

**STATE WATER RESOURCES CONTROL BOARD
BOARD MEETING SESSION – DIVISION OF FINANCIAL ASSISTANCE
DECEMBER 4, 2012**

ITEM 5

SUBJECT

CONSIDERATION OF A PROPOSED RESOLUTION TO ALLOCATE \$955,646 FROM THE CLEANUP AND ABATEMENT ACCOUNT (CAA) TO THE SAN GABRIEL BASIN WATER QUALITY AUTHORITY FOR THE WHITMORE STREET GROUNDWATER REMEDIATION FACILITY (PROJECT)

DISCUSSION

The San Gabriel Basin Water Quality Authority (Authority) is requesting \$955,646 from the CAA to continue the operations and maintenance of an existing groundwater extraction and treatment system that operates at 9401 East Whitmore Street in El Monte, California (formerly J.A.B. Holdings Bozung Site).

Technical and Regulatory Background

The project site is located within the South El Monte Operable Unit (SEMOU) area and the Area 1 Superfund Site, one of four Superfund Sites in the 170-square-mile San Gabriel Valley Basin. Groundwater contamination in the Basin includes volatile organic compounds (VOCs), 1,4-dioxane, perchlorate, and N-Nitrosodimethyl-amine (NDMA). Groundwater cleanup projects are underway in each of the four areas; however, of all of the areas, the SEMOU (within Area 1) has been affected the most by the need for additional treatment. The SEMOU consists of approximately 8 square miles of groundwater contamination underlying portions of the cities of South El Monte, El Monte, and Rosemead.

The SEMOU is generally characterized by shallow groundwater contamination that is mostly contained in the upper 100 feet of the aquifer though some contamination has migrated below 100 feet into the intermediate zone aquifers currently used for potable supplies. Predominant constituents in the SEMOU consist of VOCs, and in some locations 1,4-dioxane and low concentrations of perchlorate.

The contamination in the SEMOU presents a threat to and has impacted local drinking water supply wells which – with the exception of 1,4-dioxane – are being addressed through wellhead treatment. However, any funds paid to the U.S. Environmental Protection Agency (U.S. EPA) by the Potentially Responsible Parties (PRPs) for the SEMOU may only be used for cleanup projects outlined in U.S. EPA's Record of Decision for the SEMOU. Since the removal of 1,4-dioxane is not included in this Record of Decision, it cannot be funded with money collected from the PRPs. No PRP has been identified for the 1,4-dioxane.

The most significant 'hot spot' area for 1,4-dioxane (i.e., groundwater plume with the highest concentrations of 1,4-dioxane) exists at the project site, the Whitmore Street Groundwater Remediation Facility. Groundwater cleanup at the site actually began in 1994 but at the time, only VOCs were considered the main contaminant of concern. The treatment system was shut down in 1999 after 1,4-dioxane was discovered in addition to the VOCs and no responsible parties could be found for the 1,4-dioxane contamination.

In 2007, additional groundwater remediation was undertaken at the project site to protect 22 drinking water supply wells located downgradient of the site. This latest groundwater cleanup effort was funded through the CAA when the State Water Board allocated \$1,420,000 from the CAA to the Authority for the installation and operation of this extraction and treatment system through [Resolution No. 2007-0055](#). The goal of the Whitmore Street groundwater treatment system is to hydraulically contain and treat the contaminant plume to keep it from migrating into the deeper aquifer and impacting drinking water supply wells.

At that time, the Authority took the lead in addressing the contamination at this site after the Los Angeles Regional Water Quality Control Board (Los Angeles Water Board), the Department of Toxic Substances Control (DTSC), and the U.S. EPA reported that no responsible parties would be forced to remediate it. The Authority was created by the State Legislature to facilitate groundwater cleanup in the San Gabriel Basin.

Other funds are not available for this cleanup. In 2002, the Authority settled with several of the Potentially Responsible Parties in the SEMOU; however, these settlements did not fully cover the cleanup costs. The U.S. EPA helps offset the gap in funding from their Superfund program. However, until the treatment of 1,4-dioxane is added to the SEMOU decision document(s), there are no funding sources for the cleanup of the 1,4-dioxane hot spot area or any adverse effects on downgradient water supply wells. DTSC is expected to take on the long-term responsibility for the cleanup of the SEMOU but not the treatment of 1,4-dioxane.

The San Gabriel Basin aquifer is a critical source of drinking water for Southern California and despite the contamination, the Valley groundwater continues to provide approximately 90 percent of the drinking water for the Valley's businesses and residents. The basin's groundwater provides approximately 90 percent of the domestic water supply for over 1,000,000 people who live in the Valley. Over 400 water supply wells are used in the basin to extract groundwater for industrial, business, agricultural, and domestic uses. Forty-five different water suppliers operate in the basin and provide drinking water to more than 1,000,000 people.

Whitmore Street Groundwater Remediation Facility

The treatment system is a hydraulic containment and treatment system, consisting of six extraction wells, an Advanced Oxidation Unit, and Granular Activated Carbon (GAC) Units to treat 1,4-dioxane and volatile organic compounds (VOCs), mostly trichloroethene (TCE), before discharge to the adjacent Rio Hondo Channel regulated by the Los Angeles Water Board under General Permit No. CAG 994004 ([Order No. R4-2008-0032](#)).

Remediation at the site was initiated in 2007 because of the threat the groundwater plume posed to the San Gabriel Valley Water Company's five drinking water supply wells, located approximately 2,000 feet downgradient of the Whitmore site. An additional seventeen drinking water supply wells are located further downgradient of the site, serving approximately 85,000 residents. The water company's service area consists of several disadvantaged communities, including South El Monte, Rosemead, Monterey Park, and El Monte.

The treatment system operates at about 30 gallons per minute. To date, the system has treated 59,972,910 gallons and removed 113 pounds of contaminants from the groundwater. Since startup of the system, the concentration of 1,4-dioxane has decreased from about 180 parts per billion (ppb) to 90 ppb; the California Department of Public Health [CDPH] Notification Level for 1,4-dioxane is 1 ppb. Concentrations of TCE have declined to 85 ppb; the Maximum Contaminant Level (MCL) is 5 ppb. The plume is located in the shallow aquifer (up to 100 ft bgs); the water supply wells are screened in the deeper aquifer (250 ft bgs).

The funds now requested from the CAA would be used to: 1) upgrade the treatment system to help meet the Regional Board discharge requirements for Total Dissolved Solids (TDS) and support the Ultraviolet (UV) unit needed to treat 1,4-dioxane, 2) replace one or more extraction wells and/or install new extraction wells, and 3) operate the treatment system for an additional five years. That five-year timeframe was based on a capture zone analysis and the known aerial extent of the plume.

The requested allocation is consistent with the purposes of Water Code section 13442. Water Code section 13442 provides that the State Water Board may order moneys to be paid from the CAA to a public agency and certain not-for-profit organizations and tribal governments that serve disadvantaged communities, and have the authority to cleanup or abate the effects of a waste in order “to assist it in cleaning up the waste or abating its effects on the waters of the state.”

POLICY ISSUES

Should the State Water Board:

1. Approve \$955,646 from the CAA to fund the Project?
2. Approve the funding with the expectation that if the agreement has not been executed by June 30, 2013, the Executive Director will bring this item back to the State Water Board in August 2013 for possible rescission of funding?
3. Make the funds available until September 30, 2018, and revert any unexpended funds to the CAA as of November 30, 2018, unless the Deputy Director or Assistant Deputy Director of the Division of Financial Assistance authorizes an extension?

FISCAL IMPACT

According to the most current data, the uncommitted CAA balance is estimated to be no less than \$5.1 million.

REGIONAL BOARD IMPACT:

Yes. In August 2012, the Executive Officer of the Los Angeles Water Board submitted a Letter of Support to the State Water Board. The proposed funding will help the Authority meet the Los Angeles Water Board discharge requirements for TDS.

STAFF RECOMMENDATION

The State Water Board should adopt the proposed Resolution.

State Water Board action on this item will assist the Water Boards in reaching Goal 2 of the Strategic Plan Update: 2008-2012, to improve and protect groundwater quality in high-use basins by 2030. It will also assist the Water Boards in reaching Goal 4 of the Strategic Plan Update: 2008-2012, to comprehensively address water quality protection and restoration, and the relationship between water supply and water quality, and describe the connections between water quality, water quantity, and climate change, throughout California’s water planning processes.

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STATE WATER RESOURCES CONTROL BOARD RESOLUTION NO. 2012-

ALLOCATE \$955,646 FROM THE CLEANUP AND ABATEMENT ACCOUNT (CAA) TO THE SAN GABRIEL BASIN WATER QUALITY AUTHORITY FOR THE WHITMORE STREET GROUNDWATER REMEDIATION FACILITY (PROJECT)

WHEREAS:

1. The San Gabriel Basin Water Quality Authority (Authority) is requesting \$955,646 from the CAA for an additional five years of operation and maintenance of an existing groundwater treatment system currently operating at 9401 East Whitmore Street in El Monte, California (formerly J.A.B. Holdings, Bozung site);
2. The treatment system is a hydraulic containment and treatment system to treat 1,4-dioxane and volatile organic compounds (VOCs), before discharge to the adjacent Rio Hondo Channel regulated by the Los Angeles Water Board under a General Permit ([Order No. R4-2008-0032](#));
3. The treatment system operates at about 30 gallons per minute, and to date, the system has treated 59,972,910 gallons and removed 113 pounds of contaminants from the groundwater;
4. Remediation at the site was initiated in 2007 because of the threat the 1,4-dioxane plume posed to the San Gabriel Valley Water Company's five drinking water supply wells, located approximately 2,000 feet downgradient of the Whitmore site. An additional seventeen drinking water supply wells are located further downgradient of the site, serving approximately 85,000 residents. The water company's service area consists of several disadvantaged communities, including South El Monte, Rosemead, Monterey Park, and El Monte;
5. In September 2007, the State Water Board allocated \$1,420,000 from the CAA to the Authority for the installation and operation of this extraction and treatment system through [Resolution No. 2007-0055](#).
6. The project is an orphan site and is being managed by the Authority, which was created by the State Legislature to facilitate groundwater cleanup in the San Gabriel Basin. The cleanup is supported by the Department of Toxic Substances Control (DTSC), the U.S. Environmental Protection Agency (U.S. EPA), and the Executive Officer of Los Angeles Regional Water Quality Control Board (Los Angeles Water Board);
7. Other funds are not available for this cleanup;
8. The funds now requested from the CAA would be used to 1) upgrade the treatment system to help meet the Regional Board discharge requirements for Total Dissolved Solids (TDS) and support the Ultraviolet (UV) unit, 2) replace one or more extraction wells and/or install new extraction wells, and 3) operate the treatment system for an additional five years. That 5-year timeframe was based on a capture zone analysis and the known aerial extent of the plume; and

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9. The requested allocation is consistent with the purposes of Water Code section 13442. Water Code section 13442 provides that the State Water Board may order moneys to be paid from the CAA to a public agency and certain not-for-profit organizations and tribal governments that serve disadvantaged communities, and have the authority to cleanup or abate the effects of a waste in order “to assist it in cleaning up the waste or abating its effects on the waters of the state.”

THEREFORE IT BE RESOLVED THAT:

The State Water Board:

1. Approves \$955,646 from the CAA to fund the Project.
2. Approves the funding with the expectation that if the agreement has not been executed by June 30, 2013, the Executive Director will bring this item back to the State Water Board in August 2013 for possible rescission of funding.
3. Shall make the funds available until September 30, 2018, and shall revert any unexpended funds to the CAA as of November 30, 2018, unless the Deputy Director or Assistant Deputy Director of the Division of Financial Assistance authorizes an extension.

CERTIFICATION

The undersigned, Clerk to the Board, does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the State Water Board held on December 4, 2012.

Jeanine Townsend
Clerk to the Board