WEST BASIN MUNICIPAL WATER DISTRICT
17140 S. Avalon Blvd., Suite 210
Carson, CA 90746

AGENDA NO. 22

SEPTEMBER 10, 2010 – Water Resources
Little (Chair), Gray
SEPTEMBER 27, 2010 – Board Meeting
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Approved by: Rich Nagel

ACTION CALENDAR

OCEAN-WATER DESALINATION DEMONSTRATION PROJECT INTAKE EFFECTS ASSESSMENT STUDY

SUMMARY:

West Basin Municipal Water District's (West Basin) Ocean-Water Desalination Demonstration Facility (Demo) is progressing towards completion with commissioning expected to take place in late October. As part of the Demo Project permit compliance requirements, West Basin will perform a detailed year-long study to evaluate the effectiveness of it passive wedge-wire screen intakes (WSI) and subsurface infiltration pilot (SIP) technologies, which will be referred to as the "Intake Effects Assessment Study" (Study).

The study will develop a detailed baseline characterization of the local marine habitat and assess the effectiveness of the intake technologies in protecting all stages of marine life from larval to adult fish stage. Through a series of bi-weekly sampling events, detailed impingement and entrainment data will be gathered to determine the effectiveness of the two intake technologies. This evaluation will ultimately define the intake design criteria for a Full-Scale Ocean-Water Desalination Facility. The Study Plan (attached as Exhibit "A") was submitted to both the Los Angeles Regional Water Quality Control Board and the California Coastal Commission as part of West Basin's permit application process. The Study Plan was approved as part of our permit issuance and West Basin is committed to publicly sharing the results of this study.

In July 2010, a "Request for Proposals" (RFP) was issued soliciting professional services that could perform the required Study Plan "Scope of Work" (SOW). The SOW encompasses the following five key project tasks:

- Task 1 - Baseline Characterization of Marine Species in the Intake Area: This task establishes a baseline characterization of larval fish, fish eggs, and target invertebrate species by sampling the species composition, abundance, and temporal variability near the proposed intake. This scope will be completed with bi-weekly sampling at three pre-approved sampling locations adjacent to the WSI and SIP intakes.
- Task 2 – Performance Assessment of Alternative Intakes: The purpose of this task is to evaluate the operational effectiveness of the two (1-mm and 2-mm) wedge-wire screens in terms of amount of entrained species, potential impingement impacts, rate of debris accumulation, bio-growth, maintenance and service needs. This performance assessment will determine the comparative marine concentrations of the offshore (i.e., before the intake screens/SIP) and onshore samples (i.e., after the screens) which will be used to calculate the effectiveness of the intake technologies.

- Task 3 - Estimate of Impingement and Entrainment Impacts of Alternative Intakes: The purpose of this task will involve estimating the total annual impingement and entrainment protection associated with the continuous operation of a Full-Scale Desalination Facility. The results from Task 2 will be used to calculate the annual protection of marine species as the design basis and environmental document preparation for West Basin's future full-scale facility.

- Task 4 - Project Deliverable Preparation: This task will provide the monthly, quarterly, and final reporting of the testing results as a required condition of West Basin's Coastal Development Permit.

- Task 5 – On-Call Services: This task is to provide on-call services on an as-needed basis. On-call services may include videography work of impingement and entrainment sampling, diving services, and expert witness testimony at regulatory meetings and/or hearings.

Selection Process:

A mandatory pre-proposal meeting was held on June 29, 2010, to allow potential proposers to ask questions and visit the demonstration project site. A total of seven firms attended the mandatory pre-proposal meeting. Two of the seven firms that participated in the mandatory pre-proposal meeting possess the direct experience in performing the work without subcontracting the sampling collection and analytical lab taxonomy services. Other participating firms at the mandatory pre-proposal meeting consisted of general engineering firms interested in partnering with the marine biology consulting teams.

One proposal was received on July 16, 2010, from Tenera Environmental. The following is the cost breakdown by tasks for the aforementioned "Scope of Work":

Activity	Tenera
Task 1	$309,724
Task 2	$286,955
Task 3	$32,252
Task 4	$138,639
Task 5	$40,000
Total	**$807,570**

Tenera Environmental has over 35 years of marine biology experience in the fields of impingement and entrainment analysis, marine baseline characterizations, and regulatory compliance issues. Tenera Environmental has sampled and analyzed over 10,000 Southern California plantkton samples and has been instrumental in several ocean-water desalination projects by developing the regulatory study plans and performing the baseline marine characterizations as part of the project environmental studies. Additionally, Tenera Environmental has spent several years intricately involved in the research and development of mitigating impingement and entrainment impacts of power plants along the western and eastern coastlines.

Staff met with Tenera to review their cost proposal and "Scope of Work" to ensure that the proposed costs were representative to other projects with similar scope and magnitude. Staff has also contacted other agencies in which Tenera Environmental has performed work for to verify their relevant experience and associated project scope costs. Staff is confident that Tenera Environmental is capable and experienced in performing the required work and the proposed costs are competitive to other similar projects. Therefore, staff is recommending that the Board consider awarding the subject work to Tenera Environmental.

STRATEGIC BUSINESS PLAN IMPLEMENTATION:

Goal 1: Water Reliability – West Basin is committed to innovative planning and investments to provide water supply reliability and drought protection.

Goal 2: Water Quality – West Basin is committed to providing safe, high quality water by meeting current and anticipated water quality requirements.

Goal 5: Environment – West Basin is committed to sustainable and environmentally-friendly business practices.

FISCAL IMPACTS:

Funds for this project are included in the Fiscal Year 2010-11 Ocean-Water Desalination Capital Budget.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

This item was reviewed by the Water Resources Committee on September 10, 2010 and recommended for approval at the September 27, 2010 Board meeting.

RECOMMENDED MOTION:

That the Board authorizes the General Manager to execute an agreement with Tenera Environmental for the Intake Effects Assessment Study of West Basin's Ocean-Water Desalination Demonstration Project for an amount of $807,570 with a 10% contingency for a total not-to-exceed contract amount of $888,327.

LIST OF EXHIBITS:

None.