June 29, 2015

Mr. Andrew Barnsdale
California Public Utilities Commission
c/o Environmental Science Associates
550 Kearny Street, Suite 800
San Francisco, CA 94108

Dear Mr. Barnsdale:

DeepWater Desal LLC submits the following comments on the Draft Environmental Impact Report for the CalAm Monterey Peninsula Water Supply Project.

Section 7.4.6.1
Paragraph 2 (p. 7-11):

The third sentence in paragraph 2 states:

"*Raw seawater would be conveyed via subsurface pipelines to an onshore wet well and pump station located at one of two alternative sites – a parcel located east of Highway 1 and north of the Dynegy Moss Landing Power Plant (MLPP) near the south shore of Elkhorn Slough, or another site immediately west of Highway 1 across from the MLPP*".

DeepWater Desal is still evaluating alternative locations for its wet well. As of June 29. 2015, one additional location is being considered. The site is immediately west of Highway 1 across from the MLPP referred to in the text above. Other possible locations are being evaluated as they are identified. While the location north of the MLPP near the south shore of Elkhorn Slough, east of Highway 1 is still an alternative site, it is no longer being actively considered. Please revise the above referenced text to state:

"Raw seawater will be conveyed via subsurface pipelines to an onshore wet well located at a parcel located immediately west of Highway 1 across from the MLPP or an alternate site still under evaluation."

Paragraph 3 (p. 7-11):

The third paragraph of section 7.4.6.1 beginning on p. 7-11 of the DEIR states:

"*Brine discharge outfall options under consideration involve either the construction of a new outfall pipeline large enough to accommodate the entire discharge volume or construction of a somewhat smaller new pipeline to be used in conjunction with an existing former fuel oil pipeline that would be repurposed for brine discharge. For*

options involving the two pipelines, at the western end of the existing fuel oil pipeline the two pipes would connect (using a "Y" connection) to a single 36-inch pipeline that would extend to the

discharge point. Under any of the options the outfall pipeline would extend to one of two discharge points – a "deep" discharge site about 8,000 feet offshore or, if that site proved infeasible, to an "intermediate" site about 5,700 feet offshore. At the discharge point, a high velocity five-jet linear diffuser would be attached to the end of the outfall pipeline."

DeepWater Desal presently proposes to construct two new 36" diameter subsurface discharge pipelines that would extend to the discharge point referred to in the text above. Please revise the third paragraph of section 7.4.6.1 to read:

"Brine discharge outfall involves the construction of two new 36" diameter subsurface outfall lines extending to a "deep" discharge site about a mile offshore. At the discharge point, the discharge pipelines would rise above the seafloor and brine would be discharged through a high velocity five-jet linear diffuser."

Paragraph 5 (p. 7-12):

The fifth paragraph of section 7.4.6.1 on p. 7-12 of the DEIR states:

"*The California State Lands Commission has agreed to be the CEQA Lead Agency (a Notice of Preparation for an EIR and has not yet been issued) and the Monterey Bay National Marine Sanctuary has agreed to be the NEPA Lead Agency (a Notice of Intent to prepare a NEPA document has not yet been issued). Relevant studies completed to date include:*

On June 15, 2015, the California State Lands Commission and Monterey Bay National Marine Sanctuary issued a Notice of Preparation/Notice of Intent to prepare a joint EIR/EIS for the Monterey Bay Regional Water Supply Project. Please revise the above referenced text to read:

"The California State Lands Commission, acting as the CEQA Lead Agency and the Monterey Bay National Marine Sanctuary as the NEPA Lead Agency issued a joint Notice of Preparation/Notice of Intent to prepare a joint EIR/EIS for the Monterey Bay Regional Water Supply Project on June 15, 2015."

Paragraph 5, list of relevant studies (p. 7-12):

The list of relevant studies following the fifth paragraph of section 7.4.6.1 on p. 7-12 of the DEIR includes:

"Makai Ocean Engineering, Inc., 2014. *A Conceptual Design of Seawater Pipelines for the Deep Water Desal Project*, Prepared for Deep Water Desal, LLC, May 29, 2014.

The Makai Engineering report has been superseded with a more recent analysis of the pipeline construction conducted by Brierley Associates. The report is available on the

DeepWater Desal website for its Monterey Regional Water Supply Project. Please add to the list of relevant documents following the fifth paragraph of section 7.4.6.1:

> "Brierley Associates, 2014, *Preliminary Design of the Ocean Intake and Discharge Pipelines for the Monterey Bay Regional Water Project, Moss Landing, California*".

An analysis of hydrological conditions at Moss Landing was conducted by Ecosystems Management Associates, Inc./Coastal Environments, Inc. in 2014. The analysis is available on the DeepWater Desal website for its Monterey Regional Water Supply Project. Please add to the list of relevant documents following the fifth paragraph of section 7.4.6.1:

> "Ecosystems Management Associates, Inc. /Coastal Environments, Inc., 2014, *Deepwater Desalination Plant Moss Landing, California Hydrogeological Literature Review and Analysis,* Prepared for Deepwater Desal, LLC, Revised October 8, 2014."

Section 7.6.2.9 Intake Option 9-Open Deepwater Intake at Moss Landing

Paragraph 2 (Page 7-41)

The second paragraph of section 7.6.2.9 at p. 7-41 of the DEIR states:

> *"The onshore wet well and pump station would be located at one of two alternative sites: the project proponent's preferred location is a privately owned parcel north of the MLPP near the south shore of Elkhorn Slough, about 0.25 mile east of Highway 1 (Deep Water Desal, 2014); the alternative location is just west of Highway 1 across from the MLPP. The length of the intake pipeline, from its terminus in Monterey Bay to the preferred wet well, would be about 5,400 feet (or about 1 mile). The length of the intake pipeline from Monterey Bay to the alternative wet well location would be about 4,200 feet (or about 0.75 mile). The depth of the wet well would be below sea level and the well would be filled by gravity (DeepWater Desal, 2014). As with other open water intake options, this option would require a membrane or media pretreatment filtration system to remove algae and suspended and colloidal solids as well as pathogens from the source water prior to conveying it through the reverse-osmosis system."*

As noted above under comments on section 7.4.6.1, DeepWater Desal is still evaluating alternative locations for its wet well. Please revise the second paragraph of section 7.6.2.9 to read:

> "Onshore wet well and pump station locations are still being evaluated. As of June 29, 2015 the preferred location under consideration is just west of Highway 1 across from the MLPP. The length of the intake pipeline from Monterey Bay to the wet well location would be about 4,200 feet (or about 0.75 mile). The depth of the wet well would be below sea level and the well would be filled by gravity (DeepWater Desal, 2014). As with other open water intake options, this option would require a membrane or media pretreatment filtration system to remove algae and suspended

and colloidal solids as well as pathogens from the source water prior to conveying it through the reverse-osmosis system."

Paragraph 3 (Page 7-42)

The third paragraph of section 7.6.2.9 at p. 7-42 of the DEIR states:

"*The preferred wet well and pump station site is designated as Agricultural Conservation with an Aquaculture Overlay in the currently adopted Monterey County Land Use Plan: Moss Landing (1982) and July 2014 Revised Draft Moss Landing Community Plan of the Monterey County General Plan. The preferred site is within the AC (CZ) and RC (CZ) zoning district. The alternative location is designated as Industrial - Coast Dependent - Heavy in the currently adopted Monterey County Land Use Plan: Moss Landing (1982) and Coastal Heavy Industry in the July 2014 Revised Draft Moss Landing Community Plan of the Monterey County General Plan. The alternative location is within the HI (CZ) and RC (CZ) zoning district*."

Consistent with the proposed changes to the second paragraph of section 7.6.2.9 of the DEIR above, please revise the fifth paragraph of section 7.6.2.9 to read:

"The wet well and pump station site under consideration as of June 29, 2015 is designated as Industrial-Coast Dependent-Heavy in the currently adopted Monterey County Land Use Plan: Moss Landing (1982) and Coastal Heavy Industry in the May 2015 Revised Draft Moss Landing Community Plan of the Monterey County General Plan."

Paragraph 5 (Page 7-42)

The fifth paragraph of section 7.6.2.9 at p. 7-42 of the DEIR states:

"*Physical space is available for this construction. Access to the preferred wet well site would be via an unnamed access road off of Highway 1 just south of Elkhorn Slough; access to the alternative wet well site would be via Highway 1. Access to the ocean portion of intake installation would be via barge. Implementation of this intake option would require coordination and likely a lease agreement with or land purchase from the owner(s) of the final wet well/pump station site*."

Consistent with the proposed changes to the fourth paragraph of section 7.6.2.9 of the DEIR above, please revise the fifth paragraph of section 7.6.2.9 to read:

"Access to this wet well site would be via Highway 1. Access to the ocean portion of intake installation would be via barge. Implementation of this intake option would require coordination and likely a lease agreement with or land purchase from the owner(s) of the final wet well/pump station site."

Paragraph 6 Page 7-43

The sixth paragraph of section 7.6.2.9 at p. 7-42 of the DEIR states:

"The specific objectives of the entrainment study were to assess (1) the potential impacts to fish and invertebrate marine life due to larval entrainment through the

DeepWater Desal project's intake and (2) the potential benefits of a deep water design in relation to entrainment of fish and marine invertebrates [compared to shallower intakes commonly used]. The study assumed the DeepWater Desal project would have a maximum intake requirement of 63 mgd of seawater with an interim phase capacity of 25 mgd; the results reported for the entrainment analysis were based on the assumed intake volume of 63 mgd which is more than two-and-a-half times the 24.1 mgd intake volume required for the MPWSP.

Per the current design flows for seawater withdrawal and potable water production for the Monterey Regional Water Supply Project are as follows:

Seawater Withdrawals	48.7 mgd
Potable Water Production	22.3 mgd

Please revise the sixth paragraph of section 7.6.2.9 to read:

"The specific objectives of the entrainment study were to assess (1) the potential impacts to fish and invertebrate marine life due to larval entrainment through the DeepWater Desal project's intake and (2) the potential benefits of a deep water design in relation to entrainment of fish and marine invertebrates [compared to shallower intakes commonly used]. The study assumed the DeepWater Desal project would have a maximum intake requirement of 48.7 mgd of seawater with an interim phase capacity of 25 mgd. The entrainment analysis study was based on a 63 mgd intake, which is actually 30 percent higher than the expected intake. It is also more than two-and-a-half times the 22.3 mgd intake volume required for the MPWSP."

Section 7.6.3
Table 7-3 (p. 7-46):

The Description of Outfall-7 included in section 7.6.3, Table 7-3 at p. 7-46 states:

A new 36-inch-diameter outfall pipeline would be constructed from the vicinity of Moss Landing Power Plant to one of two possible discharge locations, 1 mile or 1.5-miles offshore. The pipeline would follow the easement for an existing 24-inch-diameter PG&E fuel oil pipeline that extends offshore from a former tank farm east of power plant (existing PG&E pipeline would be removed). This outfall pipeline alignment is similar to the Intake Option 8 (Intake-8) intake pipeline alignment.

- *Alternatively, the existing fuel line would be used in conjunction with a smaller (24-inch) new pipeline that would be attached to the existing pipeline or constructed under it, beneath the sea floor. Near the terminus of the existing line, the two pipelines would be joined with a Y pipe section and a single 36" pipeline*

would extend the remaining distance to a discharge point either 1 mile or 1.5 miles offshore.

- *Brine would be discharged below the euphotic zone[23] via diffusers.*

Per the Brierley Report we request be referenced in item 7.4.6.1, there have been changes to the outfall pipe design and routing. Please revise section to read:

- Two new 36-inch-diameter outfall pipelines would be constructed from the vicinity of Moss Landing Power Plant to a discharge location approximately one mile offshore. This outfall pipeline alignment is similar to the Intake Option 8
  (Intake-8) intake pipeline alignment.
- The concentrate discharge pipelines will be routed subsurface under Moss Landing Harbor via a newly constructed ~130 inch diameter steel casing lined tunnel constructed subsurface using micro-tunnel. The new tunnel will carry all pipelines (dual intake and dual discharge). Offshore, the concentrate discharge pipelines will be constructed subsurface using HDD to the diffuser structure.
- Brine would be discharged below the euphotic zone[23] via diffusers.

Section 7.6.3.7 Outfall Option 7 – New Outfall or New Outfall Plus Modified Existing Pipeline at Moss Landing

Paragraph 12 (Page 7-54)

The first paragraph of section 7.6.3.7 at p. 7-54 of the DEIR states:

"*This outfall option was proposed by DeepWater Desal, LLC, for brine discharge as part of its proposed Monterey Bay Regional Water Project; this option itself consists of several possible variations involving repurposing a former fuel oil pipeline for brine discharge and/or construction of a new pipeline along the fuel oil pipeline alignment to one of two possible discharge points. The alternative variations of this outfall option being considered by DeepWater Desal, LLC include new construction, for all or part of the alignment:*

- *Use of the former fuel oil pipeline plus construction of a new 24-inch HDPE pipeline secured to the top or directly adjacent to the fuel line, since the existing pipeline alone does not have enough capacity for the volume of brine discharge expected to be produced by the Monterey Bay Regional Water Project's proposed 25,000 afy desalination plant. At the western terminus of the two pipelines, they would be combined using a "Y" connection to a single 36-inch HDPE section of pipe that would extend to the diffuser.*

- *Use of the former fuel oil pipeline plus construction of a new subsurface 24-inch pipeline installed using HDD beneath the existing oil pipeline and emerging from the seafloor near the western end of the existing pipeline where, as described above, the two pipelines would be joined using a Y connection to a single 36-inch HDPE section of pipe that would extend to the diffuser.*
- *Construction of a new subsurface 36-inch HDPE pipeline, installed using HDD or similar trenchless technology. This pipeline would follow the easement of the former oil pipeline to the extent practical, and would progress further into the Monterey submarine canyon to the "intermediate" discharge point, one of two discharge points being considered and about 5,700 feet offshore. This site was selected due to the challenges of extending a 36-inch pipeline to the "deep" discharge point about 8,000 feet offshore. If the pipeline could continue on the seafloor using saddles, DeepWater Desal, Inc. indicates that the deeper water location would also be viable (DeepWater Desal, 2014)."*

DeepWater Desal is no longer proposing to repurpose the existing pipeline for brine discharge. Please revise section to read:

"This outfall option was proposed by DeepWater Desal, LLC, for brine discharge as part of its proposed Monterey Bay Regional Water Project; this option consists of construction of two new 36" pipelines to an offshore discharge point.

- The concentrate discharge pipelines will be routed subsurface under Moss Landing Harbor via a newly constructed ~130 inch diameter steel casing lined tunnel constructed subsurface using micro-tunnel. The new tunnel will carry all pipelines (dual intake and dual discharge) from onshore to the approximate wet well location. Offshore, the concentrate discharge pipelines will be constructed subsurface using HDD to the diffuser structure."

Paragraph 3 (Page 7-54)

The first paragraph of section 7.6.3.7 at p. 7-54 of the DEIR states:

"Onshore sections of new pipeline would be constructed of fiberglass-reinforced plastic or similar non-metal material and HDPE would be used for the offshore sections. The eastern end of the outfall would terminate at the MLPP East Parcel site; access to this site would be via Dolan Road. There is sufficient physical space to accommodate this facility. Facility maintenance and operations activities (type, frequency, access) have not been defined, but are expected to be similar to those required for Outfall Option 1. Implementation of this outfall would require coordination and appropriate agreements with Dynegy Moss Landing, LLC and an easement from Caltrans."

Pipe routing is still being evaluated and construction methods are being refined. Please revise section to read:

"Routing for outfall piping is still being evaluated. One possible scenario routes concentrate discharge pipelines subsurface to an onshore location where they would then enter a newly constructed ~130 inch diameter steel casing lined tunnel constructed subsurface using micro-tunnel technology. The new tunnel will carry all pipelines (dual intake and dual discharge) under Moss Landing Harbor."

Section 7.6.4.3 Desalination Plant Site Option 3 – Moss Landing Power Plant East Parcel

Paragraph 3 (Page 7-56)

The third paragraph of section 7.6.4.3 at p. 7-56 of the DEIR states:

"The Monterey County General Plan designates the East Parcel for Heavy Industrial Coast Dependent use. Implementation of a desalination plant at this site would require that CalAm purchase or lease the land from Dynegy Moss Landing, LLC."

Dynegy Moss Landing, LLC has entered into an agreement to sell the East Parcel together with several alternative easement routes to DeepWater Desal. Please revise section to read:

"The Monterey County General Plan designates the East Parcel for Heavy Industrial Coast Dependent use. Implementation of a desalination plant at this site would require that CalAm purchase or lease the land from DeepWater Desal, LLC."

Section 7.7 Evaluation of Component Options

Table 7.5 (Page 7-60)

In section 7.7, table 7.5, line item 4. Groundwater Resources, Operations and Facility Siting, under Intake Option 9 column states that impacts are:

"Increased. The impacts associated with potential violation of water quality standards or degradation of groundwater quality during construction and operation would be increased compared to the slant wells because the open water intakes would not migrate the seawater / freshwater interface back toward the ocean."

This appears to be incorrectly listed as an increased impact on the depletion of groundwater supplies. The open ocean intake, unlike slant wells, is not penetrating freshwater aquifers. If this is not mistakenly identified as an increased impact, please provide additional justification for the increased impacts.

In section 7.7, table 7.5, line item 4.5. Marine Resources (p. 7.60), under Intake Option 9 column states that impacts are:

"Increased. All impacts associated with construction and operation of the Option 9 open water intake would be increased compared to those of the proposed slant wells. Except for the impact on the movement of fish or wildlife species during construction which, although increased, would be LS, new mitigation measures would be required to reduce the impacts resulting from entrainment and impingement to less than significant. Operational impacts associated with impingement and entrainment could remain SU if feasible mitigation were not available. However, studies conducted by Deep Water Desal suggest that the abundance of marine species is reduced at this deep water location when compared to the other open water intakes. Therefore, this alternative could have less severe impacts than the other open water intakes considered here."

In section 7.6.2..9 on page 7-43 the DEIR states "Tenera prepared a "Draft Moss Landing Desalination Plant Intake Impact Assessment: Larval Entrainment" report (Tenera, 2014) and concluded, based on a combination of low flows of the proposed intake relative to a large source water volume and the abundances and life history characteristics of fish species susceptible to entrainment, and the siting characteristics of the intake in deeper water and at the head of the Monterey submarine canyon among other factors, that the DeepWater Desal project intake would not have a significant impact on the marine environment. "

Please clarify the contradictions included in the DEIR related to significant impacts on the marine environment.

Section 7.7 Evaluation of Component Options

Table 7.7 (Page 7-77)

In section 7.7, table 7.7, Surface Water Hydrology and Water Quality line item under Desalination Plant Site Option 3: Moss Landing Power Plant East Parcel column, the DEIR states that impacts are:

"This desalination site option has the potential to expose people or structures to a significant risk of loss, injury, or death from flooding due to sea level rise, tsunamis and coastal flooding. Other surface water hydrology and water quality impacts would be similar to the MPWSP Desalination Plant."

The proposed site of the Monterey Bay Regional Water Supply Project desalination facility is outside both the 100 year flood hazard area as well as the most recently mapped tsunami inundation area most recently mapped for the Moss Landing area. Please refer to the FEMA Flood Insurance Rate Maps, 2009 and the Tsunami Inundation Map for Emergency Planning, State of California, County of Monterey, Moss Land Quadrangle, Prunedale Quadrangle, July 1, 2009.

Please revise the above quoted text to read:

"This desalination site option has less potential to expose people or structures to a significant risk of loss, injury, or death from flooding due to sea level rise, tsunamis and coastal flooding. Other surface water hydrology and water quality impacts would be similar to the MPWSP Desalination Plant."

Table 7.7 (Page 7-81)

In section 7.7, table 7.7, Noise and Vibration line item under Desalination Plant Site Option 3: Moss Landing Power Plant East Parcel column, the DEIR states that impacts are:

"Increased – Due to the site proximity to nearby residences, construction at this location has an increased potential to violate established standards and expose sensitive receptors to increase vibrations, resulting in a LSM impact. Furthermore, operation of a desalination plant on this site would likely violate established standards set by Monterey County and could require mitigation."

There are no known nearby residences. Please identify residences of concern. Please also expound on specific established standards that would likely be violated.

Thank you for the opportunity to comment on the DEIR. If you have any questions regarding these comments, please contact me at (831) 632-0616 or by email at kim@dwdesal.com.

Sincerely,

Kim Adamson
General Manager
DeepWater Desal LLC