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Appeal Filed:	May 22, 2019
49th Day:	Waived
Permit Filed:	October 28, 2019
180th Day:	April 25, 2020
Staff:	T. Luster-SF
Staff Report:	October 28, 2019
Hearing Date:	November 14, 2019

STAFF REPORT: RECOMMENDATION ON APPEAL SUBSTANTIAL ISSUE & DE NOVO HEARING and CONSOLIDATED COASTAL DEVELOPMENT PERMIT

Appeal No:	**A-3-MRA-19-0034**
Local Government:	City of Marina
Decision:	Denial
Application No.:	**9-19-0918**
Applicant:	**California American Water Company**
Appellants:	**California American Water Company, Brian LeNeve, Castroville Community Services District, and Commissioners Howell and Uranga**
Project Location:	Wellfield at the site of the CEMEX, Incorporated sand mining facility in the City of Marina, Monterey County, and pipelines and associated infrastructure within the Cities of Marina and Seaside, the County of Monterey, and the Commission's retained jurisdiction.
Project Description:	Construct and operate a slant well field, associated water transmission pipelines and related infrastructure within the coastal zone to support a proposed desalination facility located inland of the coastal zone.
Staff Recommendation:	Substantial Issue **Exists**; **Denial** of De Novo Permit; **Denial** of Regular Permit

STAFF NOTE: This staff report does not currently include a section analyzing the potential groundwater impacts of the proposed project. Due to delays caused by power outages and wildfires, the independent hydrogeologist that the Commission hired to assess hydrogeological impacts has had to delay issuance of his report, which has necessarily delayed this portion of the staff report. Given the complexity of the proposed project, however, and the significant public interest in the project, staff is issuing this staff report early, even without this section, so that the public will have additional time to review the lengthy report. A revised version of this report will be posted on Friday, November 1, that will include the groundwater analysis.

PROCEDURAL NOTE: The Commission will NOT take public testimony during the substantial issue phase of the appeal hearing unless at least three Commissioners request it. Unless the Commission finds that the appeal raises "no substantial issue," it will then hear the *de novo* phase of the appeal hearing, during which it will take public testimony. Written comments may be submitted to the Commission regarding either phase of the appeal hearing.

SUMMARY OF STAFF RECOMMENDATION

Overview

California-American Water Company ("Cal-Am") proposes to construct and operate the Monterey Peninsula Water Supply Project ("MPWSP") to provide potable water for customers in its service area in the Monterey Peninsula region. The MPWSP includes a desalination facility that would be located inland of the coastal zone within the jurisdiction of Monterey County, as well as water distribution pipelines, pump stations, a well field, and other components both within and outside the coastal zone. The project would produce about 6.4 million gallons of potable water per day (or about 6,250 acre-feet per year) for use by Cal-Am's customers. One of the main project purposes is to provide an alternative water supply for Cal-Am that will allow it to reduce its water withdrawals from the Carmel River in accordance with provisions of a cease-and-desist order from the State Water Resources Control Board.[1]

Because Cal-Am is a regulated public utility, its proposed project was subject to the jurisdiction of the California Public Utilities Commission ("CPUC"), which would have to approve any project costs that Cal-Am expected to recover from its customer base. The CPUC also conducted review under the California Environmental Quality Act ("CEQA"), in association with the Monterey Bay National Marine Sanctuary, which conducted the review required pursuant to the National Environmental Policy Act. The two agencies prepared a joint

[1] The original order, issued in 1996, determined that Cal-Am was extracting over 10,000 acre-feet per year from the river when it had a legal right to just over 3,000 acre-feet. The Board determined that these excess withdrawals were adversely affecting the river's population of federally-threatened Central Coast steelhead. The Board ordered Cal-Am to develop or purchase alternative water supplies so it could end its excess withdrawals. Subsequent orders issued by the Board have included additional requirements, with Cal-Am currently required to end its excess withdrawals and be able to rely on a new source of water by December 2021.

Environmental Impact Report/Environmental Impact Statement (referred to herein as "Final EIR/EIS") that evaluated several versions of the proposed project and alternatives to it. Based on information available to the CPUC during its review, the CPUC concluded that Cal-Am could construct and operate a smaller overall project than Cal-Am had initially proposed, because of the availability of water from another project – the Pure Water Monterey recycling and aquifer storage and recovery project. The two projects together could produce more than enough water to meet Cal-Am's expected water demands. The CEQA review identified a number of environmental impacts that would result from Cal-Am's project, including several – particularly those related to the project's adverse effects on sensitive habitat areas – that would be inconsistent with Coastal Act or Local Coastal Program provisions.

Since the CPUC's review and decision, new information about water supplies and demands shows that there is less need for water from new sources than previously determined. Additionally, another project alternative – the expansion of the above-referenced Pure Water Monterey project – has progressed from being too "speculative" for the CPUC to consider as a viable alternative, to now being a feasible, well-developed alternative. This Pure Water Monterey expansion would occur entirely outside of the coastal zone and would cause far fewer environmental impacts than Cal-Am's proposed project. The recently developed alternative, coupled with the new water supply and demand information, results in Commission staff recommending that the Commission, after finding substantial issue on the appeals, **deny** Cal-Am's proposed project due to its coastal resource impacts and because there is a feasible and less environmentally damaging alternative to it.

During the Commission's review, staff received extensive public comments about potential environmental justice issues raised by Cal-Am's proposed project. The Commission's environmental justice staff conducted a site visit and interviews with a number of people raising these concerns. As described in Section II.N of these Findings, Commission staff concluded that Cal-Am's project would create substantial hardships for several communities of concern, due to its relatively high water costs, by its potential indirect impacts to other area water supplies, or due to the presence of Cal-Am's well field on a site that otherwise would provide priority coastal resource benefits such as habitat restoration, public access to the shoreline, and recreational opportunities.

Project Description

These Findings evaluate all the project components within the coastal zone, which include:

- **Well field:** Cal-Am would install six new slant wells near the Monterey Bay shoreline in the City of Marina within a Cal-Am easement in part of the CEMEX sand mining facility. It would also convert the adjacent and existing test slant well to a permanent well for long-term use. The wells would be up to about 970 feet long and extend seaward at about 14 degrees below horizontal to terminate at a depth of about 200 feet below the seafloor.
- **Pipelines:** The project would include four main pipelines, and portions of each would be within the coastal zone. The Source Water Pipeline would transport water from the well field to the desalination facility that would be located about two miles inland. The Distribution Pipeline would transport water from the facility to two other pipelines meant to deliver water to Cal-Am's water users – the Transmission Main Pipeline, and the Castroville Pipeline.

- **Outfall:** The desalination facility would discharge processed saline brine to an existing outfall used by a regional wastewater treatment facility. Cal-Am would modify the outfall by placing a liner inside about a two-mile section between the treatment facility and the beach, by replacing clamps, and by modifying the outfall's existing offshore diffuser system to meet state requirements for discharges from seawater desalination facilities. Cal-Am is also required to have a liner installed inside the outfall prior to its facility discharging to the outfall; however, Cal-Am did not include the liner in its CDP application, as it instead plans to have the work done by the agency that operates the treatment facility, which will be responsible for obtaining a CDP and other relevant permits for that work. These Findings nevertheless discuss the liner in general terms and disclose known impacts in order to provide context and information about potential cumulative impacts.

Jurisdiction and Standard of Review

The proposed project components would be located in several jurisdictions within and outside the coastal zone. The Commission is conducting a consolidated permit review for those components within the coastal zone and certified Local Coastal Program ("LCP") jurisdiction of the City of Seaside and County of Monterey, and within the Commission's retained jurisdiction in an area of deferred certification within the County. The standard of review for these project components is Chapter 3 of the Coastal Act.

The Commission is also considering appeals by Cal-Am, Brian LeNeve, the Castroville Community Services District, and Commissioners Howell and Uranga of the City of Marina's denial of a coastal development permit application for the well field and portions of two of the pipelines within the City's certified LCP jurisdiction. The City's action is appealable to the Commission pursuant to Coastal Act Section 30603(a)(5), which allows appeals of local actions on any development that constitutes a major public works project. The standard of review for these project components is the policies of the certified LCP for the City of Marina, and the public access and recreation policies of Chapter 3 of the Coastal Act.

Recommendations

Appeal – Substantial Issue: On March 7, 2019, the City denied Cal-Am's CDP application and Cal-Am and other appellants then filed timely appeals of the City's decision. Staff recommends the Commission determine that the appeals **raise** a substantial issue with respect to the grounds on which the appeals were filed regarding the consistency of the local government's action with the certified Local Coastal Program ("LCP") and that the Commission hold a *de novo* hearing. Section II.E of these Findings provides staff's assessment of the appeal issues, which include several instances where the City's findings were speculative or were based on considerations other than conformity to the LCP. The motion for substantial issue determination is on page9.

Appeal *De Novo* Review and Consolidated Permit Review: These Findings provide staff's assessment of the proposed project's conformity to the City of Marina LCP and Coastal Act's public access and recreation policies for purposes of the Commission's *de novo* review, and also provide staff's assessment of the project's conformity to relevant Coastal Act provisions for those project components proposed within the Commission's consolidated permit jurisdiction. Staff recommends the Commission **deny** both the de novo and consolidated permit aspects of the proposed project, as the project is inconsistent in three ways with the Coastal Act and/or LCP:

1) **Environmentally Sensitive Habitat Areas ("ESHA):** A primary concern is that the project would not conform to Coastal Act and City LCP provisions regarding ESHA. The project's well field within the City of Marina would be built within an extensive area of coastal dune ESHA that provides habitat for several sensitive species, and portions of the project's pipelines within the Commission's consolidated review jurisdiction would similarly be built in areas that consist of ESHA and that support a number of sensitive species. The proposed project could adversely affect up to about 35 acres of ESHA. The project is inconsistent with requirements of both the City LCP and the Coastal Act that allow uses in ESHA only if they are dependent on those habitat resources.
2) **Coastal hazards:** The proposed project is also inconsistent with a coastal hazards provision of the City's LCP that requires proposed development be sited to avoid coastal hazards for its expected economic life. The proposed project's well field would be sited at a location where it could be adversely affected by coastal erosion and the associated inland movement of foredunes that could bury the well heads.
3) **Protection of coastal water quality:** The proposed project would involve placement of fill in coastal waters in the form of new or modified outfall diffusers and monitoring buoys. These types of proposals are subject to the alternatives analysis of Coastal Act 30233, which allows such fill only if there are no feasible less damaging alternatives, if feasible mitigation measures have been provided, and for certain uses, such as coastal-dependent industrial facilities. As described below in the discussion of conformity to Coastal Act Section 30260, there is a feasible and less damaging alternative to the proposed fill, so the project would not conform to the alternatives requirement of Section 30233.

As proposed, the project would also have other coastal resource impacts that, if left unmitigated, would conflict with relevant LCP or Coastal Act policies. If staff was recommending approval of the project, they would also recommend mitigation measures that could address these impacts and bring the project into full conformity with those particular policies (e.g., related to visual impacts and public access). However, staff is recommending denial based on the three issues above, which cannot be addressed through mitigation. Thus, there is no need to identify mitigation measures for visual, access or other impacts because the project still would not fully conform to LCP and Coastal Act policies, and such mitigation would not change the denial recommendation. This report describes such impacts and situations in the relevant sections, below.

Normally, if a project is inconsistent with LCP or Coastal Act policies, and the inconsistencies cannot be addressed by requiring mitigation or alternatives, the Commission must deny a project. However, because the proposed project is a coastal-dependent industrial facility, the Commission has the discretion, though not the duty, to approve it despite its nonconformity with provisions of the Coastal Act and LCP. Coastal Act Section 30260, which is incorporated into the LCP, provides that the Commission may approve a permit for a coastal-dependent industrial facility that is otherwise inconsistent with other Coastal Act Chapter 3 policies if it meets a three-part test: 1) alternative locations are infeasible or more environmentally damaging; 2) denial of the permit would not adversely affect the public welfare; and, 3) the project's adverse effects are mitigated to the maximum extent feasible.

In applying the three tests of Section 30260, Commission staff determined the following:

Test 1: Are alternative locations infeasible or more environmentally damaging? Another project, known as the Pure Water Monterey Expansion ("PWM Expansion"), would provide enough water to meet Cal-Am's needs for the next twenty years or more and would cause fewer adverse environmental impacts, including few, if any, on coastal resources, since it would be located outside the coastal zone. This project, being developed by two public water agencies, is a water recycling and aquifer storage/recovery project that would treat several water sources to provide potable water for the area. Cal-Am is relying on the first phase of the PWM project to provide about a third of its needed water supply. The PWM Expansion is consistent with the project objectives applied to Cal-Am's proposed project during its review under the California Environmental Quality Act, and is also consistent with state requirements applicable to water systems. Staff therefore recommends the Commission find that Cal-Am's proposed project does not meet this first test of Section 30260, since there is a feasible, less environmentally damaging alternative to the proposed project that could be constructed in a different location.

Test 2: Would denying the project adversely affect the public welfare? There is a clear need for a new water supply to serve the Monterey Peninsula area, as the area does not rely on imported water sources, and Cal-Am, since 1995, has been under an order from the State Water Resources Control Board to significantly reduce its withdrawals from the Carmel River and to end any withdrawals over its legal entitlement by December 2021. Cal-Am developed its proposed project in response to the water needs and to meet the requirements of this Order. However, for several reasons, the public welfare would not be harmed by denial of this proposed project:

- **Feasible alternative:** There is a feasible and less environmentally damaging alternative that can supply sufficient water to allow Cal-Am to meet its legal obligations and to supply its customers for the coming decades.
- **Public costs:** The costs of the proposed project are substantially higher than other water sources, including the PWM Expansion, and would be borne by ratepayers and visitors to this coastal area.
- **Environmental justice:** Several communities of concern would be burdened by Cal-Am's project due to the higher costs for water it would impose or due to expected or potential impacts resulting from the construction and operation of some project components in areas of sensitive habitat or that provide public access to the shoreline.
- **Effects on public resources:** As noted above, Cal-Am's project would result in adverse effects to coastal resources – for example, sensitive habitat areas – that would diminish the public benefit from those coastal resources. The alternative project would entirely avoid those coastal resource impacts.

Test 3: Are the project impacts mitigated to the maximum extent feasible? Because the proposed project does not meet either of the first two tests of Section 30260, there is no need to determine whether it meets the third test. Nonetheless, Commission staff have determined that the proposed project's impacts are not mitigated to the maximum extent feasible. For example, the project could adversely affect up to several dozen acres of sensitive habitat, but the mitigation proposed thus far would result in a net loss of that sensitive habitat. Similarly, the

proposed project would result in adverse effects to coastal water quality, but those effects, and the measures needed to avoid or minimize them, are not yet known.

In addition to there being a feasible and less environmentally damaging alternative to the proposed project, Cal-Am's proposed project has several obstacles that may lead to delay or an inability to construct or operate the facility as proposed. Cal-Am has not yet received approval to use a shared pipeline that may not have the capacity for Cal-Am's proposed use. Cal-Am's project would also rely on another entity designing and installing a two mile-long outfall liner that needs to be in place before Cal-Am can operate, but that liner has not yet been fully designed or evaluated, may result in additional adverse impacts that have not yet been addressed, and would need to be separately permitted since it is currently not part of Cal-Am's proposal.

Conclusion

Based on the analysis in these Findings, staff recommends that the Commission find substantial issue and **deny** the project due to its inconsistency with the LCP's habitat protection and hazards policies, its failure of the three tests of Coastal Act Section 30260, and its failure of the alternatives consideration of Section 30233. With this denial, Cal-Am would also be required to remove its existing test well at the CEMEX site, pursuant to **Special Condition 6** of CDP 9-14-1735 / A-3/MRA-0050, as amended.[2] The motions for denial of both the de novo and retained jurisdiction portions of the proposed project are on pages 9 and 10.

[2] That Special Condition requires, in part, that Cal-Am remove portions of the existing test slant well to a depth of at least 40 feet below the ground surface and remove all other temporary facilities no later than February 28, 2020.

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EXHIBITS

APPENDICES

I. MOTIONS & RESOLUTIONS

A. SUBSTANTIAL ISSUE DETERMINATION ON APPEAL NO. A-3-MRA-19-0034

Staff recommends that the Commission determine that a **substantial issue exists** with respect to the grounds on which the appeal was filed. A finding of substantial issue would bring the CDP application for the portion of the proposed project in the City of Marina under the jurisdiction of the Commission for a *de novo* hearing and action.

Motion

> *I move that the Commission determine that Appeal Number A-3-MRA-19-0034 raises **no substantial issue** with respect to the grounds on which the appeal has been filed under Section 30603 of the Coastal Act.*

Staff recommends a **NO** vote. Failure of this motion will result in a de novo hearing on the application, and adoption of the following resolution and findings. Passage of this motion will result in a finding of No Substantial Issue and the local action will become final and effective. The motion passes only by an affirmative vote of the majority of the appointed Commissioners present.

Resolution to Find Substantial Issue

> *The Commission finds that Appeal Number A-3-MRA-19-0034 presents a substantial issue with respect to the grounds on which the appeal has been filed under Section 30603 of the Coastal Act regarding consistency with the Certified Local Coastal Plan and/or the public access and recreation policies of the Coastal Act.*

B. DETERMINATION FOR APPEAL A-3-MRA-19-0034

Staff recommends that the Commission, after public hearing, **deny** a coastal development permit for the proposed development. To implement this recommendation, staff recommends a **NO** vote on the following motion. Passage of this motion will result in approval of the CDP as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Motion

> *I move that the Commission approve CDP A-3-MRA-19-0034 for the development proposed by the applicant.*

Staff recommends a **NO** vote. Failure of this motion will result in denial of the permit and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Resolution to Deny CDP on Appeal

The Commission hereby denies CDP A-3-MRA-19-0034 on the ground that the proposed development will not conform with the City of Marina Local Coastal Program. Approval of the permit would not comply with the California Environmental Quality Act because there are feasible mitigation measures and alternatives that would substantially lessen the significant adverse effects of the development on the environment.

C. DETERMINATION FOR CDP 9-19-0918

Motion

*I move that the Commission **approve** Coastal Development Permit Application No. 9-19-0918 for the development proposed by the applicant.*

Staff recommends a **NO** vote. Failure of this motion will result in denial of the permit and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Resolution

The Commission hereby denies a coastal development permit for the proposed development on the grounds that the development will not conform to the applicable policies of Chapter 3 of the Coastal Act. Approval of the permit would not comply with the California Environmental Quality Act because there are feasible mitigation measures and alternatives that would substantially lessen the significant adverse effects of the development on the environment.

II. FINDINGS & DECLARATIONS

A. PROJECT DESCRIPTION, LOCATION, AND OBJECTIVES

California American Water Company ("Cal-Am") proposes to construct and operate a desalination facility, water transmission pipelines, pump station, and other related infrastructure to provide a source of potable water to its customers in the Monterey Peninsula area (see Exhibit 1 – Project Location). The facility itself would be located outside the coastal zone at a site about two miles inland within the jurisdiction of Monterey County. As described below in Section II.C – Jurisdiction and Consolidated Permit Review, these Findings include Commission consideration of several actions, including a consolidated CDP application for portions of the project within the City of Seaside, the County of Monterey, and the Commission's retained jurisdiction within a portion of the County that does not have a certified Local Coastal Program ("LCP"), along with a Substantial Issue determination and de novo review of an appeal of the City of Marina's decision to deny a CDP for portions of the project within its certified LCP jurisdiction.

Project description

The primary components of the proposed project within the coastal zone include a well field that would be located at the site of the CEMEX sand mining facility on the shore of Monterey Bay within the City of Marina's LCP jurisdiction, several water transmission pipelines that would be located within the LCP jurisdictions of the Cities of Marina and Seaside and the County of Monterey, and in the Commission's retained jurisdiction, and an existing outfall that Cal-Am will modify, which is located within the City of Marina and in the Commission's retained jurisdiction (see Exhibit 2 – Project Layout). All these main components would be located in whole or in part within environmentally sensitive habitat areas ("ESHAs") or would result in effects on other coastal resources, as described in the Findings below.

Well field: The well field would consist of six slant wells that would extract up to about 15.5 million gallons per day of a mix of seawater from beneath the bay floor, intruded seawater from beneath the shoreline, and brackish water that includes a blend of seawater and freshwater from the underlying aquifer system. The proposed well field is within the CEMEX sand mining facility, which is located in an extensive area of coastal dunes along the shoreline of Monterey Bay in the northern portion of the City of Marina. Parts of the site have been used for sand mining since 1906, though the site continues to provide significant areas of sensitive habitat along with areas disturbed due to mining activities.

The wells would be located on several well pads, each containing one or two wells. Each location would include a concrete well pad, an enclosure for electrical equipment, mechanical piping, and a rip-rap basin for disposing of pumped water during maintenance activities. Each location would be within a graded area of between about 5,200 and 6,000 square feet. The well field would also include two surge tanks. The overall developed area for these components would total up to just under an acre within the CEMEX site. The well field would also include about 2,000 linear feet of graded access road providing access to each well pad from the existing CEMEX access road.

From the wells, Cal-Am would transport water through its proposed Source Water Pipeline to its desalination facility that would be located adjacent to a regional wastewater treatment facility operated by Monterey One Water (formerly the Monterey Regional Water Pollution Control Agency). Cal-Am would treat the source water from the well field to create two main streams – about 6.4 million gallons per day of potable water that would be sent several miles south in new and existing pipelines to Cal-Am's customers in the Monterey Peninsula area, and the remainder would be a brine discharge routed to an existing ocean outfall currently used by the wastewater treatment facility.[3]

Water delivery pipelines: The proposed project includes four new pipelines within the coastal zone:

- The Source Water Pipeline would extend east from the well field at the CEMEX site, which is within the City of Marina's LCP jurisdiction, and enter the County's LCP jurisdiction. It would run parallel to the CEMEX access road to the intersection with Lapis Road, where it would turn north to the intersection of Del Monte Boulevard, where it would turn to the southeast and run about 800 feet to the intersection of Charles Benson Road. Most of these pipeline segments would be within the right-of-way of the Transportation Agency for Monterey County ("TAMC"). The pipeline would then turn east and exit the coastal zone and continue to the desalination facility. A total of 5,365 linear feet of this 42-inch pipeline would be within the County's coastal zone.
- The Desalination Water Pipeline would be constructed in much of this same area. Starting at the desalination facility, it would run west along Charles Benson Road and then enter the County's coastal zone at the same location described above and follow the same alignment as the Source Water pipeline along Del Monte Boulevard and Lapis Road and continue further south to the City of Marina. About 7,207 linear feet of this pipeline would be within the coastal zone.
- The Transmission Main Pipeline would connect to the Desalination Water Pipeline to transport water further south to an existing pipeline in the City of Seaside that Cal-Am would rely on to transport the water to its customers in the Monterey Peninsula area.[4] Several thousand feet of this Transmission Main Pipeline would be within the coastal zone.
- The Castroville Pipeline would connect to the Desalination Water Pipeline at Lapis Road and run to the north until it leaves the coastal zone. A portion of the pipeline would be attached to the Monte Road Bridge to cross the Salinas River. This location is just outside the coastal zone, though construction would occur within the coastal zone.[5]

[3] Part of the potable water would also be sent north through a new pipeline to the City of Castroville pursuant to a Settlement Agreement that ensures any "non-seawater" – i.e., the proportion of water the slant wells remove from the aquifer that is not fully seawater – is returned to the groundwater basin. This project component is described in more detail in Section II.I below.

[4] A dispute exists over whether Cal-Am currently has approval to use this existing pipeline. The pipeline's majority owner, the Marina Coast Water District, has determined that the pipeline does not have sufficient capacity for Cal-Am's proposed use, though Cal-Am disagrees with that determination and asserts that it has the authority to use the pipeline. This is described further in the Alternative Analysis findings in Section II.O below.

[5] The coastal zone boundary runs along the centerline of the bridge, and the pipeline would be installed inland of the boundary.

Outfall modifications: Cal-Am would direct the brine discharge from its desalination facility through an outfall owned by Monterey One Water, a public agency in Monterey County. The outfall is currently used to discharge treated wastewater from Monterey One's regional wastewater treatment facility in northern Monterey County to about 11,000 feet offshore in Monterey Bay. The outfall terminates at a diffuser that is about 1,000 feet long and that has over 100 ports through which the discharge reaches ocean waters. Cal-Am would be expected to be required to modify the diffuser so that its discharge conforms to Ocean Plan requirements. Cal-am would also install monitoring buoys anchored to the seafloor to provide baseline and ongoing data related to water quality and biological resources in the area of the discharge.

Additional outfall modifications: One project component that Cal-Am did not include in its CDP application and has not yet been fully designed or adequately described is an approximately two-mile long liner that Cal-Am must install, prior to starting desalination facility operations, within the existing wastewater outfall to prevent its facility's discharge from corroding the outfall line. Pursuant to an agreement between Cal-Am and Monterey One Water, the liner will be installed by Monterey One. However, although this project component was included as a required mitigation measure in Cal-Am's Final EIR/EIS,[6] and would not be needed but for Cal-Am's discharge of brine into the outfall, Cal-Am did not include it in its CDP application, so its known and potential impacts are only generally described herein. The outfall liner will need further approvals from Monterey One Water and other agencies, including Coastal Act approvals.

Project timing

Project construction would occur over an approximately two-year period. Cal-Am anticipates that its facility would have an operating life of about 60 years (until about 2080) and that the slant wells would have operational lives of 20 to 25 years (until about 2040 to 2045), at which point Cal-Am anticipates drilling new slant wells to continue supplying source water for its facility.

Project Objectives

The project's primary purpose is to provide Cal-Am a source of water to serve its customers' current and future demands while reducing Cal-Am's reliance on water from the Carmel River. As stated in the project's Final EIR/EIS, the primary project objectives are:

1) Develop water supplies for the Cal-Am Monterey District service area to replace existing Carmel River diversions in excess of Cal-Am's legal entitlement of 3,376 acre-feet per year, in accordance with SWRCB Orders 95-10 and 2016-0016;
2) Develop water supplies to enable Cal-Am to reduce pumping from the Seaside Groundwater Basin from approximately 4,000 to 1,474 acre-feet per year, consistent with the adjudication of the groundwater basin, with natural yield, and with the improvement of groundwater quality;

[6] See Final EIR/EIS Mitigation Measure 4.13-5b – Install Protective Lining in Land Segment of MRWPCA Ocean Outfall.

3) Provide water supplies to allow Cal-Am to meet its obligation to pay back the Seaside Groundwater Basin by approximately 700 acre-feet per year over 25 years as established by the Seaside Groundwater Basin Watermaster;
4) Develop a reliable water supply for the Cal-Am Monterey District service area, accounting for the peak month demand of existing customers;
5) Develop a reliable water supply that meets fire flow requirements for public safety;
6) Provide sufficient water supplies to serve existing vacant legal lots of record;
7) Accommodate tourism demand under recovered economic conditions;
8) Minimize energy requirements and greenhouse gas emissions per unit of water delivered; and
9) Minimize project costs and associated water rate increases.

The Final EIR/EIS also included the following secondary project objectives:

1) Locate key project facilities in areas that are protected against predicted future sea-level rise in a manner that maximizes efficiency for construction and operation and minimizes environmental impacts;
2) Provide sufficient conveyance capacity to accommodate supplemental water supplies that may be developed at some point in the future to meet build out demand in accordance with adopted General Plans; and
3) Improve the ability to convey water to the Monterey Peninsula cities by improving the existing interconnections at satellite water systems and by providing additional pressure to move water over the Segunda Grade.

B. PROJECT BACKGROUND

This section discusses two main components of the area's history and background relevant to the proposed project – a recent history of water issues in the Monterey area and background on the site of Cal-Am's proposed well field at the CEMEX sand mining facility.

Recent History of Water Issues in Monterey Area

The Monterey area has had long-standing difficulties with its water supply. The area has no imported water sources, and local supplies have sometimes been insufficient to provide the expected amount of water. Over the past several decades, a number of water supply projects have been proposed, but for various reasons have not reached fruition.

Cal-Am has provided water to the Monterey Peninsula area since 1966. Its primary source of water has been a series of wells along the Carmel River that draw water from the aquifer underlying the river. Cal-Am also shares a network of wells in the Seaside Groundwater Basin with other water users.

In 1995, the State Water Resources Control Board ("State Water Board") issued an order (Order 95-10)[7] that substantially reduced the amount of water Cal-Am was able to legally withdraw from the Carmel River. Cal-Am had previously been pumping an annual average of about 10,370 acre-feet per year from the river, but the State Water Board determined that Cal-Am had

[7] See State Water Resources Control Board, Order No. WR 95-10, *Order on Four Complaints Filed Against the California-American Water Company, Carmel River, Monterey County*, July 6, 1995.

a legal right to withdraw no more than 3,376 acre-feet annually.[8] The State Board's Order required Cal-Am to take any of several steps to address this issue – obtain the necessary appropriative rights, obtain water from other sources that would allow it to reduce its use of Carmel River water, and/or obtain water from other entities that have the rights to use Carmel River water. The Order also directed Cal-Am to reduce its Carmel River Basin water use in part by maximizing its use of water from the Seaside Groundwater Basin.

Around the same time, the Monterey Peninsula Water Management District (MPWMD) proposed constructing a new dam on the Carmel River; however, local voters rejected the dam's financing plan and the dam was not built. Shortly thereafter, two species in the Carmel River watershed were listed as "threatened" under the federal Endangered Species Act – the red-legged frog in 1996 and the steelhead trout in 1997, which severely limited any future consideration of dams on the river.

In 1998, state legislation directed the California Public Utilities Commission ("CPUC") to develop a water supply plan for the Monterey Peninsula that did not include a dam.[9] In 2002, the CPUC completed its plan, known as "Plan B", which included a 9,400 AFY desalination facility at Moss Landing and an Aquifer Storage and Recharge ("ASR") system that would store about 1,300 AFY of Carmel River water in the Seaside Basin. Plan B served as the basis for a 2004 application by Cal-Am to the CPUC for the proposed Coastal Water Project ("CWP"), which included a desalination facility at the Moss Landing Power Plant, transmission pipelines from Moss Landing to the Monterey Peninsula, a reservoir, pump stations, and ASR facilities. During the CPUC's review, the State Water Board's Division of Water Rights in 2009 issued a Cease-and-Desist Order to Cal-Am that required Cal-Am to significantly reduce its Carmel River withdrawals by 2016, thereby increasing the urgency of selecting and constructing a water supply project.[10] Nonetheless, several concerns were raised about the desalination facility's proposed use of a power plant open water intake and the resulting significant adverse effects on marine life, the distance of the facility from the service area, and the associated increased transmission costs, among others. These concerns led to the development of alternative water supply proposals, including one developed by regional stakeholders known as the "Regional Water Project, Phase I." This alternative proposed moving the desalination facility closer to the Monterey Peninsula and using vertical and slant wells instead of an open water intake. In December 2010, the CPUC certified an Environmental Impact Report for this Regional Water Project and approved several agreements among stakeholders that established project partner responsibilities regarding construction, ownership, operations, maintenance, and payments. However, in 2012, the CPUC voted to end its review of the project due to several problems and disputes.

[8] An acre-foot is equal to approximately 326,000 gallons of water. In the Monterey Peninsula, which has a relatively per capita water use rate compared to most of California, this would provide water for about two to four households for a year.

[9] AB 1182 required the CPUC to consult with Cal-Am and a number of affected parties to prepare a contingency water supply plan that did not rely on a new dam.

[10] The Order established a schedule for Cal-Am to reduce its reduce its Carmel River well water withdrawals from its 2009 volume of 10,730 acre-feet per year to no more than 3,376 acre-feet per year by 2016.

In 2012, Cal-Am and other stakeholders proposed the initial version of the currently proposed project, the Monterey Peninsula Water Supply Project ("MPWSP") as a replacement for the defunct Regional Water Project. In April 2012, Cal-Am filed an application with the CPUC for the MPWSP, which included slant wells that would be located at the CEMEX site, a desalination facility to be located about two miles inland adjacent to a regional wastewater treatment facility, pipelines, and the other related facilities needed to produce and deliver water to Cal-Am's service area on the Monterey Peninsula. The CPUC, in conjunction with the Monterey Bay National Marine Sanctuary, prepared a joint Environmental Impact Review/Environmental Impact Statement ("Final EIR/EIS") to meet requirements of the California Environmental Quality Act and National Environmental Policy Act. In September 2018, the CPUC certified the Final EIR and issued its Certificate of Public Convenience and Necessity for the proposed project.

The decision allowed Cal-Am to recover reasonable construction and operational costs of its proposed project from ratepayers. It also required Cal-Am to construct a smaller desalination facility than it had initially proposed – a 6.4 million gallon per day facility instead of a 9.6 million gallon per day facility – and to purchase water from the Pure Water Monterey project, a water recycling and aquifer recovery and storage project being developed by two public water agencies, the Monterey Peninsula Regional Water District, and Monterey One Water, operator of the wastewater treatment facility from which Cal-Am would discharge its project's brine.

Background and history of the CEMEX sand mining facility: As noted above, the proposed project site has been used for sand mining for over a century, most recently by its current owner, CEMEX. The site includes sedimentation ponds, sand mining equipment and related infrastructure, accessways, and stockpile areas, some of which have remained in relatively the same location for several decades and some of which have moved within the site due to changing production levels, shifts in the surrounding dunes, changes in sand delivery to the site from the Bay, and other factors. In the mid-1980s, the Monterey Peninsula Water Pollution Control Agency (now Monterey One Water) constructed the outfall Cal-Am proposes to now use along the southern portion of the CEMEX site.

In June 2017, the Commission and CEMEX reached agreement on a settlement to resolve potential Coastal Act violations at the site and resulting adverse effects on coastal resources. The settlement ("CEMEX Settlement")[11] allowed CEMEX to continue its sand mining operations for an additional three years and then make the property available for purchase by an appropriate entity that would conduct restoration activities and establish public access and recreational opportunities on the site. The CEMEX Settlement recognized other existing legal entitlements on the site, which at the time included Cal-Am having an easement or purchase option over about 30 acres of the site, along with an option for an access easement for its expected well field and Source Water Pipeline.

[11] See CCC-17-CD-02, July 13, 2017.

C. JURISDICTION AND CONSOLIDATED PERMIT REVIEW

Project components would be located in several local jurisdictions both within and outside of the coastal zone, as well as within the Commission's retained permit jurisdiction. As noted above, the desalination facility and segments of the water transmission pipelines would be located outside the coastal zone within the County of Monterey's jurisdiction. The pipelines would be located within the certified LCP jurisdictions of Monterey County and the Cities of Seaside and Marina, and within an area of deferred certification where the Commission has permit jurisdiction. Those project's proposed well field would be located largely within the City of Marina's LCP jurisdiction, while those subsurface portions of the wells that extend seaward beyond the mean high tide line, along with modifications to the existing outfall, would be within the Commission's retained permit jurisdiction. All project components within the coastal zone and outside the City of Marina are being evaluated herein pursuant to consolidated permit review, as provided by Coastal Act Section 30601.3. The standard of review for these components is Chapter 3 of the Coastal Act.

The other project components that are within the City of Marina's LCP jurisdiction are evaluated herein pursuant to appeals of the City's decision denying Cal-Am's CDP application to construct and operate slant wells, a water transmission pipeline, and associated infrastructure that would be located within the City's LCP jurisdiction. The standard of review for these project components is the City's certified LCP, which consists of its Local Coastal Land Use Plan (LCLUP) and its Local Coastal Program Implementation Plan (LCPIP), as well as the Coastal Act's public access and recreation policies. The relevant policies and measures of these City documents are codified in the Chapter 17.41 of the City's Municipal Code under "Coastal Zoning" and are implemented through requirements and development standards identified in the Ordinance.

Other Agency Approvals & Consultations

The project would be additionally subject to the following discretionary permits and approvals:

- **Monterey One Water:** Cal-Am will need to obtain authorization from Monterey One Water for connection to, and use of, the agency's ocean outfall.
- **Monterey County:** Cal-Am has obtained a development permit for its proposed desalination facility and associated infrastructure within the County's jurisdiction but outside the coastal zone and has obtained an encroachment permit from the County for construction of its pipelines within County jurisdiction.
- **State Lands Commission:** Cal-Am will need to obtain a lease of state tidelands from the State Lands Commission for project components seaward of the mean high tide line, including subsurface portions of the slant wells that extend beyond that line, project components necessary to modify the outfall diffuser, and monitoring buoys. Cal-Am has submitted a lease application that is currently under review by State Lands Commission staff.
- **Central Coast Regional Water Quality Control Board ("Regional Water Board"):** Cal-Am will need to obtain a National Pollution Discharge Elimination System ("NPDES") Permit allowing it to discharge brine through the MRWPCA outfall and to modify that outfall to allow the discharge. Cal-Am will also need to obtain approval from the Regional Water Board to ensure Cal-Am's use of groundwater from the Salinas Groundwater Basin is consistent with the Regional Water Board's adopted Basin Plan.

- **California Department of Transportation ("CalTrans"):** Cal-Am has obtained encroachment permits from CalTrans for the segments of its pipelines that would be constructed within CalTrans rights-of-way.
- **Transportation Agency of Monterey County ("TAMC"):** TAMC has approved an Easement Purchase Agreement with Cal-Am for portions of the pipelines within TAMC rights-of-way.
- **Monterey Bay National Marine Sanctuary:** Cal-Am will be subject to authorization by the Sanctuary to allow discharges into Sanctuary waters and drilling and disturbance of submerged lands within the Sanctuary.[12]
- **Other landowners:** Cal-Am is negotiating with several private landowners along sections of its proposed pipeline routes, several of whom have expressed that they would not consider providing approval until after the Coastal Commission's decision on the proposed project.

Tribal consultation: During the project's CEQA review, the CPUC requested information from the Native American Heritage Commission ("NAHC") regarding potential tribal cultural resources that the project might affect. The NAHC did not identify any such resources, though provided a list of Native American contacts that might have additional information about such resources. The project area is within the traditional lands of the Ohlone/Costanoan-Esselen Nation. Coastal Commission staff contacted the Nation requesting consultation, though did not receive a response. The Final EIR/EIS notes, however, that consultation would be ongoing throughout the project.

[12] The Sanctuary also served as lead agency under the National Environmental Policy Act ("NEPA") for the project's Environmental Impact Statement.

D. SUBSTANTIAL ISSUE

Appeal Jurisdiction and Procedures

Coastal Act Section 30603 provides for the appeal to the Coastal Commission of certain CDP decisions in jurisdictions with certified LCPs. Section 30625(b) of the Coastal Act requires the Commission to hear an appeal unless the Commission determines that no substantial issue is raised with respect to the grounds on which the appeal has been filed. For this appeal, the staff is recommending substantial issue, and unless three Commissioners object, it is presumed that the appeal raises a substantial issue and the Commission may proceed to the *de novo* portion of the appeal hearing at the same or subsequent meeting, without taking public testimony regarding the substantial issue question. However, if three Commissioners object to the substantial issue recommendation, the Commission will hear arguments and vote on the substantial issue question. The only persons qualified to testify before the Commission on the substantial issue question are the applicant, local government, and persons (or their representatives) who opposed the application before the local government. Testimony from other persons regarding the substantial issue question must be submitted in writing. It takes a majority of Commissioners present to find that no substantial issue is raised.

Unless the Commission determines that the project raises no substantial issue, the Commission will conduct a full *de novo* public hearing on the merits of the project at the same or subsequent hearing. If the Commission conducts a *de novo* hearing on the appeal, the applicable test under Coastal Act Section 30604 is whether the development is in conformance with the certified Local Coastal Program. In addition, for projects located between the sea and the first public road paralleling the sea, Coastal Act Section 30604(c) requires the Commission find that the development conforms to the public access and public recreation policies of Chapter 3.

Denial of a major public works facility: Coastal Act Section 30603(a)(5) provides that local government decisions to approve or deny coastal development permits for proposed major public works projects may be appealed to the Commission. Coastal Act Section 30114(a) defines "public works" as including: "All production, storage, transmission, and recovery facilities for water, sewerage, telephone, and other similar utilities owned or operated by any public agency or by any utility subject to the jurisdiction of the Public Utilities Commission, except for energy facilities." The Commission's regulations, at 14 CCR Section 13012(a) define "major public works" as those facilities that cost more than $100,000, adjusted yearly based on the Construction Cost Index. As of 2019, a public works project must cost approximately $275,000 to be considered a "major public works."

Regarding the above definitions and provisions, Cal-Am is subject to the jurisdiction of the Public Utilities Commission, its proposed MPWSP involves the recovery, production, storage, and transmission of water, and its stated overall project costs would be approximately $400 million. Pursuant to the above-referenced provisions of the Coastal Act and the Commission's regulations, the City's action was therefore a denial of a major public works project and its decision may be appealed to the Commission.[13]

[13] At its meeting on July 11, 2019, the Commission conducted a dispute resolution hearing in response to the City of Marina's contention that the decision of the City's Planning Commission to deny Cal-Am's CDP application was

Coastal Act Section 30603(b)(2) provides that the grounds for appealing the denial of a permit for a major public works project are limited to an allegation that the proposed development conforms to the standards set forth in the certified LCP and the relevant public access policies of Chapter 3 of the Coastal Act. The appellants' contentions regarding the grounds of their appeals are described below in the *Substantial Issue Determination* section of these Findings.

Local Action

On March 7, 2019, the City of Marina ("City") Planning Department denied a Coastal Development Permit ("CDP") for the portions of the proposed project within the City's coastal zone permitting jurisdiction. Cal-Am appealed that decision to the City Council, though it withdrew its appeal before the Council's hearing and instead appealed the City's denial to the Coastal Commission. On May 13, 2019, the Commission received the Final Local Action Notice ("FLAN") from the City. In accordance with Section 13110 of the Commission's regulations, the 10-working day appeal period ran from May 14, 2019 to May 28, 2019. Within the 10-working day appeal period, Commission staff received valid appeals of the City's denial from Cal-Am, the Castroville Community Services District, local resident Brian LeNeve, and Commissioners Howell and Uranga. In accordance with Section 13112 of Title 14 of the California Code of Regulations, staff requested that the City provide all relevant documents and materials regarding the local coastal development permit action. The documents and materials relating to the City's approval of the local coastal development permit are necessary to analyze whether a substantial issue exists with respect to conformity of the City's approval with the relevant policies of the certified LCP. Pursuant to Coastal Act Section 30621, the appeal must be heard within 49 working days from the date that the appeal is filed unless the appellant waives that 49-day period. On May 30, 2019, Cal-Am provided a waiver of that 49-day period.

Substantial Issue Standard of Review

Coastal Act Section 30625(b) states that the Commission shall hear an appeal unless it determines:

> *With respect to appeals to the Commission after certification of a local coastal program, that no substantial issue exists with respect to the grounds on which an appeal has been filed pursuant to Section 30603.*

The term "substantial issue" is not defined in the Coastal Act or in its implementing regulations. Section 13115(b) of the Commission's regulations simply indicates that the Commission will hear an appeal unless it "finds that the appeal raises no significant question." In previous decisions on appeals, the Commission has been guided by factors that include the following:

1. The degree of factual and legal support for the local government's decision that the development is consistent or inconsistent with the certified LCP and with public access policies of the Coastal Act;
2. The extent and scope of the development as approved or denied by the local government;

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not appealable to the Commission. The Commission found that the City's denial was, in fact, appealable. See Dispute Resolution No. 3-19-0569-EDD, Agenda Item 14a on July 11, 2019.

3. The significance of the coastal resources affected by the decision;
4. The precedential value of the local government's decision for future interpretation of its LCP; and,
5. Whether the appeal raises only local issues or those of regional or statewide significance.

If the Commission chooses not to hear an appeal, the appellant nevertheless may obtain judicial review of the local government's coastal permit decision by filing a petition for a writ of mandate pursuant to California Code of Civil Procedure Section 1094.5.

Substantial Issue Determination

Summary of Appellants' Contentions: In their appeals, Appellants assert that the record of the City's proceedings provides evidence that Cal-Am's proposed project is consistent with relevant provisions of the City's certified LCP. Cal-Am's appeal, and the others, reference the letters that Cal-Am sent to the City Planning Commission as providing specific contentions about the proposed project's conformity to LCP provisions. The appeals overall raise several substantial issues, both in general terms and as related to specific aspects of the City's Findings about the proposed project. These contentions, and the Commission analysis of each, are described in more detail below. The contentions are referred to as Cal-Am's contentions for sake of convenience, but apply to all of the appeals.

General Responses to Appellants' Contentions: The appeals raise substantial issues related to four of the five guidance factors identified above. First, per Factor 1, several of the City's conclusions were speculative or were not based on adequate factual or legal support. Additionally, while the extent and scope of the proposed development within the City's LCP jurisdiction would be relatively limited in size (thereby not raising concerns about Factor 2), it would affect significant coastal resources (Factor 3), particularly the environmentally sensitive habitat areas within coastal dunes. The City's conclusions also raise concerns about precedents they might establish unless further addressed by the Commission (Factor 4). Finally, the appeals clearly raise issues of regional significance (Factor 5), as they relate to a proposed regional water supply project designed to provide water to several of the area's municipalities.

Staff also notes that some of the appeal contentions are generally incorrect or inapplicable. For example, Cal-Am makes several contentions that the City's LCP authority is limited due to the City's role as a responsible agency under CEQA and that the City is required to rely on the CEQA lead agency's (the California Public Utilities Commission's) analysis provided as part of that agency's CEQA review, implying that the City is limited to using that analysis.[14] However, the City's authority under its LCP is separate from, and broader than, it may be under CEQA, and further, these contentions do not raise issues about LCP conformity; therefore, these CEQA-related contentions raise no substantial issue.

[14] See, for example, Contentions 3, 4, and 8.

Specific Contentions: The specific contentions raised include those below, listed by issue area, followed by the Commission's determination as to whether they raise substantial issue. Of the 12 main contentions described below, seven raise substantial issue.

Environmentally Sensitive Habitat Areas ("ESHA") –

Contention 1: Cal-Am contends that the City's Finding 4-5 and Recital 5 are incorrect in determining that the proposed project is not a "coastal-dependent industrial facility" and that it was therefore not an appropriate use for the site.

> **Response:** ***No substantial issue.*** The City's Finding 4-5 and Recital 5 do not refer to whether the facility would be "coastal-dependent." Instead, they state that the proposed project is not resource-dependent and is therefore prohibited from being located in ESHA. Cal-Am's contention does not properly address these City statements and therefore does not raise substantial issue. [Note: see also Contention 12 below regarding additional findings on the project's coastal dependency.]

Contention 2: The City's Findings 4-3 and 4-4 describe the dune habitat at the proposed project site as "ecosystem ESHA" and state that this type of ESHA must be considered as a whole that is more than the sum of its individual components. Cal-Am contends that the Final EIR/EIS treated the entire area affected by the project as ESHA and that there is no need for the City to further differentiate the area as "ecosystem ESHA."

> **Response:** ***No substantial issue.*** Although the City characterizes the onsite habitat as a special category of ESHA, the different characterization does not, in this instance, change the way that the ESHA is to be protected. Cal-Am's contention – that the Final EIR/EIS treated the entire site as ESHA – is correct, but because the City's characterization did not result in a material change to the standards it applied to that ESHA, this does not raise substantial issue.

Contention 3: The City's Finding 4-6 states that because Cal-Am failed to provide a Habitat Mitigation and Monitoring Plan, the City could not determine that the impacts of the proposed project would be adequately mitigated. Cal-Am contends that the Final EIR/EIS requires that Cal-Am submit such a plan to appropriate resource agencies prior to construction. Cal-Am also contends, to the extent the City's Finding argues that the proposed project fails to provide for compensatory mitigation, that the Final EIR/EIS requires compensatory mitigation for permanent impacts at a ratio of 2:1 or greater.

> **Response:** ***No substantial issue.*** Under the LCP, the City may require mitigation above and beyond what is identified in a CEQA document in order to comply with the LCP and the Coastal Act, and it may require that mitigation be identified earlier than what is required through CEQA. Although the City could have required that Cal-Am provide its proposed mitigation and HMMP "prior to issuance" of a CDP, it chose instead to deny the application. Because the City was within its authority to request that Cal-Am identify mitigation measures with more specificity to ensure the project would comply with the LCP, this contention raises no substantial issue.

Marine/Ocean Resources and Species –

Contention 4: The City's Findings 4-7 and 4-8 describe Cal-Am's planned well drilling activities and state that those activities will likely cause marine impacts due to noise or vibration propagating in the water column. Finding 4-9 states that while the Final EIR/EIS analyzed some marine resource impacts, the City is challenging the factual, legal, and scientific adequacy of those analyses in litigation. Cal-Am contends that the City's findings ignore the conclusions in the Final EIR/EIS, which determined that the impacts were fully evaluated and that any impacts would be less than significant with mitigation.

> **Response: *Substantial Issue*.** The City did not cite any analyses or conclusions it used to support its findings or that would counter the determination in the Final EIR/EIS. The City's findings are therefore speculative and not supported by evidence.

Public Access –

Contention 5: Cal-Am contends that the City's Findings 4-12 and 4-13 "misconstrue" the size and purpose of Cal-Am's easement at the proposed project site, which Cal-Am states is approximately 30 acres.

> **Response: *No substantial issue*.** Those findings accurately state the size of the 30-acre easement, though they do not provide a full, detailed description of the easement purpose. Nonetheless, this contention does not raise substantial issue.

Contention 6: The City's Finding 4-13 describes Cal-Am's proposal to fence a portion of its project site and goes on to describe "future uncertainties" about what additional fences or uses Cal-Am might include at the site. Findings 4-13 and 4-14 state that the proposed project will prevent access to the beach and/or would otherwise affect coastal access. Cal-Am contends that the City's findings are speculative and that they neglect the analyses and conclusions in the Final EIR/EIS, which found that the project will not impede beach access.

> **Response: *Substantial Issue*.** Although Finding 4-13 cites Cal-Am's proposal to fence 10, 389 square feet within the easement area, both Findings go on to speculate about the potential that Cal-Am might in the future develop other areas of the easement and states that Cal-Am's refusal to make a commitment for public access means that future access might be impaired. However, any such future fencing or restrictions on access would need to be considered, and could be limited or denied, if necessary, to address LCP and Coastal Act policies, at the time they are proposed. Because the City's findings are speculative and not supported by factual or legal evidence, Cal-Am's contention raises substantial issue.

Recreational –

Contention 7: The City's Findings 4-15 and 4-16 state that substantial future uncertainties about Cal-Am's use of the project site may result in disruption of coastal recreational use of the area, that the entire CEMEX site is meant to be held for public recreation and conservation purposes, that Cal-Am's proposed project may adversely affect the potential for visitor-serving commercial uses at the site, and that the City cannot make the necessary findings regarding conformity to the

LCP's coastal recreation provisions. Cal-Am contends that the Settlement Agreement between CEMEX and the Coastal Commission allows for both recreation and Cal-Am's proposed project, that the City's concern about future commercial uses is speculative, as the Settlement Agreement does not allow for commercial uses at the site, and that the City did not cite the Final EIR/EIS conclusions showing that the project would not impede recreational beach use.

> **Response: *Substantial issue*.** Similar to the previous contention, the City's Findings about "future uncertainties" are speculative and do not reference descriptions of the proposed project or conditions of the Settlement Agreement that would limit the project's effects on coastal recreation.

Protection of Archaeological and Cultural Resources –

Contention 8: The City's Finding 4-17 acknowledges that the project's CEQA review resulted in several protections and mitigation measures meant to protect archaeological and cultural resources, but notes that the adequacies of these measures are the subject of ongoing litigation. Cal-Am contends that the City is required to assume that the Final EIR/EIS measures comply with CEQA.

> **Response: *No substantial issue*.** Although the City's Finding does not specify any particular shortcomings with the CEQA measures, Cal-Am's contention does not raise an issue with LCP conformity. Therefore, this contention does not raise substantial issue.

Groundwater Resources –

Contention 9: The City makes a number of findings (Findings 4-18 through 4-22) that raise concerns about the proposed project's effects on groundwater, about the project's nonconformity with Coastal Act or other state requirements related to groundwater protection, and about legal questions raised by Cal-Am's proposed use of groundwater. Cal-Am contends that the City's Findings are not relevant because the City's LCP has no policies that concern groundwater or the depletion of groundwater supplies.

> **Response: *No substantial issue***. The City's findings are not based on provisions of the LCP; therefore, Cal-Am's contentions do not raise substantial issue about conformity to the LCP.

Scenic and Visual Resources –

Contention 10: The City's Finding 4-23 states that because Cal-Am has not provided adequate information about the project design and site fencing, the City believes there is a "substantial danger" that the project will interfere with the LCLUP Policy 36, which states: "To provide and promote the role of Marina as the physical and visual gateway to the Monterey Peninsula." Cal-Am contends that the City's conclusion was speculative, as Cal-Am had fully described its proposed project in its CDP application and had noted that project components would not be visible from outside the CEMEX site.

Response: *Substantial issue.* Similar to Contentions 4, 6, and 7 above, the City's Findings are based on speculation and this contention therefore raises substantial issue.

Erosion and Geologic Hazards –

Contention 11: The City's Findings 4-24 through 4-28 and its Recital 7 state that the proposed project has not been evaluated using the most recent sea level rise guidance adopted by the Coastal Commission (2018 Sea Level Rise Guidance) and that the City therefore cannot make findings of consistency with Coastal Act Section 30253, which requires that new development assure stability and structural integrity, and that it neither create nor contribute significantly to erosion and geologic instability. Cal-Am contends that the City has not adopted that guidance as part of its LCP and must require on the sea level rise and coastal erosion analyses provided in the project's Final EIR/EIS.

Response: *No substantial issue*. Contrary to Cal-Am's contention, the City may rely on the most recent sea level rise guidance in its decision-making. The City's LCP states, for example, that development along the coast requires "identification of an appropriate hazard setback to protect the economic life of structures," and that "future development shall be placed beyond the area vulnerable both to wave erosion and tsunami hazard." It also states that the setback line must be determined on a case-by-case basis at the time the development is proposed. Accordingly, the City may rely on the most recent sea level rise guidance when determining whether proposed development complies with its LCP. Accordingly, Cal-Am's contention that the City may not use updated science when considering the proposed development's consistency with LCP policies does not raise substantial issue with LCP conformity. In addition, much of the thrust of Cal-Am's contention has to do with CEQA and other issues that do not raise an issue with LCP conformity.

Application of Coastal Act Section 30260 –

Contention 12: The City's LCP references Coastal Act Section 30260 to determine what uses are allowable at the proposed project location. Although Section 30260 is not included as a provision of the City's LCP, the LCP states that appropriate uses at the proposed project site include activities "specifically dependent on proximity to the ocean" and those that are consistent with Coastal Act Section 30260 – i.e., "coastal-dependent industrial facilities."[15] Section 30260 allows for coastal-dependent industrial facilities that are not fully consistent with other relevant Coastal Act provisions to nonetheless be approved if they meet a three-part test – that alternative locations are infeasible or more environmentally damaging, that to do otherwise (i.e., to deny the project) would adversely affect the public welfare, and that its adverse environmental effects are mitigated to the maximum extent feasible.

[15] The LCP does not define "coastal-dependent"; however, Section 30101 of the Coastal Act states: "'*Coastal-dependent development or use' means any development or use which requires a site on, or adjacent to, the sea to be able to function at all.*"

Pursuant to Section 30260, as incorporated into the LCP, the City made the four Findings listed below regarding whether the proposed project was a "coastal-dependent industrial facility" and whether it met other provisions of Section 30260.[16] Although the City determined that the proposed project was not a "coastal-dependent industrial facility," it nonetheless evaluated it to determine whether it met the other criteria in Section 30260. Cal-Am agrees that the Section 30260 provisions apply to the City's CDP determination, but contends that the City erred in finding that the proposed project does not meet the standards of Section 30260.

Response: *Substantial issue*. First, because the City found the project to not be a coastal-dependent industrial facility, it should not have evaluated whether the project met the other provisions of Section 30260, which apply only to those types of facilities. The Commission finds that the City, by basing three of its Findings for CDP denial on a provision of the Coastal Act that the City found to not apply to the project, has created a substantial issue. In addition, there is a substantial issue with two of the City's specific findings related to its 30260 analysis. Analysis of each of these Findings related to Section 30260 are below:

- **Finding 5-3:** The City states that the proposed project does not qualify as a "coastal-dependent industrial facility," because it does not have to be located "on, or adjacent to, the sea to be able to function at all." The City states that the wells have been moved somewhat inland from their original proposed location and are now designed to extract brackish groundwater from the underlying groundwater basin. The City further contends that because the brackish groundwater is a combination of water from inland areas of the aquifer and intruded seawater that extends up to several miles inland, the wells do not need to be near the shoreline to extract this groundwater. Cal-Am contends that the City erred in this determination, because both the Final EIR/EIS and Cal-Am's CDP application state that the wells will extend beneath the ocean floor at a location intended to result in the wells creating a localized capture zone to withdraw primarily seawater and some seawater-intruded groundwater and to allow the slant well pumping to be recharged with seawater. Cal-Am also states that moving the wells further inland would change the entire basis of the proposed project and of the accompanying modeling conducted to determine the expected amounts of seawater withdrawal. Cal-Am further notes that the Court of Appeal previously determined that the test slant well at the site, which is located approximately the same distance from the shoreline as the proposed project wells, met the LCP's definition of a "coastal-dependent industrial facility."[17]

  Response: *Substantial issue*. Contrary to the City's finding, the project's proposed well field is considered a "coastal-dependent industrial facility" because 1) the project is designed to extract primarily seawater and to reduce its potential impacts on the "non-seawater" component of the underlying aquifers; 2) the proposed wells are limited to no

[16] The Commission's previous decision in the appeal of the City's denial of Cal-Am's test well (Appeal No. A-3-MRA-14-0050) applied the provisions and the three-part test of Section 30260 in reviewing the project's conformity to the LCP. The Commission's application of Section 30260 in that appeal provides guidance to the City as to the appropriateness of using Section 30260 in the City's review of relevant CDP applications.

[17] See *Marina Coast Water Dist. v. California Coastal Comm'n*, No. H042742, 2016 WL 6267909, at *1 (Cal. Ct. App. Oct. 26, 2016).

more than several hundred feet in length, so they need to be relatively close to the shoreline; and 3) as cited above, the Court of Appeal determined in its decision on Cal-Am's prior and similarly designed test well that the test well was a "coastal-dependent industrial facility." This contention therefore raises substantial issue.

- **Finding 5-4:** Section 30260 requires a determination that "alternative locations are infeasible or more environmentally damaging." The City's Finding 5-4 determined first, that it could not conclude that alternative locations were infeasible or more environmentally damaging, and second, that there were feasible and less damaging alternative locations for the proposed project, specifically citing the expansion of the Pure Water Monterey recycled water project as a feasible alternative. Finding 5-4 further differentiated between the alternatives analysis included in the Final EIR/EIS and that required under the Coastal Act by noting the difference between CEQA's standard of identifying an "environmentally superior alternative" (which in this case was the proposed project) and the Coastal Act's standard of identifying a "feasible" and "less environmentally damaging" alternative. Cal-Am contends that the City improperly distinguished between the alternatives analysis required under CEQA and that required under the Coastal Act, and that the City erred by identifying an alternative that was not within its jurisdiction. Cal-Am further contends that the City misapplied its role as a CEQA-responsible agency when it identified the Pure Water Monterey project as a feasible alternative, since the Final EIR/EIS found it not to be a feasible alternative.

  Response: ***No substantial issue.*** Several of Cal-Am's contentions are based on requirements of CEQA, not the LCP, and therefore do not raise significant issue with LCP conformity. The Commission also disagrees with Cal-Am's contentions that there is no difference between the alternatives analysis required under each statute. An agency such as the City of Marina or the Coastal Commission is required to carry out its duties under the Coastal Act as well as its duties as a responsible agency under CEQA. Because Section 30260 of the Coastal Act has its own requirement for considering alternatives that applies in this instance, which is not identical to the CEQA requirement for considering alternatives, the City was required to analyze consistency with the Section 30260 alternatives standard and was not limited by the EIR's alternatives analysis. See *Save San Francisco Bay Assn. v. San Francisco Bay Conservation etc. Com*. (1992) 10 Cal. App. 4th 908, 923 (upholding agency's use of alternatives analysis that was different than CEQA, because agency was subject to different state law that required different alternatives analysis).

  Additionally, Cal-Am's contention that the City can only consider alternatives within its jurisdiction is not adequately supported.[18] The *Save San Francisco Bay Association* case cited by Cal-Am did not hold that the agency in that case was limited to considering alternatives that were within its jurisdiction. It merely held that, on the particular facts of

[18] In fact, Section 15126.6 of the CEQA Guidelines suggests the opposite: *Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site.* [emphasis added]

that case, and due to the specific objectives of the proposed project, the agency was not required to consider alternative locations all over the San Francisco Bay area, as opposed to locations in the City and County of San Francisco. Similarly, the court in *Save Our Residential Environment v. City of W. Hollywood* (1992) 9 Cal.App.4th 1745, 1754 held that, due to the project objective of providing senior housing within the City of West Hollywood and the limited availability of large parcels in the city, the EIR was not required to consider alternative sites. This reasoning does not apply here, where the main project objectives relate broadly to obtaining a new source of water for Cal-Am's service area, rather than to specifically constructing a desalination plant along Marina's coastline. Notably, the PUC – which was the lead CEQA agency for the project – found that alternatives such as use of PWM water can meet the project objectives. As our state Supreme Court has held, "jurisdictional borders are simply a factor to be taken into account and do not establish an ironclad limit on the scope of reasonable alternatives." *Citizens of Goleta Valley v. Bd. of Supervisors* (1990) 52 Cal.3d 553, 575, fn. 7. Accordingly, the City's consideration of project alternatives outside of its jurisdiction does not raise a substantial issue.

Further, additional information and changed circumstances developed between the time of the Final EIR/EIS certification and the City's determination, which have changed the analysis of whether the Pure Water Monterey expansion is a potentially feasible alternative to the proposed project. The City could properly consider this new information as part of its LCP-related alternatives analysis.

- **Finding 5-5:** Section 30260 requires an evaluation of whether approving permitting a proposed coastal-dependent industrial facility "would adversely affect the public welfare." The City determined that, for several reasons, not permitting the proposed project would promote, and not adversely affect the public welfare. The City cites adverse impacts resulting from the City bearing the primary burden of the project while receiving none of the water it would produce, the threat to the integrity of the groundwater basin underlying the basin, the project's adverse effects on ESHA, the project undermining the City's decades-long efforts to end sand mining operations at the project site in favor of conservation and recreation, impairment of the City's business environment and social fabric, and the project's effects on public access and coastal resources. The City also expresses concerns about the project's environmental justice effects on its population, stating that the City is a disadvantaged community that the project would disproportionately burden.

  Cal-Am's contentions identify other public welfare factors that the City did not consider in its Findings, including the benefits of the project's water supply to nearby communities, the reduction of water withdrawals from the Carmel River, and the ability of Cal-Am to meet its obligations under the State Water Board's cease-and-desist order and thereby prevent potential rationing and restrictions in water supply. Cal-Am further states that public welfare considerations require a balancing of interests.

  Response: *Substantial issue*. The Commission's practice in its prior public welfare determinations pursuant to Section 30260 findings, has been to consider what may be competing public welfare interests, and then to identify how those interests are best

balanced in favor of the public welfare. The City erred by primarily considering the project's adverse public welfare considerations rather than a broader range of public welfare considerations that are applicable to the proposed project. The City's narrow analysis, which ignored or gave unduly restricted weight to some public welfare concerns, raises substantial issue with regards to applying Section 30260 in determining LCP conformity.

- **Finding 5-6:** Section 30260 also requires that adverse impacts be mitigated to the maximum extent feasible. The City determined that the proposed project's impacts were not mitigated to that extent, because Cal-Am had not offered mitigation beyond what had been identified in the Final EIR/EIS. The City further concluded that while some mitigation standards of the Coastal Act are similar to those of CEQA, others, including Section 30260's are of a different and higher standard. It references the difference between the Coastal Act's "mitigation to the maximum extent feasible" and CEQA's requirement to adopt mitigation that reduces impacts to less than significant levels. Cal-Am contends that the City incorrectly asserted that the Coastal Act's mitigation requirements are more rigorous than CEQA's. Cal-Am also notes that the Coastal Commission's mitigation requirements for Cal-Am's test well "show that the Coastal Commission's mitigation requirements are functionally equivalent to CEQA's." Cal-Am also notes the CEQA and the Coastal Act share the same definition of "feasible" and states that the project's potential impacts have been mitigated to the maximum extent feasible through measures included in the Final EIR/EIS.

  Response: ***No substantial issue***. The City's denial correctly distinguishes between mitigation requirements of CEQA and the Coastal Act and in noting that the Coastal Act's "maximum extent feasible" standard, as well as its particular resource protection standards, may be more stringent than CEQA's standard that feasible mitigation measures must be imposed to substantially lessen any significant effects that the project would have on the environment. Notably, the Commission imposed mitigation measures on Cal-Am's test well CDP in addition to those that resulted from the CEQA process. The Coastal Act contains specific resource protection standards that must be met, and mitigation beyond what was required per the PUC's CEQA review may be required in order to meet those standards, as well as to meet the 30260 standard for maximum feasible mitigation. For example, and as noted above, it is likely that any Habitat Mitigation and Monitoring Plan required of Cal-Am through CDP conditions could include more specific, detailed, and stringent conditions resulting from review for conformity to the LCP than required through the Final EIR/EIS.

Substantial Issue Summary and Conclusion

As described above, the appeals raise substantial issue in seven different issue areas and relate to four of the five factors the Commission generally applies to determine substantial issue. Based on the speculative nature of several of the City's findings, the Commission finds that there is insufficient factual and legal support for the City's denial of the CDP (Factor 1). Although the extent and scope of the proposed development within the City's LCP jurisdiction is relatively limited in size (thereby not raising concerns about Factor 2), the proposed project would affect significant coastal resources (Factor 3). Several of the City's conclusions – for example, its use of non-LCP provisions to make LCP findings, and its speculation about potential future

development as a reason for denial even though it would presumably have permit jurisdiction over any such future development – also raise concerns about the precedent they might establish unless further addressed by the Commission (Factor 4). Finally, the appeal clearly raises issues of regional significance (Factor 5). With four of the five factors weighing heavily in favor of finding substantial issue, the Commission finds that the appeal raises substantial issue regarding conformity with the LCP, as well as with the Coastal Act's public access policies.

E. FINDINGS FOR COASTAL DEVELOPMENT PERMIT DETERMINATION AND DE NOVO HEARING

Because the Commission finds that the City's denial of the portion of the project within the City of Marina's LCP jurisdiction raises a substantial issue, the Commission reviews that portion of the project *de novo*. Cal-Am has also applied for a consolidated CDP for the portions of its project within the Commission's retained jurisdiction and within the certified LCP jurisdictions of the City of Seaside and the County of Monterey. The findings below address all portions of the project within these jurisdictions, using the Coastal Act as the standard of review for those parts of the project within the Commission's consolidated permit jurisdiction and using the City of Marina's certified LCP and Coastal Act public access and recreation policies as the standard of review for the portions within the City's LCP jurisdiction.

F. ENVIRONMENTALLY SENSITIVE HABITAT AREAS

Coastal Act Section 30240 states:

> *(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.*
> *(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.*

Coastal Act Section 30107.5 states:

> *"Environmentally sensitive area" means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.*

Relevant City of Marina LCP Provisions

LCLUP Policy 19:

> *Promote reclamation and protection of native dune habitat and vegetation.*

LCLUP Policy 25:

> *Protect the habitat of recognized rare and endangered species found in the Coastal dune area.*

LCLUP Policy 26:

> *Regulate development in areas adjacent to recognized rare and endangered species or their habitats so that they will not threaten continuation of the species or its habitat.*

LCLUP Policy 41:

> *Give priority to coastal-dependent development on or near the shoreline and to ensure environmental effects are mitigated to the greatest extent possible.*

LCLUP Exhibit A states:

> ***Primary habitat.*** *This term includes all of the environmentally sensitive habitat areas in Marina. These are as follows:*
> 1. *Habitat for all identified plant and animal species which are rare, endangered, threatened, or are necessary for the survival of an endangered species. These species will be collectively referred to as "rare and endangered."*
> 2. *Vernal ponds and their associated wetland vegetation. The Statewide Interpretive Guideline for Wetlands and Other Wet Environmentally Sensitive Habitat Areas*

(California Coastal Commission, February 14, 1981) contains technical criteria for establishing the inland boundary of wetland vegetation.

3. *All native dune vegetation, where such vegetation is extensive enough to perform the special role of stabilizing Marina's natural sand dune formations.*
4. *Areas otherwise defined as secondary habitat that have an especially valuable role in an ecosystem for sensitive plant or animal life., as determined by a qualified biologist approved by the City. [Resolution No. 2001-118 (October 16, 2001); approved by CCC November 14, 2001]*

Secondary habitat. *This term refers to areas adjacent to primary habitat areas within which development must be sited and designed to prevent impacts which would significantly degrade the primary habitat. The secondary habitat area will be presumed to include the following, subject to more precise determination upon individual site investigation:*

1. *The potential/known localities of rare and endangered plant species as shown on LUP p. 71 ("Disturbed Vegetation" map).*
2. *The potential wildlife habitats as shown on LUP p. 75 ("Potential Wildlife" map).*
3. *Any area within 100 feet of the landward boundary of a wetland primary habitat area.*

Rare and endangered species. *This term will apply to those plant and animal species which are rare, endangered, threatened or are necessary for the survival of such species. The Environmental Analysis Report prepared for the Marina Local Coastal Program identified such species in the dune habitat areas. While future scientific studies may result in addition or deletion of species, the list presently includes:*

1. *Smith's Blue Butterfly (Shijimiaeoides enoptes smithi)*[19]
2. *Globose Dune Beetle (Coelus globosus)*
3. *Black Legless Lizard (Anniella pulchra nigra)*
4. *Salinas Kangaroo Rat (Dipodomys Heermanni Goldmani)*
5. *Seaside Painted Cup (Castilleja latifolia* ssp. *Latifolia)*
6. *Monterey Spine Flower (Chorizanthe pungens* var. *pungens)*
7. *Eastwood's Ericameria (Ericameria fasciculate)*[sic][20]
8. *Coast Wallflower (Erysimum ammophilum)*
9. *Menzies' Wallflower (Erysimum menziesii)*
10. *Coastal Dunes Milk Vetch (Astragalus tener* var. *titi)*
11. *Dune Gilia (Gilia tenuiflora* var. *arenaria)*
12. *Wild Buckwheat (Eriogonum latifolium)**
13. *Wild Buckwheat (Eriogonum parvifolium)**
14. *Bush Lupine (Lupinus* ssp.*)+*

** only within the range of Smith's Blue Butterfly.*
+ only within the range of the Black Legless Lizard.

[19] This name has been updated since publication of the LCP – it is now *Euphilotes enoptes smithi*.

[20] The correct spelling is *Ericameria fasciculata*.

LCLUP Habitat Protection Policies include:

> *Before any use or change in use, areas identified as potential habitat for rare and endangered plant or animal species shall be investigated by a qualified biologist to determine the physical extent of the primary habitat areas for the specific rare and endangered plants and animals on that site.*
>
> *Primary habitat areas shall be protected and preserved against any significant disruption of habitat values and only uses dependent on those resources shall be allowed within those areas. All development must be sited and designed so as not to interfere with the natural functions of such habitat areas. Management and enhancement opportunities should be incorporated into use or development proposals; potential impacts shall be fully mitigated, including the assurance of long term mitigation and maintenance of habitat through the use of appropriate acreage replacement/restoration ratios for any unavoidable direct impacts to habitat areas.*
>
> *Potential secondary or support habitat areas to the primary habitats identified on the site should also be defined. Secondary habitat investigation should include identification of the role and importance of the secondary area to the primary habitat area and should stress the impact of use or development in the secondary area on the primary habitat. All development in this area must be designed to prevent significant adverse impacts on the primary habitat areas. In concert with State law, City ordinances shall require environmental review and appropriate mitigation of identified impacts for all development in the Coastal Zone, including the assurance of long term mitigation and maintenance of habitat through the use of appropriate acreage replacement/restoration ratios for any unavoidable direct impacts to habitat areas.*
>
> *Available evidence indicates that dune vegetation is more resilient than previously thought, and areas damaged by illegal use or negligence shall be considered restorable and eligible for restoration.*
>
> *Where habitats of rare and endangered species are located on any parcel, owners and/or operators shall, at such time that development is proposed, develop and execute a Management Plan which will protect identified rare and endangered plant and animal communities. Each plan shall be drawn up by a qualified biologist in co-operation with the property owner/developer.*

LCLIP Regulations for Coastal Conservation and Development District Policy (b)(2)

> *Regulations for coastal conservation and development uses shall be specified in the Coastal Development Permit. The permit-issuing body may approve Permit applications if the following factors, where relevant, are found to apply: …*
>
> *b. Development is limited to already-disturbed areas.*
> *c. Rare and endangered plant and animal habitats are adequately protected*
> *d. Grading and roadway construction and are the minimum necessary for the development. …*
> *g. All significant adverse environmental effects are either avoided or adequately mitigated.*

Summary

Cal-Am's proposed project would disturb up to several dozen acres of ESHA or would otherwise adversely affect, or have the potential to adversely affect, a number of sensitive plant and animal species (see Exhibit 4a – *Special Status Species and Natural Communities That Could Be Significantly Impacted During Construction of the Proposed Facilities*). The project's primary area of long-term ESHA disturbance would be at the site of Cal-Am's proposed well field on the CEMEX site within the City of Marina's LCP jurisdiction, where the initial construction activities would result in adverse effects to about nine acres of coastal dune habitat, all of which is considered ESHA. There would also be post-construction and operational impacts resulting from building concrete pads at each of the six well locations that would cover a total of about an acre of that habitat, along with the ongoing activities needed to maintain those well sites every few years, which would disturb about six acres of ESHA. Over the longer term, these well sites are expected to be adversely affected by sea level rise and coastal erosion, and they would have to be protected or relocated further from the shoreline, either of which would result in additional ESHA impacts. Elsewhere, within the Commission's consolidated permit jurisdiction in the County of Monterey, City of Seaside, and the area of deferred certification, Cal-Am's installation of its various pipelines could result in construction-related impacts to up to about 35 acres of ESHA and other areas that include known or potential occurrences of sensitive plant and animal species, their habitats, and/or communities.[21]

The Findings below first assess the ESHA impacts within the City of Marina, where the standard of review, for purposes of the appeal of the City's denial of Cal-Am's CDP application, is the City's LCP. The Findings next assess other affected areas within the coastal zone of Monterey County, the City of Seaside, and the Commission's retained jurisdiction, where the standard of review, under the Commission's consolidated permit review, is Chapter 3 of the Coastal Act and specifically Section 30240, which establishes allowable and prohibited uses in ESHA and areas adjacent to ESHA.

The Commission's Findings below show that the project components both within the City of Marina and within the Commission's consolidated permit review jurisdiction are not consistent with Coastal Act and LCP provisions that require development within ESHA to be dependent on the protected habitat resources. Proposed project components within the City are additionally not consistent with LCP provisions requiring that habitat of rare and endangered species be protected and that the adverse effects of allowable development be mitigated to the greatest extent possible. However, because the proposed project is a coastal-dependent industrial facility, the Commission finds that the project can be considered for approval, despite its non-conformity to these ESHA policies, pursuant to Coastal Act Section 30260, which allows for approval of such facilities that are otherwise inconsistent with relevant Coastal Act policies. The LCP similarly allows for approval of otherwise non-consistent coastal-dependent industrial

[21] The project's Final EIR/EIS includes mitigation measures meant to avoid some of these impacts, but they allow for the impacts to occur if project activities cannot avoid affecting these sensitive areas and species that are identified during pre-construction surveys. Until those surveys occur, it is not known how extensive the impacts to ESHA would be.

development if it is a use allowed pursuant to Coastal Act 30260.[22] The Findings for ESHA are provided immediately below and Section II.P of these Findings provides the Commission's determination regarding Coastal Act 30260.

ESHA within the City of Marina

Cal-Am's proposed well field and a portion of its Source Water Pipeline would be located on a 30-acre easement and an access easement within the CEMEX site in the City of Marina (see Exhibit 3 – Proposed Project Well Field). The Commission's 2014 Findings regarding Cal-Am's test well project at this same location determined that this area consisted of Environmentally Sensitive Habitat Area ("ESHA"). More recent surveys conducted pursuant to the CPUC's CEQA review confirmed the continuing presence of several special-status species within the proposed well field, and a July 2017 site visit by the Commission's ecologist concluded with a recommendation that the full site be considered ESHA.

ESHA determination under the LCP: The City's LCP establishes two types of habitat – "primary" and "secondary" – and describes the different levels of required habitat protection and allowable uses in each. The LCP states that primary habitat "includes all of the environmentally sensitive habitat areas in Marina" and defines it as being the "potential locale for rare and endangered plan [sic] and animal species and identified, at the time of development, by a qualified biologist as supporting rare and endangered plant and animal species." The LCP further states that "primary habitat areas shall be protected and preserved against any significant disruption of habitat values and only uses dependent on those resources shall be allowed within those areas." The LCP's "primary habitat" definition and its related provisions are similar to the Coastal Act's definition of ESHA, which is "any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments."[23] The LCP's use limitations in those primary habitat areas are also similar to the Coastal Act's, in that both allow only those uses that are dependent on the habitat resources. Because the LCP's policies derive from the authority of the Coastal Act, we read its policies regarding primary habitat to be consistent with those of the Coastal Act.[24]

The LCP's other category – secondary habitat – is defined as those areas "adjacent to primary habitat on which the primary habitat area is dependent or from which the primary area can be influenced by drainage, erosion, human, equestrian or vehicle use or other factors." The LCP requires that direct and potential impacts to both primary and secondary habitat be fully mitigated. While the LCP includes maps of areas presumed to be primary or secondary habitat,

[22] In an unpublished decision stemming from a challenge to the Commission's approval of Cal-Am's test wells, the Sixth District Court of Appeal upheld the Commission's finding that Section 30260 is incorporated in the City's LCP.

[23] See Coastal Act Section 30107.5.

[24] The LCP derives its statutory authority from the Coastal Act, and all of its provisions, including the policies above, must be read consistent with and understood to conform to the Coastal Act as a matter of law (*McAllister v. California Coastal Commission* (2009) 169 Cal.App.4th 912, 931).

it notes that the actual determination of habitat type and category for a particular location must be based on a site-specific biological study.[25]

For several reasons, the proposed well field located in coastal dune habitat would be considered within an area of primary habitat, and therefore ESHA. First, and as detailed below, although it will be in a previously disturbed area of the CEMEX site that consists largely of compacted and sparsely vegetated sand dunes, it nonetheless provides habitat for at least three threatened or endangered species – the Monterey spineflower, Smith's blue butterfly, and the Western snowy plover. Additionally, a number of other special-status species have the potential to exist within the footprint or in adjacent areas of the dunes. The presence of at least three special-status species confirms that the proposed project footprint includes primary habitat and is therefore ESHA.

This type of dune habitat is easily disturbed by human activity. Nonetheless, and as described herein, even though this area is disturbed, degraded dune habitat generally has the ability to restore itself or be restored. The proposed well field area consists of the same substrate as the rest of the dune habitat and is contiguous to less disturbed or undisturbed areas. Barring ongoing disturbance or development, the well field site would soon be colonized by dune biota, either from the adjacent areas or from buried seed stock. The presence of the above-noted threatened or endangered species in the proposed project area provides further evidence that this degraded and historically manipulated area still provides valuable coastal dune habitat and could likely support other rare or threatened species if not further disturbed.

Further, the City's LCP acknowledges that disturbed dune habitat is resilient and relatively easy to restore.[26] The LCP also requires that the reclamation and protection of native dune habitat be promoted, and that habitat for rare and endangered species, such as this dune habitat, be protected (see LCP Policies 19 and 25). The Commission, too, has previously found that even degraded dunes can provide habitat for rare and threatened dune species and that degraded dune areas can constitute ESHA.[27] Thus, interpreting the LCP's definition of primary habitat consistent with the Coastal Act, the Commission finds that the coastal dune area in which the well head portions of the proposed project would be located constitutes ESHA and meets the description of primary habitat under the LCP.

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[25] The LCLUP policies regarding Rare and Endangered Species – Habitat Protection includes the following statement: "*Ín Marina's Coastal Zone, the foredune, dune and grassy inland areas all contain potential habitat for rare and endangered plants and animals. The precise range for each plant and animal is not known because intensive site-specific study throughout the area was not financially possible. However, the potential for various rare and endangered habitats has been identified and mapped (see Environmental Capability section) to provide a guide to the locations where more intensive study is required. Because site-specific study is needed in many areas before any development can take place the following policies apply to all of the areas indicated on the map or meeting the definitions of Exhibit "A" as being potential habitats for rare and endangered plants and animals.*"

[26] See the fourth paragraph of the LCLUP Habitat Protection Policies.

[27] See, for example, Commission actions in the Asilomar Dunes system (including Youssef (CDP 3-11-068) and Goins (CDP 3-11-020)), City of Grover Beach LCP Amendment 1-12, Part 1 (Grover Beach Lodge), Koligian (Commission denial of CDP application A-3-PSB-10-062), and California Department of Parks and Recreation (CDP 3-11-003)

As noted above, the LCP limits uses within primary habitat to those dependent on the resources,[28] and any development within those areas is limited to that which is sited and designed to not interfere with the natural functions of the habitat. The LCP also requires that all adverse effects in primary habitat be fully mitigated. Although the project is proposed to be located in portions of the CEMEX site that have been subject to disturbance, the entire area in which the well field would be located is primary habitat and ESHA under the LCP. The proposed project is not a resource-dependent use, so it cannot be approved consistent with the LCP's habitat protection policies. Importantly, the project's Final EIR/EIS identified the project's inconsistency with these LCP provisions as a significant and unavoidable impact.[29]

Site background and habitat characteristics: The CEMEX site consists primarily of central foredune habitat, which is one of the most important, vulnerable, and geographically-constrained environmentally sensitive habitat types in California. The California Natural Diversity Database ("CNDDB") classifies it as "critically imperiled," this qualifying it as ESHA.[30] Dunes form only under certain conditions where adequate sand supply and appropriate wind energy and direction allow. They are a dynamic habitat subject to extremes of physical disturbance, drying, and salt spray. The winds and shifting sands in dune habitat can cause the habitat characteristics and the species at any given location to change on a relatively short or shifting timescale, so a particular area of dune habitat may have relatively higher or lower resource values over time. The changing and often harsh conditions found in coastal dune habitat support plant and animal species that have evolved strategies adapted to these conditions – for example, many dune plants have seeds that can remain dormant for extended periods of time until conditions allow for them to germinate. Many of the plant and animal species adapted to these geographically-constrained and relatively harsh conditions have become uncommon and are considered rare, endangered, or have a similar special status. At the same time, their ability to withstand these conditions or to remain dormant for long periods, allows dune habitat, even severely disturbed dune habitat, to either be restored or to restore itself relatively easily. The habitat values in dune areas are therefore best understood in terms of the overall complex of dunes of which they are a part, and the Commission has typically found coastal dune habitat to be ESHA even when it is disturbed, due to its rarity, its important ecosystem functions, and its support of sensitive species.[31]

The coastal dune habitat at the CEMEX site provides habitat for several of these species, despite more than 100 years of active sand mining. The habitat within and adjacent to Cal-Am's proposed well field and pipeline route primarily includes the Central Dune Scrub vegetation community, which also qualifies as ESHA in part due to its CNDDB ranking,[32] and which includes a number of plant and animal species of special concern that have evolved and adapted

[28] LCLUP Habitat Protection Policy Paragraph 2.

[29] See Final EIR/EIS, Section 4.6 – Terrestrial Biological Resources.

[30] The CNDDB ranks this habitat type as G1 S1.2, which makes it "critically imperiled" both globally and within the state.

[31] This has been the Commission's approach to dune protection at other locations, for example, in the Asilomar Dunes area in Pacific Grove and the in the Del Monte Forest.

[32] The CNDDB ranks this habitat type as G2 S2.2, which is "imperiled" at both the global and state levels.

to the desiccating, salt-laden winds and nutrient poor soils of this area. Between 2012 and 2016, consultants for Cal-Am and the CPUC conducted several biological surveys of the site.[33] These biological investigations, along with a 2017 site visit by the Commission's ecologist, identified several special-status plant and animal species present within or adjacent to the proposed project area.[34] Species present on the site that are listed as threatened or endangered include:

- **Monterey spineflower** (*Chorizanthe pungens* var. *pungens*), an annual herb listed as federally-threatened under the Endangered Species Act (ESA). It also has a California Rare Plant Rank of 1B.2. It has been observed throughout the CEMEX site, including the proposed well field area.
- **Smith's blue butterfly** (*Euphilotes enoptes smithi*), a federally-endangered species, also ranked by CDFW as S1, is obligate to two host plant species throughout its life cycle – coast buckwheat (*Eriogonum latifolium*) and seacliff buckwheat (*E. parvifolium*) – that grow in these coastal dunes. While the butterfly's flight season is only from mid-June to early September each year, larvae consume the plants' flowers and seeds and pupate directly on or beneath the plants, where they overwinter until the following flight season. The surveys identified both the butterfly and coast buckwheat within the CEMEX site, including along the access road where Cal-Am's Source Water Pipeline would be built.
- **Western snowy plover** (*Charadrius nivosus*), is listed as threatened under the federal ESA and is considered a Species of Special Concern and ranked S2 by the CDFW. The shoreline along the CEMEX site is within designated critical habitat for the species and much of the site provides nesting, roosting, or foraging habitat. Nests are more common in the foredunes or on the beach, but also have been found inland of the foredune area where the well field would be located and where they may become more common as shores continue erode and succumb to sea level rise.

The site also serves as habitat for a number of other special-status species, including several plants on California's Rare Plant Inventory. The sand-loving wallflower (*Erysimum ammophilum*) is eligible for state listing and is considered rare, with a moderate to high degree and immediacy of extirpation (California Rare Plant Rating [CRPR] of 1B.2). It has been observed within the proposed well field area. The site also includes ocean bluff milkvetch (*Astragalus nuttallii* var. *nuttallii*; CRPR 4.2) and branching beach aster (*Corethrogyne leucophylla*; CRPR 3.2), which are included on the California Rare Plant Inventory as species of concern. Other special-status species are known to occupy nearby areas or have the potential to occur at the project site, though they were not identified within the project footprint during these surveys. Plant species include the federally-endangered Robust spineflower (*Chorizanthe robusta* var. *robusta*; CRPR 1B.1), the state- and federally-endangered Menzies' wallflower (*Erysimum menziesii*; CRPR 1B.1), the federally-endangered and state-threatened Sand gilia (*Gilia tenuiflora* ssp. *arenaria*; CRPR 1B.2), and the state-endangered Seaside bird's-beak (*Cordylanthus rigidus* var. *littoralis*; CRPR 1B.1). Two reptiles – the California legless lizard (*Anniella pulchra*; S2) and the coast horned lizard (*Phrynosoma coronatum*; S3), which are considered Species of Special Concern – could also be present.

[33] See survey dates and findings in Section 4.6 – *Terrestrial Biological Resources* of the project's Draft EIR/EIS.

[34] Along with direct observation during site visits, the presence of sensitive species was supported by historical documentation describing the presence of various sensitive species and communities at the site.

Native plants found within the area include California sagebrush (*Artemisia californica*), coast buckwheat (*Eriogonum latifolium*), deerweed (*Acmispon glaber*), California lilac (*Ceanothus* spp.), mock heather (*Ericameria ericoides*), silver dune lupine (*Lupinus chamissonis*), and sandmat manzanita (*Arctostaphylos pumila*; CRPR 1B.2). The site also includes native foredune species, such as beach evening primrose (*Camissonia cheiranthifolia*), yellow sand verbena (*Abronia latifolia*) and beach bur (*Ambrosia chamissonis*). The access road to the CEMEX site has adjacent stands of Coyote Brush Scrub (*Baccharis pilularis* Shrubland Alliance), which is not necessarily considered a rare plant community though particular vegetation associations within it can meet that designation. Ongoing sand mining and processing operations appear to have contributed to invasive vegetative species dominating several areas within the CEMEX site, particularly iceplant (*Carpobrotus* spp.). In some areas, a thick cover of iceplant has helped prevent establishment or re-establishment of native species.

Location and impacts of proposed project components within ESHA: Cal-Am's well field would be located on an area of this coastal dune habitat immediately landward of the foredunes that separate the well sites from the shoreline. This habitat had been disturbed during earlier sand mining activities at CEMEX when this area had been used for storage. Those mining activities are now confined to a much smaller area and are scheduled to end in about a year, pursuant to provisions of a 2017 Settlement Agreement between CEMEX, the Coastal Commission, State Lands Commission, and the City of Marina (Order CCC-17-CD-02).

This Settlement Agreement requires CEMEX to stop sand mining by December 31, 2020, conduct reclamation activities, and transfer the property to a non-profit or government entity with a deed restriction that ensures protection of the site for public access, open space, and habitat. The future uses anticipated at the site are restoration, low-impact passive recreation, public access, and public education. The Settlement Agreement also recognized existing legal rights at the site, which included a recorded easement and option for Cal-Am to use and eventually purchase or acquire an easement over the approximately 30-acre area on which it planned to build the well field, along with a 30-foot wide easement along the CEMEX access road for the Source Water Pipeline. In 2018, Cal-Am exercised this option to obtain a permanent 30-acre easement and the access easement.

Within this 30-acre easement, Cal-Am would disturb about nine acres during construction of six separate well pads, an access road, and part of the Source Water Pipeline, which would continue inland along the easement. About eight of these acres – to be used for staging, materials storage, and spoils spreading – would be restored within five years after construction. However, the expected need every few years to conduct maintenance at the well sites would result in an ongoing and essentially permanent impact to about six of the acres. With about one acre permanently lost due to the presence of the well pads, the overall long-term losses would total about seven acres and temporary losses would total about two acres. There would be additional future losses due to the likely need to protect or relocate the wells due to sea level rise and coastal erosion. Each of these impacts is detailed below:

- **Well and access road construction:** This work would involve use of heavy equipment, including drill rigs and motor vehicles, that would cause soil compaction, noise effects, potential for fuel spills, crushing of native vegetation, and disturbance of seed banks within

the work site. Each well site would be developed within a graded area of between about 5,000 and 6,000 square feet and would include concrete pads, electrical equipment, and other similar project components. Cal-Am would grade, but not pave, a road to allow access to the six well sites. The Commission generally considers impacts to be temporary if the affected area is restored within about 12 months; however, in this instance, these adverse construction-related effects would be more than temporary, as they are expected to take about 15 months before restoration could start, with the follow-up restoration expected to take up to five years.[35] Additionally, because the drilling work for each well needs to be done continuously, Cal-Am would likely need to meet its expected project deadlines by doing some of this work during all or parts of the breeding and nesting season of the Western snowy plover, thereby disturbing individuals that may be close to the construction area or preventing individuals from using nearby areas for nesting. While these direct and indirect impacts to plovers could be avoided by conducting all work during non-breeding/nesting season (i.e., from October 1 to February 28), the Final EIR/EIS anticipates that Cal-Am will be conducting work during breeding/nesting seasons and includes a number of mitigation measures meant to reduce potential impacts that could occur to nearby plovers or active nest sites.[36] Smith's blue butterflies similarly stand to be subjected to disturbance and impacts across all stages of their life history (larvae, pupae and adult) given their obligation to their sessile host plants.

- **Spoils spreading:** Cal-Am plans to remove about 1,600 cubic yards of spoils during well drilling and proposes to spread the spoils evenly in an approximately two-inch thick layer throughout eight nearby acres of ESHA. Most of those spoils would be expected to have higher levels of salinity than the surface of the dune habitat – from about 16 to 30 parts per thousand as compared to the current dune surface concentrations of less than one part per thousand. Cal-Am's expectation is that leaching and dilution during precipitation events would quickly reduce surface salinities to existing levels and would not permanently impede the re-establishment of native plants. However, although many native dune vegetation species may be tolerant of some salinity due to exposure of salt spray from the ocean and are accustomed to sand movement, it is likely that some, if not all, of the individual plants within this eight-acre area would be adversely affected by this spoil spreading, either due to the relatively high salinity in the spoils, due to being buried under the spoils, or due to compaction caused by the earthmoving machines used to spread the spoils. This spoils spreading would also likely result in adverse effects to the seed bank within the dunes, either through burial, compaction, or by being exposed to the relatively high salinity water that would leach through the sand. The Final EIR/EIS includes a mitigation measure that would require Cal-Am to restore all these areas, but allows that restoration to take up to five years, which would represent a significant diminution of that habitat and its ecological function.

[35] Mitigation measures in the Final EIR/EIS would require temporary impacts to be restored within a five-year period following the impact.

[36] The Final EIR/EIS provides that well construction should be conducted during non-breeding season unless otherwise allowed by the U.S. Fish and Wildlife Service. It presumes, though, that construction will occur during that season and includes a number of mitigation measures such as conducting nesting surveys, providing visual barriers between construction and any nests, etc.

Additionally, at least some of these eight acres provide Western snowy plover habitat, and the spoils spreading would disrupt the plover's use of this area. While the Final EIR/EIS requires that Cal-Am restore all plover habitat that is lost permanently due to the project, it does not address these shorter-term, but greater than temporary, losses associated with this spoils spreading.

- **Maintaining or relocating well sites:** Cal-Am anticipates having to conduct maintenance at the well sites about every five years and that the area of disturbance – for access, staging, presence of construction equipment, etc. – would total about six acres for each event. Although each maintenance event could be considered relatively short-term, the overall effect would be ongoing, re-disturbance of the area that could prevent adequate restoration and natural community successional processes from occurring between events, which would represent a greater than temporary adverse effect to these areas of habitat.

  An additional adverse impact would result from the need for Cal-Am to protect or relocate its well sites due to the effects of sea level rise and coastal erosion. As the nearby shoreline erodes inland, the beach and foredunes at the CEMEX site would also move inland and would be expected to maintain approximately the same profile as they now have. In response to a study done early during the CPUC's CEQA review that showed coastal erosion likely affecting the proposed well sites during their operating life, Cal-Am located them several hundred feet further inland than initially proposed. However, because that study was based on earlier versions of state guidance and science on sea level rise, Commission staff requested that Cal-Am provide an updated study using currently applicable guidance and projections. This more recent study, which Cal-Am provided in October 2019, showed that the well sites would likely be protected from the direct effects of coastal erosion over their proposed 25-year operating life, though it also showed that those well sites would be affected by the inland recession of the foredunes occurring in response to erosion and sea level rise (this is further detailed in these Findings' Section II.G –Coastal Hazards). Essentially, as the shoreline erodes inland, the beach profile, including the foredunes, would also move inland, resulting in the well sites being buried beneath the dune sands. When or before this occurs, Cal-Am would need to protect those sites by erecting barriers around the well pad, conduct grading to keep the sands away from the well pads, or relocate the wells further inland to areas that also constitute ESHA. Those areas inland of the currently proposed well sites are also within the area slated for restoration under the above-referenced CEMEX Settlement and are outside of Cal-Am's 30-acre easement, so relocation would require Cal-Am to obtain additional legal interest to any sites further inland and would likely interfere with restoration efforts expected in those areas as part of the CEMEX Settlement. Either of these approaches – protection or relocation – would therefore cause additional and longer-term, though unquantified, disturbance of ESHA.

Other ESHA within the City of Marina: As noted above, Cal-Am would construct a Source Water Pipeline from the well field to the desalination facility. This pipeline would be installed mostly within undeveloped lands along the CEMEX access road and Lapis Road. The Final EIR/EIS notes that this construction could result in temporary impacts to up to about 11.8 acres of ESHA. Cal-Am would also construct a Desalination Water Pipeline from the desalination facility to its Transmission Main Pipeline to the south. The Final EIR/EIS states that the

Desalination Water Pipeline could result in construction impacts in the City of up to 16.9 acres of ESHA in the coastal zone, though some of this area of impact would likely overlap with some of the areas affected by the Source Water Pipeline construction. Details of these ESHA impacts are further described below as part of a fuller description of the various pipeline routes and their effects.

ESHA within Commission's consolidated permit jurisdiction

Project components within the coastal zone but outside of the City of Marina (and therefore within the Commission's consolidated permit review jurisdiction) consist primarily of sections of Cal-Am's several water distribution pipelines, most of which would be built in undeveloped areas along existing transportation routes in the City of Seaside and the County of Monterey. The project's Final EIR/EIS notes that all of these undeveloped areas within the coastal zone should be assumed to be considered ESHA, due to the known or potential presence of rare or sensitive species or due to their habitat types.[37] The Findings below describe these areas more specifically to better characterize locations of ESHA within these areas likely to be disturbed during pipeline construction.

The Final EIR/EIS evaluated biological resources within the pipeline route corridors mapped areas of sensitive species and communities or special habitats within those corridors. The mapped corridors include a "project area" in which construction-related activities would be expected to occur, and a "study areas," which is a 50-foot buffer around the project area. Depending on the location, the full mapped corridor could be up to about 250 feet wide. Many of the habitats within these areas readily qualify as ESHA – for example, the Commission has generally found that areas of central dune scrub, silver dune lupine-mock heather scrub, dune mat, sandmat manzanita chaparral, and oak woodland are ESHA. These pipeline segments and the expected effects on habitat and terrestrial biological resources within the pipeline study areas are described below. The acreage figures provided below are based on potential impacts to areas of ESHA within those corridors, and while the actual location of the pipelines would not necessarily affect all the areas of ESHA within the full Study Area corridor width, there are some segments where the ESHA characteristics extend across the entire corridor, making impacts unavoidable. Additionally, most of the pipelines would be installed using conventional open trench methods, which due to equipment access, sidecasting or stockpiling of soil, and other factors, would result in a larger area being affected than just the width of the pipeline trenches. Some pipeline components, such as access or egress pits, would be wider than the trenches – up to about 35 feet in width. The Final EIR/EIS identifies some, but not all, of the effects expected from these associated activities, which, in some areas of the corridors, would result in greater direct and indirect adverse effects on ESHA than just the actual pipeline location.

Four pipeline segments would be within the County of Monterey's coastal zone, including:

- **Source Water Pipeline:** About 5,365 linear feet of this pipeline would be within the County's coastal zone, including sections along the easternmost portion of the CEMEX access road, and along Lapis Road, Del Monte Boulevard, and part of Charles Benson Road.

[37] Additionally, the County of Monterey's LCP, which the Commission may use for guidance, also identifies some of the habitat types that would be affected by pipeline construction as sensitive habitats – for example, maritime chaparral, coastal dunes, and others.

Pipeline construction along the CEMEX access road and Lapis Road would be within areas of disturbed coastal dune habitat and has the potential to disturb several special-status species, including Monterey spineflower, branching beach aster, ocean bluff milkvetch, and coast buckwheat. The Final EIR/EIS identifies ESHA impacts of up to 11.8 acres during construction, though some of these overlap with areas within the City of Marina's LCP jurisdiction.

- **Desalination Water Pipeline:** About 7,207 linear feet of this pipeline would be within the County's coastal zone, including sections along Charles Benson Road, Del Monte Boulevard, and Lapis Road, where it would enter the City of Marina. The route traverses areas of disturbed coastal dunes, including areas of central dune scrub and coyote brush scrub as well as ruderal habitat and developed areas. The Final EIR/EIS notes that pipeline construction could adversely affect at least three special-status species observed along the route – Monterey spineflower, Kellog's horkelia,[38] and coast buckwheat. The Final EIR/EIS identifies construction impacts of up to 16.9 acres of ESHA, though similar to the Source Water Pipeline above, some of this would occur within the City of Marina's LCP jurisdiction. The Final EIR/EIS also states that the Source Water and the Desalinated Water pipelines could potentially impact about 0.2 acres of this Smith's blue butterfly habitat, which it notes would be a significant adverse effect.

- **Transmission Main Pipeline:** Several thousand linear feet of this pipeline would be located within the coastal zone. It would traverse areas of coastal dune that include stands of central dune scrub, coyote brush scrub, coast live oak woodland, and northern coastal scrub. The Commission generally recognizes oak woodlands as ESHA. Construction could adversely affect a number of special-status species observed along the route, including sandmat manzanita, the federally-threatened Monterey spineflower, Menzies' wallflower, Kellogg's horkelia, Monterey Coast paintbrush, branching beach aster, south coast branching phacelia, Michael's rein orchid, and Monterey ceanothus.[39] The Final EIR/EIS identifies pipeline construction as resulting in up to about 5.4 acres of ESHA impacts (including some within the City of Marina).[40]

- **Castroville Pipeline:** A short segment of this pipeline would be located within the County's coastal zone. Most of the area traversed by the pipeline consists of agricultural land, non-native grassland, developed areas, and ruderal habitat, though it also includes areas of central dune habitat and coyote brush scrub. The Final EIR/EIS notes that construction could adversely affect Monterey spineflower and branch beach aster, and could result in construction impacts to about 0.4 acres of ESHA.

[38] Kellog's horkelia (*Horkelia cuneata* var. *sericea)* has a California Native Plant Society Rare Plant Ranking of 1B.1, meaning that it is rare throughout its range and seriously threatened.

[39] Monterey Coast paintbrush (*Castilleja latifolia* ssp. *latifolia*) has a California Rare Plant Ranking (CRPR) of 4.3; south coast branching phacelia (*Phacelia ramosissima* var. *austrolitoralis*) ranks 3.2; Michael's rein orchid (*Piperia michaelii*) ranks 4.2; and Monterey ceanothus (*Ceanothus rigidus*) ranks 4.2. These species are currently either on the California Native Plant Society's Review or Watch Lists.

[40] The Final EIR/EIS also describes an optional alignment for this Transmission Main Pipeline that would affect up to 5.7 acres of ESHA.

In the City of Seaside, about 320 linear feet of the Transmission Main Pipeline would be located within the City's coastal zone. The habitat along the route includes relatively small and discontinuous areas of coyote brush scrub, silver dune lupine-mock heather scrub, and Monterey pine woodland, along with areas of landscape plantings and ruderal vegetation.

Within the Commission's retained jurisdiction, there would be about 1,290 linear feet of the Transmission Main Pipeline bordering the Fort Ord Dunes State Park, which is an area of deferred certification within Monterey County and an area for which the Commission has previously determined to be ESHA.[41] The Final EIR/EIS identified areas of ESHA within this Study Area corridor.

As part of pipeline installation, Cal-Am would establish several construction staging areas covering a total of 6.6 acres. Most of these areas are paved, but are adjacent to areas that have the potential to provide habitat for special-status species, though they have not yet been described as ESHA. Exhibit 4b (which is Table 4.6-3 from the Final EIR/EIS) provides a description of these areas and the potentially affected species.

In sum, a total of up to about 35 acres of ESHA could be affected by pipeline construction within areas of the Commission's consolidated permit review jurisdiction. The actual area of direct and indirect impact would likely be less, though, as noted above, some areas will unavoidably be subject to direct impacts resulting from pipeline construction. Additionally, while some of the construction impacts could be temporary – i.e., able to be restored within 12 months – other areas include more mature vegetation that would not be fully restored within that period and the impacts would therefore be considered "greater than temporary" or permanent. Similar to the well field described above, these pipelines are not dependent on the habitat resources within the ESHA and are therefore inconsistent with the Coastal Act's Section 30240 ESHA provision that requires development within ESHA be dependent on those resources. However, because the proposed project is a coastal-dependent industrial facility, the Commission may consider approving the project despite this non-conformity, if it meets the three-part test of Coastal Act Section 30260. This review is provided in Section II.P of these Findings.

Additional project impacts

One project component that Cal-Am has not yet included in its CDP application and that it has not yet adequately described or evaluated is an approximately two-mile long liner that must be installed within the existing ocean outfall pipeline to prevent its desalination facility's discharge from corroding the outfall line (see description in Section II.A). The liner is included as one of the mitigation measures of the Final EIR/EIS and must be installed before Cal-Am begins its

[41] See CDP 3-14-1613, California Department of Parks and Recreation. The Commission's Findings (at page 28) stated: *"…three habitats* [central foredune, central dune scrub & central maritime chaparral] *and the areas occupied or likely to be occupied by the various rare or otherwise sensitive species described occur within the proposed project area, which as a whole constitutes ESHA under the Coastal Act. Despite a legacy of past military use and the presently degraded state, the site continues to demonstrate significant ecological value."*

facility operations.[42] Pursuant to an agreement between Cal-Am and Monterey One Water, operator of the wastewater treatment plant, the liner will be installed by Monterey One Water.

Although not yet fully described or evaluated, available information indicates that part of the installation would be done from the beach (and at or near the boundary between the City of Marina's LCP jurisdiction and the Commission's retained jurisdiction). Work is proposed to occur during the treatment facility's low flow period in the summer, when most of its discharge is treated and used for agricultural irrigation. However, this would be during the Western snowy plover breeding and nesting season and would occur within the plover's critical habitat area on the beach. The installation work would likely require heavy equipment on the beach and foredune area, excavation of some amount of beach and dune habitat, installation of temporary fencing to protect the work area, and other activities that would result in noise, disturbance, and occupancy of this critical habitat area during a critical time period for the species. Such activities would not conform to Coastal Act Section 30240 (if the work is done in the Commission's retained jurisdiction) or LCP provisions that mirror that Section (for any work in the City's permitting jurisdiction) because they would be non-resource-dependent activity that would occur in ESHA.

Mitigation measures

The project's Final EIR/EIS includes a number of mitigation measures meant to avoid or reduce some of these known or potential impacts to ESHA (see Exhibit 4c – *Summary of Final EIR/EIS Terrestrial Biology Mitigation Measures*). However, they would not result in mitigation "to the greatest extent possible," as required by the LCP. They include several commonly-required measures, such as requiring the presence of a biologist to oversee implementation of protective measures, conducting environmental awareness training and education to construction personnel, conducting pre-construction surveys and ongoing monitoring, and numerous best management practices. They also include Mitigation Measure 4.6-1n that requires Cal-Am to submit, prior to construction, a comprehensive Habitat Mitigation and Monitoring Plan ("HMMP") that describes Cal-Am's proposed mitigation, including providing mitigation success criteria, implementation plans, maintenance, monitoring, and reporting plans, and contingency measures needed to address restoration and compensatory mitigation on all sensitive habitats and species affected by the project. Cal-Am is developing the required HMMP and plans to coordinate with several resource agencies (including staff of the Commission, California Department of Fish and Wildlife, Regional Water Quality Control Board, U.S. Army Corps of Engineers, and U.S. Fish and Wildlife Service) to determine the full suite of mitigation measures that will be needed.

In partial response to that mitigation measure, and in response to a request by Commission staff, Cal-Am submitted on October 2, 2019 a proposed "Mitigation Strategy Overview for CalAm Monterey Peninsula Water Supply Project" ("Mitigation Strategy" – see Exhibit 5) to address mitigation needed for its impacts at the CEMEX site. The document references a number of the above-referenced Final EIR/EIS mitigation measures that are meant to provide some avoidance

[42] The Final EIR/EIS imposed Mitigation Measure 4.13-5b requiring Cal-Am to install the liner to protect the outfall from corrosion. It included the measure in its Public Service and Utilities section, described the expected measures Cal-Am would conduct during installation, and noted that the work would be subject to other mitigation measures meant to reduce impacts to terrestrial biological resources.

and reduction of some of the proposed project's known or potential adverse effects to sensitive habitats and species. It also proposes some additional measures to address Cal-Am's permanent and temporary ESHA impacts. To address permanent impacts, it proposes that Cal-Am contribute funds for acquisition or long-term maintenance of a portion of the CEMEX site when it is acquired by a non-profit or government entity as part of the above-referenced Settlement Agreement. Cal-Am's Mitigation Strategy identifies 2.2 acres of permanent impacts and to address that impact proposes to fund at least 6.6 acres of mitigation (at a 3:1 ratio) in the northern half of the CEMEX site, which currently consists largely of relatively undisturbed dune habitat. It also identifies a total of 10.3 acres of temporary impacts for which it proposes to restore affected areas on-site at a 1:1 ratio. It further proposes to prepare, prior to construction at the CEMEX site, a full HMMP that will contain all the elements required by Mitigation Measure 4.6-1n.

For several reasons, this Mitigation Strategy document is not consistent with Commission guidance and past approvals as to what is required to provide adequate mitigation. It also does not provide mitigation "to the greatest extent possible," as required by the City's LCLUP Policy 41. The document is also inconsistent with the findings of the project's Final EIR/EIS and with the requirements of Mitigation Measure 4.6-1n. Several of these shortcomings and inconsistencies are described below:

- The Final EIR/EIS clarifies that its mitigation measures are not meant to provide for an in-lieu fee to address compensatory mitigation.[43] However, this Cal-Am Mitigation Strategy proposes what is largely an in-lieu fee approach – i.e., to contribute funds for an unspecified amount of mitigation at an unspecified future date – as its primary mitigation approach.
- The Final EIR/EIS also notes that Mitigation Measure 4.6-1n is meant to apply to all aspects of Cal-Am's adverse effects on sensitive species and habitats, not just those at the CEMEX site or within the City of Marina. The submitted Mitigation Strategy states instead that it is "specific to potential impacts at the CEMEX site."[44] As noted below, the proposed project's expected adverse effects to ESHA elsewhere would also require mitigation, yet those measures are not proposed in this document.
- The Mitigation Strategy document identifies areas of dune habitat within the CEMEX site where it proposes to provide this mitigation. However, those areas consist largely of relatively undisturbed and functioning dune habitat, so funding the acquisition or maintenance of those areas would not result in habitat restoration, but habitat preservation, for which the Commission generally requires mitigation be provided at a greater than 3:1 ratio. Importantly, because the area is already slated for preservation, the approach proposed in the Mitigation Strategy would not provide additional habitat areas to make up for the loss of ESHA acreage and therefore would result in a net loss of habitat acreage.
- As noted above, most of Cal-Am's expected impacts to ESHA would be either permanent or greater than temporary and could total up to about 35 acres. The Mitigation Strategy document identifies only 2.2 acres of permanent impacts.

[43] See Final EIR/EIS, Section 8.5, page 696.

[44] It notes, too, that the mitigation proposed is also meant to provide compensatory mitigation for biological impacts outside the coastal zone, but does not specify what those impacts are or how mitigation might be provided for them.

Were it not for the Coastal Act and LCP nonconformity noted above – i.e., that Cal-Am's development in ESHA is not resource-dependent and is therefore inconsistent with provisions of Coastal Act Section 30240 and several LCP policies – the Commission could require additional mitigation to allow the project to conform to other relevant LCP policies and Coastal Act requirements. For example, the Commission could impose a special condition, pursuant to the LCP's provision requiring avoidance of significant environmental impacts, that the spoils from well drilling not be spread over eight acres of ESHA, but instead be removed from the site and disposed of at an appropriate location. However, because this nonconformity results in no ability for the project to be fully consistent with the LCP's ESHA provisions, there is no need to identify special conditions in this section of the Findings that would allow it to be only partially consistent. Nonetheless, because the proposed project is considered a coastal-dependent industrial facility, the Commission has the discretion to apply the three tests of Coastal Act Section 30260 and approve the project notwithstanding its inconsistencies with Coastal Act and LCP provisions. However, as described in the section of these Findings regarding Section 30260, the Commission has concluded that the project does not meet the first two tests of Section 30260; thus, there is no need to determine whether the project's ESHA impacts could, pursuant to the third test of that section, be mitigated to the maximum extent feasible.

Conclusion for Appeal

Based on the discussion above, the Commission finds that the project, as proposed, does not conform to provisions of Habitat Protection policies in the City's LCLUP, including LCLUP Policies 25, 26, and 41 and those requiring that only uses dependent on habitat resources be allowed within primary habitat areas.

Conclusion for Consolidated CDP

Based on the discussion above, the Commission finds that the project, as proposed, does not conform to the Coastal Act's ESHA policies.

G. COASTAL HAZARDS

Coastal Act Section 30253 states, in relevant part:

> *New development shall do all of the following:*
> *(a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.*
> *(b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs…*

The LCLUP states:

> *Marina's shoreline is subject to a number of hazards: wave erosion, wind erosion, tsunami inundation, and shaking from earthquakes. Currently there is virtually no development along Marina's shoreline or within the tsunami run-up zone. Therefore, the presence of the potential hazards has little effect. However new development, if allowed on the ocean-side of the dunes, could be subject to these hazards. In addition, wind erosion is a serious problem not only where it occurs on the dunes but in inland areas where the sand settles. For these reasons some objectives are outlined . . .*
>
> - *Structural development shall not be allowed on the ocean-side of the dunes, in the area subject to wave erosion in the next 50 years, or in the tsunami run-up zone. The only exception to this would be essential support facilities to a coastally-dependent industry, and in these areas the city will not undertake any liability for property damage due to hazards.*
>
> - *Before development is permitted in the Coastal Zone, a geotechnical report appropriate to the specific proposal shall be prepared for that development in the dunes or in the vicinity of any vernal pond. The report shall include at least geologic and seismic stability, liquefaction potential, identification of an appropriate hazard setback to protect the economic life of structures, and specific recommendations on drainage, irrigation and mitigation of identified problems. Report contents shall comply with guidelines of the California Division of Mines and Geology.*
>
> …
> *No new development shall be permitted which will require the construction of shoreline protection structures unless such development is in accordance with the provisions of the "Small Boat Harbor" section of this Land Use Plan, or when such structures are necessary to serve coastal dependent uses (as defined in the Coastal Act) or to protect publicly owned beaches from erosion.*

The LCLUP states:

> *Tsunami Hazard: Tsunamis are seismic sea waves, often erroneously called "tidal waves." Because of the height and depth of the Coastal dunes in Marina, inland areas are not within the tsunami hazard zone. The areas most subject to tsunami in Marina are the sandy beaches and dunes. With an adequate tsunami warning system, there is no*

significant tsunami threat to beach users. Since there is little development within the tsunami run-up zone, there is little present threat. Future development should not occur in the tsunami run-up zone (on the sandy beaches and foredune area).

The LCLUP North of Reservation Road Planning Area requires proposed development consider:

Public safety and vulnerability to wave erosion.

Tsunami and other coastal hazards.

The LCLUP contains the following table:

TABLE 1: MARINA GEOTECHNICAL CONCERNS EVALUATION

Geotechnical Concern	Geologic Terrain Affected (See Map)	Level of Concern for Terrain	Land Use	
			Risk Level	Mitigation
Wave Erosion	Sandy Beach Flandrian Dune Sand Pre-Flandrian Dune	Intermediate High Low	Moderate	Land planning, geotechnical investigations, adequate shoreline setbacks
Wind Erosion	Sandy Beach Active Dune Sand Flandrian Dune Sand Pre-Flandrian Dune	Low High High Low	Low to geotechnical on-site; High off-site	Land planning, Moderate investigations, revegetation, boardwalks, sand fences

The LCLIP states:

Standards for Coastal Protection Structures: *Except for a few facilities associated with sand mining, there currently is little capital investment to be threatened by erosion along Marina's shoreline. The face of the dunes is subject to wave erosion, so future development shall be placed beyond the area vulnerable both to wave erosion and tsunami hazard. This setback shall be great enough to protect the economic life of the proposed development (at least 50 years) and be east of the tsunami hazard zone. The exact extent of this setback shall be determined by a qualified geologist, selected from an approved list compiled and maintained by the City. Because of variation from site to site, the setback line shall be determined at the time development of a site or parcel is proposed.*

Protective structures are not recommended in Marina; however, if they should ever be necessary, standards shall be established to insure that the type of protection, location, design and other factors are considered. In determining if it is suitable to issue a coastal permit for a shoreline structure, the following shall be addressed: (1) alternatives to a

protective structure shall be determined and evaluated by appropriate specialists first; and (2) an EIR/EIS shall be required on the proposed structure. The EIR/EIS shall address specific issues of Local Coastal Land Use Plan concern, construction and maintenance. The environmental evaluation and mitigations shall be prepared by qualified specialists and shall address at a minimum the following specific issues and design considerations.

Summary

Both the Coastal Act and the LCP generally require that development be sited and designed to avoid and minimize risks associated with coastal and geologic hazards, and specifically requires that development be sited with the setback needed to provide protection from these hazards for the full expected economic life of any structures. Cal-Am's well field site would be subject to several of these hazards, including coastal erosion and tsunami runup, both of which will be exacerbated due to sea level rise and climate change. These are addressed below.

Coastal erosion and sea level rise

Background: The well field would be just inland of the actively eroding shoreline of Monterey Bay. Parts of the Bay shoreline, including areas near Cal-Am's proposed well field, have exhibited the highest annual erosion rates in the state, due in part to relatively high levels of wave energy and the easily erodible sand that makes up most of the Bay shoreline. The area has experienced, and is likely to continue experiencing, storm-driven erosion events that result in losses of as much as 100 feet of beach and dune profile in a single event. The erosional process along this stretch of shoreline also result in the recession inland of the dune system located adjacent to the beach. As the beach erodes, the dune profile moves inland, though not necessarily at the same rate as the shoreline. Along with the natural shoreline processes that drive coastal erosion in this area, a substantial additional contributor has been the sand mining that has occurred at the CEMEX facility for many decades. Its removal of more than 100,000 cubic yards of sand annually from the nearshore area served to reduce the sand supply along the shoreline, thereby exacerbating the ongoing natural erosive processes.

In recognition of the area's high erosion potential, the LCP requires that most development be located inland of areas near the shoreline that are vulnerable to tsunami runup and erosion. Regarding tsunami, the well heads – with the existing test well head at about 600 feet from the current shoreline and the rest of the proposed well heads to be about 800 feet from the current shoreline – would be located beyond the tsunami runup zone identified in the LCP and, at their approximately 30-foot elevation (NAVD88), would be above more recently identified maximum tsunami runup estimate of about 18 feet, both now and under projections of several feet of sea level rise.[45]

Regarding expected erosion, the project's Final EIR/EIS included an assessment of the effects of sea level rise and coastal erosion on the proposed well field and the most seaward sections of the Source Water Pipeline. Coastal erosion studies during early stages of the project's environmental review showed that the well field could be affected by coastal erosion expected

[45] See Wood, et. al, Community Exposure to Tsunami Hazards in California: U.S. Geological Survey Scientific Investigations Report 2012–5222, 2013.

during the project's operating life, and Cal-Am then relocated the well heads about 400 feet further inland to their currently proposed location. The Final EIR/EIS modeled "stand-alone" expected erosion rates as well as those same rates when accompanied by 100-year storm events, and found that expected erosion by 2060 would remove about 300 feet of the beach and dune profile. Adding a 100-year storm event would remove an additional 130 feet for a total of 430 feet. These projections would allow most of the well field to escape erosion until 2060, although the existing test well that Cal-Am proposes to convert to a permanent well could be affected, as it would be about 300 feet closer to the current shoreline than the other wells.

These assessments, however, were done in 2014 and 2016 and are based on sea level rise guidance and scenarios that have been superseded by the state's and Commission's more recent and current guidance that projects higher sea level elevations occurring more quickly.[46] For example, the projections used in the Final EIR/EIS anticipated sea level rise of 15 inches by 2040 and 28 inches by 2060 whereas the currently applicable projections for the Monterey Bay area anticipate a range of sea level rise in 2040 of between about 15 and 20 inches and a 2060 range of 31 and 46 inches (an increase of up to 33% and 64%, respectively). The assessments were also done before completion of the CEMEX Settlement, which requires CEMEX to permanently stop its sand mining operations by the end of 2020, so those assessments do not reflect what the expected erosion rates will be without removal of the large amounts of sand from this stretch of shoreline.

Commission staff requested that Cal-Am provide an updated assessment of expected sea level rise and coastal erosion that is based on current state guidance and projections and on expected site conditions without sand mining. In response, Cal-Am provided an October 2, 2019 technical memorandum – *Updated Coastal Erosion Hazard Analysis for CalAm Monterey Peninsula Water Supply Project*, prepared by AECOM. This technical memorandum assesses expected sea level rise and coastal erosion effects on Cal-Am's proposed well field and Source Water Pipeline using low, medium-high, and extreme risk aversion scenarios for the years 2040, 2060, and 2120. It includes the high GHG emission scenario for each to provide a more conservative assessment of expected effects. It also considers the effects of both a 100-year and 500-year storm event on site erosion to provide additional conservatism. To reflect the expected site conditions resulting from the closure of the CEMEX sand mining operations, it assumed a 60% reduction in the historical retreat rate along the stretch of shoreline.[47] For each of the several scenarios, the memorandum separately describes the expected effects on the test slant well, which Cal-Am proposes to convert to a long-term well for the project and is located about 600 feet from the current shoreline, and on the rest of the well heads that would be constructed about 800 feet from the current shoreline.

[46] See the Ocean Protection Council's *State of California Sea-Level Rise Guidance 2018 Update* and the Coastal Commission's *2018 Sea Level Rise Policy Guidance* and November 7, 2018 *Science Update*.

[47] This assumed 60% reduction is derived from studies and a sand budget analysis presented in two documents prepared, in part, to identify the effects of those mining operations on erosion along the Monterey Bay shoreline. See Environmental Science Associates and Phillip Williams and Associates, *Evaluation of Erosion Mitigation Alternatives for Southern Monterey Bay*, prepared for the Monterey Bay Sanctuary Foundation and the Southern Monterey Bay Coastal Erosion Working Group, May 30, 2012, and Young, Robert, *An evaluation of the ongoing impacts of sand mining at the CEMEX Lapis Sand Plant in Marina, California on the Southern Monterey Bay Shoreline*, 2017.

The Commission's coastal engineer reviewed the assessments provided in the Final EIR/EIS and by Cal-Am and prepared a technical memorandum describing that review and its conclusions (see Exhibit 6 – Coastal Hazards Technical Memorandum). The review concluded that under the several scenarios, both the test well site and the other well sites would likely be safe from erosion through 2040, that the test well site could be at risk by 2060, and that both the test well site and other well sites would likely be at risk by 2120. Having the test well site be at risk from long-term erosion with added storm-related retreat from a 100-year or greater storm means that the project would permit structural development in an area subject to wave erosion in the next 50 years, which presents some tension with LUP and IP policies generally requiring setbacks that will protect new development for "the economic life of the proposed development (at least 50 years)," However, the LUP has an exception to this policy for essential support facilities to a coastal-dependent industry, and this exception might apply to the test well portion of this project. Thus, the project is not inconsistent with LCP policies related to coastal erosion.

The review also considered the effects of expected dune recession on the well sites. As noted above, the site's foredunes will recede inland as a consequence of shoreline erosion and at some point will occupy the same area as the well sites. The review concluded that the risk of this occurring would be low before 2040, but would increase thereafter. Additionally, dune height is likely to increase along with the increases in sea level – for example, as sea level elevates by its expected 15 to 20 inches by 2040, the dunes could experience a similar height increase. It is difficult to estimate exactly when the back toe of the dunes would shift to cover the well sites, but the review concludes that, under some scenarios, active burial of the well heads by dune sand could start by 2040. Because of differences in the elevations of the well heads and due to variations in the dune profile – i.e., the dunes seaward of some well sites are higher or contain greater volumes of sand than those seaward of other well sites – the timing and amount of burial would likely vary among the well sites. The review concludes that the test well head would experience the greatest risk from profile changes due to sea level rise and that the well field would experience the greatest risk from the inland shift of the dune profile.

Overall, the review concludes that there are few risks from these hazards to the well sites before 2040, but that there are somewhat increasing risks to the wells between 2040 and 2060, including a possibility that the well field could experience several feet of sand burial during that period. Beyond 2060, there would be a likelihood that significant burial would occur.

To address the anticipated erosion rate, the Final EIR/EIS includes a mitigation measure that requires Cal-Am to monitor the rate of coastal retreat and to determine, based on the identified and expected annual erosion rate, when there are no more than five years before the wells become exposed due to erosion.[48] At that point, Cal-Am would be required to start the planning and permitting needed to abandon the wells in accordance with state well destruction requirements, and upon receipt of the necessary approvals, Cal-Am would remove the wells. The Final EIR/EIS and AECOM study did not assess the risk to the wells from sand burial, however. With the risk to the wells from this erosive process, the project does not conform to the LCP provision requiring identification of an appropriate hazard setback to protect the

[48] See Final EIR/EIS Mitigation Measure 4.2-10.

economic life of the structures and specific recommendations to mitigate any identified problems. Cal-Am has identified an expected 60-year project life, so the proposed well field would presumably need to be sited to avoid these erosional hazards until about 2080. Cal-Am has also estimated that these proposed wells would operate for about 25 years (i.e., until about 2045), during which time they could remain safe from these hazards. However, they would then need to be relocated further inland, which, as described below, may be infeasible due to property ownership issues, and which, as described in Section II.F of these Findings, would result in substantially greater adverse effects on ESHA and would likely interfere with habitat restoration efforts expected to occur inland of the well sites. As long as the wells were to remain in their currently proposed location, there would also be the likelihood that they would have to be maintained to remove sand that may bury them for short periods of time or that Cal-Am may need to install barriers to prevent burial. Either of those activities would represent additional impacts to ESHA and the potential need for these activities demonstrates that the project is subject to hazards from wind erosion that have not been addressed.

Conclusion
The proposed locations of the well sites would result in the wells being subject to hazards from wind erosion during the project's expected operating life and are therefore inconsistent with the above-referenced LCP provisions. To address this inconsistency, the Commission could, in theory, require that the well sites be moved further inland out of the hazard zone, either now or in the future; however, the currently proposed locations are near the most inland extent of Cal-Am's easement, and could not be moved out of the hazard zone unless Cal-Am was able to obtain additional legal interest for areas further inland. The terms of the above-referenced CEMEX Settlement do not allow Cal-Am to obtain additional legal interest on the CEMEX lands.

Nonetheless, because the proposed project is considered a coastal-dependent industrial facility, the Commission has the discretion to apply the three tests of Coastal Act Section 30260 and approve the project notwithstanding its inconsistencies with LCP hazard provisions. However, as described in the section of these Findings regarding Section 30260, the Commission declines to use that provision to approve the project; thus, there is no need to determine whether this nonconformity to the LCP's coastal hazards provisions could be addressed through mitigation or project changes.

Conclusion for Appeal: Based on the discussion above, the Commission finds that the project, as proposed, does not conform to the above-referenced LCP coastal hazards policies.

H. PROTECTION OF COASTAL WATERS AND MARINE RESOURCES

Coastal Act Section 30230 states:

> *Marine resources shall be maintained, enhanced, and, where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*

Coastal Act Section 30231 states:

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

Coastal Act Section 30233 states, in relevant part:

> *(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:*
> *(1) New or expanded port, energy, and coastal-dependent industrial facilities…*

LCLUP Policy 16:

> *To insure the protection of marine resources for long-term commercial, recreational, scientific and educational purposes.*

LCLUP Policy 17:

> *To insure protection and restoration of the ocean's water quality and biological productivity.*

These Coastal Act and LCP policies require generally that development protect marine resources, ocean water quality and biological productivity. These findings separately address the proposed project's expected effects on coastal waters and marine biological resources resulting from its source water intakes and its discharges. Additionally, because the proposed project would involve placement of structures in coastal waters, these Findings address the project's conformity to the alternatives analysis required pursuant to Coastal Act Section 30233.

Effects of intake on coastal water quality and marine biology
Cal-Am has specifically selected subsurface slant wells to obtain source water for its proposed desalination facility. The state's Ocean Plan includes provisions applicable to seawater desalination facilities that require, where feasible, that those facilities use wells or other types of subsurface intakes instead of open water intakes to avoid the adverse entrainment and impingement effects on marine life caused by open water intakes.[49]

Cal-Am's proposed slant wells would extend beneath coastal dunes and the beach to extract primarily seawater from the underlying aquifers. Cal-Am's hydrogeological modeling of the site and its proposed wells shows that the expected area of drawdown from its wells would extend some distance offshore and would be expected to induce seawater to be drawn into the wells through the overlying sand and sediments. The depth of the wells – down to about 200 feet below the seafloor – and the relatively large area from which they would induce this drawdown, along with the maximum pumping rate of about 2,500 gallons per minute from each well, would result in the seawater being drawn through the seafloor at an essentially undetectable rate, so any effects that might occur to marine life in the overlying ocean water column or benthic habitat would be imperceptible.[50] Importantly, staff of the Central Coast Regional Water Quality Control Board has determined that Cal-Am's proposed slant well system meets the Ocean Plan requirement that the proposed project's intakes constitute the "best intake technology feasible to minimize the intake and mortality of all forms of marine life."[51]

Effects of discharge on coastal water quality and marine biology
Cal-Am would direct the brine discharge from its desalination facility through an outfall owned by Monterey One Water. The outfall is currently used to discharge treated wastewater from Monterey One's regional wastewater treatment facility in northern Monterey County to about 11,000 feet offshore in Monterey Bay. The outfall terminates at a diffuser that is about 1,000 feet long and that has over 100 ports through which the discharge reaches ocean waters.

For its proposed discharge, Cal-Am would first route the brine from its facility to an approximately three million gallon mixing tank at the wastewater treatment facility where it would blend with treated wastewater before being discharged through to the outfall. The current rate of discharge of treated wastewater through the outfall varies significantly over the year – from nearly zero gallons during the summer months to up to about 17 million gallons per day in the winter – as the treatment facility produces recycled water that is routed to agricultural operations for irrigation during much of the growing season each year. At its expected operating capacity of producing 6.4 million gallons per day of potable water, the desalination facility

[49] Entrainment occurs when small organisms, such as plankton, fish eggs, larvae, etc., are pulled into an open-water intake. It results in essentially 100% mortality due to the organisms being subjected to filters and high pressures within the facility's pre-treatment or treatment systems. Impingement occurs when larger fish or other organisms are caught on an intake's screening system and are either killed or injured.

[50] See Final EIR/EIS, Section 4.5.

[51] See January 15, 2019 letter from John Robertson, Executive Officer of the Central Coast Regional Water Quality Control Board to Coastal Commission's Tom Luster regarding Cal-Am's conformity to Ocean Plan provisions Chapter III.M.2.b and III.M.2.d(1) and Water Code section 13142.5(b) regarding intakes.

would contribute about 10 million gallons per day to these discharge flows. Depending on the time of year, that volume would represent anywhere from about not quite half to 100% of the volume of total effluent conveyed through the outfall.

The treatment facility's discharge is currently regulated through a National Pollutant Discharge Elimination System ("NPDES") permit that will need to be amended to allow Cal-Am to use the outfall for its discharge. Regional Water Board staff is currently reviewing the proposed discharge to determine what requirements are needed to ensure that the varying characteristics of the combined discharges will meet water quality objectives and be protective of water quality and marine life. Regional Water Board staff is also reviewing what measures are needed for the discharge to be consistent with the state's Ocean Plan Amendment applicable to discharges from seawater desalination facilities. One requirement still being evaluated and designed is the need for Cal-Am to modify the outfall's existing diffuser to ensure that the expected salinity concentrations from the combined brine and treatment plant discharges during some times of the year and the essentially stand-alone brine discharge during other times of year conform to the Ocean Plan Amendment, which requires that discharges into ocean waters from seawater desalination facilities not exceed two parts per thousand over natural background salinity levels as measured no further than 100 meters from the discharge points.[52] Based on this requirement, the area within which the salinity could exceed the two parts per thousand limitation could cover up to about 27 acres of the ocean floor and part of the water column above; however, modeling conducted to date shows that this area would likely be much smaller, with the 100% brine discharge expected to meet the salinity standard just a few dozen feet from the discharge points.

The discharge will also be limited in its allowable concentrations of other constituents, such as metals, dissolved oxygen, and various contaminants. The Final EIR/EIS identified potential exceedances of several contaminants under certain operational scenarios and uncertainty about whether some constituents would meet the necessary Ocean Plan objectives. It is therefore unclear at this time as to what effects the proposed desalination facility would have on water quality and marine life and what structural or operational changes would be needed to ensure Cal-Am's discharge would meet the relevant Ocean Plan objectives, and thereby minimize its potential adverse effects.

The Ocean Plan requires dischargers to prepare for Regional Board approval a monitoring and reporting plan that describes measures that will be implemented to ensure the discharges are meeting all relevant requirements. A draft of this Plan is currently under review, along with consideration of what operational or design changes might allow the discharges to meet the required objectives. Potential operational changes include modifying the treatment methods, treating the discharges before they are routed to the outfall, or augmenting the flows to increase dilution prior to discharge (although the Ocean Plan Amendment generally prohibits flow augmentation for seawater desalination discharges). Potential design changes include retrofitting the existing diffuser system to allow additional dilution of the discharge, which would involve adding one or more additional structures to the existing outfall. The Final EIR/EIS described these changes to the diffuser as the most effective and reasonable strategy for ensuring compliance.

[52] Natural background salinity in ocean water generally ranges from about 30 to 35 parts per thousand.

Determining Ocean Plan conformity will also require that Cal-Am install several monitoring buoys offshore before Cal-Am starts discharging in order to establish baseline conditions on which to evaluate potential effects of the discharge. The currently proposed plan would include four buoys to be located at different distances from the outfall to measure salinity and other water quality parameters. They would include a seafloor anchor, a package of sensors, floats, and other equipment, all of which would extend about ten feet above the seafloor. Cal-Am would also install a telemetry buoy consisting of a seafloor mooring, ballast chain, a cable riser, and necessary instrumentation, which would extend through the water column to the water surface. It would transmit data from the other buoys to allow near real-time monitoring.

Either of these aspects of the project – a diffuser retrofit or buoy installation – would involve placing fill in coastal waters in the form of new or modified structures. Pursuant to Coastal Act Section 30233, any such fill is allowed only if it meets a three-part test: 1) that there is no feasible less environmentally damaging alternative; 2) that feasible mitigation measures have been provided to minimize adverse environmental effects; and 3) that it be for certain specified purposes, including a new or expanded port, energy, or coastal-dependent industrial facility. These three tests are similar to those of Coastal Act Section 30260, which is applied in Section II.P of these Findings. Those Findings include the analysis and conclusions needed to determine conformity to these Section 30233 tests. For the reasons described in those Findings, the project does not conform to Section 30233 because there is a feasible and less environmentally damaging alternative project that will not require fill in coastal waters and because not all mitigation has been identified and imposed.

Conclusion

Based on the analyses above, and on those in Section II.P of these Findings, the Commission finds that the proposed project does not conform to Coastal Act Section 30233. There is also not enough information known about the project's outfall to be able to find that the project will sustain the biological productivity of coastal waters and adequately protect marine resources in compliance with Sections 30230 and 30231. Were it not for the other Coastal Act and LCP nonconformities noted elsewhere herein – e.g., the project's nonconformity with Coastal Act and LCP ESHA policies – the Commission could consider adopting special conditions that might be able to bring this component of the proposed project into conformity with Section 30233's requirement for mitigation and Sections 30230 and 30231 requirements to protect marine resources. However, because the project is being denied for other reasons, there is no need to identify special conditions that would be needed to ensure conformity with these provisions.

I. PROTECTION OF GROUNDWATER RESOURCES

Coastal Act Section 30231 states, in relevant part:

> *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff,* ***preventing depletion of ground water supplies*** …

STAFF NOTE: As described above in the Staff Recommendation (page 2), this section will be provided on Friday, November 1, 2019.

J. ENERGY CONSUMPTION & CLIMATE CHANGE

LCP Policy 39 states that the City's intent is:

> *To encourage development which keeps energy consumption to the lowest level possible.*

Coastal Act Section 30253 states, in relevant part:

> *New development shall do all of the following:*
> …
> *c) Be consistent with the requirements imposed by an air pollution control district or the State Air Resources Board as to each particular development.*
>
> *d) Minimize energy consumption and vehicle miles traveled.*

Constructing and operating major water, energy, telecommunication, and transportation projects can use a significant amount of energy, thereby significantly increasing emissions of greenhouse gases ("GHGs").[53] These emissions exacerbate climate change caused by global warming, which, in turn can cause significant adverse impacts to coastal resources of California. The Coastal Act has a number of provisions that provide authority to take steps to reduce causes and effects of climate change and to adapt to the effects of global warming. These include the Coastal Act's public access and recreation policies (Sections 30220 and 30211), marine resource and water quality policies (Sections 30230 and 30231), the environmentally sensitive habitat area protection policy (Section 30240), and the coastal hazards policy (Section 30253(a) and (b)). Further, Section 30253 requires, in part, that development be consistent with the state's air pollution control requirements and that it minimize energy consumption.

The state has long recognized the threats of climate change and the importance of taking steps to reduce those threats. In 2006, for example, the California Legislature adopted the state's 2006 Global Warming Solutions Act and found:

> *Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.* (California Health & Safety Code, Division 25.5, Part 1).

[53] Greenhouse gases are any gas, both natural and anthropogenic, that absorbs infrared radiation in the atmosphere and include water vapor, carbon dioxide (CO2), methane (CH4), and nitrous oxide (N2O). These greenhouse gases lead to the trapping and buildup of heat in the atmosphere near the earth's surface. Carbon dioxide is the major anthropogenic greenhouse gas. All greenhouse gases are quantified collectively by the carbon dioxide equivalent ("CO_2e"), or the amount of CO2 that would have the same global warming potential, when measured over a specific time period.

Climate change covers a broad range of impacts that can occur due to GHG emissions, such as increased sea level rise, changes in the frequency, intensity or occurrence of heavy precipitation and droughts, changes in the frequency and intensity of extreme temperature events, and changes in ocean water chemistry. California's and the Coastal Commission's current guidance documents – *Rising Seas in California: An Update on Sea-Level Rise Science*, the *State of California Sea-Level Rise Guidance: 2018 Update*, and the Commission's *Sea Level Rise Policy Guidance* – build on several previous assessments and projections[54] that describe and recognize that within the coming century potentially severe impacts will likely occur in the areas of sea level, water resources, agriculture, forests and landscapes, and public health. Many of these effects will impact the coastal zone and resources specifically protected by the Coastal Act, including impacts to air quality, species distribution and diversity, agriculture, expansion of invasive species, increase in plant pathogens, alteration of sensitive habitat, wildfires, rising sea level, coastal flooding, and coastal erosion. In addition, absorption of carbon dioxide by the ocean leads to a decrease in ocean pH with concomitant consumption of dissolved carbonate ions, which adversely impacts calcite-secreting marine organisms (including many species of phytoplankton, zooplankton, clams, snails, sea stars, sea urchins, crabs, shrimp, and others). The most direct impacts of global warming focused on the coastal zone are sea level rise and its associated impacts, ocean warming, and ocean acidification.

Expected Direct and Indirect CO_2e Emissions

Cal-Am's project would result in direct GHG emissions during project construction, primarily due to use of motorized equipment, and would result in ongoing indirect GHG emissions during facility operations due to its use of purchased electricity. Regarding project construction, the Final EIR/EIS calculated expected construction-related emissions based on the presumed equipment use over a 24-month construction period. It determined that total direct construction emissions would be about 14,291 tonnes CO_2e, which when annualized over the expected 40-year project life, would equal about 357 tonnes CO2e per year.[55] This does not include emissions that would result from the required installation of the outfall liner described in Section II.A above, which would make these total and annualized emissions somewhat higher.

Regarding project operations, the facility would be expected to use just over 63,000 megawatt-hours of electricity per year, which would be an increase of almost 52,000 megawatt-hours per year over Cal-Am's existing baseline electrical use for its water portfolio (based on the 2015 baseline used in the Final EIR/EIS). The total indirect annual emissions resulting from that electrical use will depend on what sources of energy (fossil fuels, wind, sun, etc.) are used to generate the electricity supplied to the project. These indirect emissions would be expected to decrease over time as PG&E and the energy producers it purchases electricity from are able to institute emission reduction measures required pursuant to AB 32 and other state laws, such as increasing the use of lower emitting energy sources, such as solar or wind instead of natural gas.

[54] See, for example, California's 2006 *Climate Change Impacts Assessment*, 2009 *Climate Adaptation Strategy* and 2013 *Indicators of Climate Change in California* reports, and reports by the Intergovernmental Panel on Climate Change (IPCC Reports in 1990, 1995, 2001, 2007 and 2013) and various climate research centers (such as the Pew Center on Global Climate Change and Heinz Center), and the Commission's 2015 *Sea-Level Rise Policy Guidance*.

[55] Note: Standard guidance for air districts includes annualizing construction emissions over the expected operating life of the project.

Additionally, and as stated in the Final EIR/EIS, there would also be some emissions – in the range of about 95 to 735 tonnes per year – resulting from the release of carbon dioxide caused by pulling seawater and groundwater from depth, where atmospheric pressure is much higher that at the ground surface. There would also be other emissions resulting from vehicle use needed for project operations and maintenance, use and testing of an emergency generator, etc. The Final EIR/EIS amortized these emissions over an expected 40-year operating life for the facility to determine that these operationally-related emissions would total just over 8,000 tonnes per year, which would be well above the 2,000-tonne per year significance threshold identified in the Final EIR/EIS.[56]

Cal-Am's desalination plant, which will use the great majority of the overall project's energy, would be located outside of the coastal zone. Coastal Act Section 30604(d) states that "[n]o development or any portion thereof which is outside the coastal zone shall be subject to the coastal development permit requirements of this division." Accordingly, this analysis only considers whether the portions of the project inside the coastal zone comply with the relevant LCP and Coastal Act policies, though the Findings discuss overall project energy use for context. The portions of the project within the coastal zone would use energy for construction of those components and would use electricity for running the slant well pumps.

To address the project's emissions, the Final EIR/EIS includes a mitigation measure meant to ensure that Cal-Am's proposed GHG Emissions Reductions Plan results in net zero operational emissions. This measure requires Cal-Am to identify state-of-the art energy recovery and conservation technologies that it can include as part of its project, and requires Cal-Am to use renewable energy to the extent possible and to procure and retire Renewable Energy Credits, Carbon Offsets, and other similar instruments that are meant to offset emissions and that are acceptable to any of several state-approved carbon registries.[57] The measure also includes reporting requirements to ensure that Cal-am achieves net zero emissions for each year's operations. In addition, the EIR/EIS and project design include other measures to address energy usage. For example, piping system materials and sizing would be designed to limit pressure losses and reduce pumping and energy requirements, and electrical and treatment equipment would include variable frequency drives to reduce the operating speed of pumps to match the pump discharge pressure requirements and reduce energy usage. With the designs and mitigation measures incorporated in the EIR/EIS and the project, the project will minimize energy consumption, consistent with the LCP and Coastal Act requirements.

Conclusion

The portions of the project in the coastal zone appropriately minimize energy consumption, consistent with LCP and Coastal Act policies. However, as described in Section II.O of these Findings regarding alternatives, there is a feasible alternative to the project that would use significantly less energy than the desalination project as a whole.

[56] The Final EIR/EIS used a threshold of 2,000 tonnes of CO_2e per year to determine if the proposed project's emissions would represent a significant adverse environmental effect.

[57] Per the Final EIR/EIS, these include the Climate Action Reserve, the American Carbon Registry, the Verified Carbon Standard, or the Clean Development Mechanism; or (ii) any other entity approved by the California Air Resources Board to act as an "offset project registry" under the state's Cap-and-Trade Program.

K. PUBLIC ACCESS AND RECREATION

LCLUP Policy 1 is:

> *To insure access to and along the beach, consistent with the recreational needs and environmental sensitivity of Marina's Coastal area.*

LCLUP Policy 2 is:

> *To provide beach access and recreational opportunities consistent with public safety and with the protection of the rights of the general public and of private property owners.*

LCLUP Policy 3 is:

> *To provide beach access in conjunction with the new development where it is compatible with public safety, military security and natural resources protection; and does not duplicate similar access nearby.*

The LCLUP's "North of Reservation Road Planning Area" requires that proposed development consider:

> *Retention of uninterrupted lateral access along the sandy beach frontage.*
>
> *Protect and continue to provide public access from the nearest public roadway to the ocean.*
>
> *Structures necessary for the functioning of any Coastal Conservation and Development use (e.g., dredgelines, sewer outfall lines) may cross the sandy beach designated Park and Open Space provided lateral beach access is not significantly blocked.*

Coastal Act Section 30210 states:

> *In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.*

Coastal Act Section 30211 states:

> *Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.*

Coastal Act Section 30212(a) states:

> *Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where: (1) It is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, (2)*

> *Adequate access exists nearby, or, (3) Agriculture would be adversely affected. Dedicated accessway shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway.*

Coastal Act Section 30214 states, in relevant part:

> *(a) The public access policies of this article shall be implemented in a manner that takes into account the need to regulate the time, place, and manner of public access depending on the facts and circumstances in each case including, but not limited to, the following:*
> *(1) Topographic and geologic site characteristics.*
> *(2) The capacity of the site to sustain use and at what level of intensity.*
> *(3) The appropriateness of limiting public access to the right to pass and repass depending on such factors as the fragility of the natural resources in the area and the proximity of the access area to adjacent residential uses.*
> *(4) The need to provide for the management of access areas so as to protect the privacy of adjacent property owners and to protect the aesthetic values of the area by providing for the collection of litter.*

Coastal Act Section 30221 states:

> *Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.*

LCP and Coastal Act policies require generally that development located adjacent to the shoreline in areas with public use not interfere with that use and that they provide access to the shoreline. Most project components – including the desalination facility and most of the pipelines – would be located some distance from the shoreline or even outside the coastal zone and would cause few, if any, effects on public access to the shoreline or public recreation. There would likely be short-term effects resulting from temporary traffic closures or detours needed during pipeline construction in some of the rights-of-way Cal-Am plans to use, but those effects would be relatively temporary and minimal. However, project construction and operations at the well field and outfall area on the CEMEX site would potentially have greater adverse impacts, as described below.

Effects during construction

The CEMEX site is currently an active industrial facility that does not provide vertical access to the shoreline. Coastal access at the site is primarily available as lateral access along the beach from access points to the north and south. During construction, work to develop the well field and the project's Source Water Pipeline would occur several hundred feet from the shoreline and would not be expected to affect access to or along the beach and would have little, if any, effect on public access or recreational use. Pipeline installation along the Fort Ord Dunes State Beach would result in temporary closures of some park entrances, but not to all entrances simultaneously, so public access impacts there would be short-term and relatively minimal. Cal-Am's installation offshore of the modified diffuser components needed to allow its use of the

existing wastewater outfall would involve boats and divers working in coastal waters and would result in temporary and minor effects to use of those coastal waters for fishing or other uses. These construction-related activities would be expected to be consistent with, and not conflict with, the above policies, as they will not require activities or structures on the beach that would inhibit public access or impede beach users.

One component of the project's construction that was not included as part of Cal-Am's CDP application – installation of the required outfall liner – would occur on the beach at the CEMEX site and would result in temporary adverse effects on public access during construction. As currently described, installation would involve heavy equipment operating on the beach, placement of barriers and protective work zones around the installation, and other measures that would prevent lateral access along the shoreline for a period during the summer. As noted previously, this proposed liner was included as a required mitigation measure in Cal-Am's Final EIR/EIS, but there is not yet sufficient information to determine the full extent of expected construction methods, likely or potential impacts, or mitigation measures that may be needed.

Effects during project operations

The existing sand mining operations at the CEMEX site will end within a few years and the site will be made available for public access, habitat restoration, and passive recreational uses. Pursuant to the above-referenced CEMEX Settlement Agreement, the CEMEX site will be transferred to another owner at some point, though this is expected to take several years, and construction would likely be complete before public access is developed.

During project operations, Cal-Am's project could result in adverse effects to public access and recreation, depending on the eventual restoration and access plan that emerges from implementation of the CEMEX Settlement Agreement. That Agreement anticipates that most of the CEMEX site will be used for habitat restoration, public access, and passive recreation opportunities. Cal-Am has a 30-acre permanent easement within the CEMEX site and its well field will include fencing to protect about an acre of the several well heads and associated equipment. Cal-Am's ongoing maintenance of the well field will result in access and use of heavy equipment and vehicles over an area of up to about six acres. It is unclear at this time how these aspects of the project would affect or prevent public access over this part of the CEMEX site. Until the Commission approves a restoration and access plan pursuant to the Agreement, it is difficult to know exactly how much of an effect Cal-Am's project would have on future public access within the CEMEX site or along the shoreline.

Regarding Coastal Act Section 30221, the CEMEX site represents oceanfront land that, once its industrial use ceases, would be suitable for, and is expected to be used at least in part for, recreational use. Cal-Am's use of the site would result in some limitation of that future use, though Cal-Am's use would be for a coastal-dependent industrial facility, which is also a priority use under the Coastal Act. While Cal-Am's limited project footprint would represent some diminishment of the potential recreational use, there are other recreational opportunities that are provided and/or would be provided elsewhere on the CEMEX site and along this stretch of shoreline.

Conclusion

The development, as proposed, would result in temporary adverse impacts to public access and recreation during construction. Were it not for the Coastal Act and LCP nonconformities noted elsewhere herein – e.g., the project's nonconformity with Coastal Act and LCP ESHA policies, its nonconformity with LCP coastal hazards policy, and its nonconformity with Coastal Act Section 30233 regarding placement of fill in coastal waters – the Commission could require special conditions requiring Cal-Am to implement measures needed to ensure its proposed project would be consistent with the above-referenced Coastal Act and LCP provisions related to public access and recreation.

However, because those areas of nonconformity do not allow the project to be fully consistent with the relevant Coastal Act or LCP provisions, there is no need to identify special conditions in this section of the Findings that would result in it being only partially consistent with the Coastal Act and LCP. Because the proposed project is considered a coastal-dependent industrial facility, the Commission has the discretion to apply the three tests of Coastal Act Section 30260 and approve the project notwithstanding its inconsistencies with Coastal Act and LCP provisions. However, as described in Section II.P of these Findings, the Commission finds that the project does not meet any of those three tests and therefore denies the CDP application and appeal. As a result there is no need to identify needed special conditions that may be needed to ensure conformity to the above-referenced public access and recreation provisions.

L. VISUAL RESOURCES

The LCP's Preservation and Enhancement of Coastal Views policy states:

> *Views of the dunes from Highway 1 and the beach shall be protected by keeping development off of the primary ridgeline. Development below the ridgelines shall be limited in height and mass to blend into the face of the dunes: generally structures should be hidden from public view where physical and habitat constraints allow. Where this is not possible, structures shall be clustered and sited to be as inconspicuous as possible.*
>
> *In areas where mining activity or blowouts have removed sand dune landforms, new development shall not extend above the height of the nearest adjacent sand dunes and shall be clustered so as to preserve access views across its site from Highway One.*

The LCP's North of Reservation Road Planning Area requires proposed development consider:

> *Visibility of new uses from Highway 1 and from the water's edge.*

Coastal Act Section 30251 states:

> *The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.*

Project components within the coastal zone would consist primarily of pipelines and subgrade components that would have little, if any, visual impact once construction and installation would be completed. Within the City of Marina, the project's well field would include above-grade well heads and electrical boxes surrounded by fences, with no completed project components exceeding about ten feet in height. The City's LCP generally requires that permitted development protect views to and along the coast and specifically requires that views of the dune area from Highway 1 and the beach be protected by keeping development below the dune ridgelines, limiting its height, and clustering structures to the extent allowed by physical and habitat constraints.

Some project construction would occur on or near the Monterey Bay shoreline and would be visible from other nearby publicly-accessible shoreline areas, including the highly scenic Marina Dune Complex. These areas are valued in part for their views of the Bay, for wildlife and bird watching, and for recreational activities. During construction, the main project activities that would affect visual resources would be staging and operating the drilling equipment needed to install the wells. These activities would result in visual impacts over the approximately 15 months of well installation. Most of these activities, such as the use of large construction

equipment, are similar to those currently occurring as part of the sand mining activities at the site and are expected to be visually equivalent to those of the mining operations. Some of the project's activities – e.g., ingress and egress, and the higher drill rigs – may be viewed by passing motorists on Highway 1 or by beach users, though most would have distant views that would be partially blocked by intervening dune formations and vegetation. The most visible construction activities would be the lighting associated with the project, and construction of the outfall liner, which would be on the beach during summer months of higher public use.

During operations, the visual impacts of the well heads, surge tanks, and fences at the site would be relatively minimal, though their effects would depend in part on the eventual surrounding uses at the site. For example, the infrastructure could look relatively innocuous in an area used for public access but could look out of place in the midst of an area of restored dune habitat. Visual impacts would be more substantial during Cal-Am's ongoing maintenance at the well field, which would involve vehicles, heavy equipment, and maintenance activities at a time when similar industrial uses on the rest of the CEMEX site have ended.

Conclusion

The development, as proposed, would not be on prominent ridgelines, and permanent development would mainly be hidden from public view. Although ongoing maintenance activity at the well head sites might be visible from nearby public locations, it would likely be limited in extent so that it would not conflict with the LCP's requirement that development below the ridgelines be limited in height and mass to blend into the face of the dunes. Construction activities would have several temporary adverse visual impacts, that with the Commission's imposition of special conditions – such as requiring muted colors for the fences and infrastructure – could ensure conformity with the LCP's or Coastal Act's visual resource policies. Were it not for the Coastal Act and LCP nonconformities noted elsewhere herein – i.e., the project's nonconformity with Coastal Act and LCP ESHA policies, its nonconformity with LCP coastal hazards policy, and its nonconformity with Coastal Act Section 30233 regarding placement of fill in coastal waters – the Commission could ensure the proposed project would conform to the above-referenced visual resource-related provisions.

Because those areas of nonconformity do not allow the project to be fully consistent with the relevant Coastal Act or LCP provisions, there is no need to identify special conditions in this section of the Findings that would result in it being only partially consistent with the Coastal Act or LCP. However, because the proposed project is considered a coastal-dependent industrial facility, the Commission has the discretion to apply the three tests of Coastal Act Section 30260 and approve the project notwithstanding its inconsistencies with Coastal Act and LCP provisions. As described in Section II.P of these Findings, the Commission finds that the project does not meet any of those three tests and therefore denies the CDP application and appeal. As a result there is no need to identify special conditions that may be needed to ensure conformity to the above-referenced visual resource provisions.

N. ENVIRONMENTAL JUSTICE

Coastal Act Section 30604(h) states:

> *When acting on a coastal development permit, the issuing agency, or the Commission on appeal, may consider environmental justice, or the equitable distribution of environmental benefits throughout the state.*

Background and Summary

Section 30604(h) provides for the Commission to evaluate environmental justice considerations when making CDP decisions. As defined in Section 30107.3 of the Act, "environmental justice" means "the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies."[58] In addition, the Commission in March 2019 adopted an environmental justice policy ("EJ Policy") to guide and inform its decisions and procedures in a manner that is fully consistent with the standards in, and furthers the goals of, Chapter three of the Coastal Act and certified local coastal programs. The EJ Policy further articulates environmental justice concepts:

> *The term 'environmental justice' is currently understood to include both substantive and procedural rights, meaning that in addition to the equitable distribution of environmental benefits, underserved communities also deserve equitable access to the process where significant environmental and land use decisions are made.*

Thus, the EJ Policy underscores the importance of both substance – i.e., evaluating whether adverse environmental impacts disproportionately burden one population over another or the equitable distribution of project benefits – and process – i.e., ensuring that those potentially affected by proposed development have a meaningful and equitable opportunity to voice concerns in an open and transparent public process.

Opponents of the proposed project have raised both substantive and procedural concerns about the project's impacts on communities of color and low-income communities located near the proposed project in the City of Marina, as well as on those who presently purchase water from Cal Am. Key substantive concerns include potential impacts to the City of Marina's independent water supply and a loss of opportunity for public access to the local shoreline. Within Cal-Am's service area, the primary substantive concern is that increased water rates would disproportionately burden low-income rate payers in the Cities of Seaside, Carmel-by-the-Sea, Del Monte, Pacific Grove, and Monterey.[59]

[58] Coastal Act Section 30013, which provides that the Commission is to advance the principles of environmental justice and equality, references California Government Code section 65040.12(e), which defines "environmental justice" as "*the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies.*"

[59] Ratepayers in Castroville would receive low-cost water from Cal-Am through a Return Water Agreement between Cal-Am and other entities meant to ensure that Cal-Am does not export water from the Salinas Valley Groundwater Basin.

Procedural concerns include an alleged lack of transparency in the decision-making process and allegations of limited engagement by Cal-Am with communities of concern near the project site. The analysis below shows that residents of the aforementioned groups would be disproportionally burdened by the proposed project. In other words, the distribution of environmental benefits and corresponding burdens would not be equitably distributed among the various affected groups and communities within the region, which supports a determination that the proposed project implicates environmental justice issues.

Identifying communities of concern

To understand and evaluate environmental justice aspects of the project, staff conducted an environmental justice analysis by evaluating quantitative and qualitative data about potentially affected communities obtained from census data and California Communities Environmental Health Screening Tool (CalEnviroScreen).[60] Staff also relied on the definitions provided in the U.S. Environmental Protection Agency's EPA EJSCREEN.[61] "Low Income Population" is defined here as the population in households where the household income is less than or equal to twice the federal poverty level. Similarly, "Linguistically Isolated Population" is defined here as people living in a household where all members age 14 years and over speak a non-English language and also speak English less than "very well." Population level analysis was conducted using U.S. census data and the CalEnviroScreen screening tool which provides statistics gathered and compiled by public agencies at the state and federal level.

In addition to gathering and evaluating quantitative information from online sources, staff traveled to the site in September 2019 and met with Seaside and Marina stakeholders and environmental justice group representatives to understand community lived experiences and ground truth quantitative information. In this staff report, the term "communities of concern" refers to low-income communities, communities of color, and other populations that have higher exposure and/or sensitivity to adverse project impacts due to historical marginalization, discriminatory land use practices, and/or less capacity to mitigate adverse impacts.

The community of Marina, located eight miles north of Monterey, includes a modest downtown dotted with Asian and Mexican markets and family-owned restaurants. Compared with neighboring communities, the city has a disproportionate amount of nearby industrial development such as a regional landfill, regional composting facility, and regional sewage plant. Nearby Fort Ord is a contaminated site listed on the U.S. EPA's national priorities list.[62] Marina is also home to the CEMEX sand mining facility, the last coastal sand mining operation in the country, which is now scheduled to close in 2020 pursuant to Coastal Commission Consent Order CCC-17-CD-02.

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[60] CalEnviroScreen is a mapping tool developed by Cal EPA to identify California communities that are most affected by many sources of pollution, and where people are often especially vulnerable to pollution's effects. It uses state and federal environmental, health, and socioeconomic information to produce scores for every census tract in the state.

[61] EPA EJScreen: https://www.epa.gov/ejscreen/overview-demographic-indicators-ejscreen

[62] The U.S. EPA describes the National Priorities List (NPL) as sites of national priority among the known or threatened releases of hazardous substances and contaminants throughout the United States and its territories. The NPL guides the EPA in determining which sites warrant further investigations and potential remediation.

Seaside is a city on the southern end of the Monterey Bay, similar in many ways to neighboring Marina, with a modest down town and housing stock primarily consisting of modest, older homes, despite its proximity to the ocean. A third of its residents are non-white, and slightly less than half (43%) are low-income. It contains the highest population (7%) of African American residents in the project area or the region. Hospitality and food service is the largest employment sector (23%), which was part of why Seaside was hit hard economically by the military base closures in the 1990s.

Castroville is an historically agricultural area, known in particularly for artichoke production. Much of its economic activities center around agricultural support services, and many of its residents work directly or indirectly in agricultural production. Farms, farm stands, and restaurants specializing in locally produced food demonstrate the direct connection between growers and consumers. Its population is 94% non-white, 60% low-income, and slightly less than half of the population has a high school education.

Socioeconomic and demographic characteristics of affected communities:
Cal Am's service area includes the cities of Seaside, Carmel-by-the-Sea, Del Monte, Pacific Grove, and Monterey. The City of Marina is included in this analysis because it is part of the project area and will have associated impacts. Evaluating the distribution of the project's environmental burdens and benefits and cumulative impacts on communities of concern requires an understanding of the existing socioeconomic and demographic profile of the affected communities and the distribution of environmental burdens among them. This community context provides the baseline for understanding the individual and collective sensitivity to and the ability to mitigate adverse project impacts and whether existing burdens would be exacerbated by the intended project.

Several of the cities within Cal-Am's service area are majority white, English-speaking, well-educated populations with income in the 24th percentile or above. However, the demographic comparison of the area shows that the coastal zone communities of Marina, Seaside, and Castroville are majority non-white, with a larger proportion of low-income and linguistically-isolated populations than the other parts of the service area (see Exhibit 1 – Project Location). The community of Marina, although not within Cal-Am's service area, would be adversely affected because the proposed slant well field is in their city at a site that would otherwise be set aside for public access, passive recreation, and coastal resource protection and because the proposed project could have an adverse effect on aquifers within Marina. The ratepayers on the Monterey Peninsula would also be adversely affected, particularly the underserved City of Seaside, because their monthly water bills could increase substantially to cover the cost of the project and the water it provides. The service area also includes the cities of Carmel-by-the-Sea, Del Monte, Pacific Grove, and Monterey. Table 1 below provides a demographic profile of these areas and allows for a comparison of each community's demographic, linguistic, economic, and educational makeup. The City of Castroville would not be burdened by Cal-Am's project, but would benefit from Cal-Am providing water to it at a reduced rate.[63]

[63] This would result from the Return Water Agreement developed during the CPUC's review of Cal-Am's project, through which Cal-Am would return a portion of the water it extracts and exports from the Salinas Valley Groundwater Basin back to the Basin in the form of reduced-cost potable water for the Castroville Community Services District. See CPUC Final Decision 18-09-17, Appendix H.

	Marina City		Monterey City		Seaside City		Carmel-by-the-Sea		Del Monte Forest		Pacific Grove		Castroville	
Current Demographics														
White	38%		65%		31%		77%		80%		78%		6%	
Non-white	62%		35%		69%		23%		20%		22%		94%	
Latinx	26%		18%		44%		12%		9%		12%		90%	
Black	6%		3%		7%		<1%		1%		1%		<1%	
Asian	18%		7%		9%		8%		7%		5%		3%	
Native American	1%		<1%		1%		<1%		<1%		<1%		0%	
Pacific Islander	3%		<1%		3%		0%		<1%		<1%		0%	
Other	8%		6%		5%		3%		2%		3%		1%	
Demographic Indicators														
	Value %	Percentile in State	Value %	Percentile in State	Value %	Percentile in State	Value %	Percentile in State	Value %	Percentile in State	Value %	Percentile in State	Value %	Percentile in State
Low Income	36%	56	20%	32	43%	65	16%	24	20%	32	16%	24	60%	83
Linguistically Isolated	8%	53	3%	31	11%	64	0%	16	3%	31	2%	25	45%	98
Pop. w/ Less Than High School Ed.	17%	55	2%	9	24%	68	3%	13	2%	9	4%	21	53%	94

[1] EPA EJ Screen – data from U.S. Census Bureau, American Community Survey (2012-2016)
Table 1: Demographic Comparison of Affected Communities

The demographic comparison of the areas shows that the Cities of Marina, Seaside, and Castroville, have a larger proportion of non-white, low-income, and linguistically isolated populations than the other parts of the service area. Marina, Seaside, and Castroville all rank in the top half of the state when it comes to low-income population, linguistic isolation, and those with less than high school education.

The state has created other tools to identify communities of concern that factor in existing environmental burdens in addition to the demographic risk factors summarized in Table 1. In 2012, Governor Brown signed Senate Bill (SB) 535 (De Leon),[64] giving the California Environmental Protection Agency ("CalEPA") responsibility for identifying "Disadvantaged Communities," which are disproportionately affected by environmental pollution or other public health hazards can lead to environmental degradation, or have high concentrations of low-income, low levels of educational attainment, high unemployment or sensitive populations.

[64] SB 535 (De Leon) Chapter 830, Statutes of 2012, required that 25% of available monies from the Greenhouse Gas Reduction Fund be allocated to disadvantaged communities, as defined. Although the focus of SB 535 was to ensure the equitable distribution GGRF investments, the criteria used to determine the location of these communities is instructive for the purposes of this analysis.

CalEPA defines these as census tracts in the top 25 percent of the CalEnviroScreen 3.0 index because they have multiple sources of pollution and a population with high sensitivity to pollution. According to CalEnviroScreen 3.0, Marina has one census tract designated as an SB 535 Disadvantaged Community. This community experiences a higher level of poverty, linguistic isolation, unemployment and housing burden compared to the rest of California. In linguistically isolated households within this area, the top three non-English languages spoken include Spanish, Vietnamese, and Korean. This community also has a pollution burden higher than 71% of other census tracts in the state. Table 2 below provides a breakdown of demographic and environmental indicators within this census tract.

Table 2: SB 535 Disadvantaged Community Census Tract 6053014102 in City of Marina

Demographic Indicators	Percentile Relative to State
Linguistic Isolation	62
Poverty	73
Unemployment	65
Housing Burden	88
Environmental Indicators	Percentile Relative to State
Pollution Burden	71
Pesticides	83
Drinking Water	65
Cleanups	84
Groundwater Threats	95
Impaired Water	96
Solid Waste	85

Staff also gathered qualitative information about the affected communities during a site visit on September 19, 2019 where they met with residents from Marina and Seaside, including subsistence fishermen, single parents living in Section 8[65] (federally subsidized) housing, retirees on fixed incomes, recent immigrants caring for extended families and head-of-household wage earners working multiple jobs to support their families.

This demographic and socioeconomic data clearly establishes the presence of communities of concern living in Castroville, Seaside, and Marina that would be adversely affected by the proposed project. The City of Marina also has existing cumulative environmental burdens in addition to social risk factors, as indicated by the SB 535 Disadvantaged Communities tool. Although Castroville and Seaside do not meet the standards qualifying them as SB 535 Disadvantaged Communities, their population characteristics nonetheless qualify them as communities of concern for purposes of these Findings. The two communities have sizeable low-income populations relative to the rest of California, putting them in the 83rd and 65th percentiles within the state, respectively.

[65] Section 8 housing vouchers are given to individuals who are very low-income families, the elderly, and the disabled who meet eligibility criteria and is administered by local public housing agencies.

All three of these communities are at high risk for bearing disproportionate burdens associated with the proposed project as described below, and thus, potential impacts to those communities and the Commission's ability to mitigate those impacts warrant additional consideration pursuant to Section 30604(h) of the Coastal Act.

Substantive environmental justice concerns: Understanding the nature of existing environmental justice burdens within a community, and analyzing the potential for new development to inadvertently exacerbate those impacts, is best informed through the lived-experience of the community members themselves. As part of the Commission's commitment to increase outreach consistent with its environmental justice policy, staff toured the affected area and spoke with residents and city officials from both Marina and Seaside. During the site visit, residents shared various environmental concerns and community burdens, providing additional information relevant to environmental justice considerations that is not captured by quantitative tools such as CalEnviroScreen.

The main substantive concerns identified from qualitative and quantitative information relate to two main areas: 1) increased costs for water, and 2) direct and indirect environmental and public recreational effects resulting from the project's components, primarily the proposed wells:

1) **Regarding water costs:** Ratepayers in Cal Am's service area currently pay among the highest water rates in the country, according to a 2017 Food & Water Watch survey.[66] The survey found a typical household in Cal-Am's service area using 60,000 gallons a year paid on average $716.18 in 2015, a number that increased by 68 percent to $1,202.59 in 2017. A 2019 Monterey Peninsula Water Management District report found that costs of the proposed project's water and other expected rate increases from Cal-Am could nearly double an average residential ratepayer's water bill by 2023.[67]

   To address a prohibition against exporting water from the groundwater basin from which its wells would extract water, Cal-Am has agreed, through a Return Water Agreement, to provide potable water to Castroville at a substantially discounted rate. This discount would be about $110 per acre-foot versus the $6,000 or more per acre-foot expected to be paid by Cal-Am's ratepayers, including both residential and non-residential ratepayers (such as the hospitality and agriculture industry) throughout Cal-Am's service area.

   Only ratepayers in Castroville, however, would be afforded a discounted rate on the desalinated water, which would be at the expense of the rest of Cal Am ratepayers who would absorb that cost. Those higher rates would disproportionately impact underserved community residents that are part of Cal-Am's ratepayer base because economically vulnerable households cannot easily or even feasibly absorb what would likely be significant increases in their monthly water costs. Moreover, the discount to Castroville would not off-set impacts to the underserved communities of Marina and Seaside. The feasible alternative, meanwhile, would not exacerbate or increase burdens to Seaside, Marina or Castroville.

[66] See *Top Ten Most Expensive Water Providers in the Country: 2017 Update*, accessed at: https://www.foodandwaterwatch.org/sites/default/files/top_ten_most_expensive_water_providers-web.pdf

[67] See Monterey Peninsula Water Management District, *Supply and Demand for Water on the Monterey Peninsula*, September 2019.

Staff spoke to various ratepayers in the area to understand concerns with the proposed project. To summarize, some Seaside residents are concerned that the economic hardship caused by these rate increases would eventually push them out of this currently-affordable coastal community. Rate payers say they have gone to great lengths to save water over the years including using their dishwashers to only dry dishes, flushing only once a day, taking showers at municipal facilities instead of at home, not washing clothes as often, removing gardens and using graywater, but their bills have continued to increase.

Although coastal access is typically viewed through the lens of providing and protecting recreational infrastructure and other amenities for the public to visit and enjoy beach areas, when viewing communities of concern through an environmental justice lens, ensuring the affordability of cost of living is a much more fundamental aspect of the concept of "coastal access." In this case, Seaside residents' coastal access hinges on their ability to persist economically in their communities. The Commission would not achieve maximum consistency with the Chapter 3 public access policies of the Coastal Act if it were to implement those policies only in terms of protection of amenities to enhance visitor access to the coast without considering how its permitting decisions might also affect community-wide living affordability within the coastal zone – for example, by requiring the provision of parking spaces and trails for coastal access, while simultaneously authorizing a project that has the potential to affect the ability of some residents to remain in their homes. If other options for protecting the Carmel River while meeting the water needs of the region in a more affordable manner are feasible, the less environmentally damaging alternative would not reduce coastal access opportunities and also avoid the pernicious effects of this type of displacement.

2) **Regarding environmental and public recreational effects of project components:** While not in Cal Am's service area, the City of Marina and many of its residents believe the desalination proposal places the burdens of the proposed project on, but offers none of the benefits to, their community. The slant wells for this desalination project would be placed in Marina's coastal zone, affecting approximately seven acres of beach and dune habitat that currently supports coastal-dependent plant and animal species. If not for this project, this area would be available in the near future for public access, habitat restoration, and passive public recreational use.[68] Marina is already home to industrial use both in the coastal zone and outside of the coastal zone. Within the coastal zone, industrial uses include the CEMEX sand mining site (which granted will cease operations in 2020). Some members of the community also worries about losing some of the negotiated access at the site due to limitations Cal-Am may impose around its well field (Section II.K of these Findings provides a more detailed assessment of the proposed project's effects on public access). Although Marina has about four miles of shoreline, it currently has just two points of public access along that stretch of coast. Although Cal-Am's adverse effects on public access are likely to be relatively limited, they would affect Marina residents' ability to fully access this section of the coast.

[68] See Section II.A, which describes the Settlement Agreement among the Commission, CEMEX, State Lands Commission, and the City of Marina that will result in closure of the current sand mining operations by 2022 and purchase and repurposing of the site for the above-referenced uses.

Importantly, and as discussed in Section II.O – Alternatives Analysis and Section II.N – Coastal-Dependent Industrial Facility Override, a feasible project alternative exists that would avoid or reduce these environmental justice concerns and would also reduce the general public cost burdens while providing ratepayers with an adequate water supply. For the impacts to communities of concern in Marina, the feasible alternative would avoid all of the above-referenced impacts. Regarding the disproportionate burdens on low-income residential rate payers and costs to all ratepayers, this alternative is projected to provide water at about $2,000 per acre-foot in comparison to the $6,000 per acre foot for this project, which would result in a significantly lower rate increase than the proposed project. This would have a lesser burden on low-income ratepayers in the service area in addition to providing cost savings to all rate payers.

Procedural environmental justice concerns
Some residents of the City of Marina also raised procedural environmental justice concerns, including that Cal-Am did not fully engage them because they are not ratepayers. They also expressed a sense of being excluded by the CPUC proceeding because it analyzed only the proposed project's effects on ratepayers, not on the impacts to communities living near the proposed project.

A number of Marina and Seaside residents have also told Commission staff that they have felt at a disadvantage engaging in the project development and permitting process. For example, many said they could not take a day off of work to make the 100 mile journey to and from their communities to the Coastal Commission's November 2019 meeting location in Half Moon Bay. In some cases, these residents said they work multiple jobs in order to make rent, so they felt they would need to choose to either have a place to live or come before the Commission.

In response to these concerns and to a written request from the City of Marina requesting greater avenues for public engagement, the Commission agreed to several additional approaches to encourage the widest possible involvement from underserved members of the public in consideration of the current project. Commission staff scheduled the Cal-Am matter early on the November 14, 2019 agenda so members of the public would have more certainty about when, if they were able to attend, they should plan to participate. Commission staff also agreed to provide an opportunity for livestream testimony to the Commission from the City of Marina's City Hall so members of the public who could not travel to Half Moon Bay could still participate.

Conclusion
As described above, and based on staff analysis of environmental justice concerns using quantitative and qualitative information, as well as consultation with stakeholders and individuals from communities of concern in the project area, the proposed project would disproportionately burden communities of concern. Cal-Am's project would create substantial hardships for significant segments of the communities of concern that would be affected by the relatively high water costs resulting from the project, by potential indirect impacts to other area water supplies, and by the presence of Cal-Am's well field on a site that otherwise would provide priority coastal resource benefits such as habitat restoration, public access to the shoreline, and recreational opportunities.

While all ratepayers on the Monterey Peninsula, other than those in Castroville, would be adversely affected by increased water rates associated with this project, ratepayers in the City of Seaside, and other pockets of vulnerable populations elsewhere in the service area will be less able or unable to accommodate the substantial increase in their monthly water bills to cover the cost of the project and the water it provides. This could lead to the exacerbation of existing socioeconomic hardships, culminating in forced displacement from their homes. The community of Marina, although not within Cal-Am's service area, would be adversely affected because the proposed slant well field is in their city at a site that would otherwise be set aside for public access, passive recreation, and coastal resource protection

While the Carmel River would also benefit from reduced pumping, as discussed in Sections II.O and II.P below, a feasible project alternative exists that would avoid or reduce these environmental justice concerns and would also reduce the general public cost burdens while enhancing Carmel River flows and providing ratepayers with an adequate water supply. For the impacts to communities of concern in Marina and Seaside, the feasible alternative would avoid all of the above-referenced impacts. Regarding the disproportionate burdens on low-income residential rate payers and costs to all ratepayers, this alternative is projected to provide water at about $2,000 per acre-foot in comparison to the $6,000 per acre foot for this project, which would result in a significantly lower rate increase than the proposed project. This would have a lesser burden on low-income ratepayers in the service area in addition to providing environmental benefits to the Carmel River and cost savings to all rate payers.

O. ASSESSMENT OF ALTERNATIVES

Coastal Act Section 30233 states, in relevant part:

> *(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:*
> *(1) New or expanded port, energy, and coastal-dependent industrial facilities…*

Coastal Act Section 30260 states:

> *Coastal-dependent industrial facilities shall be encouraged to locate or expand within existing sites and shall be permitted reasonable long-term growth where consistent with this division. However, where new or expanded coastal-dependent industrial facilities cannot feasibly be accommodated consistent with other policies of this division, they may nonetheless be permitted in accordance with this section and Sections 30261 and 30262 if (1) alternative locations are infeasible or more environmentally damaging; (2) to do otherwise would adversely affect the public welfare; and (3) adverse environmental effects are mitigated to the maximum extent feasible.*

Summary

As noted previously, the proposed project is subject to two Coastal Act provisions and an LCP provision that require the Commission to determine whether there is a feasible and less environmentally damaging alternative to the proposed project. As described below, the Commission evaluated an alternative project – the Pure Water Monterey Expansion project – to determine whether it would be feasible, whether it would conform to the same project objectives and criteria applied to Cal-Am's proposed project during its CEQA review, whether it would provide adequate water, and whether it would have fewer adverse environmental effects. Based on the analysis provided below, the Commission concludes that the Pure Water Monterey Expansion project provides a feasible and less environmentally damaging alternative to the proposed project.

Overview

The proposed project is subject to two Coastal Act provisions requiring an assessment of alternatives. One of the tests of Coastal Act Section 30233 is to determine, for proposed projects such as this that involve filling coastal waters or wetlands, whether there is a feasible and less environmentally damaging alternative.[69] The first test of Coastal Act Section 30260 similarly requires a determination of whether there are feasible and less environmentally damaging alternative locations for a proposed project. In addition, the second test of Section 30260 requires a finding that denial of a coastal-dependent industrial facility would adversely affect the

[69] Coastal Act Section 30108 defines "feasible" as:

> *"Feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors.*

public welfare. As described in more detail in Section II.P – Coastal-Dependent Industrial Facility Override of this report, the question of whether there is a feasible alternative is relevant to the Commission's finding that denial of the project would not adversely affect the public welfare. Furthermore, and as noted in Section II.F of these Findings, the City of Marina LCP includes provisions that incorporate Coastal Act Section 30260. Thus, the alternatives assessment herein applies to the proposed project components both in the Commission's consolidated permit jurisdiction and in the City's LCP jurisdiction.

The California Environmental Quality Act ("CEQA") provides additional guidance regarding consideration of alternatives. The Commission's regulations require staff reports to include findings evaluating the conformity of a proposed development with the requirements of Public Resource Code (CEQA) section 21080.5(d)(2)(A), which, in turn, requires that "an activity will not be approved or adopted as proposed if there are feasible alternatives or feasible mitigation measures available that would substantially lessen a significant adverse effect that the activity may have on the environment."

As part of its consideration of Cal-Am's project under its own authority, the CPUC acted as the lead agency in drafting and certifying an Environmental Impact Report (EIR) under CEQA. Pursuant to both its CEQA authority and its authority to determine whether to issue a certificate of public convenience and necessity to Cal-Am for the proposed project, the CPUC defined the project objectives and analyzed various alternatives.[70] As the CPUC explained:

> *The primary purpose of the MPWSP is to replace existing water supplies that have been constrained by legal decisions affecting the Carmel River and Seaside Groundwater Basin water resources. SWRCB Order 95-10 requires CalAm to reduce surface water diversions from the Carmel River in excess of its legal entitlement of 3,376 acre-feet per year (afy), and SWRCB Order 2016-0016 ("Cease and Desist Order") requires CalAm to develop replacement supplies for the Monterey District service area by December 2021. In 2006, the Monterey County Superior Court adjudicated the Seaside Groundwater Basin, effectively reducing CalAm's yield from the Seaside Groundwater Basin from approximately 4,000 afy to 1,474 afy.*[71]

The CPUC analyzed a variety of alternatives to the project that would meet most of the basic project objectives. One alternative that the PUC analyzed in particular is the Pure Water Monterey (PWM) project. As described more fully below, PWM is a water recycling and aquifer storage and recovery project that will treat existing streams of wastewater and inject the water into the ground for later use. Cal-Am initially proposed constructing a 9.6 million gallon per day ("mgd") desalination plant; however, as an alternative to the 9.6-mgd desalination plant, Cal-Am's application also included a 6.4-mgd desalination plant coupled with a water purchase agreement for 3,500 acre-feet per year of treated water from PWM. The CPUC found that it

[70] See the following for the PUC's decision and CEQA documents: https://www.cpuc.ca.gov/Environment/info/esa/mpwsp/comms_n_docs.html

[71] See https://www.cpuc.ca.gov/Environment/info/esa/mpwsp/PD.html

would be feasible, less expensive, and less environmentally damaging for Cal-Am to build the smaller desalination plant and purchase 3,500 acre-feet per year of treated water from PWM. It therefore required that Cal-Am implement that project alternative.

Relatively late in the CPUC's multi-year hearing process, some parties to the proceeding raised the possibility that PWM could be further expanded so that it could supply 2,250 acre-feet per year of water beyond the 3,500 acre-feet per year originally proposed. The CPUC declined to open a new phase of the proceeding to consider this alternative in detail, citing the need to wrap up the already-long PUC process, the then-existing uncertainties of the proposed PWM expansion, and the need for Cal-Am to meet deadlines for ceasing withdrawals from the Carmel River and Seaside Groundwater Basin. However, the CPUC did briefly consider the alternative, and found, based on the then-available information, that the alternative was not developed in enough detail and did not yet have enough certainty for the CPUC to be able to find that it was a reliable, affordable, and concrete alternative that could be implemented in a timely fashion. It also found that the PWM Expansion would not produce enough water to obviate the need for some desalination, and that a smaller desalination facility was not reasonable, in part because it would have virtually the same costs as a larger plant and would not avoid or substantially lessen any significant impacts. Although it did not require Cal-Am to pursue the PWM expansion as part of this project, the CPUC was supportive of further studying the potential for such expansion; for instance, it required Cal-Am to provide later updates on the progress of the PWM expansion and stated that purchase of such water might be required if the desalination project ended up getting delayed.

As part of its duties to analyze the project's conformity with the Coastal Act and LCP, as well as its duties as a responsible agency pursuant to CEQA, the Coastal Commission now has an independent obligation to consider alternatives to the project based on current information. Notably, in the nearly two years since the CPUC last collected water demand data, the year and a half since the CPUC issued its Final EIR, and the more than 13 months since the CPUC issued its final Decision approving Cal-Am's project, there have been new developments regarding the PWM Expansion, as well as new information related to the water demand in Cal-Am's service area. The findings below describe the PWM Expansion alternative and its impacts, and they also analyze its feasibility, ability to meet project objectives, and ability to protect the public welfare.

Fundamentally, Cal-Am's proposed project is a water supply project that, when combined with the other water sources in Cal-Am's water supply portfolio, would allow Cal-Am to reduce its withdrawals from the Carmel River to no more than its maximum legal limit while providing enough water for Cal-Am's existing and future water demands. As described below, there appears to be a feasible and less environmentally damaging alternative to Cal-Am's proposed project – namely, the expansion of the Pure Water Monterey project being developed by the Monterey Peninsula Water Management District and Monterey One Water – that would protect the public welfare by providing adequate regional water supplies for the coming decades.

The Pure Water Monterey ("PWM") project will treat several water sources to replenish the Seaside Groundwater Basin and to provide 3,500 acre-feet of water annually for Cal-Am. Part of the CPUC's approval for Cal-Am's project required Cal-Am to purchase water from the PWM project, which allowed the CPUC to reduce the size of Cal-Am's desalination facility. The

PWM Expansion would be located at the same site and would use the same water sources, treatment methods, and aquifer injection/extraction methods to supply an additional 2,250 acre-feet per year, all of which would be available to Cal-Am.

The Findings below evaluate and compare the PWM Expansion and the proposed project in four main ways:

1) **Feasibility:** The PWM Expansion is evaluated using the criteria of the Coastal Act's definition of "feasible."
2) **Water supply and demand:** Each project is evaluated as to whether it would provide the expected amount of water needed for current and future demands.
3) **Project objectives and criteria:** Each project is described as to how it meets the project objectives developed for Cal-Am by the CPUC in its Decision and Final EIR/EIS. Additionally, the PWM Expansion is described in relation to the nine criteria the CPUC used to evaluate the initial PWM project and to determine that it would be a suitable and reasonable component of Cal-Al's water supply portfolio.
4) **Adverse environmental effects:** The two projects are compared as to what overall adverse environmental effects they would cause.

1) Feasibility

Each project is briefly evaluated for conformity to the criteria of the Coastal Act Section 30108 definition of feasibility – i.e., "*Feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors.*"

- **"Capable of being accomplished in a successful manner":** Both projects would use proven technology to produce and deliver drinking water. Just as Cal-Am is proposing to use treatment processes common to other seawater desalination facilities in operation around the world, the PWM Expansion would use treatment processes similar to those used at other water recycling projects. The PWM Expansion is essentially a larger version of the same PWM project that Cal-Am is relying on for a part of its expected water supply. As noted above, and at the CPUC's direction, Cal-Am is relying on the first phase of the PWM project to provide 3,500 acre-feet per year, which is a substantial amount of its needed water supply. The PWM Expansion is therefore capable of being successfully accomplished from a technological standpoint.

- **"Within a reasonable period of time":** The PWM Expansion has a projected construction schedule similar to Cal-Am's, in that both anticipate being online and able to provide water at or near December 2021, which is the date by which Cal-Am is required to end its overpumping of the Carmel River. More specifically, and as described below in the section entitled "Applying the criteria applied to PWM to the PWM Expansion," the permitting, design, and environmental review process for PWM Expansion are underway and are anticipated to be completed in sufficient time to meet the December 2021 date.

"… and taking into account the following factors":

- **"Economic":** The expected costs of Cal-Am's proposed project are much higher than those of the PWM Expansion. Cal-Am and its ratepayers would be paying about $400 million in initial capital costs for the overall project, along with operational and maintenance costs of over $1 billion during its initial 30 years of operations. The PWM Expansion is expected to have about $60 million in initial capital costs and about $190 million in operational and maintenance costs over a 30-year operating life. Although the desalination facility would produce more water than the PWM Expansion, the cost per unit of water would also be much higher for Cal-Am's project than for the PWM Expansion water. For the water supply provided by each, ratepayers would be expected to pay about $6,000 to $8,000 per acre-foot for Cal-Am's water and about $2,100 per acre-foot for Pure Water's supply. Nonetheless, Cal-Am would have the ability to reflect these costs in the rates it charges to its customers.

- **"Environmental":** This factor is discussed in more detail below, under the comparison of the projects' environmental effects. In general, however, and as noted in the Findings above, Cal-Am's proposed project would result in several significant adverse effects on coastal resources – including environmentally sensitive habitat areas – whereas the PWM Expansion would be built entirely outside the coastal zone and have relatively few environmental impacts compared to Cal-Am's project.

- **"Social":** As described more below and in the report's findings on Section 30260's public welfare test, both projects would provide sufficient water for the Cal-Am's service area, though Cal-Am's would have far greater environmental justice-related effects on low-income ratepayers and other communities of interest (see Section II.N – Environmental Justice).

- **"Technological":** As noted above, both projects would generally use proven technology for treating and distributing water. The Cal-Am project would use a slant well system to provide its source water, and although there are no other operating desalination facilities known to use this system, there are at least two proven examples here in California where slant wells were successfully tested as a method to supply source water to desalination facilities.[72] Both projects would rely in part on an Aquifer Storage and Recovery ("ASR") system that is being used in numerous locations as a proven method to store and provide water supplies.

An additional consideration is that, of the two projects, Cal-Am's appears to have several obstacles that may affect its feasibility or schedule. These include 1) its current lack of approval to use a key pipeline component that the Marina Coast Water District has identified as having inadequate capacity to convey Cal-Am's flows; and 2) the need for additional environmental review and permitting associated with its outfall liner before Cal-Am can start operations.

[72] Along with Cal-Am's test slant well, the South Coast Water District in Orange County conducted successful slant well tests and is now proposing to use them for its full-scale desalination facility in Dana Point.

2) Water supply and demand – would the PWM Expansion provide sufficient amounts of water to allow Cal-Am's water portfolio to meet expected demands?

Cal-Am's project would provide more water than would the PWM Expansion, but either project, in combination with other water sources Cal-Am has available in its water portfolio, would provide sufficient water for current and expected future demands. Cal-Am's current and future expected water needs and available supplies were initially detailed in the Final EIR/EIS and the CPUC's Final Decision; however, the baselines and assumptions used in those analyses have since been updated with new data and projections. The updated analysis is provided primarily by the Monterey Peninsula Water Management District's ("District's") September 2019 *Supply and Demand for Water on the Monterey Peninsula* ("2019 Update" – see Exhibit 8), which is supported by recent data that were not available at the time of the CPUC review.[73] The evaluation below compares the earlier CPUC projections with those of the 2019 Update using the same criteria used in the CPUC analysis, along with several others, to identify how either of the projects would provide for the expected water supply and demand needs for Cal-Am's service area.

As acknowledged in the CPUC's Final EIR/EIS, "[f]orecasting future demand and supply is not an exact science," and "estimating future water demand necessarily entails the use of assumptions about demand factors that cannot be predicted with absolute certainty."[74] This uncertainty often leads to analyses of future water needs being based in part on relatively conservative assumptions to ensure that errors are generally on the side of ensuring more water is available rather than not enough. The Findings below first describe the basis for the CPUC's projection of Cal-Am's expected water supply and demands.[75] They then describe how there is new information related to those expected water supplies and demands that is evaluated in the 2019 Update. The Findings then analyze Cal-Am's future water portfolio with the proposed desalination facility versus the PWM Expansion project. These Findings also consider a key issue fundamental to Cal-Am's expected water supplies and demands – the need for Cal-Am to meet the obligations of the State Water Board's cease-and-desist order that requires Cal-Am to stop its excess water withdrawals from the Carmel River by December 2021. In sum, the Findings below show that Cal-Am could meet its expected water needs by including either the desalination facility or the PWM Expansion in its overall water portfolio.

[73] According to the District's website statement, it serves over 100,000 people within the cities of Carmel-by-the-Sea, Del Rey Oaks, Monterey, Pacific Grove, Seaside, and Sand City, the Monterey Peninsula Airport District, and portions of unincorporated Monterey County including Pebble Beach, Carmel Highlands and Carmel Valley. It is a public agency funded largely by property taxes, user fees, water connection charges, investments, grants, permit fees and project reimbursements. The District operates pursuant to five main goals:

1) Increase the water supply to meet community and environmental needs.
2) Assist California American Water in developing a legal water supply.
3) Protect the quality of surface and groundwater resources and continue the restoration of the Carmel River environment.
4) Instill public trust and confidence.
5) Manage and allocate available water supplies and promote water conservation.

[74] See Section 8.2.13 – Master Response 13: Demand (Project Need) and Growth.

[75] Those analyses are provided in greater detail in Section 2.6 of the Final EIR/EIS and in the CPUC's September 13, 2018 Final Decision on the proposed project.

CPUC's initially projected water demand

The CPUC relied on state regulatory requirements to identify the baseline on which to base its expected existing water demands and projected future demands. This regulation – the California Department of Public Health's Waterworks Standards – requires that water supply systems have the capacity to meet maximum day demand and peak hourly demand, as based on the most recent 10 years of a water system's operations.[76] The CPUC determined that, for Cal-Am, using the peak month demand would be the critical determinant as to whether the proposed project could meet its maximum day and peak hour demand, as peak month represents an elevated demand sustained over multiple days.[77] At the time of the CPUC review, the peak month during the 10-year period from 2006 to 2015 was July of 2010 when Cal-Am's ratepayers used 1,111 acre-feet. The average annual demand during that 10-year period was 12,351 acre-feet.

The CPUC also considered several events that occurred before, during, and after that 10-year period that had affected the area's rate of water use. It first recognized that water demand in the area had been somewhat higher long before that particular 10-year period and that it had declined in part due to reduced visitation to the Monterey Peninsula after the events of September 11, 2001 and due to the recession that occurred between 2007 and 2009. It also recognized that California, including Cal-Am's service area, had experienced several years of drought conditions that had further reduced water use and led to implementation of a number of water conservation measures, many of which were still in place and likely represent permanent reductions in the expected water use per capita in the Monterey area and elsewhere. This was accompanied by behavior changes by water users that led to additional reductions, which may or may not be as long-lived as the structural conservation measures but may nonetheless continue to some degree beyond the period of drought conditions due, in part, to continued changes in behavior, increases in the price of water, and other factors. The CPUC also acknowledged that Cal-Am anticipated that by the time the desalination facility would be operating, its average 10-year and maximum year demands will be lower that the above-referenced 10-year period. Based on these considerations, the CPUC concluded that the existing annual demand was about 12, 000 acre-feet per year.[78]

Along with identifying these existing water system demands, the CPUC considered several expected future demands that it noted would increase that existing demand by about 2,000 acre-feet per year for a total expected demand of about 14,000 acre-feet per year. Table 3 below

[76] See Title 22, CCR Division 4, Chapter 16, Section 64554. Maximum day demand is determined by selecting the month with the highest water use during the past ten years of service, dividing by the number of days in that month, and multiplying the average daily use by a peaking factor of at least 1.5. Peak hourly demand is determined by calculating the average hourly rate for the maximum day demand and multiplying by a peaking factor of 1.5.

[77] This was also reflected in the CPUC's inclusion of a project objective in the Final EIR/EIS that was to ensure the water supply would be able to serve peak month demands. The CPUC's September 13, 2018 Final Decision on the project notes that "[t]*his is consistent with Cal-Am's assertion that peak month demand is a more critical consideration for its operations than peak day demand. This appears undisputed, as all of the parties presented their demand projections in a similar method (see, e.g., Exhibit SF-12 Attachment A) and we use monthly and annual figures throughout in our consideration of the standard.*"

[78] The CPUC's Final Decision states that "[a] projection of demand for existing customers of approximately 12,000 afy is appropriately conservative and reasonable."

shows the expected existing demand and these expected future demands, which are described below.

Table 3: CPUC identified existing and future demand

	CPUC review (totals in acre-feet per year)
Existing demand (10-year annual average**):**	12,000
Future demand:	
• Pebble Beach water entitlements	325
• Hospitality industry rebound	500
• Lots of record	1,181
Total:	**14,006**

- **Pebble Beach water entitlements:** As part of a water reclamation project funding agreement between the Monterey Peninsula Water Management District and the Pebble Beach Company, the District granted water entitlements totaling 380 acre-feet per year to the Company. The funded reclamation project provides reclaimed water for use on golf courses in the Del Monte Forest area. Because that water would have otherwise come from Cal-Am's use of Carmel River water, the State Water Board recognized in its cease-and-desist order to Cal-Am that those entitlements could be considered part of Cal-Am's expected additional water demands for proposed development in this area. As of the time of the CPUC's decision, about 325 acre-feet per year of these entitlements had not been used and were therefore considered part of potential future growth.
- **Hospitality industry rebound:** As noted above, the CPUC acknowledged that water demand in Cal-Am's service area had declined post-2001 and during the 2006-2009 recession, due in part to a reduction in visitation rates. Cal-Am had proposed as part of the CPUC's review that an additional 500 acre-feet per year be added to the projected future demand to reflect an expected rebound in visitation to the area. The Monterey Peninsula Water Management District conducted a 2013 study that determined that 500 acre-feet per year was a reasonable expectation. The CPUC accepted this figure, though it acknowledged that part of the rebound dependent on this 500 acre-feet per year had already occurred and that some of that supply would therefore be available for other uses.
- **Water for lots of record:** Cal-Am's service area has several hundred undeveloped "lots of record," and it proposed that the CPUC include 1,181 acre-feet per year of water for the expected development of those parcels.

During its review, the CPUC also requested and received alternative water demand/supply scenarios proposed by intervenors. These included the same demand categories identified above, though they varied in the current and expected volumes in each category.[79] These alternative scenarios proposed that the CPUC consider expected future demands ranging from about 9,700

[79] Scenarios were provided by Cal-Am, the City of Marina, the Marina Coast Water District, the Monterey Peninsula Regional Water Authority, Monterey Peninsula Water Management District, the Planning and Conservation League, Surfrider Foundation, the Coalition of Peninsula Businesses, and Water Plus.

to 15,000 acre-feet per year. In comparing and evaluating the above demand categories and the scenarios presented by intervenors, the CPUC concluded that Cal-Am's existing demands along with the above expected demands would total about 14,000 acre-feet per year.

CPUC's projected available water supplies

The CPUC also identified water supplies that Cal-Am would have available, in addition to the water provided by its proposed desalination facility, to serve this expected 14,000 acre-foot per year demand. These are shown in Table 4 and described below.

Table 4: CPUC identified available water supplies

Source:	**Amount Available (in acre-feet per year):**
Carmel River	3,376
Seaside Groundwater Basin	774
Aquifer Storage and Recovery	1,300
Sand City Desalination Facility	94
Groundwater Replenishment Project	3,500
Total:	**9,044**
Total when including a 6.4 mgd (6,252 afy) desalination facility:	**15,296**

The water supply sources included:

- **Carmel River:** Although Cal-Am is required to reduce its withdrawals from the Carmel River, it continues to have the legal right to withdraw 3,376 acre-feet per year from the river.
- **Seaside Groundwater Basin:** Cal-Am has also relied on past withdrawals from the Seaside Groundwater Basin. As part of the Basin's adjudication in 2006, Cal-Am was determined to have rights to 1,474 acre-feet per year from the Basin; however, based on its overwithdrawals from past years, Cal-Am is required to replenish the Basin at a rate of 700 acre-feet per year over a 25-year period, which limits its allowable withdrawals to 774 acre-feet per year.
- **Aquifer Storage and Recovery ("ASR"):** Cal-Am and the Monterey Peninsula Water Management District together implemented an ASR project that provides a water supply based on using available storage capacity in the Seaside Basin. The project involves diverting high winter flows of Carmel River water into the Basin for later recovery, treatment, and delivery to customers during summer months to help reduce summer withdrawals from the river. The winter flows it diverts are only those identified as excess to the flows needed to support the river's threatened steelhead population. The first ASR phase was completed in 2008 and allows a maximum annual diversion of about 2,400 acre-feet per year from the Carmel River, and an average yield of approximately 920 acre-feet per year. The second phase, completed in 2013, allows storage of up to 2,900 acre-feet per year and provides an average yield of 1,050 acre-feet of additional water supply. For water supply planning purposes, ASR is estimated to produce an average of 1,300 acre-feet annually.
- **Sand City Desalination Facility:** This facility is owned by Sand City but operated by Cal-Am. Of the facility's 300 acre-feet per year capacity, Cal-Am has available to it a long-term supply of 94 acre-feet per year.
- **Pure Water Monterey Groundwater Replenishment Project:** At the time of the CPUC's review, the first phase of this project – a joint proposal by the Monterey Regional Water

Pollution Control Agency and the Monterey Peninsula Water Management District – had just undergone environmental review. The project involves treating several water sources – including treated wastewater, agricultural runoff water, and stormwater – and injecting the treated water into the Seaside Groundwater Basin for later additional treatment and use as a potable water supply. The CPUC's decision to approve Cal-Am's desalination facility relied on Cal-Am being able to purchase 3,500 acre-feet per year from the PWM Monterey, which allowed the CPUC to reduce the size of Cal-Am's desalination facility from its initially proposed 10,700 acre-feet per year to its currently proposed 6,252 acre-feet per year (i.e., from 9.6 to 6.4 million gallons per day).

In summary, the CPUC identified an expected future demand of about 14,000 acre-feet per year and an available supply, including Cal-Am's proposed desalination facility, totaling 15,296 acre-feet per year.

Water District's 2019 Update of water supply and demand

Regarding supply, in September 2019, the Monterey Peninsula Water Management District ("District") prepared an updated assessment of expected water demands and supplies for Cal-Am's service area (see Exhibit 9 – "2019 Update"). Using the same water supply sources as identified above in the CPUC's review, the District's study provided an updated evaluation of the total supplies available either with Cal-Am's desalination facility or with the PWM Expansion project. Table 5 below provides the 2019 Update's comparison of these two supply scenarios showing that the scenario with the PWM Expansion would provide about 4,000 acre-feet per year less than the scenario with Cal-Am's desalination facility:

Table 5: Comparison of water portfolio with Cal-Am desalination or PWM Expansion

Supply Source	**With Cal-Am desalination (in afy)**	**With Pure Water Monterey Expansion (in afy)**
Cal-Am Desalination	6,252	0
Pure Water Monterey	3,500	3,500
Pure Water Monterey expansion	0	2,250
Carmel River	3,376	3,376
Seaside Basin	774	774
Aquifer Storage and Recovery	1,300	1,300
Sand City Desalination	94	94
Total Available Supply	**15,296**	**11,294**
Other Available Supply	406	406
Total Available Supply w/Other	**15,702**	**11,700**

Note: to ensure a more conservative assessment of available supplies the "Other Available Supply" category is not included in the analysis immediately below, as it includes some less certain water sources. However, that category is included later under "Additional considerations for projecting future demand."

The District also updated the current and expected future water demands the CPUC had identified during its proceedings, using the same demand categories as the CPUC had used, but including more recently available data and some modified assumptions. The District had the benefit of about 18 months of new data, starting from January 2018, that showed continued reductions in existing water demand compared to the demand figures available to the CPUC. The 2019 Update showed that both the existing demand and expected future demand were substantially lower than had been identified previously and could be met for the next twenty

years or more by adding either Cal-Am's desalination facility or the PWM Expansion project to the water supply portfolio. Importantly, the 2019 Update also assessed the rate at which the identified future demand would occur, and although the PWM Expansion scenario would not provide as much water as the desalination facility scenario, the rate of growth in demand would allow the PWM Expansion scenario to provide sufficient water for twenty years or more. The two sets of demand scenarios are provided in Table 6 below. It also determined, using an even higher baseline than the CPUC had used, that the PWM Expansion could meet the maximum daily demand and peak day flows as required by the state's Waterworks standards. Finally, it evaluated how a Cal-Am water supply portfolio that included the PWM Expansion instead of the desalination facility could provide adequate water supplies during multiple years of drought. These four areas – existing demand, future demand, maximum daily and peak hour demands, and drought supply – are described separately below.

Table 6: Comparison of existing and future demand scenarios

	CPUC review	**2019 Update**
Existing demand (10-year annual average**):**	12,000	11,232
Future demand:		
Pebble Beach entitlements	325	103 to 160
Hospitality industry rebound	500	100 to 250
Lots of record	1,181	864 to 1,014
Total:	**~14,000**	**12,299 to 12,656**

Existing demand: The District considered 20 years of past water production to calculate Cal-Am's current average water demand. Using the past 10 years of data (the same time period the CPUC used, though updated with 2018 data), the District calculated an average existing demand of 11,232 acre-feet, about 1,000 acre-feet less than Cal-Am's suggested average and 768 acre-feet less than the CPUC's conclusion of an existing 12,000 acre-foot existing demand.

Future demand: The 2019 Update overall showed lower future demands expected in each of the same categories that the CPUC study had used, as shown below:

- **Pebble Beach entitlements:** As noted above, the CPUC had identified about 325 acre-feet of expected demand for build-out in the Pebble Beach area. The District's analysis shows that the actual baseline amount was somewhat lower – about 299 acre-feet – and would be split between two categories – a 145 acre-feet expected average for buildout and a 154 acre-feet expected average in "other entitlement demand."[80]

[80] See April 2012 *Pebble Beach Final Environmental Impact Report, Appendix H – Water Supply and Demand Information for Analysis*. This document identifies demands wet, average, dry, and critically dry years that range from 128 to 145 acre-feet per year for buildout and 147 to 167 acre-feet per year for "other entitlement demand."

The District notes that this identified buildout demand is likely overstated, in that it was based on higher water usage rates than are the current norm. For example, the buildout figures were based on a period when residences used about a third more water than the current average and included a proposed hotel that is no longer being pursued. The 2019 Update concluded that the actual expected buildout demand should be lowered to between 103 and 160 acre-feet.

The District also determined that the "other entitlement demand" is similarly overstated in that this demand would not exist once a new water supply – such as Cal-Am's project or the PWM Expansion – makes water available to users that would otherwise need the entitlement. These entitlements were developed as part of a financing package for an area recycling project, allowing the Pebble Beach Company to sell some of its unused water entitlements to residential property owners in the area. Over the last decade or so, these average entitlement demands have totaled about 4.9 acre-feet per year. It is unlikely that there will be requests for those same levels of entitlements during the two years before one of these two projects is online, in part because the entitlements cost about $250,000 per acre-foot. The 2019 Update acknowledges, however, that there could be future interest from this category of water use, though more in the range of 10 to 15 acre-feet total rather than the above-referenced 154 acre-feet. The 2019 Update did not include this 10-15 acre-foot demand in its expected growth figures, though it addressed potential growth in a different way to provide sufficient conservatism in its calculations, as described below.

- **Hospitality industry rebound:** The 500 acre-feet the CPUC included in this category was based on an expected recovery in the number of visitors to the Monterey Peninsula area. As part of the CPUC proceedings, the industry noted that hotel occupancy rates declined after 2001 and after the 2006-2009 recession, and requested that the CPUC consider including additional water in its demand scenarios to serve the expected increase in occupancy rates that would accompany an improved economy. As described in the 2019 Update, the pre-2001 occupancy rates were about 72%, dropped in 2001 to about 63%, and stayed at about that level until 2012-13. The 2019 Update notes that since then, occupancy rates have returned to the previous high pre-2001 level of about 72%, yet the water use in this sector is substantially lower than it was in 2001 – about 2,442 acre-feet per year in 2018 versus 3,387 acre-feet in 2001. The District credits this reduction to recent mandatory conservation standards and improved conservation measures, many of which are permanent. It acknowledges, though, that even with these improvements, there is likely to be some "rebound" for this demand sector, though it is more likely to be in the range of 100 to 250 acre-feet, not the 500 acre-feet referenced above.[81]

[81] The Final EIR/EIS also acknowledged that much of the expected rebound had occurred, that the 500 acre-foot demand expectation was long-term, and that a reasonable estimate for hospitality industry rebound would be on the order of 200 to 300 acre-feet per year. See *Section 2 – Water Demand, Supplies, and Water Rights*, page 2-13, and *Section 6 – Other Considerations*, page 6-15.

- **Lots of record:** Cal-Am's Final EIR/EIS identified an expected future annual demand of 1,181 acre-feet from development of vacant lots of record within Cal-Am's service area, based on a study done in 2002.[82] The 2019 Update notes that expected per capita or per household water use at the time of that 2002 analysis was substantially higher than current usage and that this expected future demand should be reduced to reflect this lower per capita use. It also notes that some of these lots included in this calculation are not buildable or have already been developed and are therefore already included as part of Cal-Am's existing demand. The 2019 Update concluded that the proposed 1,181 acre-feet of demand should be reduced by about 167 acre-feet to reflect reduced per capita/per household usage and by about 150 acre-feet to account for already developed or undevelopable lots. It acknowledges that some growth will occur both within and near Cal-Am's service area, though that growth will be spread out over time rather than occur immediately. Overall, the District calculates the amount of new demand for this category at between 864 and 1,014 acre-feet.[83]

Rate of increase for future demand: The 2019 Update also evaluated how these overall future water demands would be developed over time. Rather than expecting an immediate need for the 14,000 acre-feet per year identified in the Final EIR/EIS, the District determined the expected rate of increase in demand by looking into past rates of growth in water demand and projecting them over the next several decades. It also evaluated several additional considerations, such as potential higher growth rates, the cost of water, and the effects of recent legislation that are expected to limit or reduce future per capita demands. These projections and other considerations are described below.

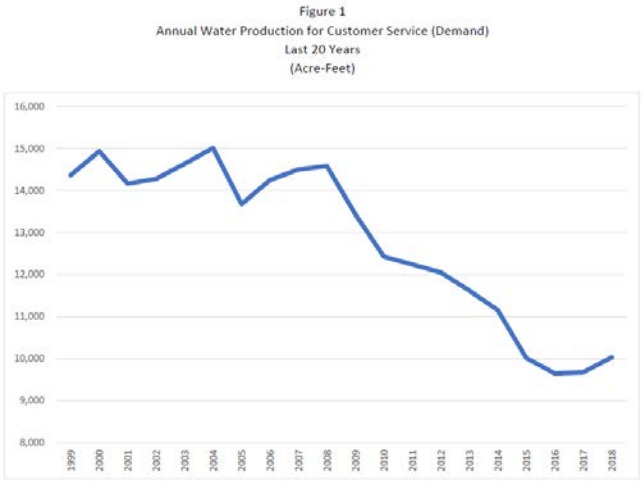
The District found that annual water growth rates during the past 20 years, which included periods of high water availability as well as drought and imposed conservation measures, ranged from about nine to 16.4 acre-feet per year. Based on the total supplies identified above in Table 5 showing Cal-Am's desalination scenario providing about 15,296 acre-feet per year and the PWM Expansion scenario providing about 11,294 acre-feet per year, it appears that the current annual demand of 11,232 acre-feet would result in Cal-Am's project resulting in an excess supply of about 4,000 acre-feet and the PWM Expansion resulting in an excess supply of 62 acre-feet. It appears, then, that the total portfolio with the PWM Expansion, combined with nine to 16.4 acre-foot per year of increased demand, would allow for only about four to seven years of growth. However, the 2019 Update identified several other factors showing that the PWM Expansion would provide sufficient supply for many more years, as described below.

Additional considerations for projecting future demand: There are several additional planning considerations that support a conclusion that the PWM Expansion would provide water for a substantially higher number of years of growth in the area:

[82] The 2019 Update notes that this figure was based on a February 2002 analysis conducted by the District that was revised slightly upward later that year to about 1,211 acre-feet.

[83] This is largely consistent with the District's testimony to the CPUC, in which it recommended the CPUC not use the 2002 figures for the reasons cited above. See Final EIR/EIS Section 2 – *Water Demand, Supplies, and Water Rights*, pages 2-14 & 2-15.

- **Continually lowering baseline:** As noted above, both the CPUC and the District used a period of the past 10 years of usage data as the basis for average annual demand. The 2019 Update also identified average demands based on the past five years and three years, both of which resulted in lower average demands of 10,109 acre-feet per year and 9,788 acre-feet per year, respectively, or about 10% and 13% less than the existing 10-year average. The 2019 Updated also included a graph showing the past 20 years of demand, which illustrates the substantial drop in water demand over that period and also illustrates that the early part of the most recent 10-year periods is much higher than current use – e.g., 2007 and 2008 have much higher demand than 2017 and 2018:

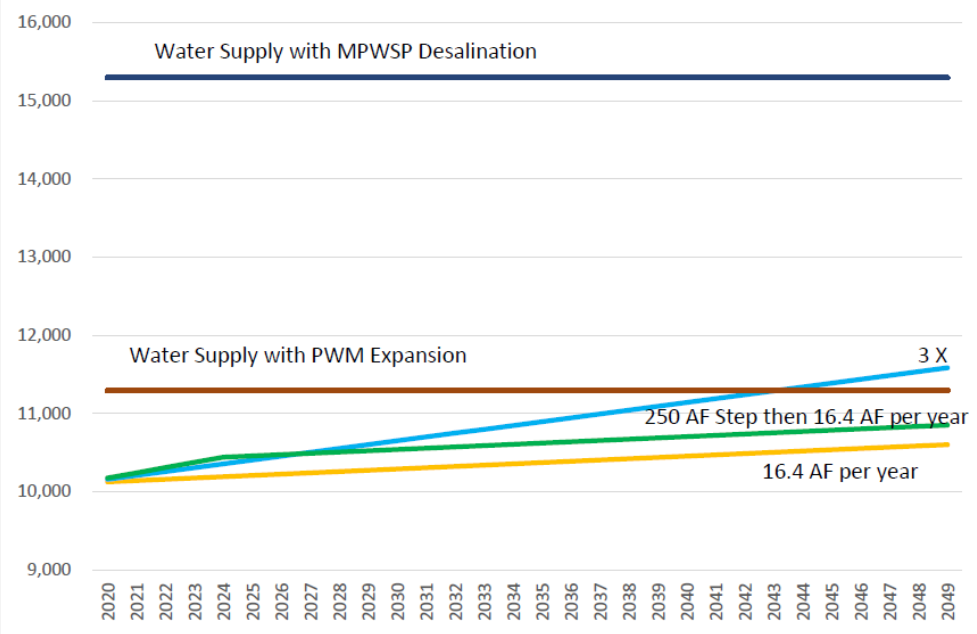


This graph also illustrates that calculating the 10-year average during the next several years will involve removing the higher demand years from 2008 to about 2015 and replacing them with lower demand years of 2019, 2020, and onward. Moving forward each year by deleting the earliest year of the 10-year period and adding a new year that includes the expected high estimate of 16.4 acre-feet per year of predicted growth (which, as noted in the 2019 Update, is the highest rate over the past 20 years) results in the next several 10-year annual averages dropping well below the current 10-year average of 11,232 acre-feet per year – to a low of about 10,047 acre-feet in 2024.[84] It would then be expected to start increasing at the anticipated rate of growth. This approach puts the upcoming 10-year averages much closer to the existing five-year average used in the 2019 Update and allows for a relatively consistent comparison with the same approach used in the CPUC's reliance of the 10-year average.

[84] This approach results in the 10-year annual average roughly equaling:
In 2019 (2010 to 2019): 10,902
In 2020 (2011 to 2020): 10,661
In 2021 (2012 to 2021): 10,467
In 2022 (2013 to 2022): 10,280
In 2023 (2014 to 2023): 10, 135
In 2024 (2015 to 2024): 10,047
In 2025 (2016 to 2025): 10,061
In 2026 (2017 to 2026): 10,102
In 2027 (2018 to 2027): 10,140

- **Rate of market absorption of water demand:** Although the 2019 Update used a five-year average demand rather than the 10-year average demand used in the CPUC's review, it included added several potential growth scenarios to assess how the PWM Expansion would support expected growth into future decades. Using the current five-year average annual demand as a baseline, it calculated future expected water demands in three ways: 1) adding the above-referenced 16.4 acre-feet per year growth rate; 2) adding three times that growth rate; and 3) adding an initial 250 acre-feet of growth during the first five years, followed by annual 16.4 acre-feet growth rates. As shown on the 2019 Update's Figure 3, those projections show that Cal-Am's available water portfolio with the PWM Expansion instead of the desalination facility would provide sufficient water under those growth rates until well beyond 2050, until about 2043, and again, well beyond 2050, respectively.

Figure 3
Market Absorption of Water Demand Compared to Water Supply
Current Demand at 5-Year Average
(Acre-Feet)



- **Effects of cost on expected water demand:** Rates of water use are driven by several considerations, including the cost of that water to the users. Selection of either of these facilities – the Cal-Am project or the PWM Expansion – would result in increased water costs and water rates in Cal-Am's service area. Current costs for water from the Carmel River and the Seaside Basin are in the range of several hundred dollars per acre-foot, whereas the Cal-Am project is expected to cost about $6,100 per acre-foot and the PWM Expansion about $2,100 per acre-foot. Either would increase the average cost of water from Cal-Am's water portfolio, though the Cal-Am project, at about three times the cost of the PWM Expansion, would create a substantially larger cost increase (this issue is discussed in more detail in Section II.N – Environmental Justice and Section II.P – Coastal-Dependent Industrial Facility Override). Additionally, because the Cal-Am project would be built to

produce significantly more water than will be needed for a number of years, its actual costs per acre-foot would be substantially higher than $6,100 for as long as the facility was operated at less than full capacity. This is because its fixed costs, such as the capital costs for building the facility, are much higher than the facility's operating costs and those capital costs would be spread among the smaller number of acre-feet actually produced. The District's 2019 Update illustrated this difference in Table 7 below, which shows the expected cost per acre-foot at three different levels of production:

Table 7: Cal-Am costs per acre-foot at different production levels

Annual production by desalination facility (in acre-feet):	6,252	5,000	4,300
Annual fixed costs (in millions):	$30.3	$30.3	$30.3
Annual variable costs (in millions):	$7.8	$6.2	$5.4
Total annual costs to customers (in millions):	$38.1	$36.5	$35.7
Resulting cost per acre-foot	**$6,094**	**$7,308**	**$8,294**

- **Lower per capita use due to conservation:** The 2019 Update also described the effects of recent legislation that establishes urban water efficiency standards to be implemented by water agencies.[85] The legislation establishes standards for indoor and outdoor water use, allowable limits for water lost to leaks, and other measures meant to reduce per capita water use in the state. It establishes, for example, an indoor water use rate of 55 gallons per person per day that will be further reduced to 50 gallons per person per day in the coming years. The 2019 Update notes that per capita use in the Cal-Am service area is currently at 57 gallons per person per day, so while there will be a relatively small additional reduction due to these new mandates, it is unlikely that a new water supply from either the Cal-Am project or the PWM Expansion will result in an increase in individual water consumption rates.

In sum, with the current 10-year annual average demand being lower than the demand identified in Cal-Am's Final EIR/EIS, with any of several potential future growth rates, and with increased water costs and increased conservation mandates, including the PWM Expansion instead of Cal-Am's desalination facility in the water supply portfolio, is expected to provide sufficient water for at least the next two or more decades.

Two additional factors support this conclusion. First, and as noted above, the 2019 Update included a category of "other available supplies" that would provide an additional 406 acre-feet per year to the above totals. These include:

- Up to about 300 acre-feet per year from the Carmel River (through State Water Board Permit #21330 issued to Cal-Am in 2013).
- Additional production from the Sand City desalination facility: up to about 106 acre-feet per year available to Cal-Am until Sand City generates sufficient growth and development to use this volume of water. At the time of the CPUC's review, this additional production had been suggested, but the CPUC found that it was not supported by credible evidence. More recently, however, and as part of Cal-Am's compliance requirements for the State Water

[85] The 2019 Update referenced both the 2018 adoption of SB 606 and AB 1668.

Board most recently updated cease-and-desist order from 2016, Cal-Am has confirmed its use of about 108 acre-feet thus far this year from the Sand City facility, about 15% more than had been anticipated in the CPUC's review.

- "Carryover Credit" from the Seaside Groundwater Basin: Cal-Am has a number of "credits" for water in the Seaside Groundwater Basin that Cal-Am was allowed to produce, but did not produce due to constraints within the delivery system.

While these supplies are not as certain or may not be as consistently reliable as other supplies in Cal-Am's water portfolio, some proportion of this 406 acre-feet is likely to be available as part of future supply portfolios. Second, and importantly, the above-referenced unresolved issue regarding Cal-Am's proposed use of a shared pipeline could result in a reduction or inability of Cal-Am delivering its full proposed amount of water to its service area. This could result in Cal-Am being able to deliver about the same as, or less than, the PWM Expansion project.

Maximum daily and peak hour demands: As noted above, Cal-Am's CEQA review evaluated whether the desalination facility, if included as part of Cal-Am's water portfolio, would allow Cal-Am's water system to provide maximum daily demand ("MDD") and peak hour demand ("PHD"), pursuant to the state's requirements. That review considered Cal-Am's peak month demand as being the critical determinant as to whether the system could meet MDD and PHD. The review used July of 2010 as the peak month demand, when Cal-Am's ratepayers used 1,111 acre-feet of water. The CPUC's Final Decision noted, based on the information available at that time, that the MDD was 60.48 acre-feet (about 19.7 million gallons) and the PHD was 15.12 acre-feet (about 4.9 million gallons).

The District has also prepared calculations to determine whether including the Pure Water Expansion instead of the desalination facility as part of the water portfolio could meet maximum daily and peak hour demands (see Exhibit 9 – MPWMD *Analysis of Available Well Capacity for 10-Year Maximum Daily Demand (MDD) and Peak Hour Demand (PHD)*). It used an even higher peak month as its baseline – July of 2012, when demand was 1,206 acre-feet – and determined that the Pure Water Expansion would more than allow Cal-Am to meet these standards. The District's calculations included assumptions that the additional well capacity included as part of the Pure Water Expansion and a proposed pump station would be developed as proposed and one or more existing wells not currently connected to the system could be added. It concluded that these demands could be met under any of several operating scenarios that used the Pure Water Expansion instead of the desalination facility.

Drought supply: A key concern raised by Cal-Am and others about the Pure Water Expansion is whether it would be able to provide sufficient water supply during multiple years of drought. Cal-Am's Final EIR/EIS review described concerns about whether even the first phase of the Pure Water project would provide sufficient water during multiple drought years, and it based the approved size and volume of the desalination facility, in part, with this concern in mind.[86]

[86] See, for example, the Final EIR/EIS Section 8.2.13 at pages 117-18, which states: "[t]he recent severe, five-year drought demonstrated that it is not reasonable to assume that there would never be drought conditions that could deplete ASR reserves and prevent new ASR supplies being diverted from the Carmel River for storage and use. Consequently, changes in plant sizing based on scenarios that assume the availability of adequate ASR supplies would need to be considered carefully."

The District has evaluated how much water would be available during multiple drought years and determined that, with the Pure Water Expansion adding water to the ASR project each year and with the current level of demand and expected increases in that demand, Cal-Am's portfolio could provide adequate water for multiple drought years (see Exhibit 10 – *Draft Technical Memorandum – Pure Water Monterey Expansion SEIR Groundwater Modeling Analysis*). The District's modeling shows that the amount of water stored in the ASR would increase at a rate allowing it to contribute water to Cal-Am's water supply portfolio during an increasing number of drought years through time. Starting in 2020, the ASR would provide between about 4,750 and 5,950 acre-feet per year and by 2024 would have enough water stored to provide for about two years of drought and by 2034 would have enough stored for at least four years of drought and possibly longer.

3) How does the PWM Expansion conform to the Project Objectives and Criteria used for Cal-Am's project?

In order to qualify as a feasible alternative to a project, an alternative generally must feasibly accomplish most of the basic objectives of the project. The Findings below evaluate each project as to whether it meets the project objectives listed in the CPUC's Final EIR/EIS and Final Decision. Those documents included nine primary objectives and three secondary objectives, each of which is provided below, followed by a brief description of how the two projects conform to them. For purposes of this comparison, the Commission assumes that Cal-Am will be successful in gaining approval for use of the shared pipeline described above that is critical to its project's feasibility, though it acknowledges that this issue is not yet resolved. Following this comparison, the Findings then evaluate the PWM Expansion against the nine criteria the CPUC applied to the initial phase of PWM to determine that it was a suitable and reasonable source of water supply for Cal-Am.

Final EIR/EIS primary objectives:

1. **Develop water supplies for the Cal-Am Monterey District service area to replace existing Carmel River diversions in excess of Cal-Am's legal entitlement of 3,376 afy, in accordance with SWRCB Orders 95-10 and 2016-0016:** As described above, including either project as part of Cal-Am's water supply portfolio would allow Cal-Am to replace its excess diversions from the Carmel River.
2. **Develop water supplies to enable Cal-Am to reduce pumping from the Seaside Groundwater Basin from approximately 4,000 to 1,474 afy, consistent with the adjudication of the groundwater basin, with natural yield, and with the improvement of groundwater quality:** As described in Cal-Am's Final EIR/EIS and in the PWM Expansion Notice of Preparation, both projects are designed to meet this objective. The PWM project has established contracts for up to about three times the water it will initially need, so there is likely to be sufficient water, even if those full amounts are not available.
3. **Provide water supplies to allow Cal-Am to meet its obligation to pay back the Seaside Groundwater Basin by approximately 700 afy over 25 years as established by the Seaside Groundwater Basin Watermaster:** Similar to the above, both projects are designed to meet this objective.

4. **Develop a reliable water supply for the Cal-Am Monterey District service area, accounting for the peak month demand of existing customers:** As described above, both projects are sized to accomplish this objective.
5. **Develop a reliable water supply that meets fire flow requirements for public safety:** As described above, both projects are designed to meet maximum daily demand and peak hour demands, which are intended to provide the required factor of safety to ensure public water systems can meet emergency demands.
6. **Provide sufficient water supplies to serve existing vacant legal lots of record:** As described above, adding either project to Cal-Am's water supply portfolio would provide sufficient water for the area's lots of record.
7. **Accommodate tourism demand under recovered economic conditions:** As described above, adding either project to Cal-Am's water supply portfolio would allow for an expected increase in tourism demand for water over the coming two decades or longer.
8. **Minimize energy requirements and greenhouse gas emissions per unit of water delivered:** The PWM Expansion more strongly conforms to this objective than would Cal-Am's project. The PWM Expansion would use about 45 megawatts per year of electricity that will be generated by landfill gas that would otherwise be released to the atmosphere, thereby making the project's electrical use net greenhouse gas positive, whereas Cal-Am's project would use about 38,000 megawatts per year from grid-based electricity that currently represents production of about 8,000 metric tonnes of CO_2 per year. Although the carbon footprint from grid-based electricity is expected to decline as more is produced from renewable energy sources, the indirect greenhouse gas emissions from Cal-Am's electrical use would be, both initially and over the long term, significantly higher than those of Pure Water and would only be offset after the fact by Cal-Am's purchase of credits or offsets (see also Section II.J of these Findings).
9. **Minimize project costs and associated water rate increases:** The PWM Expansion conforms to this objective far better than the Cal-Am project. Pure Water's capital costs are roughly a quarter or a third of Cal-Am's; its water costs are about a third of Cal-Am's, and the effects on water rates are expected to be similarly less than Cal-Am's.

Final EIR/EIS secondary objectives:

1. **Locate key project facilities in areas that are protected against predicted future sea-level rise in a manner that maximizes efficiency for construction and operation and minimizes environmental impacts:** Cal-Am's well field, located within a few hundred feet of the Monterey Bay shoreline, would likely be affected directly by sea level rise and the accompanying erosion of the shoreline. The main effect on the wells would be the dune recession that will accompany this coastal erosion – as the shoreline profile moves inland, the foredunes that are on the seaward side of the well field would move inland and bury the well heads (Section II.G of these Findings above provides a more detailed description). The PWM Expansion would take place at an inland location outside of the coastal zone and is likely to experience few, if any effects of sea level rise.
2. **Provide sufficient conveyance capacity to accommodate supplemental water supplies that may be developed at some point in the future to meet build out demand in accordance with adopted General Plans:** As described in Exhibit 10 – Monterey Peninsula Water Management District Analysis of Available Well Capacity for 10-Year Maximum

Daily Demand (MDD) and Peak Hour Demand (PHD), the PWM Expansion has been planned to provide adequate conveyance to meet the expected water demands.

3. **Improve the ability to convey water to the Monterey Peninsula cities by improving the existing interconnections at satellite water systems and by providing additional pressure to move water over the Segunda Grade:** Both projects are able to meet this objective, assuming Cal-Am is able to use the distribution pipeline it shares with the Marina Coast Water District (see Section II.A of these Findings).

Applying the criteria applied to PWM to the PWM Expansion: During the CPUC's review of Cal-Am's proposed project, it evaluated several water supply alternatives to consider whether they could help meet the above project objectives. In 2017, the CPUC determined that combining a smaller desalination facility than Cal-Am had initially proposed with the PWM project would provide a reasonable alternative to the originally proposed larger desalination facility.[87] To determine whether the PWM would provide a suitable and reliable water supply source, the CPUC had, in 2016, evaluated the PWM against nine criteria, which are provided below. For each of those nine criteria, these Findings compare the status of the PWM at the time of the CPUC's decision with the current status of the PWM Expansion.[88] This comparison is meant to help determine whether it is similarly reasonable for the Commission to now consider the PWM Expansion as a feasible project alternative.

- **Criterion 1 – Final EIR:** The CPUC evaluated whether the PWM had an approved EIR, whether it was subject to a CEQA lawsuit, or whether it was subject to a stay due to any such lawsuit. At the time of the CPUC's decision regarding Cal-Am's project, the PWM had a completed EIR and was not subject to lawsuits or stays. The PWM Expansion is not yet at that stage of development, though its Notice of Preparation for a Supplemental EIR was published in May 2019 and its Draft EIR is scheduled to be published in November 2019. However, because the environmental review for the PWM Expansion is proceeding through a Supplemental EIR process, which means that it is tiering off of the prior, certified EIR for the PWM, the process will likely not be as extensive or lengthy as it might be if it were an entirely new project. Even though the PWM Expansion has not advanced to the degree the PWM had been at the time of the CPUC's decision, it raises essentially the same issues that were successfully addressed, without challenge, as part of the PWM EIR.
- **Criterion 2 – Permits:** This criterion was used to determine the status of permits needed to construct and operate the PWM, including whether they had been obtained or whether the weight of evidence showed that they were likely to be obtained in a timeframe consistent with the project's proposed schedule. At the time of the CPUC decision, the PWM had not yet obtained several key permits, but the CPUC determined that its sponsors were working diligently to obtain the needed approvals and there was no indication they would not be able to obtain them. The PWM Expansion similarly has not obtained all of its needed permits; however, many of those permits are expected to be new or amended versions of permits the

[87] See California Public Utilities Commission, Decision 16-09-021, issued September 22, 2106.

[88] The PWM sponsors initially prepared a status report in 2018 that applied these nine criteria to the PWM Expansion. See May 10, 2018 *Progress Report on Pure Water Monterey Expansion*, prepared by Monterey One Water. These Findings provide an update of the conclusions of that 2018 Progress Report.

PWM has since obtained or is expected to soon obtain. The PWM Expansion sponsors expect to receive the needed permits in time to construct and operate the facility at or near Cal-Am's December 2021 deadline for establishing a water source that will allow it to eliminate its overpumping from the Carmel River.[89]

- **Criterion 3 – Source waters:** This criterion was meant to establish whether there was sufficient legal certainty as to whether the PWM had adequate source water. At the time of the CPUC's decision, the PWM had agreements that could provide it with about three times the amount of water it needed to produce the expected 3,500 acre-feet per year and it was seeking approval for additional amounts. The PWM Expansion would use the same water sources, and possibly others. The 2018 PWM Expansion Progress Report considered 12 different scenarios – e.g., dry year versus wet year supplies, variable seasonal or annual amounts from different sources, etc. – and determined in each case that there would be sufficient water to produce the 2,250 acre-feet expected from the PWM Expansion. Although some commenters have questioned whether there is a sufficient, reliable supply of water for the PWM Expansion, the May 15, 2019 Notice of Preparation of a Supplemental Environmental Impact Report for the proposed PWM Expansion states that "[n]o new source water diversion and storage sites are necessary to achieve the Expanded PWM/GWR Project's recycled water yield objective of an additional 2,250 AFY of replacement supplies." It further notes that the PWM Expansion is designed to use water from existing M1W contractual rights.
- **Criterion 4 – Water quality and regulatory approvals:** Similar to Criterion 2, this criterion had the CPUC examine whether it was likely that the PWM would obtain approvals from the state Department of Health and the Regional Water Quality Control Board for the PWM's proposed treatment and injection processes. Neither had been obtained at the time of the CPUC decision, though the CPUC noted that available evidence indicated that the approvals would be forthcoming. It cited additional assurance in that the expected water quality sampling and testing program would ensure project water quality would meet necessary health and safety standards and would protect uses of the aquifer. Both the PWM and the PWM Expansion use the same treatment methods as approved at other permitted facilities of this type in California. As noted above, Monterey One Water's project schedule expects that the PWM Expansion will obtain necessary permits and be operating by December 2021. Once obtained, the PWM Expansion, which would use the same treatment systems and presumably have similar sampling and monitoring requirements, could be expected to obtain the new or amended version of these permits for its operation.
- **Criterion 5 – PWM Expansion project schedule compared to desalination schedule:** At the time of CPUC Decision 16-09-021, the PWM was expected to be completed in late 2017, with the desalination facility to be completed in mid-2019. Both schedules were delayed somewhat; however, the PWM is still expected to be completed about two years earlier than the desalination facility – i.e., in November 2019, versus late 2021 for the desalination facility. The PWM Expansion is currently anticipated to be able to be completed by about December 2021, which is the approximate time that Cal-Am expects to complete the desalination facility. This would allow either project to serve as the water supply to reduce

[89] See, for example, Monterey One Water's May 10, 2018 *Progress Report on Pure Water Monterey Expansion* and its May 15, 2019 *Notice of Preparation of a Supplemental Environmental Impact Report and Public Scoping Meeting Notice* that describe the project as being expected to provide water by the December 2021 deadline.

Cal-Am's overpumping of the Carmel River by the December 2021 deadline imposed by the State Water Board cease-and-desist order.

There is some uncertainty about the deadline for the PWM Expansion, as it still needs to proceed through environmental review and the PWM project itself needs to be fully constructed and begin operation first. The PWM project was delayed for several months due to various scheduling issues typical of a complex industrial construction project. However, there is greater doubt about whether Cal-Am can meet its expected desalination facility schedule, due to several issues, including: 1) the above-referenced lack of approval from the Marina Coast Water District to allow use of a shared pipeline; 2) the uncertainty about the timing, effects, and environmental review needed for the outfall liner that Cal-Am must install before it can discharge its brine waste; 3) ongoing concerns about likely and potential litigation related to Cal-Am's proposed use of groundwater from the Salinas Valley Groundwater Basin; and 4) litigation over Monterey County's approval of portions of the project in its jurisdiction, which so far has resulted in the Superior Court in mid-September 2019 issuing a temporary stay on construction activity. In addition, if the Commission were to approve the project, there is a substantial likelihood that its decision would also be challenged in court. These areas of concern do not apply to the PWM Expansion.

- **Criterion 6 – Status of PWM Expansion project engineering:** This criterion required that the PWM be developed to at least a 10% design level or that its development is at or beyond the level of engineering prepared for the desalination facility. At the time of the CPUC's decision, the various components of the PWM were at anywhere from at least 10% to 100% design and it therefore met this criterion. The project is now constructed and about to produce purified water. The PWM Expansion, being a larger version of the existing facility, is well beyond this 10% design threshold.
- **Criterion 7 – PWM Expansion project funding:** This criterion required that PWM funding be detailed sufficiently for the project to apply to a State Revolving Fund loan. At the time of the CPUC decision, PWM had applied for that loan and had received confirmation from the State Water Board that its application was complete and that would be eligible for a relatively low (1%) interest rate on the loan. The PWM Expansion would rely in part on a commitment from Cal-Am to purchase the water it produces, though the PWM project (and the Expansion) have also been recently deemed eligible for a similar government loan through the U.S. EPA.[90]
- **Criterion 8 – Reasonableness of Water Purchase Agreement terms:** This criterion was meant to ensure that Cal-Am and the PWM sponsors had concurred on a "just and reasonable" water purchase agreement. The CPUC determined, at the time of this 2017 decision, that the agreement that the parties had reached in 2016 met this criterion. The agreement included a first-year cost cap and a provision that Cal-Am would pay only the actual costs for PWM water. Water from the PWM project is expected to cost about $2,000 per acre-foot water and PWM Expansion water is expected to cost about $2,100 per acre-foot, both well below the $6,000 per acre-foot cost for water from Cal-Am's project.

[90] On October 22, 2019, the U.S. EPA announced that 38 projects around the U.S. were eligible to apply for loans through the EPA's Water Infrastructure Finance and Innovation Act. In its approval for Monterey One Water, the EPA notes that the projects could produce more than 10,000 acre-feet per year.

- **Criterion 9 – Reasonableness of the PWM Expansion project revenue requirement:** Similar to Criterion 8 above, the CPUC required for this criterion that the revenue requirement for the smaller desalination facility – i.e., the currently proposed facility – combined with PWM was "just and reasonable" as compared to the revenue requirement of the larger proposed desalination facility alone. At the time of this 2017 decision, there was a great deal of uncertainty about expected PWM costs, but the CPUC determined that it was reasonable to move forward with the combination of a desalination facility and PWM, based in part on the first-year cost cap referenced in Criterion 8, on an evaluation of the likely "indifference cost" of the two options,[91] and on the broader benefits provided by the PWM, such as supporting aquifer recharge, having lower greenhouse gas emissions, and others. There is more certainty at this point than during the 2017 decision about the expected costs of all the projects, which provides more certainty about the reasonableness of expected revenue requirements.

Overall adverse environmental effects of each project

As noted above and in the findings of this report, the Cal-Am project would have significant adverse effects on several coastal resources, including environmentally sensitive habitat areas and endangered or threatened species (see Section II.F – Environmentally Sensitive Habitat Areas). It would result in additional adverse impacts to those coastal resources due to the expected effects of sea level rise and coastal erosion on its proposed well field during the expected project life (see Section II.G – Coastal Hazards). Its effects on marine life and ocean water quality have not yet been determined. The PWM Expansion would have few, if any, adverse effects on coastal resources, as it would be located entirely outside of the coastal zone and would be constructed largely on an existing industrial site. It would also be greenhouse gas neutral, as it would use electricity generated from landfill gasses, whereas the Cal-Am project would rely on grid-supplied electricity with a current emissions rate of up to several hundred pounds of greenhouses gasses per megawatt-hour.

An underlying environmental concern applicable to both projects is the potential effect of Cal-Am not having an adequate water supply project in place by December 2021 so that it can meet its obligation under the State Water Board's cease-and-desist order to reduce its withdrawals from the Carmel River to no more than its legal limit. Missing that deadline (or other interim deadlines) would result in substantial reductions in Cal-Am's lawful diversion limits. Cal-Am has a supply of "banked" water in the Seaside Aquifer that it may be able to rely on for some period of time, but it is possible that Cal-Am would seek, and obtain, an extension to allow completion of its desalination facility or of PWM Expansion if needed, which could lead to continued excessive water withdrawals from the Carmel River until the new project was ready. This would result in further adverse effects in the Carmel River ecosystem and specifically to the steelhead that are listed as threatened. However, as noted above, the Cal-Am project appears to have a higher risk of delay than does the PWM Expansion, so this potential environmental effect is more likely to occur if the Cal-Am project moves forward at the expense of the PWM Expansion.

[91] The CPUC's 2017 decision describes the "indifference cost" as the range of costs within which ratepayers are indifferent as to whether they are paying for water from the larger desalination facility or the smaller facility in combination with the PWM. This range was determined to be between $1,178 and $2,062, which bracketed the expected first-year cost cap of $1,720.

"No Action" Alternative

The existing water supply situation is discussed above and elsewhere in this report, and this analysis relies on that discussion. The purpose of describing the "no action" alternative is to allow decision makers to compare the impacts of approving a proposed project with the impacts of not approving it. Here, if the Commission denies the proposed desalination project, Cal-Am will need to pursue other options to obtain alternative water supplies. Over the past decade or two, other water supply projects have been considered – for example, new desalination facilities elsewhere in Monterey County. Those other desalination facilities have proposed to use open water intakes and could also affect areas of ESHA, thereby potentially causing greater adverse impacts than Cal-Am's proposed project. However, none of those proposals could meet the deadline imposed by the State Water Board's cease-and-desist order, and Cal-Am is therefore not likely to pursue them, at least in the foreseeable future.

If the Commission does not approve this project, the most likely scenario is that Cal-Am will pursue the PWM Expansion. The PUC acknowledged this possibility in its 2017 Decision when it stated that it would consider an application for the PWM Expansion if the "desalination plant authorized in this decision (i.e., 6.4 million gallons per day) is delayed to the point that sufficient source water capacity is more likely than not to be unavailable after the December 31, 2021, deadline set by the State Water Resources Control Board." Given that the design and environmental review for the PWM Expansion is already underway, it appears as though that project is the only other water supply project that could be ready in time to allow Cal-Am to meet the State Water Board's cease-and-desist order. Therefore, what is most reasonably expected to occur in the foreseeable future if the project is not approved is that Cal-Am will pursue the PWM Expansion. As described above, the PWM Expansion would have fewer impacts on coastal resources than the proposed project.

As the analysis above shows, the PWM Expansion should provide adequate water supply for Cal-Am's service area for some number of decades. However, if Cal-Am determines that it needs additional supply during or after that time period, it may seek to develop such other supplies. Whether and when any such projects might be proposed, whether they would be approved by the PUC and other agencies, and what impacts those supply projects might have on coastal resources, is speculative at this time.

Conclusion

Based on the above, the Commission finds that there is a feasible and less environmentally damaging alternative that would meet all or most of the proposed project's objectives in a timely manner.

P. COASTAL-DEPENDENT INDUSTRIAL FACILITY OVERRIDE

Section 30260 of the Coastal Act states:

> *Coastal-dependent industrial facilities shall be encouraged to locate or expand within existing sites and shall be permitted reasonable long-term growth where consistent with this division. However, where new or expanded coastal-dependent industrial facilities cannot feasibly be accommodated consistent with other policies of this division, they may nonetheless be permitted in accordance with this section and Sections 30261 and 30262 if (1) alternative locations are infeasible or more environmentally damaging; (2) to do otherwise would adversely affect the public welfare; and (3) adverse environmental effects are mitigated to the maximum extent feasible.*

Section 30101 of the Coastal Act states:

> *"Coastal-dependent development or use" means any development or use which requires a site on, or adjacent to, the sea to be able to function at all.*

Section 30101.3 of the Coastal Act states:

> *"Coastal-related development" means any use that is dependent on a coastal-dependent development or use.*

The City of Marina LCP includes the following provisions:

LCLUP Policy 41:

> *To give priority to Coastal-dependent development on or near the shoreline and ensure that environmental effects are mitigated to the greatest extent feasible.*

LCLUP Geotechnical Policies, Policy 1 (first bullet)

> *Structural development shall not be allowed on the ocean-side of the dunes, in the area subject to wave erosion in the next 50 years, or in the tsunami run-up zone. The only exception to this would be essential support facilities to a coastally-dependent industry, and in these areas the city will not undertake liability for property damage due to hazards.*

Project components within the City of Marina are on property designated by the LCP as "Coastal Conservation and Development," a designation that prioritizes coastal-dependent industrial uses.

LCLUP Coastal Conservation and Development Uses, Policy 2 (second bullet) states:

> *Coastal Conservation and Development uses shall be allowed on the west side of Dunes Drive. These activities shall include, but not be limited to, marine agriculture (Mariculture); off-shore and surf-zone sand mining, and other commercial activities dependent for economic survival on proximity to the ocean, salt water or other elements available in this particular environment. Development in this area will be allowed in already disturbed areas.*

The LCLUP, at page 41, describes uses allowed in areas designated Coastal Conservation and Development:

> *such uses as are dependent upon salt water, the unique coastal-marine environment found in Marina, and/or on resources present only in this portion of Marina's Coastal Zone. Development shall be sited in already disturbed areas. Access roadways shall be kept to the minimum necessary to serve the proposed development and buildings shall be designed and sited to preserve sensitive habitats and views of the coastal dunes.*

The IP, in its regulations for Coastal Conservation and Development Districts, includes similar standards for allowed uses in this district. They include:

> *Coastal research and educational uses; developed public access and other coastally dependent recreation uses; coastal dependent industrial uses including but not limited to marine agriculture (mariculture), dredge pond, surf zone and offshore sand extraction;*

The LCLUP's policies relating to the North of Reservation Road Planning Area identify appropriate uses within the high Flandrian dune area, in which this project is proposed, to include "activities specifically dependent upon proximity to the ocean" (see LCLUP, page 37). It further states that the uses allowed in Coastal Conservation and Development districts are those consistent with numerous Coastal Act policies, including Coastal Act Section 30260 (see LCLUP, pages 38 and 44).

Analysis

As evaluated above, the Commission finds that the proposed project is inconsistent with Coastal Act and/or LCP policies regarding environmentally sensitive habitat areas, coastal hazards, and placement of fill in coastal waters. Nonetheless, Coastal Act Section 30260 allows the Commission to consider approval of a coastal-dependent industrial facility that is otherwise inconsistent with one or more policies of the Coastal Act's Chapter 3. The City of Marina's LCP, under its Coastal Conservation and Development land use designation, similarly allows coastal-dependent uses that are dependent on proximity to the ocean if the uses are consistent with Coastal Act Section 30260, subject to certain limitations.

The LCP does not define the term "coastal-dependent," but Coastal Act Section 30101 states that a coastal-dependent development or use *"means any development or use which requires a site on, or adjacent to, the sea to be able to function at all."* Cal-Am's proposed project is a coastal-dependent facility because: 1) the proposed well field is located so it can extract primarily seawater from beneath the seafloor and the shoreline of Monterey Bay while reducing its effects on non-seawater components of the underlying groundwater aquifers; 2) the proposed Source Water Pipeline is needed to transport that water from the shoreline to the inland desalination facility; and 3) the project's proposed use of an existing outfall is needed to convey the facility's brine discharge into coastal waters.

The proposed project is also an industrial facility. Several project components fall within at least one category of the North American Industry Classification System ("NAICS") – i.e., NAICS #237110: Water and Sewer Line and Related Structures Construction.[92] Some of the project components would be built within currently active industrial sites and would use similar equipment and methods as the other uses on those sites. The proposed project would be implemented by Cal-Am, an entity that, along with being a publicly-regulated utility, is considered part of the water and wastewater industry. Further, the Commission has previously recognized that public utilities conduct industrial activities – for example, in its 2013 certification of Santa Barbara County Local Coastal Program Amendment No. LCP-4-STB-13-0215-2 allowing natural gas exploration and production by public utilities. The City's LCP also includes several provisions that similarly address "coastal-dependent" uses. The proposed project is therefore a coastal-dependent industrial facility.[93]

Application of Coastal Act Section 30260

Coastal Act Section 30260 provides for special consideration of coastal-dependent industrial facilities that would otherwise be unapprovable due to inconsistencies with the Act's Chapter 3 coastal resource protection policies. Section 30260 allows the Commission to approve such projects, notwithstanding the project's inconsistencies with those other policies, if they meet a three-part test: 1) if alternative locations are infeasible or more environmentally damaging; 2) to do otherwise would adversely affect the public welfare; and 3) if adverse effects are mitigated to the maximum extent feasible. The LCP similarly allows approval of coastal-dependent industrial uses in dune habitat if they are the types of uses allowed pursuant to Coastal Act Section 30260, if the development is sited in the most disturbed areas, and if the adverse impacts of the development are mitigated.[94] Thus, the Commission interprets these LCP provisions consistent with Section 30260 to determine if the proposed project is approvable, despite its inconsistency with the habitat protection policies of the LCP.[95] For this first test, the Commission is also incorporating the alternatives analysis required pursuant to Coastal Act Section 30233 – that there be no feasible, less environmentally damaging alternative to the proposed project.

Application of the Section 30260 override provision is discretionary: it *allows* the Commission to approve a project that meets the three statutory criteria, but it does not *require* the Commission to do so. Similarly, the Commission need not find that a coastal-dependent industrial project fails to meet the three criteria in order to deny it, although such findings could support a denial. The three tests of Section 30260 are applied below.

[92] NAICS was formerly the Standard Industrial Classification, or SIC system. Both systems have been used by U.S. EPA, the State and Regional Water Boards, and others to categorize various industrial activities.

[93] The Commission's findings here are also supported by an unpublished Court of appeal opinion upholding the Commission's 2014 approval of Cal-Am's test well and finding that the test well was a "coastal-dependent industrial facility" and that the City's LCLUP incorporates Section 30260. See *Marina Coast Water Dist. v. California Coastal Comm'n*, 2016 WL 6267909, (Oct. 26, 2016).

[94] For example, LCLUP Uses allowed in the CD District, Policy 2, p. 41, LCLUP Habitat Protection Policy 1, LCLIP Regulations for CD Districts section b(2)(b).

[95] See *McAllister v. California Coastal Commission*, (2009) 169 Cal.App.4th 912, 931.

Test 1 – Alternative Locations are Infeasible or More Environmentally Damaging and Development is Limited to Already-Disturbed Areas: The first test of Coastal Act Section 30260 allows the Commission to approve a project that is otherwise inconsistent with Coastal Act policies, or in this case, if it is also inconsistent with LCP policies, if it finds that "alternative locations are infeasible or more environmentally damaging." As noted above, the Commission is also considering this question in the context of Coastal Act Section 30233's provision allowing fill in coastal waters only "where there is no feasible less environmentally damaging alternative." Section II.O – Alternatives Analysis of these Findings describe a feasible and less environmentally damaging alternative to the Cal-Am's proposed project. The Pure Water Monterey Expansion project would have few adverse environmental effects compared to the proposed project, and few, if any, adverse effects to coastal resources, since it would be located outside of the coastal zone – for example, it would result in no impacts to ESHA, would have far fewer greenhouse gas emissions compared to the Cal-Am project, and would not cause the brine discharge-related water quality impacts that Cal-Am's project would cause. This alternative project would meet the same project objectives as developed under CEQA for Cal-Am's proposed project, and would also meet the same state requirements for water supply systems. This alternative project also appears to be fully feasible, as it would be an extension of an existing facility that is modeled on other existing and similar treatment facilities. Importantly, it fully meets the criteria of the Coastal Act's definition of feasibility. Thus, the Commission finds that the proposed Cal-Am project does not meet the first test of Section 30260 because the Commission has determined that there is a feasible and less damaging alternative to the proposed project.

Test 2 – To not permit the development would adversely affect public welfare: Section 30260's second test provides that coastal-dependent industrial development may be permitted if to do otherwise (i.e., to deny the proposal) would adversely affect the public welfare. The Findings herein evaluate several benefits and concerns regarding the proposed project's effects as related to the public welfare.

The Commission acknowledges the need for Cal-Am to obtain a new water supply. As noted above, Cal-Am and other entities in the area have been seeking a water supply since about 1995 to replace that obtained from the Carmel River in response to the requirements of a cease-and-desist order from the State Water Board to reduce its water withdrawals from the Carmel River by December 2021 so as to eliminate Cal-Am's water extractions above its legal rights to that water and to benefit the Carmel River watershed, particularly the federally-listed Central Coast steelhead. Cal-Am's proposed project also includes three components meant in part to address public welfare concerns. First, Cal-Am selected a site where it could obtain its source water using subsurface intakes, which is the state's preferred method for seawater desalination facilities, due to their limited or non-existent adverse effects on marine life. It also selected a site that, at the time, was already being used by a coastal-dependent industrial facility – the CEMEX sand mining operation – rather than a completely undeveloped coastal location where it may have caused additional adverse effects. Cal-Am also proposed a facility sized to meet the then-expected water supply and demand projections for its service area.

However, the situation has recently changed significantly for two of these aspects of the project. First, Cal-Am would no longer share the site with another industrial facility, as CEMEX will be closing in approximately one year. Pursuant to the above-referenced CEMEX Settlement, the site will be largely set aside for habitat restoration, public access, and coastal educational opportunities, where ongoing industrial uses such as those Cal-Am proposes would not be compatible. Second, another potential project has been developed – the above-referenced Pure Water Monterey Expansion – that will be able to provide a water supply adequate for current and future growth and that will allow Cal-Am to meet its obligations regarding reduced withdrawals from the Carmel River. As described above and in the Alternatives section of these Findings, the alternative project will have far fewer adverse impacts than Cal-Am's project. Because of this feasible alternative, the Commission's denial of Cal-Am's project will not adversely affect the public welfare, as the alternative project will be able to provide the needed water.

Importantly, and as detailed in Section II.N – Environmental Justice, Cal-Am's project would create substantial hardships for several communities of concern that would be affected by the relatively high water costs resulting from the project, by potential indirect impacts to other area water supplies, and by the presence of Cal-Am's well field on a site that otherwise would provide amenities such as habitat restoration, public access to the shoreline, and recreational opportunities.

Based on the above, the Commission finds that denying the proposed project would not adversely affect the public welfare. On the contrary, denying the project is likely to lead to implementation of a project alternative that would benefit the public welfare. The project therefore does not meet the second test of Section 30260.

Test 3 – Adverse environmental effects are mitigated to the maximum extent feasible: Because the Commission has determined that the proposed project does not meet either of the first two tests of Section 30260, there is no need to determine whether it meets this third test. Nonetheless, and as described below, the Commission finds that the proposed project does not meet the third test of Section 30260.

This third test of Section 30260 and of the LCLUP's Habitat Protection Policy 1 require that the proposed project's adverse environmental effects be fully mitigated. As noted in the Findings above, several project components are not yet fully mitigated. For example, the project's adverse effects on ESHA could be fairly extensive – a maximum of up to about 35 acres – yet Cal-Am's currently proposed mitigation strategy would result in a net loss of ESHA. The project's inconsistencies with the LCP's coastal hazards provisions lead to what may be an unavoidable significant impact to ESHA, due to Cal-Am's inability to move its well sites further inland and away from the hazards area. Some aspects of the project – for example, the required outfall liner – have not yet been fully evaluated, so while some of its impacts can be generally identified, Cal-Am has not yet provided adequate information to determine the full extent of its likely impacts and what mitigation would be needed to avoid or minimize those impacts to the maximum extent feasible. The Commission therefore finds that Cal-Am's proposed project does not meet the third test of Section 30260.

Conclusion
The Commission finds that the proposed project does not meet the three tests of section 30260 and the parallel LCP policies.

III. CALIFORNIA ENVIRONMENTAL QUALITY ACT

Section 13096(a) of the Commission's administrative regulations requires that Commission approval of a Coastal Development Permit application be supported by a finding showing that the application, as conditioned by any conditions of approval, is consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect that the activity may have on the environment. In addition, CEQA Guidelines Section 15042 states that "[a] Responsible Agency may refuse to approve a project in order to avoid direct or indirect environmental effects of that part of the project which the Responsible Agency would be called on to carry out or approve."

The CPUC, as lead agency under the California Environmental Quality Act (CEQA), prepared and certified an EIR for the project in 2018. The Coastal Commission, acting as a responsible agency pursuant to CEQA, has reviewed and considered the information contained in the EIR on the project. The findings in the staff report also address and respond to all issues pertaining to significant adverse environmental effects that were raised in public comments received prior to preparation of the staff report.

The Commission incorporates its findings on inconsistency with the Coastal Act and City's certified LCP at this point as if set forth in full. As discussed above, the proposed development is inconsistent with various, applicable policies of the certified LCP and Coastal Act, and is denied on that basis. As an additional and independent basis for denial, the Commission denies the proposed project under CEQA in order to avoid the environmental effects that Cal-Am's project would have within the coastal zone, including the effects to environmentally sensitive habitat and the other impacts described in this report. Denial is also appropriate because there is also a feasible alternative available which would substantially lessen significant adverse effects that the proposed development may have on the environment.

In addition, Section 21080(b)(5) of CEQA, as implemented by section 15270 of the CEQA Guidelines, provides that CEQA does not apply to projects that a public agency rejects or disapproves. Accordingly, the Commission's denial of this project represents an action to which CEQA, and all requirements contained therein that might otherwise apply to regulatory actions by the Commission, does not apply.

APPENDIX A – SUBSTANTIVE FILE DOCUMENTS

California American Water, *Coastal Development Permit Application for Monterey Peninsula Water Supply Project, July 31, 2019*, with attachments and responses to Commission staff requests for additional information.

California American Water, *Monterey Peninsula Water Supply Project Hydrogeologic Working Group – Hydrogeologic Investigation Technical Report*, November 6, 2017.

California American Water, *Monterey Peninsula Water Supply Project Hydrogeologic Investigation Technical Memorandum, Summary of Results – Exploratory Boreholes*, July 8, 2014.

California American Water, *Reply Comments Regarding Hydrogeologic Study and Technical Report*, CPUC Application 12-04-019, January 4, 2018.

California Public Utilities Commission, *Final Decision 18-09-017* with appendices, September 13, 2018.

California Public Utilities Commission and Monterey Bay National Marine Sanctuary, *Final Environmental Impact Report / Final Environmental Impact Statement*, March 2018.

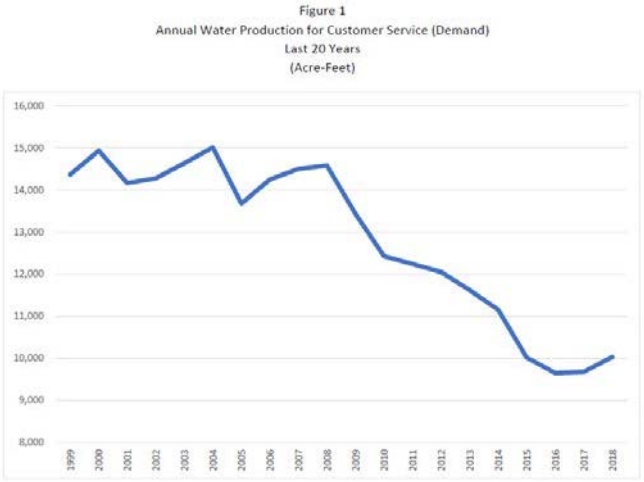
City of Marina, file for California American Water coastal development permit application 2018-01.

County of Monterey, *Integrated Coastal Groundwater Monitoring Program and Plan*, May 2019.

Knight, R. et. al, *Preliminary Findings of AEM Study*, June 16, 2017.

Marina Coast Water District and City of Marina, technical appendices/attachments to submittals to CPUC pursuant to California American Water application A-12-04-019 to California Public Utilities Commission, April 19, 2018.

- **Continually lowering baseline:** As noted above, both the CPUC and the District used a period of the past 10 years of usage data as the basis for average annual demand. The 2019 Update also identified average demands based on the past five years and three years, both of which resulted in lower average demands of 10,109 acre-feet per year and 9,788 acre-feet per year, respectively, or about 10% and 13% less than the existing 10-year average. The 2019 Updated also included a graph showing the past 20 years of demand, which illustrates the substantial drop in water demand over that period and also illustrates that the early part of the most recent 10-year periods is much higher than current use – e.g., 2007 and 2008 have much higher demand than 2017 and 2018:

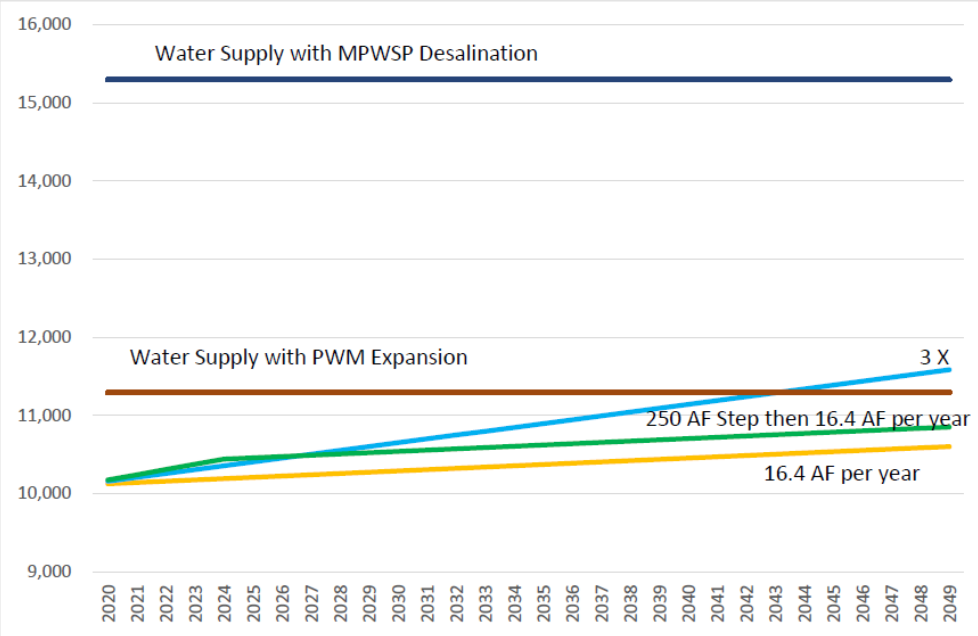


This graph also illustrates that calculating the 10-year average during the next several years will involve removing the higher demand years from 2008 to about 2015 and replacing them with lower demand years of 2019, 2020, and onward. Moving forward each year by deleting the earliest year of the 10-year period and adding a new year that includes the expected high estimate of 16.4 acre-feet per year of predicted growth (which, as noted in the 2019 Update, is the highest rate over the past 20 years) results in the next several 10-year annual averages dropping well below the current 10-year average of 11,232 acre-feet per year – to a low of about 10,047 acre-feet in 2024.[84] It would then be expected to start increasing at the anticipated rate of growth. This approach puts the upcoming 10-year averages much closer to the existing five-year average used in the 2019 Update and allows for a relatively consistent comparison with the same approach used in the CPUC's reliance of the 10-year average.

[84] This approach results in the 10-year annual average roughly equaling:
In 2019 (2010 to 2019): 10,902
In 2020 (2011 to 2020): 10,661
In 2021 (2012 to 2021): 10,467
In 2022 (2013 to 2022): 10,280
In 2023 (2014 to 2023): 10, 135
In 2024 (2015 to 2024): 10,047
In 2025 (2016 to 2025): 10,061
In 2026 (2017 to 2026): 10,102
In 2027 (2018 to 2027): 10,140

- **Rate of market absorption of water demand:** Although the 2019 Update used a five-year average demand rather than the 10-year average demand used in the CPUC's review, it included added several potential growth scenarios to assess how the PWM Expansion would support expected growth into future decades. Using the current five-year average annual demand as a baseline, it calculated future expected water demands in three ways: 1) adding the above-referenced 16.4 acre-feet per year growth rate; 2) adding three times that growth rate; and 3) adding an initial 250 acre-feet of growth during the first five years, followed by annual 16.4 acre-feet growth rates. As shown on the 2019 Update's Figure 3, those projections show that Cal-Am's available water portfolio with the PWM Expansion instead of the desalination facility would provide sufficient water under those growth rates until well beyond 2050, until about 2043, and again, well beyond 2050, respectively.

Figure 3
Market Absorption of Water Demand Compared to Water Supply
Current Demand at 5-Year Average
(Acre-Feet)



- **Effects of cost on expected water demand:** Rates of water use are driven by several considerations, including the cost of that water to the users. Selection of either of these facilities – the Cal-Am project or the PWM Expansion – would result in increased water costs and water rates in Cal-Am's service area. Current costs for water from the Carmel River and the Seaside Basin are in the range of several hundred dollars per acre-foot, whereas the Cal-Am project is expected to cost about $6,100 per acre-foot and the PWM Expansion about $2,100 per acre-foot. Either would increase the average cost of water from Cal-Am's water portfolio, though the Cal-Am project, at about three times the cost of the PWM Expansion, would create a substantially larger cost increase (this issue is discussed in more detail in Section II.N – Environmental Justice and Section II.P – Coastal-Dependent Industrial Facility Override). Additionally, because the Cal-Am project would be built to