January 19, 2012

Mayor Della Sala
City Hall, Monterey
799 Pacific Street
Monterey, CA 93940

Dear Mayor Della Sala,

Many thanks for your request for further information about the Deep Water Desal project at Moss Landing ("DWD Project"). The DWD Project can deliver potable water to the Monterey Peninsula before the deadline set by the California State Water Resources Control Board in its 2009 Cease and Desist Order.

The DWD Project is intended to provide 25,000 acre-feet of potable water annually to water purveyors throughout the Monterey Bay region. Phase I of the DWD Project will produce 10,000 acre feet of potable water annually and is intended for use in California American Water Company's Monterey District. Phase II will produce an additional 15,000 acre-feet of production that will become available to water purveyors in the Monterey Bay region in 2016.

## 95-10 deadline/timeline

A key aspect of our strategy to bring Phase I online in 2014 is the adaptive reuse of existing infrastructure at Moss Landing. Phase I will incorporate use of an existing pipeline and easement located on the edge of the deepwater canyon to bring raw seawater from a deepwater location. Two recent engineering inspection reports conclude that the pipeline and intake structures are in good condition, presently under the US Coast Guard's "Caretaker Status" and ready to be returned to use. DeepWater Desal is leasing this pipeline easement from Dynegy.

A second key aspect of our strategy to bring Phase I online in 2014 is the use of existing scientific data regarding the environmental impacts of drawing seawater from depth at Moss Landing. TENERA Environmental Consultants (www.TENERA.com) has recently completed an entrainment and impingement impact study on fish larvae mortality at the location of the existing intake pipeline. Using the Empirical Transport Model, TENERA has found that the mortality rate on various species caused by entrainment and impingement from an open ocean intake line at the location of the existing pipeline easement location will not be detectable. A passive wedge-wire screen will be fitted to a pipeline as an additional precaution. In CEQA terms, DeepWater Desal believes the impacts of its planned open ocean intake facilities cannot be considered significant.

TENERA Environmental Consultants will conduct additional studies using seawater samples collected from a location of the existing pipeline intake and other deep water locations through the larvae's annual life cycle to validate conclusions drawn from use of the Empirical Transport Model. We anticipate these studies will be completed by December 2012.

In addition to the data concerning the impacts of drawing seawater from depth, DeepWater Desal plans to utilize information concerning land based impacts of a desalination project located at Moss Landing that is available in the Environmental Impact Report prepared for the California State University system for its project including the reconstruction of the Sandholdt Pier and the Environmental Impact Report prepared for the California American Water Company's Coastal Water Project.

We believe that we will be able to have a Coastal Development Permit approved for the DWD Project within 12 months of making application for that permit based on information available at this time. We believe that permission for Phase II full build out of the DWD Project can be achieved within 24 months of making the application for the permit based on the anticipated results of prospective ongoing studies for a permanent intake line to supply raw seawater to produce the full 25,000 acre feet of potable water per year.

## REGIONAL SEAWATER RO DESALINATION PLANT
## Major Milestone Schedule

| | 2012 | | | | 2013 | | | | 2014 | | | | 2015 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MILESTONE | 1st Qtr | 2nd Qtr | 3rd Qtr | 4th Qtr | 1st Qtr | 2nd Qtr | 3rd Qtr | 4th Qtr | 1st Qtr | 2nd Qtr | 3rd Qtr | 4th Qtr | 1st Qtr | 2nd Qtr | 3rd Qtr | 4th Qtr |
| **PHASE 1 – 10,000 AF/Yr** | | | | | | | | | | | | | | | | |
| Major Permits (See Permit Schedule for Detail) | | | | ◆ | | | | | | | | | | | | |
| Design | | | ◆ | → | → | | | | | | | | | | | |
| Funding (Formation of JPA and Bond Issuance) | | | | ◆ | → | → | | | | | | | | | | |
| Develop Specs & RFPs | | | | ◆ | → | | | | | | | | | | | |
| Procurement Cycle | | | | | ◆ | → | → | | | | | | | | | |
| Procurement/Process Equipment Fabrication | | | | | | ◆ | → | → | → | → | | | | | | |
| Site Prep | | | | | | | ◆ | → | | | | | | | | |
| Intake Construction | | | | | | | ◆ | → | → | | | | | | | |
| Equipment Installation/ Construction | | | | | | | ◆ | → | → | → | → | | | | | |
| Conveyance System Construction to Marina / Cal Am Upgrade | | | | | | ◆ | → | → | → | → | → | | | | | |
| Brine Disposal Construction | | | | | | | | | ◆ | → | → | | | | | |
| Start-up, Testing & Commissioning | | | | | | | | | ◆ | → | → | → | | | | |
| Water Production Commercial Operation | | | | | | | | | | | | ◆ | | | | |
| | | | | | | | | | | | | | | | | |
| **PHASE 2 - PROJECT BUILD OUT 25,000 AF/Yr** | | | | | | | | | | | ◆ | → | → | → | → | → |

**<u>Critical Path</u>** (start – production of water for CalAm distribution to Monterey Peninsula)

- **Deepwater Intake Impingement/Entrainment Verification Report**

With data from MBARI's NOAA funded federal Central and Northern California Ocean Observatory System (CeNCOOS) unit, TENERA Environmental Consultants performed a study using the Empirical Transport Model on the most common fish species occurring at the location of the DWD Project's Phase I intake. The study modeled the current paths taken for an entire month for all twelve months of 2010 prior to arriving at our Phase 1 intake line. Combined with the larval duration of the species of interest the total larval mortality for each species relative to the total population was derived at the intake depth. The results show that the impact of the intake on the fish species of interest is below a measurable difference, or non-detectable. This data verifies our hypothesis that the deep water intake will minimize the impact on marine life. Ongoing prospective studies will validate these findings at the alternative intake locations for the Phase II of the DWD Project.

- **Coastal Development Permit**

We met with Tom Luster of the California Coastal Commission in San Francisco in July to explain our phased development plan and deep water hypothesis. Since Phase I of the DWD Project will use an existing pipeline easement and existing buildings, the principal issue is the entrainment and impingement of marine life at the intake and additionally the disposal of brine. Mr. Luster understood our plans and concept of starting with the use of the existing pipeline for Phase I intake before construction of a larger intake line. The plan will call for the removal of the existing pipeline when Phase II becomes operational. This will help mitigate impacts on the Monterey Bay National Marine Sanctuary by meeting the Sanctuary's goal to remove old pipelines from the Bay. Phasing the DWD Project in this fashion will allow the California Coastal Commission to approve a project of sufficient size to meet the urgent needs of the Monterey Peninsula, while DWD initiates Phase II.

- **Environmental Analysis**

Production of potable water from a reverse osmosis facility and transportation of that water to the Monterey Peninsula was analyzed in the final Environmental Impact Report for Cal Am's former Coastal Water Project. The environmental impact of reconstructing the Sandholdt Pier at Moss Landing was analyzed in the final Environmental Impact Report for the CSU project. TENERA has already completed an entrainment and impingement study of our intake and concluded that the impact on fish larve will be far less than significant. We anticipate that TENERA's ongoing studies this year will validate those findings.

- **Lead Agency** for the CEQA Analysis

DeepWater Desal is presently in discussions with governmental agencies that have authority over various aspects of the DWD Project. A lead agency will be selected in compliance with CEQA Guideline 15015.

- **Monterey Peninsula Water Management District water purchase agreement**

DeepWater Desal has made two presentations to subcommittees of the MPWMD Board. We have submitted a regulatory approval schedule that has been posted on the MPWMD web-site since August. The same schedule is presented in this letter. DeepWater Desal also presented a non-binding memorandum of understanding regarding water purchase to the MPWMD last fall. As of this date, the MPWMD Board has not yet considered the proposed MOU. DeepWater Desal has continued to communicate with the General Manager of MPWMD and invited Mr. Stoltd to tour the facilities planned for adaptive reuse in Phase I of the DWD Project.

- **Construction Financing**

DeepWater Desal presently plans to continue the financing of the design, and permitting costs of the DWD Project with private capital. When permitted, DeepWater Desal will invite a Joint Powers Authority to become the public owner of the DWD Project. Bonds issued by the JPA to finance construction of the DWD Project will be rated on the strength of the Water Purchase Agreements and the credit ratings of the member public agencies of the JPA.

**Specific Tasks** with "no later than" start dates and durations

- **Acquisition of easements/encroachments**

PHASE I Q2 2012 (Conveyance system, Hwy 1 encroachments)

FINAL PHASE Q2 2013 (Sandholdt Rd, and Pier Complex, State Lands)

- **Data collection for environmental documents**

PHASE I COMPLETE

FINAL PHASE Q4 2012 (2012 calendar year of collection)

- **Coastal Commission Permits**

PHASE I Authority to Construct and Operate
Q1 2013 (submit no later than Q2 2012)

FINAL PHASE Authority to Construct and Operate
Q1 2014 (submit no later than Q2 2013)

- **Schedules for various Permits required**

SEE APPENDIX

- **Design and construction schedule**

*Refer to major milestone schedule. Please note schedule is divided into Phase I and Phase II*

**Key Individuals** outside partnership to develop project

Michael Patrick George, Wedbush Securities – Bond Financing

Roger Davis, Orrick Law Firm – JPA Formation and Structure

John Steinbeck, TENERA – Ecology, Entrainment/Impingement

Joe Parisi, THERMA – engineering and construction

Frank Capurro, - MLJK Partnership

## The Joint Powers Authority

DeepWater Desal proposes that a Joint Powers Authority ("JPA") be created with responsibility to construct, own and operate the DWD Project. The JPA will have at least two public agencies. as members, each of who have the common power to own and operate water facilities. DeepWater Desal will design, build and operate the DWD Project under contracts with the JPA.

Members of the JPA will enter into Water Purchase Agreements with the JPA, committing to take water produced by the DWD Project over a 30-year minimum period.

**Project Funders** (to date and planned pending public acquisition)

Deepwater Desal estimates spending about $5M prior to beginning project construction. Most of these costs are related to regulatory approvals and engineering. To date, DeepWater Desal has spent $400,000. We are in the process of selling about $1 M in convertible promissory notes to continue funding pre-construction soft costs, including permit application fees and environmental analysis. We will begin raising the remainder of the $5 M at a higher valuation in Q2 2012 following submission of an application for a Coastal Development Permit for the DWD Project. (Dr. Constantz has previously raised several hundred million dollars for his earlier start up projects.)

The construction of the DWD Project will be financed through tax-free municipal bonds. Wedbush Securities has recommended a public/private partnership of a JPA which can issue tax-free municipal bonds based upon the Water Purchase Agreements and the credit rating of the member agencies. The DWD Project will be under contract to the JPA to build and operate the plant. The contract will provide for a management fee payable to DeepWater Desal upon successful completion of the DWD Project, which is included in the proforma budget for the DWD Project. The fee payable for the operation of the plant is also included in the DWD Project proforma budget.

Protect the **interest of ratepayers** in each subject jurisdiction

The purchase price for water produced from the DWD Project will be set by the JPA in the Water Purchase Agreements it makes with individual water purveyors. That price will include sums sufficient to recover capital invested by the JPA in the SWRO plant facilities and the cost of operating those facilities. If the JPA elects to construct conveyance systems necessary to deliver water produced by the SWRO plant to the location of the customers of a particular water purveyor (such as the Monterey Peninsula), sums necessary to recover capital invested in that conveyance system will also be included in the price of water purchased from the JPA. Rates charged to ultimate consumers of water produced from the DWD Project will set by individual water purveyors. In the case of California American Water Company, a regulated public utility, the rate charged to its customers must be approved by the California Public Utilities Commission.

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Presently, Deepwater Desal plans to include all construction financing of the common plant and district specific conveyance systems in the municipal bond offering to the public at the best available tax-free municipal bond rates. These rates would be locked in for 30 years protecting local ratepayers from future inflation and borrowing rate fluctuations. By developing a regional project to meet all the replacement water needs of the Monterey Bay region, the cost of construction and borrowing costs are lowered due to the resultant economies of scale and risk sharing. The only future variable costs would be for normal inflation on operational expenditures. The operational costs for energy is the largest single item representing 46% of the annual operating costs. We are negotiating long term supply agreements with a solar power provider and with PG&E to insure the lowest commercial rate and minimal impact from rate spikes in the future, as well as a possible direct power purchase agreement with Dynegy.

Assumed **interest rates** on borrowed/bonded funds and issuing agency

Tax free bonds will be issued by the JPA, at an interest rate based on the combined credit rating of its members. Due to economies of scale and risk sharing, the marginal cost of a single issuance will be lower than the combined cost of several agencies issuing separate bonds to finance individual pieces necessary to achieve the goal of a regional water project. Current rates are in the range of 4 – 5% for the revenue backed municipal bonds.

Below are the estimates for two sizes of SWRO plant scenarios including conveyance to Marina for the 10,000 AFY (Phase I) plant and conveyance to Marina and north to Watsonville for the 25,000 AFY (Phase II) plant scenario. Property control expenses are included in the capital expense budget and included in our operating costs.

**Capital Expense Budgetary Estimate**

| **Cost Component (Direct Costs)** | **Total** | |
|---|---|---|
| | **10,000 AFY** | **25,000 AFY** |
| ***Intake/Outfall*** | | |
| Pier Structure | | $18,000,000 |
| Intake | $8,000,000 | $32,000,000 |
| Outfall | $1,000,000 | $3,125,000 |
| Raw Feed Storage | $1,000,000 | $5,100,000 |
| ***Pretreatment*** | | |
| Chlorination | $316,000 | $805,800 |
| Coagulant Dosing | $950,500 | $2,423,775 |
| Acidification or SI Dosing | $316,000 | $805,800 |
| Gravity Media Filter | $6,750,000 | $17,212,500 |
| Backwash Pumps | $2,205,000 | $5,622,750 |
| Backwash Reclaim | $2,600,000 | $6,630,000 |
| Dechlorination | $313,000 | $798,150 |
| Transfer Pumps (Boosters SWRO & ERD's) | $1,630,000 | $4,156,500 |
| Cartridge Filtration | $1,075,000 | $2,741,250 |
| ***Desalting*** | | |
| High Pressure Pumps with VFD's | $6,620,000 | $16,881,000 |
| Energy Recovery | $3,860,000 | $9,843,000 |
| RO Trains | $15,400,000 | $39,270,000 |
| Clean-In-Place System | $770,000 | $1,963,500 |
| ***Post-Treatment*** | | |
| Stabilization | $1,800,000 | $4,590,000 |
| Chlorination | $234,000 | $596,700 |
| | | $0 |
| ***Conveyance*** | | |
| Treated Water Storage | $3,000,000 | $7,650,000 |
| Distribution Pumps | $2,210,000 | $5,635,500 |
| Pipeline | $22,000,000 | $36,000,000 |
| ***Other Equipment*** | | |
| Administrative Offices and structures | $0 | |
| Maintenance Shop and Lab | $0 | |
| Electrical Substation (Refit) | $1,000,000 | $2,500,000 |
| **Total Direct Costs with Conveyance System Capex** | $83,049,500 | $224,351,225 |

Land/facilities under **property control** and nature of the control and plan/timeline to acquire control and associated cost

**Phase I Intake Pipeline Easement**

Long-term lease/option to buy preliminary agreement with Dynegy, Q4/2011; final agreement with Dynegy Q1/2012

- **Capurro Ranch**

  Long-term Lease Agreement/option to buy with MLJK Partnership, preliminary agreement Q3/2011; final agreement Q1/2012

- **Highway 1 encroachments near Moss Landing**

  Have met with TAMC & Monterey County Public Works to share plans, estimated Q4/2012

- **Conveyance**

  Coastal Water Project EIR describes pipeline conveyance route, estimated Q4/2012

- **Brine Discharge**

  Agreement in process with Dynegy for discharge in power plant cooling water outfall, estimated Q1/2012

**Phase II**

- **Intake Location with Final Intake Pipeline**

  State Lands Commission & Moss Landing Harbor District, estimate Q1/2014

**The Team**

Deep Water Desal LLC, is a private company focused on completing one project. The company is highly incentivized to see it completed in a timely manner and in the most cost-effective way possible.

Brent Constantz has lead the development of the most significant new industrial operation at Moss Landing in recent times when he developed Calera's Moss Landing Cement Company in 2008– bringing the international spotlight on Monterey Bay. Dr. Constantz's team obtained many important permits at Moss Landing, and had flue gases being delivered from the Moss Landing power plant to Moss Landing Cement Company in a matter of months – a feat outside engineering firms projected would take up to three years at many multiples the actual cost.

Scott Jackson, who has been involved in many desalination plants and desalination technologies, was instrumental in getting the water system at the Diablo Canyon Nuclear Power Plant constructed and operational in three months.

Dennis Ing, a highly seasoned financial executive, is an expert on public financing, lead the formation and operation of Moss Landing Cement Company, and has been working closely with Michael George of Wedbush Securities to plan the financing of the deepwater project since its inception one year ago.

Jim Heisinger, a Carmel native, is highly experienced in land use law, and is the City attorney for Sand City, which has the only operating municipal desalination plant in the State. The Sand City Desalination Facility was approved by the Coastal Commission by unanimous vote.

David Armanasco, is a Monterey native and public relations executive. He has been involved in water issues in the region for over two decades, as well as being a former California Coastal Commissioner.

Jane Ricci has led the administrative efforts of several successful start-ups with aggressive schedules.

Jon Dietrich, is a P.E. chemical engineer who has worked almost exclusively on seawater desalination for the past 18 years.

More detailed resumes are listed on our website: www.DeepWaterDesal.com.

DeepWater Desal is very confident in its ability to successfully deliver a cost effective and environmentally sensible true regional desalination solution for Monterey Bay's future water needs. The DWD Project will be capable of providing potable water to CalAm's Monterey District as well as the greater Monterey Bay region.

Cordially,

Brent R. Constantz, Ph.D.
Managing Member, Chief Executive Officer

APPENDIX

Agencies With Potential Permits and Approvals for Deep Water Desal

**OVERALL SCHEDULE**

BOND ISSUANCE 1st traunch 2013; final traunch 2014

**Phase 1**: Construction 2013, Water Delivery 2014

**Completion Phase**: Construction 2013 – 2015, Water Delivery 2015

**Federal Agencies**

Requirements for All Federal Agencies: **Q4 2012**

Incidental Take Permit in accordance with Section 104 of the Marine Mammal Protection Act of 1972

Incidental Take Statement in accordance with ESA Section 7

Consultation and biological opinion in accordance with ESA

Consultation with State Historic Preservation Officer and/or Tribal Historic Preservation Officer in accordance with the National Historic Preservation Act of 1966

National Marine Fisheries: **Q4 2012**

Approval for sea floor pipeline

Consultation with Coastal Commission, NOAA, and ACOE

U.S. Fish and Wildlife Service: **Q4 2012**

Incidental Take Statement in accordance with Section 7 of the Endangered Species Act of 1973

Incidental Take Permit in accordance with the Migratory Bird Treaty Act

Consultation in accordance with the Fish and Wildlife Coordination Act

National Oceanic & Atmospheric Administration: **Q4 2012**

Authorization by the Monterey Bay National Marine Sanctuary Superintendent of federal, state and local agencies' permits within the sanctuary in accordance with NOAA's National Marine Sanctuary Program requirements for the MBNMS.

Consultation in accordance with the Magnuson-Stevens Fishery Conservation and Management Act

U.S. Army Corps of Engineers: **Q4 2012**

Permit in accordance with Clean Water Act Section 404

Permit in accordance with Rivers and Harbors Act Section 10

U.S. Coast Guard: **Q4 2012**

Approval for use of Navigable waterways, bridges

Approval of Construction Methods

U.S. Environmental Protection Agency: **Q4 2012**

Consultation with State Regional Quality Board

**State Agencies**

For All State Agencies: **Q3 2011**

Consultation and coordination with Federal permits and agencies

Compliance with California Environmental Quality Act, possible EIR

San Jose State University Foundation: **Q4 2012**

Owner permissions for use of pier and right of way to reach the beach

California State University: **Q4 2011**

Construction approval for pier, Chancellors Office approval

Agreement with Moss Landing Marine Laboratories for pier, right of way and easement

California Public Utilities Commission: **Q4 2013**

Certificate of Public Convenience and Necessity

State Water Resources Control Board: **Q4 2012**

Order of approval for Regional Board Action

Regional Water Quality Control Board for the Central Coast Region: **Q4 2012**

Compliance with National Pollutant Discharge Elimination System General Permit For Storm Water Discharges Associated With Construction Activity

National Pollutant Discharge Elimination System Permit in accordance with Clean Water Act Section 402

Waste Discharge Requirements in accordance with the Porter-Cologne Water Quality Control Act

Water Quality Certification in accordance with Clean Water Act Section 401

California State Lands Commission: (see Moss Landing Harbor District)

California Department of Fish and Game: **Q4 2012**

Incidental Take Permit in accordance with the California Endangered Species Act

Lake/Streambed Alteration Agreement

California Coastal Commission: **Q4 2012 [phase 1], Q4 2013 [Completion Phase]**

Coastal Development Permit in accordance with the California Coastal Act

California Energy Commission: **Q4 2012**

Approval of Petition for Certification

California Department of Public Health: **Q1 2013**

Permit to Operate a Public Water System

California Department of Transportation: **Q4 2012**

Encroachment Permit

California State Historical Preservation Office: **Q4 2012**

Consultation and approval for historic resources for highway encroachment

**Local Agencies**

Moss Landing Harbor District: **Q4 2012**

Lease for use of Harbor District's Dredging Pipeline Right of Way

Lease for Intertidal zone as empowered by the State Lands Commission

Construction permit for all water system pipeline in the District jurisdiction

Monterey County Public Works Department: **Q4 2012**

Encroachment Permit

Monterey County Health Department Environmental Health Division: **Q4 2012**

Permit to Construct Desalination Facility

Monterey County Planning and Building Inspection Department: **Q4 2012**

Combined Coastal Development Permit and County Use Permit – Planning Commission and Board of Supervisors approvals, in accordance with California Coastal Act

Local Citizen's Advisory Committee Approval

Grading Permit, Digging and Excavation Permit

Building Permits

Erosion Control Permit

Monterey Peninsula Water Management District: **Q4 2012**

Water System Expansion Permit

Monterey Bay Unified Air Pollution Control District: **Q4 2012**

Authority To Construct, Air Quality Protection

Permit To Operate in accordance with Air Quality Regulations

Transportation Agency for Monterey County: **Q4 2012**

Easement

Waste Management Authority: **Q4 2012**

Wastewater system use and construction, Castroville Sanitation District

Pajaro Sunny Mesa Community Service District: **Q4 2012**

Agreement for use of potable water produced

Standards for potable water

Agencies not yet identified - Others may be required and identified.