



● **Board of Directors**
Engineering and Capital Programs Committee

December 8, 2009 Board Meeting

7-4

Subject

Authorize amendment of the agreement to extend the Semitropic Water Storage District Demonstration Arsenic Treatment Program; and expend up to \$1.75 million in Metropolitan funds

Description

Staff is seeking authorization for a one-year extension to an existing agreement with the Semitropic Water Storage District (Semitropic) for removal of arsenic from water recovered from Metropolitan's existing groundwater storage account. The agreement would extend the Demonstration Arsenic Treatment Program initiated in 2009, and would cost Metropolitan no more than \$1.75 million, a maximum of \$50 per acre-foot for treatment of returned banked water. Should there be a need, Metropolitan would recover about 35,000 acre-feet (AF) of banked water in 2010. Without arsenic treatment, a significant portion of this supply could not be delivered to Metropolitan because of an inability to meet the Department of Water Resources' (DWR) water quality criteria for the State Water Project delivery system.

Since its inception in 1994, the Semitropic Groundwater Storage Program has provided Metropolitan with dry-year water supply benefits. Under the program, Metropolitan has stored nearly 500,000 AF and anticipates recovering more than 450,000 AF by the end of 2009. In 2008, Semitropic returned around 140,000 AF by a combination of direct pump-back from the groundwater basin and exchange with Semitropic's allocation of State Water Project California Aqueduct supplies. About 29,000 AF was returned by direct pump-back during the 2008 operation of the Demonstration Arsenic Treatment Program. The treatment cost to return the water from direct pump-back was approximately \$30 per acre-foot.

In 2008, DWR set criteria limiting groundwater pump-in operations from increasing the ambient arsenic levels in the California aqueduct to no more than 2 parts per billion (ppb) and establishing a flow weighted average of the Kern County pump-in programs of no more than 10 ppb. In 2008 and 2009, the base flows in the California Aqueduct were much lower than normal, creating the potential for arsenic impacts that exceed those criteria. Without arsenic treatment, complying with the criteria would be more difficult and would reduce the availability of Metropolitan's Semitropic water supplies. If the program yield is reduced in 2010 due to arsenic levels, Metropolitan may need to purchase more costly transfer water to make up for the loss.

Semitropic has proposed extending the temporary demonstration treatment process. The extension would support next year's water supplies and provide additional data to assess feasibility of a long-term treatment strategy. Metropolitan and Semitropic staff have developed a term sheet as the basis for an extended funding agreement ([Attachment 1](#)). The terms would limit Metropolitan's financial risk and provide Metropolitan with indemnification for the treatment of the arsenic and the disposal of the byproduct arsenic sludge.

The removal of the arsenic at the source would protect Metropolitan, other downstream state water contractors, and member agencies from future increased treatment costs for State Water Project supplies. The treatment program reduces the overall contribution of arsenic into the California Aqueduct.

Policy

By Minute Item 40996, dated August 19, 1994, the Board authorized the General Manager to enter into an agreement with Semitropic Water Storage District for a water storage program.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

Pursuant to the provisions of CEQA and the State CEQA Guidelines, Semitropic, acting as Lead Agency, prepared and processed a Final Environmental Impact Report (Final EIR) for the proposed project. The Final EIR was certified and the project was approved by the Lead Agency on July 13, 1994. The Lead Agency also approved the Findings of Fact (findings) and the Mitigation Monitoring and Reporting Program (MMRP). On August 5, 1994, Metropolitan, as Responsible Agency, reviewed and considered the information contained in the certified Final EIR, along with the findings and the MMRP. At that time, the Board also authorized the General Manager to enter into an agreement with Semitropic for the Semitropic Groundwater Banking Project. On October 14, 2008, the Board authorized the General Manager to enter into a subsequent agreement with Semitropic to implement a pilot study to remove arsenic from the water recovered from Metropolitan's existing groundwater storage account. The present proposed board action is solely based on extending the existing agreement one more year and not on any other substantial changes to the original Semitropic Groundwater Banking Project. Hence, the previous environmental documentation reviewed and considered by the Board in conjunction with the proposed action fully complies with CEQA and the State CEQA Guidelines. Accordingly, no further environmental documentation is necessary for the Board to act on the proposed action. In addition, the proposed action involves a temporary demonstration arsenic treatment study that would assist in the feasibility and planning of a permanent water treatment solution in the future. As such, the proposed action is not subject to CEQA because it involves only feasibility studies for possible future actions which have not been approved, adopted or funded (Section 15262 of the State CEQA Guidelines).

The CEQA determination is: Determine that the proposed action has been previously addressed in the 1994 certified Final EIR and related environmental documentation (i.e., findings and MMRP) and that no further environmental analysis or documentation is required. In addition, the proposed pilot study on water quality involves only feasibility studies for possible future actions and as such, is not subject to CEQA (Section 15262 of the State CEQA Guidelines).

CEQA determination for Option #2:

None required

Board Options

Option #1

Adopt the CEQA determination and

- a. Authorize extending an agreement with Semitropic for a Demonstration Arsenic Treatment Program consistent with the terms in [Attachment 1](#); and
- b. Authorize expenditure of up to \$1.75 million to implement the treatment program.

Fiscal Impact: Up to \$1.75 million

Business Analysis: Extending the temporary removal of arsenic will help ensure the maximum return of previously stored water to Metropolitan in 2010. Additional treatment data collecting will help guide development of a long-term arsenic solution.

Option #2

Do not authorize an agreement with Semitropic to implement a Demonstration Arsenic Treatment Program.

Fiscal Impact: Increased costs to replace reduced 2010 return of previously stored water

Business Analysis: Metropolitan would likely be unable to maximize its return of previously stored water without extending arsenic removal. It would also not benefit from the additional collection of treatment process data that could help guide future solutions to arsenic.

Staff Recommendation

Option #1

Stephen N. Arakawa 11/24/2009
Stephen N. Arakawa Date
Manager, Water Resource Management

Jeffrey Rightlinger 11/24/2009
Jeffrey Rightlinger Date
General Manager

Attachment 1 – Semitropic Demonstration Arsenic Treatment Program Term Sheet

Reference Number wrm12602421

Semitropic Demonstration Arsenic Treatment Program Term Sheet

- Under Section 5.7 of Metropolitan's existing agreement with Semitropic, Metropolitan can accept the costs associated with the improvement of water quality for direct pumpback. Metropolitan agrees to fund the Demonstration Arsenic Treatment Program in an amount not to exceed \$50 for every acre-foot of total pumpback water returned during the treatment operation without the prior written approval of Metropolitan.

Arsenic Treatment Cost per Acre-Foot = Cost to Treat Metropolitan Water / Metropolitan Program Pumpback Supply

Example: Arsenic Treatment Cost per Acre-Foot = \$1.6 Million / 32,000 Acre-Feet = \$45.71/AF

- Metropolitan shall be reimbursed should other banking parties contribute financially to the Demonstration Arsenic Treatment Program that would reduce Metropolitan's share of the costs. In this case, Metropolitan would be reimbursed based on the proportionate share of returned pump-in supply.
- Semitropic has the exclusive control of the design, construction, operation, and sludge handling related to the Demonstration Arsenic Treatment Program. Semitropic will indemnify and hold harmless Metropolitan for the Demonstration Arsenic Treatment Program.
- Semitropic shall comply with all applicable local, state, and federal laws as they relate to the Demonstration Arsenic Treatment Program and the handling of any sludge created from the treatment process.
- Semitropic shall operate the program wells and the Demonstration Arsenic Treatment Program in a manner that minimizes the arsenic impacts to the California Aqueduct and the amount of arsenic found in the treatment sludge. The treatment process will be operated so as to minimize the production of hazardous waste.
- The Demonstration Arsenic Treatment Program is to be implemented as soon as practical but not extend beyond December 31, 2010, without the consent of both parties.