



California Regional Water Quality Control Board Los Angeles Region



Linda S. Adams
Agency Secretary

Recipient of the 2001 Environmental Leadership Award from Keep California Beautiful

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Governor

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Eric Leung
Long Beach Water Department
1800 East Wardlow Road
Long Beach, CA 90807

WATER QUALITY CERTIFICATION FOR PROPOSED UNDER OCEAN FLOOR SEAWATER INTAKE AND DISCHARGE DEMONSTRATION PROJECT (Corps' Project No. 2007-335-KW), PACIFIC OCEAN, CITY OF LONG BEACH, LOS ANGELES COUNTY (File No. 07-034)

Dear Mr. Leung:

Board staff has reviewed your request on behalf of Long Beach Water Department (Applicant) for a Clean Water Act Section 401 Water Quality Certification for the above-referenced project. Your application was deemed complete on July 16, 2007.

I hereby issue an order certifying that any discharge from the referenced project will comply with the applicable provisions of sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 303 (Water Quality Standards and Implementation Plans), 306 (National Standards of Performance), and 307 (Toxic and Pretreatment Effluent Standards) of the Clean Water Act, and with other applicable requirements of State law. This discharge is also regulated under State Water Resources Control Board Order No. 2003 - 0017 - DWQ, "General Waste Discharge Requirements for Dredge and Fill Discharges that have received State Water Quality Certification" which requires compliance with all conditions of this Water Quality Certification. The discharge of water from the planned facility will also require permitting under a National Pollutant Discharge Elimination System (NPDES) Permit and/or Waste Discharge Requirement (WDR).

The Applicant shall be liable civilly for any violations of this Certification in accordance with the California Water Code. This Certification does not eliminate the Applicant's responsibility to comply with any other applicable laws, requirements and/or permits.

Should you have questions concerning this Certification action, please contact Dana Cole, Section 401 Program, at (213) 576-5733.

[Original Signed By]
Deborah J. Smith
Interim Executive Officer

August 22, 2007
Date

California Environmental Protection Agency



Our mission is to preserve and enhance the quality of California's water resources for the benefit of present and future generations.

DISTRIBUTION LIST

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**Project Information
File No. 07-034**

1. Applicant: Eric Leung
Long Beach Water Department
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Long Beach, CA 90807

Phone: (562) 570-2300 Fax: (562) 570-2330
2. Applicant's Agent: Tom Barnes
ESA
707 Wilshire Boulevard, Suite 1450
Los Angeles, CA 90017

Phone: (213) 599-4300 Fax: (213) 533-4301
3. Project Name: Under Ocean Floor Seawater Intake and Discharge Demonstration Project
4. Project Location: Junipero Beach, Los Angeles County
- | <u>Longitude</u> | <u>Latitude:</u> |
|------------------|------------------|
| 118° 10' 08" | 33° 46' 02" |
| 118° 10' 08" | 33° 45' 49" |
| 118° 10' 08" | 33° 45' 40" |
| 118° 09' 58" | 33° 45' 40" |
| 118° 09' 42" | 33° 45' 40" |
| 118° 09' 42" | 33° 46' 49" |
| 118° 09' 42" | 33° 46' 02" |
| 118° 09' 02" | 33° 46' 02" |
5. Type of Project: Under ocean pipeline construction
6. Project Purpose: The City of Long Beach currently receives its water supply from local groundwater aquifers and imported water from the Metropolitan Water District of Southern California. Like other cities and utilities in southern California, the Long Beach Water Department (LBWD) is exploring new water sources and

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technologies to maintain a reliable water supply for its customers and to reduce its reliance on imported waters as most surface water and groundwater sources are being used to capacity. In order to reduce the City's reliance on imported water, the LBWD is considering seawater desalination as a new water source. The LBWD has received State and Federal funds for its Under Ocean Floor Seawater Intake and Discharge Demonstration Project (Demonstration Project), which will research an innovative submerged intake technology for seawater desalination plants that minimizes environmental impacts such as impingement and entrainment of marine organisms. Construction and operation of the City of Long Beach's Demonstration Project will evaluate the feasibility of developing a full-scale seawater desalination plant.

7. Project Description:

LBWD proposes to construct an under ocean floor seawater intake and discharge pipeline near Bluff Park on Junipero Beach in Long Beach. LBWD will excavate two underwater pits (galleries); one infiltration gallery and one discharge gallery within the surf zone, each measuring approximately 150 long by 50 feet wide and up to 15 feet deep. Native sand will be excavated within these galleries and replaced with more permeable sand for effective flow. Perforated plastic pipe will be placed at the bottom of the galleries at a minimum of five feet below the beach surface. The base of the galleries will be below the mean low tide line to ensure submergence at all time.

LBWD previously was issued a Nationwide 6 Permit (NWP 6) by the Army Corp of Engineers (NWP-6 is certified by the State Water Resources Control Board) for preliminary hydrogeologic investigations and surveying for this Demonstration Project. The conditions of the NWP 6 required pre-construction and post-construction eelgrass and *Caulerpa taxifolia* (*Caulerpa*) surveys. The area surveyed for eelgrass and *Caulerpa* was based on the original project description for the Demonstration Project, which included lateral collection and discharge pipelines extending up to 500 feet offshore. As a result of the hydrogeologic investigations, the project was revised to exclude the offshore lateral pipelines and include the surf-zone infiltration and discharge galleries. The project area otherwise has not changed.

No *Caulerpa* or giant kelp was found offshore from the current

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project area. The surveys found no eelgrass at depths between -1 and -4 MLLW offshore from the current project area. The sites where eelgrass was identified, at depths greater than -4 MLLW, will not be affected by this revised Demonstration Project.

The galleries will be constructed during daylight hours using conventional construction techniques. The total construction period is estimated at two months outside the peak recreation season, between Labor Day and Memorial Day. Sand excavated from the galleries will be spread evenly on the beach. Approximately 3,000 cubic yards of sand will be imported for each infiltration gallery (6,000 cubic yards total).

Imported sand will be delivered either by trucks or by barge. If trucks are used to import sand, they will access the site from Ocean Boulevard and Junipero Avenue. Approximately 280 roundtrip truck trips will be required over the two month period. The imported sand will be stockpiled on the beach as it is delivered, similar to routine beach nourishment operations conducted by the City. The stockpile will not impede beach access. If a barge is employed, sand will likely be unloaded into the gallery using a dredge shovel.

During operation of the intake gallery, seawater will enter by passive infiltration and flow by gravity through plastic infiltration pipes to a wet-well (approximately 48-inches in diameter and 30 feet deep to be located at the edge of the parking lot). From this wet-well (transfer station), the water will be pumped through a pipeline to the discharge gallery under pressure. The discharge gallery may be smaller than the infiltration gallery or a similar size. The discharge pipelines will be consistently discharging water into the sands at depths of five to ten feet below the sand surface near the low-tide line. Water discharge into the gallery will rise slowly through the sand to the surface of the gallery and disperse in the surf zone. The Demonstration Project will be operational for a period of 12 months. The installed infrastructure will be abandoned and left in place upon completion of the demonstration project.

This is a pass-through facility that will not involve treatment of, or introduction of, pollutants to seawater.

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8. Federal Agency/Permit: U.S. Army Corps of Engineers
NWP No. 7 (Permit No. 2007-335-KW)
9. Other Required Regulatory Approvals: California Coastal Commission
NPDES permit and/or WDR
10. California Environmental Quality Act Compliance: A Mitigated Negative Declaration (MND) prepared for the Demonstration Project, as originally designed, was completed and adopted by the City of Long Beach in October 2005. The project description changed after the preliminary surveying and geotechnical studies were conducted in 2006. An Addendum to the MND was completed in January 2007 for the revised Demonstration Project. A subsequent Notice of Determination was approved by the Department of Planning, City of Long Beach to include the Addendum on February 22, 2007 and filed with the Los Angeles County Clerk.
11. Receiving Water: Pacific Ocean (Hydrologic Unit No. 404.12)
12. Designated Beneficial Uses: NAV, REC-1, REC-2, COMM, MAR, WILD, RARE, SPWN, SHELL
13. Impacted Waters of the United States: Ocean/Estuary/Bay: 0.34 temporary acres
14. Dredge Volume: None
15. Related Projects Implemented/to be Implemented by the Applicant: The Applicant conducted preliminary exploration at the project site. Hydrogeologic investigations involving over-water borings and permeability modeling were performed using the native beach sands to determine the soils and geotechnical conditions at the site of the proposed Intake and Discharge Demonstration Project.
- In September 2006, aquifer testing and water level monitoring were conducted at the project site to evaluate the production capability of the aquifer at the site of the proposed Demonstration Project, to

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obtain data on aquifer characteristics for use in groundwater modeling efforts, and to obtain representative water quality samples.

The results determined that low permeability of the native beach sands at the project site would limit the feasibility of the proposed subsurface intake and discharge wells.

16. Avoidance/ Minimization Activities:

The Applicant has proposed to implement several Best Management Practices, including, but not limited to, the following:

- Construction equipment staging areas and material storage areas (except for imported sand) will be located in the Bluff Park and Junipero Beach parking lots.
- Erosion and sediment control measures will include sediment barrier traps, silt basins, and silt fences.
- Sediment barriers shall be placed near storm drains to block sediment, construction materials, or fluid spills from entering the storm drain system.
- Storm water pollution control facilities shall be implemented and inspected once every working day during the wet weather period and one calendar day before and after forecasted or actual storm events.
- Flow barriers shall be erected around temporary equipment storage areas to prevent storm water flow from entering or leaving the area. If storm water becomes contaminated as a result of contact with construction materials, the runoff from storage areas shall be disposed of in a manner acceptable to the Regional Water Quality Control Board.
- All spills of fuel, hydraulic fluid, or oil from construction equipment or vehicles shall be immediately contained and cleaned to prevent spilled material from entering storm drains or being absorbed by underlying pavement or sand.
- Water from equipment washing shall not be discharged to storm drains or allowed to percolate into the ground.

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- Fueling, maintenance, and parking of vehicles and vehicle maintenance equipment shall occur only in the Parking Lots. Secondary containment measures, such as drain pans, shall be used during fueling.
- Stockpiles of imported sand will be protected from erosion using perimeter sediment barriers, such as silt fencing or sandbags, and protective coverings.

17. Proposed
Compensatory
Mitigation:

None

18. Required
Compensatory
Mitigation:

The Regional Board will not require compensatory mitigation for the temporary impacts. See *Attachment B, Conditions of Certifications, Additional Conditions* for modifications and additions to the above proposed compensatory mitigation.

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STANDARD CONDITIONS

Pursuant to §3860 of Title 23 of the California Code of Regulations (23 CCR), the following three standard conditions shall apply to this project:

1. This Certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to §13330 of the California Water Code and Article 6 (commencing with 23 CCR §3867).
2. This Certification action is not intended and shall not be construed to apply to any activity involving a hydroelectric facility and requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent Certification application was filed pursuant to 23 CCR Subsection 3855(b) and the application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.
3. Certification is conditioned upon total payment of any fee required pursuant to 23 CCR Chapter 28 and owed by the Applicant.

ADDITIONAL CONDITIONS

Pursuant to 23 CCR §3859(a), the Applicant shall comply with the following additional conditions:

1. The Applicant shall submit to this Regional Board copies of any other final permits and agreements required for this project, including, but not limited to, the U.S. Army Corps of Engineers' (ACOE) Section 404 Permit and the California Coastal Commission (CCC) permit. **These documents shall be submitted prior to any discharge to waters of the State.**
2. The Applicant shall adhere to the most stringent conditions indicated with either this certification, the CCC's permit, or the ACOE Section 404 Permit.
3. The Applicant shall comply with all water quality objectives, prohibitions, and policies set forth in the *Water Quality Control Plan, Los Angeles Region (1994)*.
4. The Avoidance/Minimization activities proposed by the Applicant as described in Attachment A, No. 16, are incorporated as additional conditions herein.
5. The Applicant and all contractors employed by the Applicant shall have copies of this Certification, the approved maintenance plan, and all other regulatory approvals for this project on site at all times and shall be familiar with all conditions set forth.

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6. Fueling, lubrication, maintenance, operation, and storage of vehicles and equipment shall not result in a discharge or a threatened discharge to waters of the State. At no time shall the Applicant use any vehicle or equipment which leaks any substance that may impact water quality. Staging and storage areas for vehicles and equipment shall be located outside of waters of the State.
7. All excavation, construction, or maintenance activities shall follow best management practices to minimize impacts to water quality and beneficial uses. Dust control activities shall be conducted in such a manner that will not produce downstream runoff.
8. No construction material, spoils, debris, or any other substances associated with this project that may adversely impact water quality standards, shall be located in a manner which may result in a discharge or a threatened discharge to waters of the State. Designated spoil and waste areas shall be visually marked prior to any excavation and/or construction activity, and storage of the materials shall be confined to these areas.
9. All waste and/or dredged material removed shall be relocated to a legal point of disposal if applicable. A legal point of disposal is defined as one for which Waste Discharge Requirements have been established by a California Regional Water Quality Control Board, and is in full compliance therewith. Please contact Rodney Nelson, Land Disposal Unit, at (213) 620-6119 for further information.
10. The Applicant shall implement all necessary control measures to prevent the degradation of water quality from the proposed project in order to maintain compliance with the Basin Plan. The discharge shall meet all effluent limitations and toxic and effluent standards established to comply with the applicable water quality standards and other appropriate requirements, including the provisions of Sections 301, 302, 303, 306, and 307 of the Clean Water Act. This Certification does not authorize the discharge by the applicant for any other activity than specifically described in the 404 Permit.
11. The discharge shall not: a) degrade surface water communities and populations including vertebrate, invertebrate, and plant species; b) promote the breeding of mosquitoes, gnats, black flies, midges, or other pests; c) alter the color, create visual contrast with the natural appearance, nor cause aesthetically undesirable discoloration of the receiving waters; d) cause formation of sludge deposits; or e) adversely affect any designated beneficial uses.
12. The Applicant shall allow the Regional Board and its authorized representative entry to the premises, including all mitigation sites, to inspect and undertake any activity to determine compliance with this Certification, or as otherwise authorized by the California Water Code.

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13. The Applicant shall not conduct any construction activities within waters of the State during a rainfall event. The Applicant shall maintain a **five-day (5-day) clear weather forecast** before conducting any operations within waters of the State.
14. If rain is predicted after operations have begun, grading activities must cease immediately and the site must be stabilized to prevent impacts to water quality, and minimize erosion and runoff from the site.
15. Sediment removal at each phase shall not go beyond the extent as defined in the application packet.
16. The grading, stabilization and re-vegetation will be phased to limit the exposed or working face such that the graded area can be stabilized within 24 hours after the first prediction of rain during the 5-day forecast or within 24 hours after final grading of the phased area.
17. All project and construction activities not included in this Certification, and which may require a permit, must be reported to the Regional Board for appropriate permitting. Bank stabilization and grading, as well as any other ground disturbances, are subject to restoration and revegetation requirements, and may require additional Certification action.
18. The Applicant shall restore the proposed **0.34 acres** of TEMPORARY IMPACTS to waters of the United States and all other areas of temporary disturbance which could result in a discharge or a threatened discharge to waters of the State. Restoration shall include grading of disturbed areas to pre-project contours and revegetation with native species where native species were removed. The Applicant shall implement all necessary Best Management Practices to control erosion and runoff from areas associated with this project.
19. The Applicant shall submit to this Regional Board **Annual Monitoring Reports** (Annual Reports) by **January 1st** of each year for a minimum period of **five (5) years** following this issuance of 401 Certification or until project completion has been achieved and documented. The Annual Reports shall describe in detail all of the project and construction activities performed during the previous year. The Annual Reports shall describe the status of other agreements or any delays in the mitigation process. At a minimum the Annual Reports shall include the following documentation and answered appropriately whether or not mitigation has been performed:
 - (a) Color photo documentation of the pre- and post-project and mitigation site conditions;
 - (b) Geographical Positioning System (GPS) coordinates in decimal-degrees format outlining the boundary of the project and mitigation areas;
 - (c) The overall status of project including a detailed schedule of work;

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- (d) Copies of all permits revised as required in Additional Condition 1;
 - (e) Water quality monitoring results for each reach (as required) compiled in an easy to interpret format;
 - (f) A certified Statement of “no net loss” of wetlands associated with this project;
 - (g) Discussion of any monitoring activities and exotic plant control efforts; and
 - (h) A certified Statement from the permittee or his/her representative that all conditions of this Certification have been met.
20. All applications, reports, or information submitted to the Regional Board shall be signed:
- (a) For corporations, by a principal executive officer at least of the level of vice president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which discharge originates.
 - (b) For a partnership, by a general partner.
 - (c) For a sole proprietorship, by the proprietor.
 - (d) For a municipal, State, or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.
21. Each and any report submitted in accordance with this Certification shall contain the following completed declaration:

“I declare under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who managed the system or those directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Executed on the _____ day of _____ at _____.

(Signature)
(Title)”

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22. All communications regarding this project and submitted to this Regional Board shall identify the Project File Number **07-034**. Submittals shall be sent to the attention of the 401 Certification Unit.
23. Any modifications of the proposed project may require submittal of a new Clean Water Act Section 401 Water Quality Certification application and appropriate filing fee.
24. The project shall also comply with all requirements of the National Pollutant Discharge Elimination System (NPDES) **General Permit** for Storm Water Discharges Associated with Construction Activity, Order No. 99-08-DWQ. All stormwater treatment systems shall be located outside of any water of the State and shall not be used as a wetland or riparian mitigation credit.
25. The project shall also require an individual or general National Pollutant Discharge Elimination System (NPDES) Permit and/or Waste Discharge Requirements (WDR) for discharge of the non-process wastewaters.
26. Coverage under this Certification may be transferred to the extent the underlying federal permit may legally be transferred and further provided that the Applicant notifies the Executive Officer at least 30 days before the proposed transfer date, and the notice includes a written agreement between the existing and new Applicants containing a specific date of coverage, responsibility for compliance with this Certification, and liability between them.
27. The Applicant or their agents shall report any noncompliance. Any such information shall be provided verbally to the Executive Officer within 24 hours from the time the Applicant becomes aware of the circumstances. A written submission shall also be provided within five days of the time the Applicant becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected; the anticipated time it is expected to continue and steps taken or planned to reduce, eliminate and prevent recurrence of the noncompliance. The Executive Officer, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.
28. *Enforcement:*
 - (a) In the event of any violation or threatened violation of the conditions of this Certification, the violation or threatened violation shall be subject to any remedies, penalties, process or sanctions as provided for under State law. For purposes of section 401(d) of the Clean Water Act, the applicability of any State law authorizing remedies, penalties, process or sanctions for the violation or threatened violation

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constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this Certification.

- (b) In response to a suspected violation of any condition of this Certification, the State Water Resources Control Board (SWRCB) or Regional Water Quality Control Board (RWQCB) may require the holder of any permit or license subject to this Certification to furnish, under penalty of perjury, any technical or monitoring reports the SWRCB deems appropriate, provided that the burden, including costs, of the reports shall be a reasonable relationship to the need for the reports and the benefits to be obtained from the reports.
 - (c) In response to any violation of the conditions of this Certification, the SWRCB or RWQCB may add to or modify the conditions of this Certification as appropriate to ensure compliance.
29. This Certification shall expire **five (5) years** from date of this Certification. The Applicant shall submit a complete application prior to termination of this Certification if renewal is requested.