

SECTION 18

Revisions to the Draft EIR Text

Introduction to Revisions to the Draft EIR Text

Responses to comments on the Draft EIR have resulted in revisions to the Draft EIR text. Other minor clarifications have also been made. This section reflects all changes made to the Final EIR in ~~strikeout~~/underline text, and will be adopted as part of the Final EIR by West Basin when certifying the Final EIR and approving the proposed Project. All revisions to the Project Description are found in Final EIR Section 11, *Refinements to the Project Description*.

Section 1, Executive Summary

The Draft EIR text on page 1-1 is revised as follows:

The Local Project would provide approximately ~~44~~ 10 percent of West Basin's water demand, relieving pressure on the heavily constrained supply of imported water available to West Basin. The new water source would increase the overall water supply reliability, drought resiliency, local control, and water security in the region.

Section 2, Introduction and Project Background

The Draft EIR text on page 2-22 is revised as follows:

West Basin has included this analysis of best available site, best available design, best available technology, and best available mitigation measures to assist the LARWQCB in its ~~determine~~ determination of the best combination of feasible alternatives to minimize intake and mortality of all forms of marine life pursuant to the OPA.

The Draft EIR text on page 2-23 is revised as follows:

~~If a listed species may be adversely affected by a Project, SWRCB staff will confer with the USFWS, and/or NMFS to inform these agencies of Project impacts to any federally listed species or critical habitat.~~

The Draft EIR text on page 2-37 is revised as follows:

Although the technical memorandum found that SSIs could have advantages over screened ocean intakes, since SSIs collect water through sand sediment which acts as a natural barrier to organisms, and thus eliminates ~~with regard to~~ impingement and entrainment ~~and while~~ reducing pretreatment requirements, results indicated that

significant additional geotechnical feasibility studies would be required for this intake option.

The Draft EIR text on page 2-37, Footnote No.7, is revised as follows:

⁷SWRCB amended the California Ocean Plan on May 6, 2015, to address desalination facilities withdrawing seawater (“Desal Amendments”). As a result, Ocean Plan Section III.M.2(d)(1) now requires that ~~in requesting~~ while making a Water Code Section 13142.5(b) determination for an ocean desalination facility, the ~~owner or operator of a proposed seawater desalination facility~~ LARWQCB must consider whether subsurface intakes are feasible to minimize intake and mortality of all forms of marine life.

Section 3, Project Description

All revisions to the Project Description are found in Final EIR Section 11, *Refinements to the Project Description*.

Section 4, Basis of Cumulative Analysis

The Draft EIR text on page 4-5 in Table 4-1 is revised as follows:

City of Redondo Beach		
22	Waterfront Development Project (Portofino Way and Torrance Circle)	Demolition of approximately 207,402 SF of existing structures Retention of 12,479 SF of existing development Construction of up to 511,460 SF of retail, restaurant, creative office, specialty cinema, a public market hall, and a boutique hotel Total of new and remaining development on-site would be 523,939 SF (304,058 SF of net new development) Status: Application being processed, NOP circulated June-July 2014 <u>Approval by City Council, under review by California Coastal Commission, construction anticipated 2017-2020</u> <u>2019-2021</u> .

The Draft EIR text on page 4-6 in Table 4-1 is revised as follows:

23	South Bay Galleria Improvement Project (1815 Hawthorne Boulevard)	Increase existing SF by 217,864 SF, including department stores, mall shops, dining and entertainment. Overall density of development on the site (including retail, office, hotel, and housing) will increase to a maximum 1,943,965 sf of building floor area. Project will also include a hotel of up to 150 rooms and up to 300 <u>650</u> DU (townhomes, condos, and/or apartment homes). Status: NOP posted October 2015 <u>Approved by Planning Commission on April 19, 2018 and on appeal to the City Council, construction anticipated 2017-2018</u> <u>2020-2023</u>
24	Mixed-Use Development (1700 South Pacific Coast Highway)	149 <u>115</u> DU 2637,000 SF of commercial Status: Approved June 2016, construction to <u>begin in 2019</u> completed 2017

25	600 North Pacific Coast Highway	Expansion of existing automobile sales office/lot with adjacent property at 610 N. Pacific Coast Highway Status: Initial project development stage <u>Project under construction in 2019</u>
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The Draft EIR text on page 4-10 is revised as follows:

The volume generated would account for approximately ~~4~~ 10 percent of the total water demands, while the rest of the demand would be met by the use of imported water, recycled water, and water conservation.

Draft EIR text on pages 4-11 and 4-12 in Table 4-2 is revised as follows:

2	Los Angeles Department of Sanitation Hyperion Water Reclamation Plant	Los Angeles County	230 <u>Design capacity 450; peak weather flow 800</u>	N/A	Wastewater Discharge	Existing, Active
11	San Diego County Water Authority -Camp Pendleton Seawater Desalination Project	Camp Pendleton	400-150 <u>Undetermined (pilot test facility of 20 gallons per minute)</u>	Undetermined	Surface	In Feasibility Study

The Draft EIR text on page 4-15 is revised as follows:

Currently, the Huntington Beach project is pending permits/approvals from the Coastal Commission and Regional Water Quality Control Board, and the State Lands Commission ~~has initiated~~ certified an Supplemental EIR in October 2017 prior to ~~considering~~ issuing a lease for the intake and discharge tunnels.³

³ ~~The NOP was released November 18, 2016.~~

The Draft EIR text on page 4-16 is revised as follows:

In collaboration with the United States Marine Corps, the Water Authority ~~is currently~~ was evaluating the feasibility of a potential regional desalination project located at Camp Pendleton in northern San Diego County. ~~The Camp Pendleton Seawater Desalination Project would involve an ocean water desalination facility producing between 100 to 150 MGD.~~ The Water Authority released the Camp Pendleton Seawater Desalination Project Feasibility Study in December 2009. ~~The project is considered very early in the development process and the Water Authority was is currently~~ is conducting additional technical studies for the project, including parallel piloting of a screened ocean intake and subsurface intake, to evaluate an intake flow of up to 40 gallons per minute and treatment of up to 20 gallons per minute of seawater (SDCWA 2016 and 2017). However, in September 2018, the Water Authority decided to close down its work on a potential seawater desalination pilot plant at Camp Pendleton due to extraordinary permitting hurdles and related costs created by the State Lands Commission staff, along with the decreased potential that the plant will be needed in coming decades (SDCWA 2018).

Section 5.0, Environmental Analysis

The Draft EIR text in the footnote on page 5-3 is revised as follows:

³ Note that California Government Code Section 53091(d) states that “[b]uilding ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water, wastewater, or electrical energy by a local agency.” Furthermore, Section 53091(e) states that “[z]oning ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water . . .” However, West Basin intends to make every effort to comply with all applicable building and zoning ordinances stipulated under the City of El Segundo Municipal Code in the construction and operation of the Ocean Water Desalination Project. The subject Government Code section does not apply to Local Coastal Programs, including zoning ordinances of a city or county incorporated into or adopted for the purpose of implementing Local Coastal Programs.

Section 5.1, Aesthetics, Light & Glare

Draft EIR page 5.1-11 is revised as follows:

Ocean intake and discharge construction would occur offshore in the open ocean.
Construction equipment would include boats, barges, tug boats, and/or dive boats.
Construction would occur over ~~24~~ 12 months . . .

Section 5.2, Air Quality

The Draft EIR text on page 5.2-20 is revised as follows:

... For sites over 5 acres, if the emissions exceed the screening level thresholds in the lookup tables the site would have the potential to result in significant local impacts and the SCAQMD recommends air quality dispersion modeling to assess impacts to nearby sensitive receptors. This refined analysis uses the AERMOD dispersion model to determine the concentration of the pollutant at the nearby receptor locations. For NOx and CO emissions, concentrations derived from the dispersion modeling are converted to ppm, added to the existing background emissions, and compared to the appropriate ambient air quality standards shown in Table 5.2-1. For PM10 and PM2.5, concentrations are compared to an increase of 10.4 µg/m³.

The Draft EIR text on page 5.2-40 is revised as follows:

AQ-1: Prior to construction, West Basin shall confirm that the Grading Plan, Building Plans, and specifications stipulate that, in compliance with SCAQMD Rule 403, excessive fugitive dust emissions shall be controlled by regular watering or other dust prevention measures, as specified in the SCAQMD’s Rules and Regulations. In addition, SCAQMD Rule 403~~2~~ requires implementation of the following dust suppression techniques to prevent fugitive dust from creating a nuisance off-site and reduce construction-related fugitive dust impacts on nearby sensitive receptors:...

The Draft EIR text on page 5.2-46 is revised as follows:

... It is noted that due to the location of the Project components, LST emissions associated with the construction of the onshore facilities for the ESGs were evaluated for a 5-acre site at 25 meters. Construction of offshore Project components were evaluated for a 5-acre site at 500 meters. Construction of the off-site conveyance pipeline ~~was~~ ~~were~~ evaluated for a 1-acre site at 25 meters. Where emissions exceed the screening tables, a refined analysis was conducted to determine the potential to result in significant impacts as discussed in Section 5.2.3 Significance Thresholds and Criteria – Localized Significance Thresholds.

The following footnote is added to Table 5.2-18 on page 5.2-47 as follows:

Refined analysis for Offshore Emissions²

²The refined analysis utilized dispersion modeling. Because the Basin is in non-attainment for NOx, the threshold is based on California ambient air quality standards as identified in Table 5.2-1.

The Draft EIR text on page 5.2-47 is revised as follows:

As identified in Table 5.2-18, incorporation of Mitigation Measures AQ-1 through AQ-3 for Local Project emissions for the screened ocean intake and concentration discharge facilities would result in less than significant impacts. Mitigated NOx emissions exceeds the LST screening tables for a 5-acre site at 500 meters. Therefore, a refined analysis was conducted to determine if the Project concentrations would exceed CAAQS for the specific Project conditions. Based on the results of the dispersion model, the impacts from the Project for the offshore emissions would not exceed the CAAQS and, therefore, the Project would result in less than significant impacts with respect to NOx emissions.

The Draft EIR text on page 5.2-48 is revised as follows:

...The resulting health risk calculations were performed using a spreadsheet tool consistent with the OEHHA guidance. The spreadsheet tool incorporates the algorithms, equations, and a variable described above as well as in the OEHHA guidance, and incorporates the results of the AERMOD dispersion model. Risk assumptions and calculations for both unmitigated and mitigated scenarios are included in Appendix 3D, Air Quality/Greenhouse Gas Emissions Data, Health Risk Assessment.

The Draft EIR text on page 5.2-53 is revised as follows:

...Construction of the Regional Project would contribute to the long-term emissions associated with the Project and would therefore add to the cumulative emissions experienced during the lifetime of nearby residents. Risk assumptions and calculations for both unmitigated and mitigated scenarios are included in Appendix 3D, Air Quality/Greenhouse Gas Emissions Data, Health Risk Assessment. ...

Section 5.3, Biological Resources – Terrestrial

The Draft EIR text on page 5.3-7 is revised as follows:

Local

As set forth by the California Government Code (CGC) Section 53091(d) and (e), West Basin would not be subject to compliance with local building and zoning ordinances, as the Project involves locating and constructing water-related facilities. The subject Government Code section does not apply to Local Coastal Programs, including zoning ordinances of a city or county incorporated into or adopted for the purpose of implementing Local Coastal Programs.

The Draft EIR text on page 5.3-13 and -14 is revised as follows:

Restored Coastal Scrub

The restored coastal scrub plant community occurs along the slopes of the southwestern corner of the desalination facility site. This plant community is primarily composed of native vegetation, including common yarrow (*Achillea millefolium*), brittlebush (*Encelia farinosa*), Menzies' goldenbush (*Isocoma menziesii*), Douglas' nightshade (*Solanum douglasii*), lemonadeberry (*Rhus integrifolia*), and California buckwheat (*Eriogonum fasciculatum*), but also includes some non-natives, particularly Mexican fan palm (*Washingtonia robusta*), pine (*Pinus* sp.), New Zealand flax (*Phormium* sp.), and rabbitsfoot grass (*Polypogon monspeliensis*). This community corresponds to Menzie's golden bush scrub (*Isocoma menziesii* Shrubland Alliance) as described in the MCV and is considered a natural sensitive community with a state rank of S3. This community integrates into ornamental vegetation in the southeastern corner of the Project site. Water irrigation pipelines, which provide artificial irrigation, are present throughout this community.

Ornamental

Ornamental areas are present along the remainder of the slopes within the survey area, which are primarily found along the eastern half of the desalination facility site and along the entire length west of Vista Del Mar. These slopes are dominated by iceplant (*Carpobrotus edulis*), particularly in the southern half of the desalination facility site. Additional ornamental shrubs and trees, including Mexican fan palm, are present on the slopes in the northern half of the site. This community corresponds to Ice Plant Mats (*Mesembryanthemum* spp. - *Carpobrotus* spp. Herbaceous Semi-Natural Alliance) as described in the MCV, which does not identify a state ranking due to its dominance by non-native species. Thus, it is not considered a natural sensitive community.

Draft EIR text on page 5.3-29 is revised as follows:

California Brown Pelican

California brown pelican is a CDFW fully protected subspecies of the brown pelican that has been delisted from both the federal and ~~CESA~~ state endangered species lists

(~~formerly endangered on both~~). It is a year-round resident of Los Angeles County. The brown pelican is found mostly offshore along coastal waters, but may also venture inland into large open waters; it is known to occur in inundated reservoirs throughout the county. It usually nests on the ground, in trees, or on cliffs along the Pacific Coast; refer to Appendix 6. However, the only breeding colonies of this subspecies along the California coast are located on Anacapa Island and Santa Barbara Island. The species is known to roost on mudflats, sandy beaches, wharfs, rocky areas, and jetties. The ~~Project~~ ESGS site is located along the California coast, where brown pelicans (as well as several other birds) can commonly be found foraging offshore; however, there is no suitable nesting habitat within a 250-foot buffer of the ESGS site~~within the survey area~~. This species was observed flying over the ~~Project~~ ESGS site during the November 2015 habitat assessment field survey. Roosting habitat in the form of sandy beach and a jetty exists at the ESGS site as it does within the entire Santa Monica Bay and Southern California coastline. However, because there is a high level of human activity along this section of beach, brown pelican is not expected to roost at the site and has not been observed roosting at the site. In addition, the sandy beach in this area is much narrower than similar and wider areas located to the immediate north and south that also provide sandy beaches that are suitable for roosting.

The Draft EIR text on page 5.3-32 is revised as follows:

Special-Status Plant Species

The ESGS is developed and is surrounded by two plant communities: restored coastal scrub and ornamental. The habitat assessment field survey did not identify any special-status plant species at the ESGS. All vegetated areas within the ~~survey area~~ ESGS north and south sites are manmade ornamental areas or areas that have been revegetated with a specific coastal scrub seed mix. Based on habitat requirements for specific species, the availability and quality of habitats needed by each special-status plant species, and the manmade nature of the on-site vegetation, it was determined that the ~~desalination facility~~ ESGS north and south sites does not provide suitable habitat that would support any of the special-status plant species known to occur in the its general vicinity. Therefore, Local Project ocean water desalination facility construction would not impact special-status plant species.

The Draft text on pages 5.3-36 through -38 for Mitigation Measures BIO-1, BIO-2, BIO-4, BIO-5, BIO-6, BIO-7, BIO-9 are revised and Mitigation Measure BIO-9B is added as follows:

BIO-1: Prior to commencement of ground-disturbing activities, West Basin shall ~~implement~~ develop a Worker Environmental Awareness Program (WEAP) to educate all construction personnel on the area's sensitive biological resources, environmental concerns, and mitigation. The WEAP must discuss the locations and types of sensitive biological resources on the Project ESGS site and adjacent areas, identify monitoring methods, provide pictures, and identify habitat and wildlife protection measures. WEAP training shall be conducted as necessary during mobilization, demolition, and construction activities. New employees that join the construction crew must complete the training prior to working on the Project. A copy of the training logs shall be made

available for inspection upon request by responsible agencies. The WEAP shall be administered by a qualified biologist.

BIO-2: During site mobilization, demolition, and construction, West Basin shall monitor the ~~on-shore construction~~ ESGS site sufficiently to ensure that sensitive species are avoided. The extent of monitoring shall be determined by a qualified biologist. At a minimum, monitoring shall occur when ground-disturbing activities are conducted for the first time in new areas on the ESGS site, as well as during vegetation removal. The qualified biologist shall prepare monthly reports identifying monitoring results for the duration of the construction period. The qualified biologist shall have a bachelor's degree in biology or related subject or equivalent experience, and at least one year of work experience with the special-status species (and their associated habitats) that have the potential to occur on or adjacent to the ESGS site.

BIO-4: West Basin shall implement the following measures during construction and operation to prevent the spread and propagation of nonnative, invasive weeds:

- Only certified weed-free straw, hay bales, and seed shall be used for erosion control and sediment barrier installations...

BIO-5: Construction activities involving vegetation removal shall be conducted between September 1 and December 31. For construction that occurs inside the nesting season (between January 15 and August 31), ~~West Basin~~ a qualified biologist shall conduct a pre-construction nesting avian species clearance survey in accordance with the following guidelines:

- a) At least one pre-construction survey shall be conducted within 72 hours preceding initiation of vegetation removal and construction activity. Additional follow-up surveys may be required if periods of construction inactivity exceed 3 weeks in any given area, an interval during which birds may establish a nesting territory and initiate egg laying and incubation.
- b) The survey shall cover all potential nesting habitat and substrate as well as roosting habitat on the Project site and within 500 feet of its perimeter.
- c) If no active nests or roosts are identified, the construction work shall be allowed to proceed. The results of the clearance survey and any ongoing monitoring efforts and/or buffers shall be documented in ~~a~~ monthly compliance reports.
- d) If the qualified biologist finds an active nest during the survey and determines that the nest may be impacted, a no-disturbance buffer zone shall be established (protected areas around the nest, typically established using pin flags or construction netting). The size of the buffer shall be determined by the qualified biologist in consultation with CDFW and USFWS, based on the nesting species, its sensitivity to disturbance, and expected types of disturbance. These buffers are typically 300 feet from the nests or roosts of non-listed passerine species and 500 feet from the nests of raptors and listed species.
- e) Any active nests or roosts observed during the survey shall be mapped on an aerial photograph using GPS, and provided in the monthly compliance report.

- f) If active nests or roosts are detected during the survey, the qualified biologist shall monitor all nests or roosts at least once per week to determine whether birds are being disturbed. Activities that might, in the opinion of the qualified biologist, disturb nesting or roosting activities (e.g., excessive noise, exposure to exhaust), shall be prohibited within the buffer zone until such a determination is made. If signs of disturbance or distress are observed, the qualified biologist shall immediately implement adaptive measures to reduce disturbance. These measures may include, but are not limited to, increasing buffer size, halting disruptive construction activities in the vicinity of the nest until fledging is confirmed, or placement of visual screens or sound dampening structures between the nest and construction activity, reducing speed limits, replacing and updating noisy equipment, queuing trucks to distribute idling noise, locating vehicle access points and loading and shipping facilities away from noise-sensitive receptors, reducing the number of noisy construction activities occurring simultaneously, placing noisy stationary construction equipment in acoustically engineered enclosures and/or relocating them away from noise-sensitive receptors, and/or reorienting and/or relocating construction equipment to minimize noise at noise-sensitive receptors.

BIO-6: ~~Prior to~~ Within 72 hours of the commencement of ground-disturbing activities, a qualified biologist shall conduct a pre-construction clearance survey for western snowy plover on and in the vicinity of the ~~Project~~ ESGS site. This shall include a focused search for western snowy plover in suitable habitat within 500 feet of proposed construction activities. Western snowy plover shall be avoided by workers waiting for western snowy plover to leave an area before working in it. If western snowy plovers are observed nesting within 500 feet of construction activities, a minimum buffer of 500 feet shall be delineated around the nest and monitored until the nest is no longer considered active.

BIO-7: A qualified biologist shall be present during all vegetation removal and construction on or immediately adjacent to the open beach. The qualified biologist shall be familiar with the identification of western snowy plover, their biology and ecology, and have field experience surveying from nests and conducting monitoring activities for western snowy plover. The qualified biologist shall be responsible for ensuring that no snowy plovers are present within the construction zone.

If western snowy plover are observed within Critical Habitat Subunit 45C, and no breeding behavior activity is observed, the Project biologist will establish appropriate buffers and monitor the western snowy plovers as needed until the snowy plover are no longer observed using these areas. The Project biologist will have the ability to halt Project construction activities, if necessary, to avoid unanticipated impacts, including significant disturbance, to the snowy plover foraging, roosting or breeding behavior.

BIO-9: Although surveys have shown the El Segundo blue butterfly is absent from the Project site, ~~One~~ year prior to commencement of ground-disturbing activities, an El Segundo blue butterfly focused survey shall be conducted by a qualified biologist within areas of the Project site containing suitable habitat supporting coast buckwheat during the adult flight season (mid-June to early September). The adult flight stage of this species can last as little as 4 days to as much as 2 weeks per individual. If this species is found, ground-disturbing activities shall not occur within these areas until West Basin consults with the USFWS and determines if avoidance measures are possible or if an incidental take authorization permit is required prior to Project construction. Avoidance measures shall be determined based on consultation with USFWS and may include avoidance of

occupied habitat, replacement of impacted habitat, and measures to control fugitive dust, which can adversely affect the species. The qualified biologist shall provide the results of the focused survey in the subsequent monthly compliance report. If El Segundo blue butterflies are found, the qualified biologist shall document butterfly mitigation, monitoring, and compliance efforts in the monthly compliance reports, including maps and photographs. The qualified biologist shall report all butterfly occurrences with the CNDDDB. If avoidance of occupied or suitable habitat is not possible, West Basin shall consult with USFWS for replacement of impacted habitat at a ratio commensurate with the value of the affected area to be determined by USFWS.

BIO-9B: One year prior to commencement of demolition activities, a bat roosting survey will be conducted on the Project site to confirm the absence of any bat roosts. If bats are found to utilize any portion of the site, and avoidance is not feasible, West Basin shall report the findings to CDFW and will prepare and implement a bat relocation plan consistent with CDFW approved methods.

Draft EIR text on page 5.3-53 is revised as follows:

Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens, 2009. A Manual of California Vegetation, 2nd Edition, California Native Plant Society, 2009.

California Department of Fish and Wildlife (CDFW), 2003. List of Terrestrial Natural Communities, 2003.

Sibley, D.A., 2014. The Sibley Guide to Birds, 2nd Edition, 2014.

Section 5.4, Cultural Resources

The Draft EIR text on page 5.4-7 is revised as follows:

California Public Resources Code Section 6313

PRC Section 6313(a) states that title to all abandoned shipwrecks, archaeological sites, and historic resources on or in the tide and submerged lands of California shall be in the custody and subject to the control of the State Lands Commission. The Commission may transfer title, custody, or control to other state agencies or recognized scientific or educational organizations, institutions, or individuals by appropriate legal conveyance. PRC Section 6313(d) requires permits be granted by the Commission for salvage operations involving submerged archaeological sites or submerged historic resources when the proposed salvage activity is justified by an educational, scientific, or cultural purpose, or the need to protect the integrity of the site or the resource. All activities permitted under subdivision (d) shall be accomplished under the direct supervision of a person who meets the qualifications required of a professional marine archaeologist as stated in PRC 6313(e)(2). The Commission shall provide for the disposition of all objects or other materials recovered as part of salvage operations, which may include provisions for display in museums, educational institutions, and other appropriate locations available to the public.

The Draft EIR text on page 5.4-32 is revised as follows:

Desalinated Water Conveyance Components

As noted above in the Local Project Impact CUL-5.4-1 discussion, no known historical resources were identified within the proposed desalinated water conveyance components as a result of the records search and survey. However, the geoarchaeological review indicates that the sediments underlying the eastern portions of the water conveyance components have the potential to contain buried archaeological deposits that may qualify as historical resources. Therefore, construction of the offshore and onshore portions of the ocean intake and concentrate discharge structures has the potential to encounter subsurface archaeological deposits that qualify as historical resources, resulting in a significant impact. Implementation of Mitigation Measures CUL-1 through CUL-5 would be required to ensure that the Project's potential impacts to archaeological resources that may qualify as historical resources are less than significant.

Because the phasing of the Regional Project is unknown at this time, additional historic architectural resources that qualify as historical resources may be identified as part of separate projects within and/or adjacent to the desalinated water conveyance components. Should additional historical resources be identified in the future, construction of the Regional Project's desalination water conveyance components could directly or indirectly impact these resources. Implementation of Mitigation Measure CUL-12 would be required to ensure that the Project's potential impacts to historic architectural resources that may qualify as historical resources are less than significant.

Mitigation Measures:

Implement Mitigation Measures CUL-1 through CUL-5 and CUL-12 for impacts to historical resources resulting from construction of the ocean water desalination facility and the desalination water conveyance components.

The Draft EIR text on page 5.4-33 and -34 for Mitigation Measures CUL-1, CUL-3, and CUL-4 is revised as follows:

CUL-1: Prior to onshore and offshore ground-disturbing activities, West Basin shall retain a Qualified Archaeologist defined as an archaeologist meeting the Secretary of the Interior's Standards for professional archaeology (U.S. Department of the Interior 2008). The Qualified Archaeologist shall be responsible for implementation of all cultural resources mitigation measures and will oversee Cultural Resource Monitors (CRMs) to monitor Project-related ground-disturbing activities. The CRMs shall have demonstrable monitoring experience and familiarity with the types of resources that may be encountered during Project-related ground-disturbing activities.

West Basin shall ensure that the Qualified Archaeologist oversees construction monitoring, mitigation, and curation activities necessary; fulfills all the requirements of these measures; ensures that the Qualified Archaeologist obtains technical specialists and CRMs; and ensures that the Qualified Archaeologist evaluates any cultural resources that are newly discovered.

A current schedule of anticipated Project activity shall be provided to the Qualified Archaeologist on a weekly basis during ground disturbance.

CUL-3: All Project related ground-disturbing activities occurring within the onshore and offshore geological formations that have the potential to contain buried archaeological deposits shall be subject to archaeological and Native American monitoring. Prior to ground-disturbing activities, West Basin shall prepare a CRMMP that summarizes monitoring methodology for both onshore and offshore components, identifies specifically the portions of the Project that require monitoring based on archaeological sensitivity of the geological formation underlying the Project components, and provides general and specific measures treatment to minimize potential impacts to inadvertent discoveries of archaeological resources. The CRMMP shall include inspection procedures developed by the Qualified Archaeologist in coordination with West Basin. The CRMMP shall include provisions for the inclusion of a Qualified Maritime Archaeologist to accompany any diving personnel to identify the presence of archaeological resources within anchorage locations and to monitor any associated sediment disturbance.

The CRMMP shall include protocol to be carried out in the event human remains are uncovered during Project construction. All work within 50 feet of any identified human remains shall be immediately halted, and the Los Angeles County Coroner shall be contacted to evaluate the remains and follow the procedures and protocols set forth in CEQA Guidelines Section 15064.5(e)(1). If the County Coroner determines that the remains are Native American, the California Native America Heritage Commission (NAHC) will be contacted by telephone within 24 hours of the find, in accordance with Health and Safety Code Section 7050.5, subdivision (c), and PRC 5097.98 (as amended by AB 2641). The NAHC shall then identify a Most Likely Descendant (MLD) of the deceased Native American. Once the MLD has been granted access to the site by the landowner and inspected the discovery, the MLD then has 48 hours to provide recommendations to the landowner for the treatment of the human remains and any associated grave goods. Per PRC 5097.98, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in this section (PRC 5097.98), with the MLD regarding their recommendations, if applicable, taking into account the possibility of multiple human remains.

Copies of the CRMMP shall reside with the Qualified Archaeologist, each monitor, and West Basin.

CUL-4: The Qualified Archaeologist and the CRMs shall have the authority to halt construction if previously unknown cultural resource sites or materials are encountered. All construction activities within 50 feet of the find shall halt, and redirection of ground disturbance shall be accomplished under the direction of the construction supervisor. In the event cultural resources are discovered during any offshore construction activities, Project personnel shall halt all activities in the immediate area and notify both the California State Lands Commission and a Qualified Maritime Archaeologist to determine the appropriate course of action. The Qualified Archaeologist shall determine what, if any, data recovery or other mitigation treatment is needed. The final disposition of archaeological and/or historical resources recovered on state lands under the jurisdiction of the California State Lands Commission must be approved by the Commission. Should cultural resources be identified during the geophysical survey and/or monitoring of offshore components, a Qualified Maritime Archaeologist shall be retained to prepare the

treatment plan, and the appropriate permits will be obtained from the State Lands Commission. Construction in the area shall not resume until the Qualified Archaeologist has completed data collection activities and the resource has been recorded.

The Draft EIR text on page 5.4-34 for Mitigation Measure CUL-5 is revised as follows:

CUL-5: Within 90 days after completion of ground-disturbing activities, West Basin shall prepare a CRR that specifies all field activities including dates, times and locations, findings, samplings and analysis. All survey reports, DPR 523 forms, and additional research reports not previously submitted to the CHRIS shall be included as an appendix to the CRR. All confidential information protected by relevant law and pertaining to cultural resources identified during monitoring shall remain confidential and will not be publicly disseminated.

The Draft EIR text is revised on page 5.4-34, where Mitigation Measure CUL-12 is added as follows:

CUL-12: Prior to development of the Regional Project's desalination water conveyance components, West Basin shall retain a qualified architectural historian to conduct a historical resources assessment. All identified historic architectural resources shall be assessed for the Regional Project's potential to result in direct and/or indirect impacts to those resources, and any historic architectural resource that may be affected shall be evaluated for potential significance (i.e., listing in the CRHR) prior to West Basin's approval of Project plans and publication of subsequent CEQA documents. The qualified architectural historian shall provide recommendations for avoiding or minimizing impacts, or for the treatment of historical resources that will be impacted by the Regional Project. West Basin shall implement the recommendations.

The Draft EIR text on page 5.4-39 is revised as follows:

**TABLE 5.4-4
SUMMARY OF IMPACT CUL 5.4-3 PALEONTOLOGICAL RESOURCES**

	Ocean Water Desalination Facility	Offshore Intake and Discharge Facilities	Inland Conveyance Facilities
Impact CUL 5.4-3: Impacts on paleontological resources.			
Local Project			
Construction	LTSM	LTSM NI	LTSM
Operation	NI	NI	NI
Regional Project			
Construction	LTSM	NI	LTSM
Operation	NI	NI	NI

NOTES:

NI = No Impact, no mitigation proposed

LTSM = Less than Significant impact with mitigation

Screened Ocean Intake and Concentrate Discharge

Local Project screened ocean intake and concentrate discharge construction ~~would not~~ may involve excavations greater than 10 feet or that extend into older Quaternary alluvial deposits. Therefore, Local Project screened ocean intake and concentrate discharge construction ~~would not~~ may destroy a unique paleontological resource or site or unique geologic feature ~~and no impact would occur~~. However, with implementation of Mitigation Measures CUL-6 through CUL-11, impacts would be less than significant.

The Draft EIR text on page 5.4-43 for Mitigation Measure CUL-8 and CUL-10 is revised as follows:

CUL-8: Prior to the start of onshore or offshore ground-disturbing activities, West Basin shall ensure that the Qualified Paleontologist prepares a PRMMP in accordance with SVP guidelines. The PRMMP shall summarize paleontological resources monitoring methodology, identify at which depth and the specific portions of the Project where monitoring shall occur based on geological formation underlying the onshore and offshore Project components, and provide general and specific treatment to minimize potential impacts to inadvertent discoveries of paleontological resources. The final disposition of paleontological resources recovered on state lands under the jurisdiction of the California State Lands Commission must be approved by the Commission. The PRMMP shall function as the formal guide for monitoring, collecting, and sampling activities.

CUL-10: West Basin shall ensure that the PRMs monitor all construction-related grading, excavation, trenching, and boring in areas that involve excavations greater than ~~8~~10 feet and extend into older Quaternary alluvial deposits, ~~both~~ at the desalination facility site, ~~and~~ desalinated water conveyance pipeline alignment, and offshore Project components. In the event that the Qualified Paleontologist determines full-time monitoring is not necessary in locations that were identified as potentially fossil-bearing in the PRMMP, monitoring activities may be modified, at the direction of the Qualified Paleontologist.

West Basin shall ensure that the Qualified Paleontologist and PRMs have the authority to stop or redirect construction if a unique paleontological resource or site or unique geologic feature is encountered. Should a paleontological resource be identified at a depth of less than 10 feet and a PRM or the Qualified Paleontologist is not present, all construction shall halt and the Qualified Paleontologist shall be contacted to assess the discovery and develop appropriate treatment in coordination with West Basin.

West Basin shall ensure that the Qualified Paleontologist prepares a summary of monitoring and other paleontological activities that will be reported on monthly. The summary will include the name(s) of the Qualified Paleontologist or PRMs active during the month, general descriptions of training and monitored construction activities, and general locations of excavations, grading, and other activities. A section of the report shall include the geologic units or subunits encountered, descriptions of samplings within each unit, and a list of identified fossils. A final section of the report shall address any issues or concerns about the Project relating to paleontological monitoring, including any incidents of noncompliance or any changes to the monitoring plan.

Section 5.5, Energy

The Draft EIR text on page 5.5-15 is revised as follows:

West Basin is committed to pursuing reasonable and feasible energy minimization and efficiency as part of the Project, including use of energy recovery devices (for the first pass reverse osmosis [RO] process) and energy efficient pumps. In implementing Mitigation Measure GHG-1, West Basin may will also use on-site solar power generation to reduce load demand from the grid...

Page 5.5-19 in the Draft EIR is revised as follows:

Impact ENERGY ~~5.5-4~~ 5.4-4: Would the Project result in an increase...

Section 5.6, Geology, Soils, and Seismicity

No text changes are made.

Section 5.7, Greenhouse Gas Emissions

The Draft EIR text on page 5.7-30 and -31 for Mitigation Measure GHG-1 is revised as follows:

GHG-1: West Basin shall prepare an Energy Minimization and GHG Reduction Plan no later than 60 days prior to the start of Project construction activities...

3) **GHG Mitigation Options** – The Energy Minimization and GHG Reduction Plan shall include GHG mitigation strategies that shall, at minimum, be sufficient to offset the Project’s incremental GHG emissions over the net zero carbon neutral threshold of significance and shall be verifiable and feasible to implement over the Project life. The GHG Reduction Plan shall indicate how reductions will be achieved on an annual basis starting with operational year 1.

The Draft EIR text on page 5.7-32 for Mitigation Measure GHG-1 is revised as follows:

West Basin shall implement items a. and b. and progress through the remaining GHG reduction strategies and offset strategies remainder (items c. through e.) to achieve the net carbon neutral threshold of significance. Selection and implementation of the options will be based on their on the basis of the options’ physical and economic feasibility, as reasonably determined by West Basin, with low-cost options preferred over high-cost options. In the event that options have equivalent costs, options enumerated higher in the above list shall be selected by West Basin over options enumerated later in the above list.

Section 5.8, Hazards and Hazardous Materials

The Draft EIR text on page 5.8-24 for Mitigation Measure HAZ-3 is revised as follows:

HAZ-3: West Basin shall prepare an Anchoring Plan that applies to all ships, barges, and other ocean-going vessels and describes procedures for deploying, using, and recovering anchorages. The Anchoring Plan shall include, but not be limited to, the following elements:

- A brief overview of the Project objectives.

- Description of anchor set and anchor leg (wires, winches, and other support equipment).
- Description of vessels to be anchored and support tugs to be used.
- Description and delineation of safety zone and anchor zone, including identification and mapping all areas of kelp, seagrasses, and hard substrate found within the work area. The anchoring plan shall ensure that these marine habitats of special significance shall not be impacted by the placement of vessel and buoy anchors, by dragging of anchors, buoy lines or cables, by riprap placement, or by sidecasting of dredging spoils.
- Identification of Contractor Vessels and Buoys, including daylight and nighttime marking schemes.
- Anchoring procedures.
- Local notice to U.S. Coast Guard and mariners.

All elements of the Anchoring Plan shall be in compliance with U.S. Coast Guard regulations.

Section 5.9, Hydrology and Water Quality

The Draft EIR text on page 5.9-8 is revised as follows:

The *Water Quality Control Plan for Ocean Waters of California* (California Ocean Plan) (SWRCB 2015), adopted by the SWRCB in 1972 ~~May 2015~~ and effective ~~January 2016~~, establishes water quality requirements and objectives for California's ocean waters and provides the basis for regulation of wastes discharged into the state's coastal waters. In 2015, the SWRCB adopted the Desalination Amendment, which has been in effect since 2016...

The Draft EIR text on page 5.9-11 is revised as follows:

The California Ocean Plan water quality objectives are to be met after the initial dilution of a discharge into the ocean. The California Ocean Plan defines initial dilution as the process that results in the rapid and irreversible turbulent mixing of wastewater with ocean water around the point of discharge. For a submerged buoyant discharge, characteristic of most municipal and industrial wastes that are released from the submarine outfalls, the momentum of the discharge and its initial buoyancy act together to produce turbulent mixing. Initial dilution in this case is completed when the diluting wastewater ceases to rise in the water column and first begins to spread horizontally. For shallow water submerged discharges, surface discharges, and non-buoyant discharges, characteristic of cooling water wastes and some individual discharges, turbulent mixing results primarily from the momentum of discharge. Initial dilution, in these cases, is considered to be completed when the momentum induced velocity of the discharge ceases to produce significant mixing of the waste, or the diluting plume reaches a fixed distance from the discharge to be specified by the Regional Board, whichever results in the lower estimate for initial dilution...

The Draft EIR text on page 5.9-11 is revised as follows:

...If the effluent density is greater than the ambient ~~density~~ salinity, as occurs for desalination brine, it produces a negatively buoyant plume that sinks toward the seabed. ~~In this case, the edge of the ZID is located at the point where the discharge plume contacts the seafloor.~~

The Draft EIR on page 5.9-23 is revised as follows:

California Coastal Commission Sea-Level Rise Policy Guidance

The CCC has developed Sea-Level Rise Policy Guidance intended to help local governments, permit applicants, and other interested parties address the challenges presented by sea-level rise in California's coastal zone. The CCC's adopted ~~2018~~ 2015 Sea-Level Rise Policy Guidance (CCC ~~2018~~ 2015) outlines the types of information, analysis, and design considerations that the agency's staff requires to determine whether shoreline projects conform to the above-listed Coastal Act policies...

The Draft EIR text on page 5.9-24 is revised as follows:

⁹ Note that California Government Code Section 53091(d) and (e) provide that building and zoning ordinances of a county or city "shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water . . ." However, the construction and operation of the Ocean Water Desalination Project would strive to comply with all appropriate building and zoning ordinances, as well as policies set forth in the City of El Segundo General Plan. The subject Government Code section does not apply to Local Coastal Programs, including zoning ordinances of a city or county incorporated into or adopted for the purpose of implementing Local Coastal Programs.

The Draft EIR text on page 5.9-37 is revised as follows:

The Intergovernmental Panel on Climate Change (IPCC) has indicated that globally, sea level rose at an average annual rate of approximately 1.5 millimeters from 1901 to 1990 and at an average annual rate of approximately 3.2 millimeters from 1993 to 2010 (IPCC 2013). By year 2100, sea levels may rise up to 55 inches (1.4-meter), causing a 45 percent increase in land in Los Angeles County to become more vulnerable to the 100-year flood event (CCC ~~2018~~ 2015)...

The Draft EIR text on pages 5.9-50 through 5.9-53 is revised as follows:

Salinity

A multiport diffuser system typically consists of a series of nozzles that create relatively high-velocity jets to increase brine mixing through enhanced entrainment of ambient seawater and maintain a reasonable water jet velocity within the seawater column. The area where the mixing takes place is called the BMZ¹⁹. In an open ocean environment with dynamic mixing from ocean currents, tidal and wave actions such as Santa Monica

Bay, the use of a multiport diffuser system is effective in preventing dense, high-salinity water from accumulating on the seafloor.

The size and shape of the mixing zone depends upon the discharge rate, diffuser system design, initial salinity concentrations of the brine stream and the receiving water, and prevailing marine currents. The proposed multiport diffuser nozzles would be arranged in a “rosette” linear pattern (Figure 3-18c¹). Brine from the Local Project desalination facility would be conveyed to the proposed diffuser via the existing ESGS concrete tunnel, as described in Section 3.4.1. Water depth at 2,078 feet offshore at the proposed diffuser location ranges from 28 to 34 feet. The proposed discharge structure design would consist of either a 44-foot-long linear diffuser with six 15.2-inch diameter ports, or a 93-foot-long linear diffuser with 14, 9-inch diameter ports (Figure 3-18c). For both linear diffuser design options, the port depth would be 24 feet below water surface and the diffuser port angle would be 60° from horizontal. ~~The diffuser has been designed with multiple ports inclined upward at a 46° angle²⁰ from the horizontal.~~ This orientation is intended to (1) ensure that the discharge reduce jet exit velocity, meets California Ocean Plan salinity requirements, (2) reduce jet exit velocity and to reduce shear stress so that turbulence-induced mortality of organisms that may be entrained into the diffuser jets are minimized (see Section 5.11, *Marine Biological Resources*), and ~~to~~ (3) ensure that the discharge plume does not reach the ocean surface.

As described in Section 5.9.1, the California Ocean Plan limits the increase of salinity of receiving water from desalination plant discharges to a daily maximum of 2 parts per thousand (ppt) above natural background salinity. The owner or operator of a desalination facility must meet the salinity standard at the boundary of the BMZ, defined as the horizontal distance of 100 meters (328 feet) from the point of discharge. A significant impact related to water quality, water quality standards or Waste Discharge Requirements would occur if operational discharges from the Local Project resulted in a salinity level of 2 ppt above ambient salinity levels beyond the BMZ.

To determine whether the proposed discharge would comply with the California Ocean Plan BMZ salinity requirements, a brine plume mixing model that is consistent with the method approved by the SWRCB was conducted (Appendix ~~4C-14~~). **Table 5.9-5** summarizes two operational scenarios based on the conceptual design described in Section 3, which were evaluated using the mixing model. A detailed description of the mixing model methodology and results are included in **Appendix ~~4C-14A~~**. The model analysis assumes an ambient ocean water flow velocity of zero (i.e., conservatively assumes an absolutely still ocean environment where ocean currents and tides are absent and mixing of the discharge plume with the surrounding water occurs as a direct result of the use of the diffusers).

¹ Draft EIR Figure 3-18c has been revised to reflect the linear diffuser design. The revised figure is included in Final EIR Section 11, Refinements to the Project Description.

**TABLE 5.9-5.
PROPERTIES OF EFFLUENT CONSTITUENTS FOR LOCAL PROJECT DISCHARGE SCENARIOS**

Project	Case ID	Brine			Washwater			Combined effluent			
		Flow (mgd)	Temp. (°C)	Salinity (ppt)	Flow (mgd)	Temp. (°C)	Salinity (ppt)	Flow (mgd)	Temp. (°C)	Salinity (ppt)	Density (kg/m ³)
Local	L1	20.9	17.6	68.0	4.5	17.6	34.0	25.4	17.6	62.0	1046.2
	L2	20.9	17.6	68.0	0.1	17.6	34.0	21.0	17.6	67.8	1050.8

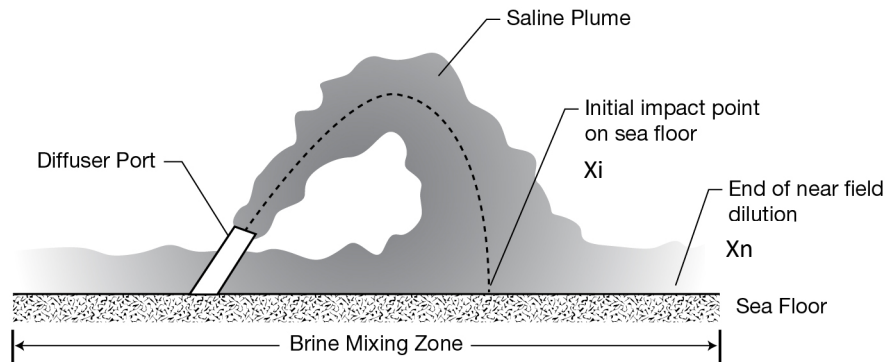
SOURCE: Roberts 2019⁸; Appendix 4C14A.

The size of a discharge plume and the extent of dilution depends, in part, on whether the plume is positively buoyant (light or rising), as occurs with typical wastewater discharges that have lower salinity and hence lower density than the ambient ocean water; or negatively buoyant (dense or sinking), as occurs for desalination brine discharges that have a higher salinity and hence higher density than the receiving ocean water. The latter represents the case applicable to this Project. Denser discharges are dispersed via an upward inclined jet that result in a plume that rises upward and then sinks down, making contact with the seafloor at some distance away from the diffuser nozzles (Figure 5.9-4). As the discharge plume ascends, the jet entrains ambient water, and the brine becomes diluted. Because the plume is denser than the receiving water, it reaches a terminal rise height and then falls back to the seafloor. Entrainment of seawater into the plume continues in the descending plume phase, promoting more mixing and dilution. After contacting the seafloor, the brine plume continues traveling horizontally and further entrains ambient seawater resulting in greater dilution. The region that encompasses the ascending plume, the descending plume, the point of impact with the seafloor, and the area of horizontal flow up to the point where momentum and turbulence-driven mixing dynamics cease is called the near field. The brine discharge model analysis estimated dilution ratios and salinity concentrations at where the plume contacts the seafloor (referred to as X_i) as well as at where the plume momentum from the nozzle becomes zero (referred to as X_n), representing the end of the near field (Figure 5.9-4). Given that the model assumes no additional mixing or dilution from ocean currents or tides, the model would not be able to predict additional dilution beyond where the plume momentum reaches zero.

Salinity Results and Discussion

The linear diffuser model analysis (Appendix 4C-14A) demonstrates that operational discharges from the Local Project would not exceed 2 ppt above ambient conditions at the BMZ boundary. In fact, the model analysis indicates that the 2 ppt salinity threshold would be met at a distance of 11.6 m (38 feet) between the point at which the brine plume makes contact with the seafloor (at X_i), and from the point of discharge (Table 5.9-6). Such a distance is well within the 100 meters (328 feet) from the point of discharge as prescribed in the California Ocean Plan and would translate to a circular area of approximately 0.1 acres around the diffuser. The terminal height would reach a maximum

of 19.5 feet above the seafloor for both scenarios and after descending and making contact with the seafloor, the model analysis indicates that the brine plume would continue entraining ambient seawater and further diluting until the plume momentum reaches zero (i.e., the edge of the near field (at X_n); at 119 between 45 and 63 feet (13.7 m to 19.2 m) from the point of discharge (Table 5.9-6) for all scenarios modeled. The salinity at the edge of the near field would decrease to 1.9 be equal to or less than 2 ppt above ambient, well within the distance of 100 meters (328 feet) prescribed in the California Ocean Plan. The total seafloor area from the diffuser to the edge of the near field (at X_n) would be an ~~area~~ circular area of approximately ~~± 0.3 and 0.5~~ acres (Appendix 4C14A). Thus, brine discharges from the Local Project would not exceed or violate the California Ocean Plan salinity standards or degrade water quality in terms of salinity; impacts related to salinity would be less than significant.



SOURCE: Roberts 2019⁸; Appendix 14A 4G.

West Basin Ocean Water Desalination Project

Figure 5.9-4
Characteristics of an Inclined Dense Jet

**TABLE 5.9-6.
OPTIMUM PORT LINEAR DIFFUSER CONFIGURATIONS FOR EACH LOCAL PROJECT FLOW SCENARIO WHERE PORT DEPTH OF 20 FEET AND SALINITY INCREMENT LESS THAN 2 PPT AT THE JET IMPACT POINT SALINITY INCREMENT AT THE END OF THE NEAR FIELD \leq 2 PPT**

Project	Case ID	Number of ports	Diffuser Details			Impact Point			Salinity Increment (ppt)	Layer thickness, y_L (ft)	BMZ ¹		UM3 predictions at top	
			Port diameter (in)	Jet velocity (ft/s)	Diffuser length (ft)	Dilution S_i	Length X_i (ft)	Distance, X_n (ft)			Area (acres)	Average dilution, S_{ta}	Entrained flow (mgd)	
Local: 6 Port Diffuser	L1	6	15.2	5.2	44	8.9	16.9	3.2	4.9	63	0.42	3.6	66	
Local: 14 Port Diffuser	L1	14	9.0	6.4	93	14.1	15.9	2.0	4.6	60	0.51	5.56	116	
	L2	14	9.0	5.3	93	10.6	11.9	3.2	3.5	45	0.34	4.24	68	

¹ The BMZ boundary is at the end of the near field. Flow properties there are the near field properties (Figure 5.9-4).
SOURCE: Roberts 2019; Appendix 14A.

Project	Case ID	Effluent			Nozzle conditions				Dilution		Salinity Increment		Impact Point Length (ft)	Near-Field Length (ft)	
		Flow (mgd)	Salinity (ppt)	Density (kg/m ³)	No.	Diam. (in)	Angle (deg)	Flow (cfs)	Velocity (ft/s)	At Impact Point, S_i	At Near Field, S_n	At Impact Point, S_i			At Near Field, S_n
Local	L1	25.4	62.0	1046.2	4	15.0	46	9.8	8.0	14.3	14.9	2.0	1.9	38	119
	L2	21.0	67.8	1050.8	4	12.4	46	8.1	9.7	17.3	18.0	2.0	1.9	38	119

NOTES:

S_i and S_n refer to salinity and dilution at the point the plume contacts the seafloor (impact point) and at the edge of the near field, respectively (Figure 5.9-4).
SOURCE: Roberts 2018; Appendix 4C.

The Draft EIR text on pages 5.9-58 through 5.9-60 relating to the Regional Project compliance with Ocean Plan salinity requirements is modified as follows:

Screened Ocean Intake and Concentrate Discharge Structures

As described in Section 3.4.1, expansion of the Local Project to the Regional Project would involve expanding the Local Project intake and discharge structures to accommodate the 60 MGD Regional Project desalination facility. The intake structure would be modified through the installation of 8 additional wedgewire screens to pre-installed risers (comprising 12 total for the Regional Project), as described in Section 3.4.1. The Local Project diffuser structure would be modified through the ~~removal~~ replacement of the existing ~~four duckbill~~ diffusers (either six or 14 depending on diffuser design) and the ~~installation of eight smaller diameter duckbill~~ with larger diameter diffusers (Section 3.4.1). The ~~eight duckbill~~ diffusers for either linear diffuser design would be inclined upwards at a ~~26~~ 60° angle from the horizontal (~~reduced as compared to the Local Project~~) to meet California Ocean Plan salinity requirements and to maintain a submerged discharge plume.

Salinity

As described for the Local Project, a significant impact related to water quality, water quality standards or Waste Discharge Requirements would occur if operational discharges from the Regional Project resulted in salinity concentrations greater than 2 ppt above ambient salinity levels at the edge of the BMZ, which would be an exceedance of the receiving water salinity limitation detailed in Chapter III.M.3 of the Ocean Plan (see Section 5.9.1).

The methodology and assumptions for assessing Regional Project salinity impacts are the same as described for the Local Project and are presented in detail, with the results, in Appendix ~~4C-14A~~. **Table 5.9-7** summarizes two Regional Project scenarios which were used in the mixing model to evaluate compliance. The model analysis assumes a port depth of ~~20~~ 24 feet below sea surface, ~~eight~~ and all discharge ports at a ~~26~~ 60° angle. Additionally, zero water flow or movement from ocean current and tides is assumed, consistent with the California Ocean Plan methodology for assessing salinity increases from desalination facilities.

TABLE 5.9-7.
PROPERTIES OF EFFLUENT CONSTITUENTS FOR REGIONAL PROJECT DISCHARGE SCENARIOS

Project	Case ID	Brine			Washwater			Combined effluent			
		Flow (mgd)	Temp. (°C)	Salinity (ppt)	Flow (mgd)	Temp. (°C)	Salinity (ppt)	Flow (mgd)	Temp. (°C)	Salinity (ppt)	Density (kg/m ³)
Regional	R1	62.7	17.6	68.0	13.5	17.6	34.0	76.2	17.6	62.0	1046.2
	R2	62.7	17.6	68.0	0.3	17.6	34.0	63.0	17.6	67.8	1050.8

SOURCE: Roberts 2019~~8~~; Appendix ~~14A4C~~.

Salinity Results and Discussion

Assuming the most conservative scenario, the model analysis (Appendix 4C-14A) demonstrates that operational discharges from the Regional Project would meet the California Ocean Plan salinity standard (**Table 5.9-8**). Also, the operational discharges would remain below the water surface (i.e., the plume would remain submerged), consistent with California Ocean Plan requirements. The California Ocean Plan salinity limit of 2 ppt above ambient would be met at the point of initial dilution impact with the seafloor (at X_i , see Figure 5.9-4), located ~~66 feet from the diffuser (representing a circular area of approximately 0.3 acres around the diffuser) for the assessed operational discharge scenarios. Meeting the 2 ppt salinity requirement at 66~~ 24.8 feet (29.97.6 m) from the point of discharge with the 14-port diffuser configuration, ~~would be~~ well within the California Ocean Plan allowable distance of 328 feet or 100 meters (the maximum allowable BMZ). As the discharge plume continues to entrain ambient seawater and ~~further continues to~~ dilute within the near field, salinity at X_n would be ~~reduced to 1.7~~ equal to or less than 2 ppt (Table 5.9-8) above ambient for all scenarios modeled. The edge of the near field (X_n) would be located ~~203-70 to 76 feet from the diffuser for the 14-port configuration~~, representing an ~~circular~~ area of approximately 3 0.7 acres around the diffuser. Furthermore, as described for the Local Project, the computed salinities would occur only along the seabed. Salinities would decrease with height in the water column and would be above ambient salinity concentrations only near the seabed (Appendix 4C-14A).

**TABLE 5.9-8.
OPTIMUM LINEAR DIFFUSER PORT CONFIGURATIONS FOR EACH REGIONAL PROJECT FLOW SCENARIO WHERE PORT DEPTH OF 20 FEET AND SALINITY INCREMENT LESS THAN 2 PPT AT THE JET IMPACT POINT SALINITY INCREMENT AT THE END OF THE NEAR FIELD \leq 2 PPT**

Project	Case ID	Number of ports	Diffuser details			Impact Point			BMZ ¹		UM3 predictions at top		
			Port diameter (in)	Jet velocity (ft/s)	Diffuser length (ft)	Dilution S _i	Length X _i (ft)	Salinity Increment (ppt)	Layer thickness, y _i (ft)	Distance, X _n (ft)	Area (acres)	Average dilution, S _{ia}	Entrained flow (mgd)
Regional: 6 Port Diffuser	R1	6	23.6	6.5	44	8.9	26.2	3.2	7.6	98	0.89	3.6	198
Regional: 14 Port Diffuser	R1	14	13.9	8.0	93	14.3	24.8	2.0	7.2	76	0.74	5.62	352
	R2	14	13.9	6.6	93	10.7	18.7	3.2	5.4	70	0.65	4.30	208

¹ The BMZ boundary is at the end of the near field. Flow properties there are the near field properties (Figure 5.9-4).
SOURCE: Roberts 2019; Appendix 14A.

Project	Case ID	Effluent				Nozzle conditions				Dilution		Salinity Increment		Impact Point Length (ft)	Near Field Length (ft)
		Flow (mgd)	Salinity (ppt)	Density (kg/m ³)	No.	Diam. (in)	Angle (deg)	Flow (cfs)	Velocity (ft/s)	At Impact Point, S _i	At Near Field, S _n	At Impact Point, S _i	At Near Field, S _n		
Regional	R1	76.2	62.0	1046.2	8	13.4	26	14.7	15.0	14.3	16.9	2.0	1.7	66	203
	R2	63.0	67.8	1050.8	8	11.4	26	12.2	18.4	17.2	20.3	2.0	1.7	66	203

SOURCE: Roberts 2018; Appendix 4C.

~~The incremental salinity increase from operational discharges would meet the 2 ppt threshold at the impact point, 66 feet from the diffuser for both Scenario R1 and R2. Therefore, the area where salinity concentration would be greater than 2 ppt would be restricted to a small area (less than 0.3 acre) around the diffuser and above the seafloor, which would attenuate rapidly with distance from the nozzle.~~

The analysis of the proposed Regional Project operational discharges indicates that, for ~~both~~ all scenarios modeled, the discharge of brine would meet California Ocean Plan salinity standards. The Regional Project would therefore, not exceed or violate the California Ocean Plan salinity standards or degrade water quality in terms of salinity; impacts related to salinity would be less than significant.

The Draft EIR text on page 5.9-77 in Mitigation Measure HYDRO-1 is revised as follows:

HYDRO-1: West Basin shall contract a California licensed engineer to update as required ~~prepare~~ a Coastal Hazard Resiliency Study focused on the ESGS site, consistent with the methods for assessing sea-level rise in the current CCC's Sea Level Rise Policy Guidance (~~CCC 2015~~), over the Project planning horizon. Recommendations in the Study shall be incorporated into the final design and construction specifications of the Project as applicable to minimize conflicts with the applicable Coastal Act Section 30235 (Construction altering natural shoreline) and Section 30253 (Safety, stability, pollution, energy conservation, visitors). At a minimum, the study shall: . . .

The Draft EIR text on page 5.9-80 is revised as follows:

California Coastal Commission (CCC), 2018. Sea Level Rise Policy Guidance: Interpretive Guidelines for Addressing Sea Level Rise in Local Coastal Programs and Coastal Development Permits, Adopted August 12, 2015, updated November 7, 2018.

Section 5.10, Land Use and Planning

The Draft EIR text on pages 5.10-3 and 5.10-4 is revised as follows:

California Coastal Commission Sea Level Rise Adopted Policy Guidance

In August 2015, the Sea Level Rise Policy Guidance document was unanimously adopted for use by the CCC (CCC 2015). This document provides an overview of the best available science on sea-level rise and recommended methodology for addressing sea-level rise in Coastal Commission planning and regulatory actions. This guidance is a comprehensive, multi-purpose resource that will be updated periodically to address new sea-level rise science and information. Some of the principles listed in the document for addressing sea-level rise in the coastal zone that apply to the proposed Project include:

Minimize Coastal Hazards through Planning and Development Standards

- 7. Minimize hazard risks to new development over the life of authorized structures.**

8. Minimize coastal hazard risks and resource impacts when making redevelopment decisions.

Maximize Protection of Public Access, Recreation, and Sensitive Coastal Resources

12. Maximize natural shoreline values and processes; avoid expansion and minimize the perpetuation of shoreline armoring.

In November 2018, the CCC adopted an update to the 2015 Sea Level Rise Policy Guidance (CCC 2018). The revisions address the State’s updated understanding of sea level rise science and best planning practices for anticipated impacts. The changes mainly concern updated references to best available science, including revisions to sea level rise projections. Notably, while the 2015 guidance identified and incorporated findings from a 2012 National Research Council report (NRC 2012) as the best available science at the time, the 2018 updates revise much of that discussion to incorporate the findings of two Ocean Protection Council studies (Griggs, et al. 2017 [OPC 2017] and OPC 2018) as the best available science.

The Draft EIR text on page 5.10-22 is revised as follows:

The proposed Local Project ocean water desalination facility would be subject to compliance with the El Segundo LCP, as this Project component is sited within the coastal zone. In addition, the Local Project would comply with the Sea Level Rise Policy Guidance principles because it would be located within the existing boundaries of the energy facilities and would avoid expansion and minimize the perpetuation of shoreline armoring. A recent study of coastal hazards (see Final EIR Appendix 15) indicates the Project site could be subject to unmitigated coastal hazards associated with wave run-up late in the century under a medium to high sea level rise scenario. Accordingly, the Project site plan would be modified to mitigate exposure to such risks. These potential modifications would take into consideration sea level rise over the next approximately 100 years and reduce the Project’s exposure to coastal hazards consistent with the CCC’s updated 2018 Sea Level Rise Policy Guidance.

The Draft EIR text on page 5.10-29, Footnote No. 11, is revised as follows:

¹¹ Since the proposed Project would involve the construction of a water infrastructure project by West Basin Municipal Water District (West Basin), it is exempt from local land use, grading, and building permit requirements (California Government Code Section 53091). However, West Basin intends to comply with applicable General Plan and city building codes and as such they are evaluated in this section. The subject Government Code section does not apply to Local Coastal Programs, including zoning ordinances of a city or county incorporated into or adopted for the purpose of implementing Local Coastal Programs.

The Draft EIR text on page 5.10-34 is revised as follows:

The City of El Segundo Zoning Map identifies the Project site as within the Heavy Manufacturing (M-2) zoning district¹². In addition, Aas previously noted, the LCP Issue Identification section specifies that height, setback, and bulk requirements are those allowed by the City's M-2 Zone, except that in the SA designated lands, energy development will be limited to stringent development criteria set forth therein designed to not restrict public access.

ESMC Chapter 15-6B, *Heavy Industrial (M-2) Zone*, provides standards for development within lands zoned M-2. All uses within the M-2 Zone are required to comply with the development standards contained in ESMC Section 15-6B-7, *Site Development Standards*.¹² These development standards involve TDM and trip reduction criteria (pursuant to ESMC Chapter 15-16), general provisions (pursuant to ESMC Title 15-2), and development regulations for allowable lot area, building/structure height, setbacks, lot frontage, building area, walls/fences, and access.

¹² Since the proposed Project would involve the construction of a water infrastructure project by West Basin Municipal Water District (West Basin), it is exempt from local land use, grading, and building permit requirements (California Government Code Section 53091). However, West Basin intends to comply with applicable General Plan and city building codes and as such they are evaluated in this section. The subject Government Code section does not apply to Local Coastal Programs, including zoning ordinances of a city or county incorporated into or adopted for the purpose of implementing Local Coastal Programs.

The Draft EIR text on page 5.10-37 is revised to update the Coastal Commission 2015 reference to 2018 as follows:

By year 2100, sea levels may rise up to 55 inches (1.4-meter), causing a 45 percent increase in land in Los Angeles County to become more vulnerable to the 100-year flood event (CCC 2018~~5~~).

The Draft EIR text on page 5.10-38 is revised as follows:

California Coastal Commission (CCC), 2018. Sea Level Rise Policy Guidance: Interpretive Guidelines for Addressing Sea Level Rise in Local Coastal Programs and Coastal Development Permits, Adopted August 12, 2015, Updated November 7, 2018.

National Research Council (NRC), 2012. *Sea-Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future*, Washington, DC: The National Academies Press, <https://doi.org/10.17226/13389>.

Griggs, G, Árvai, J, Cayan, D, DeConto, R, Fox, J, Fricker, HA, Kopp, RE, Tebaldi, C, Whiteman, EA (California Ocean Protection Council Science Advisory Team

Working Group), 2017. Rising Seas in California: An Update on Sea-Level Rise Science, California Ocean Science Trust, April 2017

Ocean Protection Council (OPC), 2018. State of California Sea-Level Rise Guidance: 2018 Update.
[http://www.opc.ca.gov/webmaster/ftp/pdf/agenda_items/20180314/Item3_Exhibit A_OPCLSLR_Guidance-rd3.pdf](http://www.opc.ca.gov/webmaster/ftp/pdf/agenda_items/20180314/Item3_Exhibit_A_OPCLSLR_Guidance-rd3.pdf)

Section 5.11, Marine Biological Resources

The Draft EIR text on page 5.11-29 in table 5.11-3 (column six) has been updated for White sharks as follows:

Low-Moderate Not Expected to Low. Present in coastal waters throughout the State ~~but typically north of the study area.~~ with inshore coastal waters frequently used as foraging areas for juveniles. The presence of juvenile White sharks has been noted to increase in SMB during El Niño conditions, but this increase is typically expected to occur north of the study area.

The Draft EIR text on page 5.11-34 is revised as follows:

National Estuary Program

The Santa Monica Bay National Estuary Program (SMBNEP) was established under 1987 CWA Section 320 and is intended to protect and restore Santa Monica Bay's resources. The Santa Monica Bay Restoration Commission (SMBRC) is responsible for developing, updating, and implementing the Bay Restoration Plan (BRP). The SWRCB and The Bay Foundation (TBF), a non-profit entity, serve as the hosting entity that provide physical locations, staffing, and matching funds to support the SMBNEP activities. The Bay Foundation also receives, administers, and uses grant funds from different entities to implement many Projects identified in the BRP. The SMBRC in its Bay Restoration Plan (SMBRC 2013) have adopted 14 restoration goals that include objectives to improve water quality through enhancement of current regulatory frameworks and collaborative, integrated watershed-wide planning and implementation. These goals include the minimization of potential entrainment and impingement effects of desalination facilities.

Draft EIR text on page 5.11-35 is revised as follows:

Environmentally Sensitive Habitat Areas

~~Under the California Coastal Act, Environmentally Sensitive Habitat Areas (ESHA) are defined as “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.” According to El Segundo’s Local Coastal Program, there are no ESHAs in El Segundo’s coastal zone, thus, Coastal Act Sections 30240(a) and (b) are not applicable (City of El Segundo 1980). Section 5.3, Biological Resources—Terrestrial discusses the presence of artificially introduced buckwheat, which is the host plant for the protected El Segundo blue butterfly.~~

The Draft EIR text on page 5.11-39 is revised as follows:

The dredging, temporary stockpiling of dredged sediments, ~~and~~ temporary removal and replacement of armor rock, and anchoring by Project work vessels, can be expected to result in the temporary disturbance of both soft-bottom and artificial hard-bottom habitats in the offshore Project work area.

The Draft EIR text on page 5.11-42 is revised as follows:

Once the modifications to the screened ocean intake and outfall structures are completed, the temporarily removed armor rock would be replaced to anchor and protect the new seafloor-based intake and outfall structures. ~~Additional armor rock may be required which would provide more artificial hard substrate than is currently present at the Project site...~~

The text in the Draft EIR on Page 5.11-47 is revised as follows:

As illustrated in Table 5.11-7, underwater sound levels high enough to potentially cause acute damage to fish is ~~<+ 2 meters~~ for a vibratory hammer and ~~1-11< 18 meters~~ for an impact hammer, depending on the pile composition and diameter used for the piling. Cumulative SEL levels resulting in Behavioral changes sound levels, depending on the type of pile hammer used, range between 12 and 215 meters. Level A SEL Cumulative harassment underwater sound levels for marine mammals range between 0.1 and ~~108~~ 34.8-meters, depending on the species, piling composition and diameter, and type of hammer used. Ambient underwater noise for a major harbor like San Francisco is estimated at approximately 150 dB (CalTrans 2009) and 138 dB for coastal locations (Wilson et al. 1997; Fabre and Wilson 1997)...

The Draft EIR text on page 5.11-50 in Table 5.11-7 is revised as follows:

**TABLE 5.11-7
ESTIMATED VIBRATORY AND IMPACT HAMMER PILE-DRIVING SOUND LEVELS AND DISTURBANCE TO CRITERIA LEVELS**

		Distance to Sound Level Thresholds (meters) for Non-impulsive Vibratory Hammer Sound Sources ²								
		SEL Cumulative Threshold ⁴		150 dB (Fish-Behavioral) ^{3,4}	SEL Cumulative Threshold ^{3,4}					Attenuation Equipment
Pile Type	Equipment Type	187 dB (Fish ≥2g)	183 dB (Fish < 2g)		199 dB (Low-Frequency Cetaceans)	198 dB (Mid-Frequency Cetaceans)	173 dB (High-Frequency Cetaceans)	201 dB (Phocid Pinnipeds)	219 dB (Otariid Pinnipeds)	
12-inch Steel Pipe Pile ¹	Vibratory	4-0.0	4-0.0	12	20 2.3	408 0.1	29.5 2.1	42.4 1.2	0.9 0.1	None
13-inch Steel Pipe Pile ^{1,5}	Vibratory	1.0	4-2.0	25-22.0	20 4.3	408 0.2	29.5 3.8	42.4 2.3	0.9 0.2	None
16-inch Steel Pipe Pile ¹	Vibratory	1.0	4-2.0	4.0	58.5 5.1	5-2 0.3	86.5 4.4	35.6 2.7	2.5 0.2	None
16-inch Fiberglass/concrete pile ¹	Vibratory	0.0	1.0	1.0	4-3 1.8	0-4 0.1	6.4 1.6	2-6 1.0	0-2 0.1	None
		Distance to Sound Level Thresholds (meters) for Impulsive Impact Hammer Sounds Sources ²								
		SEL Cumulative Threshold		150 dB (Fish-Behavioral) ^{3,4}	SEL Cumulative Threshold ^{3,4}					Attenuation Equipment
Pile Type	Equipment Type	187 dB (Fish ≥ 2 g)	183 dB (Fish < 2 g)		183 dB (Low-Frequency Cetaceans)	185 dB (Mid-Frequency Cetaceans)	155 dB (High-Frequency Cetaceans)	185 dB (Phocid Pinnipeds)	203 dB (Otariid Pinnipeds)	
12-inch Steel Pipe Pile ³	Impact	6-1.0	44 1	100	4.1 1.8	0.1	2.2	0.7 1.0	0.0 0.1	None
13-inch Steel Pipe Pile ^{3,4,5}	Impact	0 10.0	0 18.0	215	29.2	1.0	34.8	15.7	1.1	None
16-inch Steel Pipe Pile ³	Impact	3 2.0	5 3.0	63	2.7 4.8	0-2 0.2	5.5	4.7 2.5	0.4 0.2	None
16-inch Fiberglass/concrete pile ³	Impact	0 1.0	1.0	76	0-2 1.2	0-0 0.0	0.5-1.4	0.4 0.6	0-0 0.0	None

NOTES:

- ¹ Vibratory pile driving hammers have been documented to reduce underwater noise levels a minimum of 14-15 dB and up to 28-29 dB, depending on the pile type, water depth, and type of hammers being used (Caltrans 2015). Estimating the potential underwater noise attenuation distances for steel pipe and fiberglass/concrete pilings using a vibratory hammer, underwater noise levels documented for impact hammers were reduced by 14 dB.
- ² NOAA 2018b, NOAA 2016b; NMFS 2016; Caltrans 2015, AMS 2019
- ³ Time duration for using an impact hammer to set any pilings to desired depth assuming the vibratory hammer cannot, by itself, achieve required anchor depth was <1 hour. Calculations assumed 4,440 50 blows per piling, 2 piles per day, XLogR = 15, pulse duration = 0.8 seconds, 2-5 2.0 weighting factor adjustment.
- ⁴ In calculating the potential SEL cumulative or behavioral threshold distances for fish, if no RMS values available for pile driving calculation, the mean of Peak dB and SEL dB values used. If no SEL value available for the pile driving calculation, then the RMS values is used.
- ⁵ Data for the installation of the 13-inch steel pilings reflect very shallow water conditions on the Mad River in Arcata, CA and appear to reflect unique underwater noise reflective conditions.

The Draft EIR text on page 5.11-51 in Table 5.11-8 is revised as follows:

**TABLE 5.11-8
FISH LARVAE USED FOR APF CALCULATION, THEIR CONTRIBUTION TO THE LARVAL COMMUNITY AND TO THE APF CALCULATION, PROPORTIONAL MORTALITIES (P_m), AND SIZE OF LARVAE**

Fish Taxa		Contribution to larval community ¹ (%)	Contribution to APF calculation ¹ (%)	P _m Local ^{1,2}	P _m Regional ²¹ ₃	Mean Size of Larvae ⁴ (mm)
Atherinopsidae	Silverside	14	25	3.45x10 ⁻³	1.04x10 ⁻²	9.9/9.1
Engraulidae	Anchovy	13	23	2.38x10 ⁻⁴	7.15x10 ⁻⁴	8.9
<i>Genyonemus lineatus</i>	White Croaker	11	20	4.55x10 ⁻⁴	1.37x10 ⁻³	2.4/2.9
<i>Hypsoblennius spp.</i>	Combtooth Blenny	6.5	0.2	4.33x10 ⁻⁴	1.30x10 ⁻³	NA /2.35
<i>Citharichthys spp.</i>	Sanddab	5	2	1.62x10 ⁻⁴	4.88x10 ⁻⁴	NA
<i>Paralichthys californicus</i>	California Halibut	1.8	6	2.60x10 ⁻⁴	7.80x10 ⁻⁴	2.0/NA
Gobiidae	CIQ Goby	1.5	1	2.39x10 ⁻³	7.19x10 ⁻³	NA
<i>Paralabrax spp.</i>	Sea Bass	1.3	5.5	5.41x10 ⁻⁴	1.63x10 ⁻³	NA
<i>Parophrys vetulus</i>	English Sole	1.25	2	1.19x10 ⁻⁴	3.58x10 ⁻⁴	NA
<i>Pleuronichthys guttulatus</i>	Diamond Turbot	0.43	1.5	3.35x10 ⁻³	1.00x10 ⁻²	NA
<i>Seriphys politus</i>	Queenfish	0.07	1.5	5.41x10 ⁻⁵	1.63x10 ⁻⁴	NA
Sciaenidae	Unid. Croakers	NA	12.6	7.36x10 ⁻⁴	2.21x10 ⁻³	2.9

SOURCE: HDR 2018, Tenera 2014.

NOTES: NA = Not Available; ¹Data based on Tenera and MBC 2008; ²Mean of 41 and 45 MGD intake; ²³Mean of 123 and 136 MGD intake; ⁴ Project marine study area/SCB; data based on Tenera 2014

The Draft EIR text on page 5.11-52 is revised as follows:

It should be noted that these APF calculations do not take into account the use of wedgewire screens, potentially excluding larvae that are > 1 mm in size, or the intake flow rate, and the potential exclusion of larvae that are > 1 mm in size. For example, Tenera 2014 (see Draft EIR Appendix 4A) concluded that the entrainment of Silverside fish larvae, which account for approximately 14 percent of the Project marine study area larval fish population (Table 5.11-8), would be excluded from entrainment because of their mean size being 9 mm, and because larvae below 7 mm in size did not occur in the Project marine study area (Table 5.11-8, Tenera 2014). Tenera (2014) also concluded that entrainment of other fish larvae that were > 1 mm in size would be substantially reduced, if not eliminated. Tenera (2014) assumed 100 percent entrainment for each of the 12 fish species used in their calculations of mortalities and in the estimation of APF. However, as evidenced from the size distribution of silverside larvae, using data on larval sizes could refine the potential for larval entrainment. Unfortunately, data on larval sizes only existed for 6 of the 12 species used by Tenera (2014). By assuming reduced entrainment for larvae > 1 mm in size for these 6 species, and 100 percent entrainment for the 6 species where data on larval size was lacking, the APF declined by ~11 percent (Table 5.11-9). If

reductions in entrainment of larvae was extrapolated to all 12 out of the 12 fish species, APF would decline by ~24 percent (Table 5.11-9).

That potential reductions in larval entrainment by wedgewire screens can occur has been noted by the SWRCB, which cited a study at the Diablo Canyon Nuclear power plant in the technical support for OPA 2015 where use of wedgewire screens reduced larval entrainment 4.6 to 15.8 percent over the open intake. However, this study did not employ reduced flow in its assessment of entrainment reductions; with reduced intake flow entrainment of larval fish could be even less (OPA 2015). Other studies cited by the SWRCB demonstrated reductions in entrainment as high as 66 percent. It should be noted that the majority of these studies focused on larval fish body length and not head diameter in assessing percentages of potential reductions occurring when using wedgewire screens. It was because of this uncertainty in the effectiveness of wedgewire screens that the SWRCB concluded that, “Additionally, even though wedgewire screens can reduce entrainment mortality of juvenile and adult fish and essentially eliminate impingement mortality, intake-related mortality will be site and species-specific. Empirical studies on wedgewire screen efficacy may be required to test the models that have been designed to estimate entrainment. There also may be a need to empirically measure entrainment at individual desalination facilities.” Consequently, the calculation of APF for an unscreened ocean intake located offshore of the ESGS (HDR 2018) potentially overestimates the loss of productivity to the marine ecosystem from entrainment, since most of the entrainment would be restricted to larvae < 1 mm in diameter or fish larval head size (Tenera 2014).

The Draft EIR on page 5.11-53 is revised as follows:

Therefore, the implementation of **Mitigation Measure BIO-M2** would reduce Project related entrainment impacts of ~~non-special status~~ all marine taxa, to less than significant after mitigation.

The Draft EIR text on page 5.11-54 in Table 5.11-9 is revised as follows:

**TABLE 5.11-9
AREA PRODUCTION FOREGONE (APF) ESTIMATES FOR OPEN AND 1 MM WEDGEWIRE SCREENED OCEAN
INTAKE FOR THE WEST BASIN DESALINIZATION PROJECT LINEAR DIFFUSER**

Intake	APF Estimates for an Unscreened Intake¹ (acres)	<u>APF Estimates for a Wedgewire Screened Intake with a 1% reduction in entrainment (acres) consistent with the CA Ocean Plan</u>	APF Estimates for a Wedgewire Screened Equipped Intake Accounting for Exclusion of certain > 1 mm larvae² (acres)	APF Estimates for a Wedgewire Screened Equipped Intake with 100% Exclusion of Silverside Larvae³ (acres)	<u>APF Estimates for a Wedgewire Screen Intake with a 24% reduction in Entrainment⁴ (acres)</u>
Local (41 MGD) ⁵	16.4	<u>16.2</u>	14.52	14.2	<u>12.5</u>
Local (45 MGD) ⁶	18.1	<u>17.9</u>	16.03	15.64	<u>13.8</u>
Regional (123 MGD) ⁵	49.1	<u>48.7</u>	43.659	42.53	<u>37.3</u>
Regional (136 MGD) ⁶	54.4	<u>53.8</u>	48.325	47.197	<u>41.3</u>

SOURCE: ¹HDR 2018 ⁴Tenera 2014. All calculations include 1:10 scaling of estuarine: midwater habitat for non-estuarine fish species (Allen and Pondella 2006).

NOTES: ² APF wedgewire screen values are based on estimated reductions in entrainment of ~~assorted~~ certain fish and invertebrate larvae, depending on the spectrum of larval sizes for each species. (~~from a spectrum of larval sizes for each species~~) when a 1.0-mm Wedgewire Screen is utilized ~~and~~ as presented in Tenera 2014.

³ APF wedgewire screen values are calculated by excluding entrainment of Silverside larvae based on data in Tenera et al. 2014. All calculations include 1:10 scaling of estuarine: midwater habitat for non-estuarine fish species (Allen and Pondella 2006).

⁴ Estimated mortality reductions if data existed for 12 out of 12 species used for APF calculation and all species have some reductions in entrainment.

⁵ Treated waste washwater is internally recycled.

⁶ Treated waste washwater is NOT internally recycled.

The Draft EIR on page 5.11-58 through -60 is revised as follows:

Shear Stress

Mortality due to turbulence-induced shearing stress from the discharge of brine can impact plankton, particularly thin-shelled bivalve and gastropod veligers (Jessopp 2007; Zhang et al. 2017). Shearing stress from discharge of water through multiport diffusers has been modeled in a number of scientific studies and has been found to vary depending on a variety of factors, including the angle of the diffusers and water discharge velocities (Foster et al. 2013; Roberts 2018). The discharge of the brine entrains ambient seawater into a turbulent discharge plume wherein marine organisms face a greater risk of shear-induced damage and mortality. For the Local Project, Roberts (2019~~8~~) ~~used a preliminary and evolving methodology (which has not yet been approved) to estimate~~ that approximately ~~119-126~~ 66 - 116 MGD of ambient seawater would become entrained by the turbulent discharge of the Project's outfall (see Appendix ~~D3-14A~~). If it is assumed that all organisms entrained into the turbulent discharge flow will suffer mortality, then the estimated APF of this entrainment would vary from ~~47-50~~ 26.3 - 46.3 acres due to the large volume of water that would be entrained by the discharge (**Table 5.11-12**). This could be considered a potentially significant impact.

However, the ocean produces a substantial amount of natural turbulence due to the action of wind and waves (Mann and Lazier 1991). This "background" turbulence is typically

manifested at length scales > 1 mm, depending on forcing intensities. The Project-induced turbulence that needs to be mitigated would occur at length scales of < 1 mm (Roberts 2018). If the APF calculation is adjusted for Project-induced turbulences, i.e. by excluding some organisms > 1 mm for which there exists data, then the APF can initially decrease from ~~47-50~~ 26.3 - 46.3 acres to ~~39-42~~ 21.7 - 38.2 acres for the Local Project (Table 5.11-12).

Additionally, all of the organisms < 1 mm in size are not expected to be affected to the same extent by shear stress due to their natural elasticity and in the case of some invertebrate larvae, the hardness of their shells. Recent studies of turbulence-induced shearing mortalities on invertebrate organisms demonstrate that a number of taxa, including polychaetes, barnacles, cyprids and bryozoans show no effects from turbulent transport at velocities as high as 3 m/s (Jessopp 2007). At a velocity of 3 m/s, which is comparable to the discharge velocities of the Local Project, predicted to vary from 2.7 - 3.3 m/s (8 - 10 feet/s), the impact of turbulence-associated shear mortality would principally affect thin-shelled veligers such as those of *Mytilus edulis* and the gastropod *Littorina littorea* (Jessopp 2007). For these types of organisms, shear-induced mortalities vary from 15 to 35 percent of the population (Jessopp 2007; Zhang 2017). Because these types of veligers typically comprise a varying proportion of the plankton < 1 mm in size, taking the mortality of the total plankton population to be the midpoint of this range (25 percent) would represent a worse-case scenario for invertebrates and for fish eggs and larvae, which are typically more elastic and can be expected to withstand minimal levels of shear stress compared to thin shelled mollusks. Applying a 25 percent mortality rate to the discharge entrainment APF calculations further reduces the estimated APF acreage to ~~9.8-10.4~~ 5.4 - 9.5 for the Local Project (Table 5.11-12). However, although the OPA requires mitigation, it is unclear from current policy guidance how to calculate a scientifically accurate fair compensation at this time. The RWQCB is currently evaluating methodologies.

As discussed above concerning ocean water intake entrainment, the potential magnitude of entrainment from the Project's brine discharge is uncertain, primarily due to limited and pertinent scientific data concerning invertebrate and larval fish mortality that may actually occur from discharge turbulence. Scientific data that can be applied (Jessopp 2017; Zhang 2017) indicate that turbulence-induced mortality on invertebrates and fish larvae in the open ocean is far less than 100 percent and could be 15 percent or lower. As also discussed above for Project related intake entrainment, although the potential overall magnitude and effect of discharge turbulence-induced entrainment of larvae < 1 mm may be in question, the potential effect of injured or killed marine fish and invertebrates may still have a significant impact on the marine ecosystem.

Regardless of the magnitude of the impact of discharge-induced entrainment, it would be expected to be reduced through the application of mitigation to restore or enhance marine or coastal habitat, which could include a local coastal marsh restoration Project such as the Ballona Wetlands Restoration Project. Therefore, the implementation of Mitigation

Measure BIO-M2 would reduce Project related entrainment impacts of non-special-status taxa, to less than significant after mitigation.

Finally, as mentioned above, the potential for entrainment of special-status taxa would be negligible to non-existent. For example, the lack of veliger larvae or juvenile fish stages of black abalone and giant sea bass in any of the studies of plankton conducted in the last decade in the Project marine study area (Tenera and MBC 2008; Tenera 2014), the lack of kelp beds or other suitable habitat which provide the primary food source of both black abalone and Giant sea bass (Butler et al. 2009) in reasonable proximity to the intake and discharge tunnels, and the survivability of either taxa larvae to travel the requisite distance to the Project site from existing supporting habitat, as well as the > 1 mm egg and larval body size of giant sea bass, all support a determination of a very low to non-existent potential for substantial larval densities to be effected by Project entrainment that would pose a significant risk to the survivability and recovery of these species. Therefore, potential entrainment impact would be less than significant with implementation of Mitigation Measure BIO-M2.

TABLE 5.11-12
AREA PRODUCTION FOREGONE (APF) ESTIMATES FOR TURBULENT DISCHARGE-ASSOCIATED MORTALITY FOR THE WEST BASIN DESALINIZATION PROJECT LINEAR DIFFUSER

Intake	Estimated-Entrained Flow (MGD) ⁴	100% Mortality Discharge APF ² (acres)		< 1 mm Mortality Discharge APF ³ (acres)		25% < 1 mm Mortality-Discharge APF ⁴ (acres)	
		6-Port	14-Port	6-Port	14-Port	6-Port	14-Port
Local (41 MGD)	119		47.5		39.2		9.8
Local (45 MGD)	126		50.3		41.6		10.4
Regional (123 MGD)	678		270.8		223.6		55.9
Regional (136 MGD)	693		276.7		228.5		57.13

Intake Volumes	Estimated Entrained Flow (MGD) ¹		100% Mortality Discharge APF ² (acres)		< 1 mm Mortality Discharge APF ³ (acres)		25% < 1 mm Mortality Discharge APF ⁴ (acres)	
	6-Port	14-Port	6-Port	14-Port	6-Port	14-Port	6-Port	14-Port
	Local (41 MGD) ⁵	66	116	26.3	46.3	21.7	38.2	5.4
Local (45 MGD) ⁶		68		27.1		22.4		5.6
Regional (123 MGD) ⁵	198	352	79.1	140.6	65.2	116	16.3	29.0
Regional (136 MGD) ⁶		208		83		68.5		17.1

NOTES:

¹ Volume of estimated entrained flow from Roberts 2018⁹.

² Mortality assessed as 100% of organisms of all size classes in the entrained flow;

³ 100% of organisms < 1mm in size with a proportional percentage of organisms > 1 mm being affected based on Tenera 2014;

⁴ Assumes 25% mortality of organisms < 1 mm in size, based on observed mortalities of marine taxa from Jessopp 2007 and Zhang et al. 2017. Entrainment includes 1:10 scaling of estuarine:midwater habitat for non-estuarine fish species (Allen and Pondella 2006).

⁵ Treated waste washwater is internally recycled.

⁶ Treated waste washwater is NOT internally recycled.

The Draft EIR text on page 5.11-62 to -63 in Mitigation Measure BIO-M1 is revised as follows:

The plan shall incorporate, but not be limited to the following BMPs:

- Pile driving shall be conducted only between June and November to avoid gray whale migration, unless NMFS in their Section 7 consultation with the USACE determines that the potential effect to marine mammals is less than significant.
- A ~~1,600-foot (500-meter)~~ safety zone at least 1,600 feet (500 meters) in size shall be established and maintained around the sound source for the protection of marine mammals and sea turtles in the event that sound levels are unknown or cannot be adequately predicted. If NOAA or the USACE requests that the size of the safety zone be increased when NOAA or the USACE issues a permit for Project pile-driving, then the larger of the NOAA-requested or USACE-requested safety-zone size will be established and maintained around the sound source.^[2]
- Work activities shall be halted when a marine mammal or sea turtle enters the ~~1,600-foot (500-meter)~~ safety zone, and shall cease until the mammal has been gone from the area for a minimum of 15 minutes.
- A “soft start” technique shall be used in all impact hammer sourced pile driving, giving marine mammals an opportunity to vacate the area.
- A NMFS-approved biological monitor will conduct daily surveys before and during impact hammer pile driving to inspect the work zone and adjacent SMB waters for marine mammals. The monitor will be present as specified by NMFS Fisheries during the pile-driving phases of construction.
- In-water sound level monitoring will be conducted during all pile-driving activities.

Page 5.11-76 in the Draft EIR is revised as follows:

Because of the Project’s nature and scope, neither construction nor operation activities would interfere substantially with the movement of any native, resident, or migratory fish, or with wildlife species, or with established native resident or migratory wildlife. Through regulatory permitting compliance, including OPA, the Project’s geographic scope of marine resource effects would be limited to the immediate area of the Project’s intake and discharge facilities, and adverse effects would be fully offset ~~though~~ through OPA compliance.

The Draft EIR text on page 5.11-77 through -92 is revised as follows:

Applied Marine Sciences, 2018. Populated NOAA 2018 Acoustic Technical Guidance Excel Spreadsheets for West Basin Desalination Project.

Caltrans, 2009. Technical Guidance for Assessment and Mitigation of Hydroacoustic Effects of Pile Driving on Fish,

² This BMP was edited in response to comment SLC-29.

https://tethys.pnnl.gov/sites/default/files/publications/Caltrans_2009_Guidance_Manual_for_noise_effects_on_fish.pdf, Accessed August 30, 2019.

National Oceanic and Atmospheric Administration (NOAA), 2018b. User Manual for Optional Spreadsheet Tool - 2018 Acoustic Technical Guidance. Available at: <https://www.fisheries.noaa.gov/action/user-manual-optional-spreadsheet-tool-2018-acoustic-technical-guidance>.

Santa Monica Bay Restoration Commission. 2013. Bay Restoration Plan. Adopted December 19, 2013. Available at: https://www.smbrc.ca.gov/about_us/snbr_plan/docs/snbrplan2013_adopted.pdf

Section 5.12, Noise

The Draft EIR text on page 5.12-3 is revised as follows:

City policies pertaining to noise are contained in the Land Use and Noise Elements. ~~Since the proposed Project would involve the construction of a water infrastructure project by West Basin, it is exempt from local land use, grading, and building permit requirements (California Government Code Section 53091).~~ The policies outlined in the *City of El Segundo General Plan* (General Plan) Land Uses Element and Noise Element are considered relevant to the proposed Project, as described below.

The Draft EIR text on page 5.12-27 for Mitigation Measure NOI-5 is revised as follows:

NOI-5: Prior to conducting sheet piling installation activities within 100 feet of the existing Chevron storage tank, West Basin shall conduct a vibration analysis of the local impact area to evaluate the potential for the construction methods to damage the tank. If vibration analysis concludes that construction methods could result in vibration beneath the tank that could result in structural damage, West Basin shall modify construction methods to ensure vibration would not be generated at levels that could damage the tank. ~~West Basin shall provide the assessment to Chevron for their review and comment.~~ West Basin shall monitor the existing Chevron storage tank for damage during construction activities within 25 feet of the tank. If damage from project-related vibration is detected, West Basin shall cease construction until methods are developed to avoid further damage and West Basin shall repair the damage.

Section 5.13, Public Services

No text changes are made to this section.

Section 5.14, Recreation

The Draft EIR text on page 5.14-6 is revised as follows:

- Regional Pump Station Optional Site 5, which is sited within the westernmost edge of the Chester Washington Golf Course in unincorporated Los Angeles County.

Section 5.15, Transportation and Traffic

No text changes are made to this section.

Section 5.16, Utilities and Service Systems

The Draft EIR text on page 5.16-4 and -5, Footnote No. 1, is revised as follows:

¹ California Government Code Section 53091(d) states that “Building ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water, wastewater, or electrical energy by a local agency.” However, construction and operation of the Ocean Water Desalination Project would strive to demonstrate compliance with the applicable building ordinances stipulated under the City of El Segundo Municipal Code. The subject Government Code section does not apply to Local Coastal Programs, including zoning ordinances of a city or county incorporated into or adopted for the purpose of implementing Local Coastal Programs.

Section 6, Other CEQA Considerations

The Draft EIR text in Section 6.2.4 *Water Supply and Demand*, on page 6-7 is revised as follows:

As described above, the Project involves construction and operation of an ocean water desalination facility, along with related water infrastructure components, including a screened ocean intake, concentrate discharge structure, and desalinated water conveyance facilities. As discussed in greater detail below, although the Project would provide an “essential service” (potable water), the Project’s water supply would serve to replace imported water. The Local Project would meet ~~44~~ 10 percent of West Basin’s total water demand in 2040, including conservation...

6.3 Environmental Justice

The Draft EIR text in Section 6.3.2, from the top of page 6-10 to the bottom of page 6-12, is replaced with the following text:

6.3.2 Environmental Setting

Potentially Affected Populations

The study area for environmental justice effects includes areas that may experience adverse human health or environmental effects resulting from construction and operation of the Local Project and Regional Project. Based on a review of Section 5 analyses, this includes portions of El Segundo (where the desalination facility would be located); Manhattan Beach (directly adjacent to the desalination facility); Hawthorne (where the pump station and desalinated water conveyance facilities would be located); and Lawndale, Gardena, and unincorporated neighborhoods (adjacent to conveyance facility

routes). **Table 6-2** lists all of the census tracts potentially affected by the Local Project and Regional Project facilities.

Minority Populations

According to the federal Council on Environmental Quality (CEQ) guidelines for environmental justice analyses (CEQ 1997), minority populations should be identified where either (a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is “meaningfully greater” than the majority population percentage in the general population or other appropriate unit of geographic analysis. CEQ guidance does not define the term “meaningfully greater;” however, the Federal Interagency Working Group on Environmental Justice NEPA Committee’s *Promising Practices for EJ Methodologies* (FIWGEJ 2016) suggests that the 50 percent approach and the “meaningfully greater” approach should be used together, and that “The Meaningfully Greater analysis requires use of a reasonable, subjective threshold (e.g., ten or twenty percent greater than the reference community).” This analysis embraces the NEPA Committee’s advice on this approach.

Information regarding racial and ethnic diversity in the study area was derived from the 2015 American Community Survey administered and published by the U.S. Census Bureau, which provides estimates based on surveys conducted from 2011 to 2015. The West Basin service area as a whole has a total minority population percentage greater than 50 percent, and thus, as a reference population, West Basin represents a minority population. However, the minority population percentages of individual cities, communities, and census tracts within the West Basin service area differ widely, reflecting different local patterns of diversity, separation, and integration. For example, the cities of Rolling Hills, West Hollywood, Manhattan Beach, Hermosa Beach, and Malibu have non-Hispanic white (non-minority) population percentages of 72 to 85 percent, while the City of Inglewood has a minority population percentage of 97 percent (U.S. Census Bureau 2016).

Selected racial and ethnic characteristics of the census tracts potentially affected by the Local and Regional Project components are summarized in Table 6-2. The final column presents the “total minority” population percentage, which for this analysis is considered to include all residents who reported their race and ethnicity as anything other than non-Hispanic white to the U.S. Census Bureau. As shown in italics in this final column, most of the census tracts have minority populations of over 50 percent.

Because the West Basin service area has a minority population of over 50 percent, the “meaningfully greater” approach also is used here to identify minority populations that exceed the percentage of the service area. As explained above, no official threshold defines this term, and a lead agency must select a threshold that provides a reasonable and meaningful basis for comparison. Given the wide range of minority population concentrations within the service area, from nearly all residents of Westmont to merely 15 percent of Malibu residents (U.S. Census Bureau 2016), an inclusive threshold is used to acknowledge areas of particularly high minority populations: any census tracts within

the potential area of environmental impact that have concentrated minority populations greater than the service area (68.8 percent) are considered to be “meaningfully” greater.

As shown in Table 6-2, all of the census tracts within the cities of Hawthorne, Lawndale, and Gardena, as well as the Del Aire neighborhood in unincorporated Los Angeles County, have higher minority population percentages than the West Basin service area as a whole. The minority population percentages in the cities of El Segundo, Redondo Beach, and Manhattan Beach are substantially lower than the West Basin service area as a whole and also below 50 percent; therefore, these areas are not considered to have minority populations for the environmental justice evaluation.

TABLE 6-2
MINORITY POPULATIONS IN THE STUDY AREA (2011-2015)

Geography	Black or African American alone, not Hispanic or Latino	Asian alone, not Hispanic or Latino	Hispanic or Latino (Of any Race)	Total Minority (Other Than Non-Hispanic White)
West Basin Service Area^a	18.3%	12.4%	33.5%	68.8%
City of El Segundo				
CT 6200.02	2.4%	7.9%	19.4%	32.9%
CT 6201.02	0.4%	4.5%	15.3%	32.4%
City of Hawthorne				
CT 6020.02	6.1%	7.8%	78.9%	95.6%
CT 6021.03	11.3%	2.3%	73.4%	89.3%
CT 6021.04	27.2%	1.9%	61.2%	96.1%
CT 6021.05	19.8%	4.4%	68.3%	94.4%
CT 6021.06	18.0%	6.0%	63.4%	92.7%
CT 6024.02	11.9%	7.5%	60.0%	82.2%
CT 6024.03	17.2%	10.6%	60.2%	95.2%
CT 6024.04	22.7%	9.4%	58.4%	92.3%
CT 6025.04	32.5%	12.1%	44.4%	95.3%
CT 6025.05	29.7%	5.7%	54.9%	95.2%
CT 6025.06	44.9%	4.0%	43.2%	97.5%
CT 6025.07	47.9%	3.6%	33.0%	95.4%
CT 6025.08	30.1%	7.0%	46.3%	93.7%
CT 6205.09	14.0%	14.2%	63.8%	96.9%
CT 6027	63.8%	4.5%	23.5%	97.3%
CT 6037.03	3.5%	13.4%	50.1%	73.3%
CT 6037.04	26.7%	8.0%	56.5%	98.0%
City of Gardena				
CT 6026	62.0%	2.7%	22.5%	96.5%
CT 6035	9.9%	27.9%	45.3%	86.1%

CT 6036	<u>6.4%</u>	<u>28.1%</u>	<u>35.0%</u>	<u>71.9%</u>
<u>City of Lawndale</u>				
CT 6038.01	<u>16.4%</u>	<u>7.8%</u>	<u>61.0%</u>	<u>92.1%</u>
CT 6308.02	<u>6.7%</u>	<u>9.1%</u>	<u>70.8%</u>	<u>91.1%</u>
CT 6039	<u>6.8%</u>	<u>9.5%</u>	<u>65.2%</u>	<u>84.3%</u>
<u>City of Redondo Beach</u>				
CT 6205.01	<u>8.0%</u>	<u>11%</u>	<u>16.7%</u>	<u>44.7%</u>
<u>City of Manhattan Beach</u>				
CT 6202.01	<u>2.7%</u>	<u>5.2%</u>	<u>12.2%</u>	<u>24.0%</u>
<u>Unincorporated Los Angeles County Tracts</u>				
CT 6022 (Del Aire)	<u>12.9%</u>	<u>6.5%</u>	<u>52.0%</u>	<u>76.7%</u>
CT 6023.01 (Wiseburn)	<u>2.7%</u>	<u>8.9%</u>	<u>52.9%</u>	<u>67.4%</u>
CT 6037.02 (Alondra Park)	<u>3.2%</u>	<u>29.7%</u>	<u>34.3%</u>	<u>68.5%</u>

NOTES:

The first three columns are selected minority group populations for illustrative purposes, and are not intended to sum to the total minority percentage in the final column.

^a The West Basin Service Area population is approximated by combining the populations of incorporated cities, census-designated places, and census tracts covering the service area jurisdictions. Some variation occurs as a result of service area boundaries that differ from census boundaries.

CT = census tract

SOURCE: U.S. Census Bureau 2016.

Low-Income Populations

This analysis uses two methods for identifying communities of concern related to income levels, based on two sets of guidelines: CEQ guidance and California Regional Water Management Guidelines. Both of these methods are addressed below.

The CEQ environmental justice guidance states that “...low-income populations in an affected area should be identified with the annual statistical poverty thresholds from the Bureau of the Census’ Current Population Reports, Series P-60 on Income and Poverty” (CEQ 1997, page 25). USEPA guidance (1998) recommends the use of Census data on poverty income as one indicator, as well as other available data. Unlike the CEQ guidance on minority populations, none of the environmental justice guidance documents contains a quantitative definition of what proportion of low-income individuals defines a low-income population. The annual statistical poverty thresholds are based on family income. A threshold of 50 percent of individuals in families with incomes below the poverty threshold (similar to the 50 percent threshold used to identify a minority population) would be an overly restrictive threshold for identifying a low-income population due to the nature of the poverty thresholds, which are not adjusted for regional costs of living, and are below levels commonly considered low-income in many areas of California. For the purposes of this environmental justice analysis, the method of identifying low-income populations within the study area must account for regional costs of living. Therefore, this analysis uses a comparative approach and identifies a low-income population if the proportion of people with family incomes below the poverty

threshold is greater than that within the general population; in other words, if the percentage of such people in any of the communities considered is greater than 14.2 percent. As shown in Table 6-3, nearly all of the census tracts within the cities of Hawthorne and Lawndale, as well as the Del Aire neighborhood in unincorporated Los Angeles County, have meaningfully greater percentages of people with incomes below poverty than the West Basin service area as a whole. Therefore, these are considered low-income populations. The low-income percentages associated with the cities of El Segundo, Redondo Beach, and Manhattan Beach, as well as the specific census tracts identified within the City of Gardena, are not considered to be low-income populations for the environmental justice evaluation.

TABLE 6-3
INCOME AND POVERTY IN THE STUDY AREA (2011-2015)

Geography	Median Household Income	Individuals with Family Income Below Poverty Threshold
West Basin Service Area ^a	n/a ^b	14.2%
City of El Segundo	\$85,727	7.3%
CT 6200.02	\$72,708	5.0%
CT 6201.02	\$80,536	3.8%
City of Hawthorne	\$44,504	20.1%
CT 6020.02	\$39,609	21.1%
CT 6021.03	\$32,632	21.6%
CT 6021.04	\$41,813	25.7%
CT 6021.05	\$40,262	24.0%
CT 6021.06	\$43,520	13.1%
CT 6024.02	\$50,680	17.7%
CT 6024.03	\$46,880	18.7%
CT 6024.04	\$47,917	17.3%
CT 6025.04	\$38,579	21.8%
CT 6025.05	\$31,021	40.5%
CT 6025.06	\$37,768	24.0%
CT 6025.07	\$38,036	30.3%
CT 6025.08	\$42,925	18.9%
CT 6205.09	\$49,769	19.2%
CT 6027	\$77,708	17.7%
CT 6037.03	\$83,000	2.1%
CT 6037.04	\$42,668	27.0%
City of Gardena	\$47,674	15.0%
CT 6026	\$50,358	11.8%
CT 6035	\$66,419	8.6%
CT 6036	\$77,083	6.1%
City of Lawndale	\$47,540	17.8%

<u>CT 6038.01</u>	<u>\$46,576</u>	<u>19.7%</u>
<u>CT 6308.02</u>	<u>\$51,735</u>	<u>20.4%</u>
<u>CT 6039</u>	<u>\$47,386</u>	<u>14.9%</u>
<u>City of Redondo Beach</u>	<u>\$105,145</u>	<u>4.7%</u>
<u>CT 6205.01</u>	<u>\$121,960</u>	<u>1.8%</u>
<u>City of Manhattan Beach</u>	<u>\$143,527</u>	<u>4.0%</u>
<u>CT 6202.01</u>	<u>\$124,545</u>	<u>9.5%</u>
<u>Unincorporated Los Angeles County Tracts</u>		
<u>CT 6022 (Del Aire)</u>	<u>\$58,074</u>	<u>20.1%</u>
<u>CT 6023.01 (Wiseburn)</u>	<u>\$75,050</u>	<u>8.2%</u>
<u>CT 6037.02 (Alondra Park)</u>	<u>\$76,625</u>	<u>12.8%</u>

NOTES:

^a The West Basin Service Area population is approximated by combining the populations of incorporated cities, census-designated places, and census tracts covering the service area jurisdictions. Some variation occurs as a result of service area boundaries that differ from census boundaries.

^b Median household income is not reported for the West Basin Service Area as a whole because this geographic area is not captured by Census boundaries. For informational purposes only, the weighted average of median household incomes of all geographies in this service area is \$75,196.

CT = census tract

SOURCE: U.S. Census Bureau 2016.

Additionally, California’s Integrated Regional Water Management guidelines provide criteria for identifying “disadvantaged communities” during water resources planning efforts. Under the California Water Code, a disadvantaged community is defined as one with an annual median household income that is less than 80 percent of the statewide median household income (California Water Code, Section 79505.5[a]). The statewide median household income for the period 2011-2015 was \$61,818. Therefore, the threshold of 80 percent of the statewide median is \$49,454. As shown in Table 6-3, many of the census tracts within the cities of Hawthorne and Lawndale have median incomes below this figure, and are therefore identified as disadvantaged communities and low-income populations.

These two approaches identify slightly different groups of census tracts as low-income. This may be related to different average household/family sizes (because poverty thresholds are based on family size, but median income is not) or other factors.

The Draft EIR text starting at the bottom of page 6-12 is revised as follows:

6.3.3 Significance Thresholds and Criteria

For the purposes of this EIR and consistency with NEPA or CEQA-Plus Guidelines, applicable local plans, and agency and professional standards, the Proposed Project would be considered to have a significant effect on environmental justice if it would:

- Affect the health or environment of minority or low-income populations disproportionately.

Impacts and Mitigation Measures

Construction-related environmental impacts would be felt within portions of El Segundo, Lawndale, Hawthorne, Gardena, and Manhattan Beach, as well as several unincorporated neighborhoods within Los Angeles County. For the purposes of this discussion and as identified in Tables 6-2 and 6-3, the cities of El Segundo and Manhattan Beach are not low-income or minority communities and are excluded from consideration herein. As a result, the only construction-related Project activities that would occur in minority and low-income communities are the installations of conveyance facilities for both the Local and Regional Projects. As described in the Draft EIR on page 3-32, approximately 9.3 miles of pipeline would be installed belowground for the Local Project and 4.9 miles of belowground pipeline and a new pump station would be installed for the Regional Project. Conveyance facilities would be installed at a rate of approximately 150 feet per day.

Construction impacts of the Project are explained in detail within Sections 5.1 through 5.16 of the Draft EIR. Environmental topics that have the potential to exacerbate existing disproportionate impacts on minority and low-income populations during construction include Sections 5.2, *Air Quality*, 5.8, *Hazards and Hazardous Materials*, and 5.12, *Noise*. As explained within Sections 5.8 and 5.12, short-term temporary impacts related to hazardous materials use/transport and construction noise would result from construction of conveyance facilities within roadway rights-of-way identified on Figure 3-5. While the conveyance facilities traverse low-income and minority communities such as Hawthorne, Gardena, and Lawndale, and portions of unincorporated Los Angeles County, the movement of construction along an alignment would result in transitory impacts at any one location, but would not result in disproportionately high and adverse impacts for minority and low-income populations.

The primary construction-related environmental impacts that could have the potential to exacerbate existing disproportionate impacts on minority and low-income populations include emissions of pollutant concentrations emitted near sensitive receptors (see Section 5.2, *Air Quality*, pages 5.2-45 to 5.2-54). All other criteria pollutant air quality impacts (all sensitive receptors including NO_x and PM₁₀) are based on a regional scale within the South Coast Air Quality Management District (SCAQMD) and thus do not differentiate between census tracts in West Basin's service area, either low-income/minority or not. As identified in Table 5.2-18, incorporation of Mitigation Measures AQ-1 through AQ-3 for emissions attributable to the Local Project desalinated water conveyance facilities would result in less than significant impacts. As a result, construction of the conveyance facilities would not expose minority or low-income populations to substantial pollutant concentrations per localized significance thresholds; therefore, impacts from construction emissions would not be disproportionately high or adverse for minority or low-income populations.

Generally speaking, operation of proposed facilities including desalination facilities and the pump station, would not create localized impacts that could disproportionately negatively affect public health within the surrounding minority or low-income

~~environment or communitiesy public health~~ (as evidenced in the analyses provided within other sSections 5.1 through 5.16 of this EIR).

~~Based on all census data presented above, Local Project and Regional Project components in the cities of El Segundo and Hawthorne would not be located in areas with significantly larger minority and/or low income populations on average, relative to the overall characteristics of their respective cities. The proposed locations of the ocean water desalination facility and pump station have been based on criteria such as elevation and proximity and connectivity to existing facilities. The ocean water desalination facility would be located in El Segundo, which is not a low-income or minority community, and therefore is excluded from consideration of environmental justice impacts herein. Additionally, dDuring operation of the Local and Regional Projects, residential areas would not be significantly impacted because the location of the ocean water desalination facility would be within an existing power generating facility site.~~

~~The only Project facility to be operated in low-income or minority communities would be the Regional Project pump station. Operation of the proposed pump station could occur adjacent to low-income or minority residential areas, but all potential locations are on vacant and/or disturbed land. Even though the proposed regional pump station could be located within an area of the city of Hawthorne with a higher minority population (Black or Hispanic), the area is not considered to have a significantly high minority population because it is within 10 percent of the overall city's minority population percentage. In addition, the construction of the pump station was found to have less than significant impacts for most resource topics identified in Section 5.1 through 5.16. As a result, the census data shows that the location of the Local and Regional Project would not be within areas significantly characterized by low income or minority populations. Nonetheless, the location of such facilities in areas characterized by minority or low income populations would not be disproportionately high and adverse, adversely affect the environment or public health of such communities. Impacts are considered less than significant. However, as described in Draft EIR Section 2.2, this EIR addresses some aspects of the Regional Project (60 MGD) at a "programmatic level," pursuant to CEQA Guidelines Section 15168. And if and when West Basin considers moving forward with a larger (up to 60 MGD) facility, the specific locations and designs (which are not known at this time) would require subsequent project-level environmental review pursuant to CEQA Guidelines Section 15168(c).~~

The Draft EIR text in Section 6.4, *References*, on pages 6-13 and 6-14, is augmented with the following:

Council on Environmental Quality (CEQ), 1997. Environmental Justice Guidance Under the National Environmental Policy Act, https://www.epa.gov/sites/production/files/2015-02/documents/ej_guidance_nepa_ceq1297.pdf, Accessed August 28, 2019.

Federal Emergency Management Agency (FEMA), 2005, Final Draft Guidelines for Coastal Flood Hazard Analysis and Mapping for the Pacific Coast of the United States, <https://www.fema.gov/media-library-data/840f98e4cb236997e2bc6771f04c9dcb/Final+Draft+Guidelines+for+Coastal+Flood+Hazard+Analysis+and+Mapping+for+the+Pacific+Coast+of+the+United+States.pdf>, Accessed August 28, 2019.

Federal Interagency Working Group on Environmental Justice NEPA Committee (FIWGEJ), 2016. Promising Practices for EJ Methodologies in NEPA Reviews, https://www.epa.gov/sites/production/files/2016-05/documents/iwg_promising_practices_final_5-16-2016.pdf, Accessed August 28, 2019.

Office of the California Attorney general (OAG), 2012. Environmental Justice at the Local and Regional Level Legal Background, https://oag.ca.gov/sites/all/files/agweb/pdfs/environment/ej_fact_sheet.pdf?, Accessed August 28, 2019.

U.S. Census Bureau, 2016. 2011-2015 American Community Survey 5-year estimates, Product DP05, ACS Demographic and Housing Estimates, selected geographies.

Section 7, Alternatives to the Proposed Project

The Draft EIR text on Page 7-20 is revised as follows:

This alternative ~~and~~ will also require construction and operation of additional downstream advanced water treatment facilities for TDS reduction.

The Draft EIR text on Page 7-35 is revised as follows:

Given that there are no known examples of permitted offshore desalination facilities in the world, such an approach is considered to have very high risks and not considered as proven.

The Draft EIR text on Page 7-47 is revised as follows:

Greenhouse Gas Emissions

The AES Redondo Beach Generating Station Alternative would involve a similar construction duration and scope of activities as those proposed under the Ocean Water Desalination Project at the ESGS North Site, and slightly less GHG emissions compared to the Project at the ESGS South Site due to reduced construction-related GHG emissions as compared to the ESGS South Site. The RBGS site would have similar GHG emissions as the proposed Project with similar impacts to GHG emissions and mitigation, and therefore similar impacts to energy.

The Draft EIR text on page 7-52 is revised as follows:

Greenhouse Gas Emissions

Construction and operation of a Reduced Capacity Alternative would have fewer greenhouse gas emissions and therefore energy impacts than the proposed Project. Total GHG emissions would be reduced in comparison to the proposed Project due to a slight reduction in construction emissions and approximately 50% reduction in operational GHG emissions (prior to mitigation) due to reduced water production and hence reduction in the overall energy demands. However, the embedded GHG intensity, expressed in terms of MT CO₂e per volume of water produced would remain the same. In addition, this alternative could result in increased imported water as compared to the proposed Project (although not increased compared to existing conditions).

The Draft EIR text on page 7-56 is revised as follows:

Greenhouse Gas Emissions

This alternative would increase GHG emissions and energy associated with construction due to additional construction-related grading. GHG impacts and energy during operational phase would be similar to the proposed Project.