

**SPECIAL MEETING OF THE GROUNDWATER QUALITY COMMITTEE
OF THE BOARD OF DIRECTORS
WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA
4040 PARAMOUNT BOULEVARD, LAKEWOOD, CA 90712
12:30 P.M., WEDNESDAY, AUGUST 31, 2011**

AGENDA

EACH ITEM ON THE AGENDA, NO MATTER HOW DESCRIBED, SHALL BE DEEMED TO INCLUDE ANY APPROPRIATE MOTION, WHETHER TO ADOPT A MINUTE MOTION, RESOLUTION, PAYMENT OF ANY BILL, APPROVAL OF ANY MATTER OR ACTION, OR ANY OTHER ACTION. ITEMS LISTED AS "FOR INFORMATION" MAY ALSO BE THE SUBJECT OF ANY "ACTION" TAKEN BY THE BOARD OR A COMMITTEE AT THE SAME MEETING.

- 1. DETERMINATION OF A QUORUM**
- 2. PUBLIC COMMENT**
- 3. MINUTES OF THE MEETINGS OF MAY 25, 2011, JUNE 22, 2011 AND JULY 29, 2011**
Staff Recommendation: Approve as submitted.
- 4. GROUNDWATER QUALITY UPDATE – FINAL PUBLIC HEALTH GOAL FOR HEXAVALENT CHROMIUM**
Staff Recommendation: For information.
- 5. WORLEYPARSONS CONTRACT AMENDMENT FOR ASSISTANCE WITH CONTAMINATED SITE INVESTIGATION AND EXPEDITED CLEANUP**
Staff Recommendation: Amend the existing contract with WorleyParsons to increase the budget amount by an additional \$25,000 and a time extension to June 30, 2012.
- 6. RFP FOR GOLDSWORTHY DESALTER EXPANSION FEASIBILITY STUDY**
Staff Recommendation: Issue a request for proposals for the Goldsworthy Desalter expansion feasibility study.
- 7. SAFE DRINKING WATER PROGRAM**
Staff Recommendation: For discussion.
- 8. DIRECTORS' REPORTS, INQUIRIES, AND FOLLOW UP OF DIRECTIONS TO STAFF**
- 9. ADJOURNMENT**

Posted by Abigail C. Andom, Deputy Secretary, August 25, 2011.

In compliance with the Americans with Disabilities Act (ADA), if special assistance is needed to participate in the Board meeting, please contact Deputy Secretary Abigail Andom at (562) 921-5521 for assistance to enable the District to make reasonable accommodations.

All public records relating to an agenda item on this agenda are available for public inspection at the time the record is distributed to all, or a majority of all, members of the Board. Such records shall be available at the District office located at 4040 Paramount Boulevard, Lakewood, California 90712.

Agendas and minutes are available at the District's website, www.wrd.org.

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**MINUTES OF MAY 25, 2011
MEETING OF THE GROUNDWATER QUALITY COMMITTEE
OF THE BOARD OF DIRECTORS OF THE
WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA.**

A meeting of the Groundwater Quality Committee of the Board of Directors of the Water Replenishment District of Southern California was held on Wednesday, May 25, 2011, 12:20 p.m., at the District Office, 4040 Paramount Boulevard, California. Chairperson Sergio Calderon called the meeting to order and presided thereover. Administrative Specialist Sheryll A. Moffat recorded the minutes.

1. DETERMINATION OF A QUORUM

Committee: Directors Sergio Calderon and Rob Katherman
Staff: Ted Johnson, Charlene King, Cathy Chang, Phuong Ly

2. PUBLIC COMMENT

None.

**3. MINUTES OF THE MEETINGS OF FEBRUARY 23, 2011 AND
APRIL 27, 2011**

The Committee approved the minutes as submitted.

4. GROUNDWATER QUALITY UPDATE- FLUORIDATION

Dr. Cathy Chang, Water Quality Program Manager, reported that U.S. municipal water systems add fluoride to their potable water supply in order to prevent tooth decay. Dr. Chang stated that fluoride is added in various forms to levels between 0.7 and 1.2 milligrams per liter (mg/L), which is the current recommended optimal level for the purposes of preventing tooth decay. She informed the Committee that this past January, the U.S. Department of Health and Human Services (HHS) and the United States Environmental Protection Agency (USEPA) jointly announced their proposal to change the recommended optimal fluoride level in drinking water to 0.7 mg/L, which is the lower end of the current range. This new recommendation comes in the wake of a set of new findings from a scientific panel convened last year by the HHS. The scientists reviewed the best available information on the occurrence and trends in tooth decay; water intake in children (special focus on children because the critical period of exposure to fluoride is between 1 and 4 years old), and changes in the percentage of U.S. children and adults with dental fluorosis.

Dr. Chang stated that the USEPA issued data on new assessments that showed that sources of fluoride have steadily increased since the early 1960s when almost all of a person's daily fluoride intake came from drinking water and food and beverages prepared with fluoridated water. She explained that today,

besides water, dental products such as toothpaste and mouth rinses, and professionally applied varnish and gels contain fluoride. Fluoride is also naturally occurring and found in well water, and at low levels in many foods such as fish, meat, fruits and vegetables.

Dr. Chang stated that both HHS and USEPA decided to lower the recommended fluoride level in drinking water based on findings showing adverse health impacts of excess fluoride and prevalence of the fluoride sources in the U.S. population. The current federal Maximum Contaminant Level for fluoride in drinking water is 4 mg/L. In light of the latest findings, USEPA announced its intent to evaluate the MCL. The California MCL for fluoride is 2 mg/L. The California Department of Public Health will have to reconcile any proposed changes with the current fluoride MCL. Any MCL changes will most likely take more than several years, since it will first require a change in the Public Health Goal by the California Office of Environmental Health Hazard Assessment (OEHHA).

In the case of a reduced fluoride MCL in the future, Dr. Chang said she didn't anticipate problems with attaining compliance because it is expected that effective source control will be implemented by the municipal or community drinking water systems level, i.e. drinking water systems will be adding less fluoride in their system to comply with the 0.7 mg/L target. This, in turn, will translate into lower fluoride levels in imported water as well as in the treated wastewater effluent, which serve as sources of water for the District's spreading and direct injection projects. The District currently has no problems meeting the fluoride MCL and anticipates the same for the future and for the purveyors in the District service area.

5. GROUNDWATER CONTAMINATION UPDATE

Water Quality Specialist Phuong Ly stated that she will be reviewing two sites today: the former Fairchild Space facility located in the City of Manhattan Beach (West Coast Basin) and the Waste Disposal Superfund Site located in the City of Santa Fe Springs (Central Basin, Whittier Area).

Ms. Ly stated that the Fairchild facility was used for the design and manufacturing of parts for aircraft and spacecraft applications. There was an on-site plating shop that utilized a chrome acid storage tank and clarifier. Additionally, waste solvents were placed in an underground "waste oil sump" which was eventually found to be leaking and was removed in 1988. The site is now undergoing remediation under the oversight of the Los Angeles Regional Water Quality Control Board. She said that no chemicals of concern have been detected in the nearest active production (drinking water) wells.

Ms. Ly stated that the 38-acre Waste Disposal Superfund Site, a now-buried concrete-lined 42-million gallon reservoir, was used to store a variety of liquid and solid wastes, including oil field, refinery, and construction wastes, from the 1940s to the mid-1960s. Wastes were also

disposed in other areas of the site outside the reservoir; these wastes include organic wastes, solvents, petroleum-related chemicals, and other chemical wastes. Disposal activities at the site ceased in approximately 1964 and buried wastes were subsequently graded over. The former disposal site has been divided into 22 individual land parcels and approximately 35 small light industrial businesses now operate on the property. According to the United States Environmental Protection Agency (USEPA), there have been no indications of site-related groundwater contamination. However, volatile organic compounds (VOCs) have been detected in groundwater beneath the site, which USEPA believes is related to a regional VOC plume in groundwater (i.e., off-site sources). The nearest drinking water well is contaminated with VOCs and currently has a wellhead treatment system.

6. NO COST TIME EXTENSION FOR PROFESSIONAL SERVICES AGREEMENT WITH URS CORPORATION

Chief Hydrogeologist Ted Johnson said that staff had gone through the Request for Qualifications (RFQ) process in 2009 and after next June will be looking for the services of another firm for the engineering and design services for projects in the Safe Drinking Water Program. Mr. Johnson said that the Vernon and Maywood wells will wrap up the current contract with the URS Corporation.

The Committee concurred with the staff recommendation to execute a contract amendment with the URS Corporation, subject of approval of form by District Counsel, for professional services for the Safe Drinking Water Program with the term of the agreement to extend to June 30, 2012 at no additional cost to the District.

Associate Engineer Charlene King distributed and reviewed the status of projects in the Safe Drinking Water Program.

7. DIRECTORS' REPORTS, INQUIRIES, AND FOLLOW UP OF DIRECTIONS TO STAFF

Director Katherman asked Ms. King to contact the Public Works Director of the City of Lomita regarding some problems they are having with a well. He noted that they may be a potential candidate for the wellhead treatment program. He also requested an update on the Saline Plume Study. Director Katherman also requested an update on the funds in the Safe Drinking Water Program.

8. ADJOURNMENT

There being no further business to come before the Committee, the meeting was adjourned at 1:30 p.m.

Chairperson

Attest:

Director

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**MINUTES OF JUNE 22, 2011
MEETING OF THE GROUNDWATER QUALITY COMMITTEE
OF THE BOARD OF DIRECTORS OF THE
WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA**

A meeting of the Groundwater Quality Committee of the Board of Directors of the Water Replenishment District of Southern California was held on Wednesday, June 22, 2011, 12:15 p.m., at the District Office, 4040 Paramount Boulevard, California. Chairperson Sergio Calderon called the meeting to order and presided thereover. Deputy Secretary Abigail C. Andom recorded the minutes.

1. DETERMINATION OF A QUORUM

Committee: Directors Sergio Calderon and Rob Katherman
Staff: Ted Johnson, Phuong Ly, Charlene King

2. PUBLIC COMMENT

None.

3. GROUNDWATER QUALITY UPDATE – SAFE DRINKING WATER ACT (SDWA) COMPLIANCE TRACKING TOOL

Chief Hydrogeologist Ted Johnson stated that the U.S. Environmental Protection Agency (EPA) announced last month a new searchable website on safe drinking water act violations and compliance.

Mr. Johnson stated that the website is known as Enforcement and Compliance History Online (ECHO), a tool that allows the public to search a database to see whether drinking water in their community meets the Safe Drinking Water Act (SDWA) standards.

Mr. Johnson demonstrated to the Committee how the ECHO website works by searching information on a local water system in the District's service area whose water source is groundwater.

The Committee asked staff to place a link on ECHO in the WRD website.

4. GROUNDWATER CONTAMINATION UPDATE

Water Quality Specialist Phuong Ly presented an update on Basin By-Products Company located in the City of Wilmington and Golden West Refinery located in the City of Santa Fe Springs. Ms. Ly stated that the sites are included in WRD's list of high-priority contaminated groundwater sites within District boundaries.

Ms. Ly stated that Basin By-Products Company (BBP) is a 12-acre site comprised of three former hazardous waste disposal facilities: BBP, Pacific Ocean Disposal Company (PODCO), and Anaheim Street Liquid Disposal Company (ASLD). She explained that from the early 1960s to the mid-1970s, these facilities primarily accepted liquid industrial waste,

solvents, heavy metals, and caustic/alkaline waste from aerospace manufacturing facilities, oil production sites, and metal plating facilities. She noted that liquid waste was discharged directly into the soil and groundwater via pits with a total of approximately 40 million gallons of liquid waste disposed at the site.

Ms. Ly stated that constituents of concern beneath the site are volatile organic compounds (VOCs), semi-volatile organic compounds, and various metals. She noted that no chemicals of concern have been detected in the nearest active production wells.

Ms. Ly stated that remediation activities include capping the site with either asphalt or concrete.

The second site Ms. Ly discussed was Golden State Refinery located in the City of Santa Fe Springs. She explained that in 1925, above ground oil storage tanks with more than 7 million barrels capacity were installed on the site. By 1936, she noted that an oil refinery was constructed on site. Golden West Refinery took ownership of the site in 1983 and operated the refinery until February 1992 when crude oil processing operations were suspended. From February 1992 to August 1997, only oil transport operations were conducted at the site.

Ms. Ly stated that beginning in 1997, structures and equipment at the refinery were demolished and the site was redeveloped into light industrial, manufacturing, and commercial warehouse facilities. She stated that soil and groundwater beneath the site is contaminated with VOCs, fuel oxygenates, and petroleum hydrocarbons. The nearest drinking water well is contaminated with tetrachloroethene (PCE) and trichloroethene (TCE) and currently has a wellhead treatment system. As of August 2010, no site-specific constituents of concern have been detected in this well.

Ms. Ly stated that remediation activities at the site consist of soil excavation, soil vapor extraction (SVE), groundwater pump and treat, and a free product removal program.

5. SALINE PLUME UPDATE

Mr. Johnson presented a saline plume update which discussed the results of the latest drilling on the monitoring wells showing the areas of possible high chlorides and seawater intrusion. He stated that chlorides at the Mariner Monitoring Well was 6200 parts per million (ppm), 1200 ppm at the Columbia Monitoring Well, and 40 ppm at the Madrid Monitoring Well. He also noted that plume movement is calculated at 250 feet per year moving east.

Discussion followed and the Committee recommended proceeding with the selection of the top three consulting firms to calibrate the chlorides model.

6. SAFE DRINKING WATER PROGRAM

Associate Engineer Charlene King presented an update on the District's Safe Drinking Water Program (SDWP). Ms. King stated that there are currently fourteen (14) SDWP project facilities in operation. She noted that the Grant Program is for wells with contamination from man-made sources such as VOCs and the Loan Program is for wells with contamination from natural sources such as iron, manganese and arsenic.

Discussion followed on possible improvements to the Loan and Grant Programs.

7. DIRECTORS' REPORTS, INQUIRIES, AND FOLLOW UP OF DIRECTIONS TO STAFF

The Committee requested a change be made to the time of the regularly scheduled Committee meeting from 12:00 p.m. to 12:30 p.m.

8. ADJOURNMENT

There being no further business to come before the Committee, the meeting was adjourned at 1:55 p.m.

Chairperson

Attest:

Director

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**MINUTES OF JULY 29, 2011
SPECIAL MEETING OF THE GROUNDWATER QUALITY COMMITTEE
OF THE BOARD OF DIRECTORS OF THE
WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA**

A meeting of the Groundwater Quality Committee of the Board of Directors of the Water Replenishment District of Southern California was held on Friday, July 29, 2011, 9:25 a.m., at the District Office, 4040 Paramount Boulevard, California. Chairperson Sergio Calderon called the meeting to order and presided thereover. Deputy Secretary Abigail C. Andom recorded the minutes.

1. DETERMINATION OF A QUORUM

Committee: Directors Sergio Calderon and Rob Katherman

Staff: Robb Whitaker, Ted Johnson, Cathy Chang, Phuong Ly,
Charlene King, Interim District Counsel H. Francisco Leal

2. PUBLIC COMMENT

None.

3. GROUNDWATER QUALITY UPDATE – SURVEY OF MUNICIPAL WASTEWATER RECYCLED IN CALIFORNIA

Dr. Cathy Chang, Water Quality Program Manager, provided a summary of the results of the State Water Resources Control Board's survey of recycled water delivered in 2009. Dr. Chang explained that the primary goals of the survey were to capture (1) the amount of wastewater treated, (2) the amount of recycled water used, and (3) the type of beneficial use. She noted that the survey results would provide a useful indicator of the statewide progress in achieving the goals of recycled water use as set forth in the State Water Board's Strategic Plan Update.

Dr. Chang noted that the 2009 survey estimated a total of 723,845 acre feet of recycled water being used in California. She stated that the amount represented a 38% increase compared to the baseline amount conducted by the State Water Board in 2001 and about 10% compared to a 2007 survey conducted by the WaterReuse Foundation. She stated that there is still much room for improvement since the 2009 results reflect only 58% and 47% of the goals specified in the State Water Board Strategic Plan Update and the Recycled Water Policy, respectively.

Dr. Chang stated that the 2001 estimated baseline amount of the State Water Board (525,465 acre feet) is about 23 % of the municipal wastewater available for recycling. She noted that the top three uses for municipal recycled water were agriculture, groundwater recharge, and landscape/golf course irrigation. In conclusion, she added that the survey results are important in that they inform the state regulators of how much room for improvement there is to achieve the stated goals of increasing

municipal recycled water use and at the same time, they present an opportunity for dialogue between the water reuse industry and the state regulators, in identifying existing incentives, their effectiveness, and roadblocks that should be overcome.

4. GROUNDWATER CONTAMINATION UPDATE

Water Quality Specialist Phuong Ly presented an update on Master Sun Cleaners located in the City of Gardena and Powerine Oil Company located in the City of Santa Fe Springs. Ms. Ly stated that the sites are on WRD's list of high-priority contaminated groundwater sites that are located within District boundaries.

Ms. Ly stated that the former Master Sun Cleaners was a dry cleaning business that operated from the mid-1960s until 2004. She explained that the business occupied one suite of a multi-tenant retail building located on the property. The building was occupied by the dry cleaners until it was destroyed by a fire in 2004 and remains vacant to date. She stated that other retail buildings on the property remain in operation.

Ms. Ly stated that activities associated with the dry cleaning business have impacted the groundwater beneath the site. She noted that the constituents of concern are volatile organic compounds (VOCs), mainly chlorinated solvents. She stated that, as of March 2010, no chemicals of concern have been detected in the nearest active production wells.

Ms. Ly stated that contamination is being investigated and is under the oversight of the Los Angeles Regional Water Quality Control Board (RWQCB). She noted that remediation has been ongoing on the site since 2004, which consisted of an enhanced in-situ biodegradation barrier (EISBB), an on-site soil vapor extraction system, groundwater pump and treat, and EHC® socks.

The second site Ms. Ly discussed was the Powerine Oil Company, an 88-acre site that operated as an oil refinery from 1936 until July 1995. She explained that prior to the 1930s, the site was an oil field consisting of oil production wells and unlined sumps/ponds with the western portion of the site used for agricultural purposes.

Ms. Ly stated that CENCO Refining Company acquired the oil refinery in 1998 and used the site only to store petroleum products in aboveground tanks. She noted that CENCO began decommissioning the site in Fall 2002 and the refinery has not been in operation since 1998. Some of the refinery structures remain on site but are scheduled to be removed prior to the redevelopment of the property for commercial/light industrial use.

Ms. Ly explained that groundwater beneath the site is contaminated with VOCs, fuel oxygenates and petroleum hydrocarbons. She noted that the nearest down gradient drinking water wells are contaminated with VOCs, mainly tetrachloroethene (PCE) and trichloroethene (TCE), and wellhead treatment systems remove VOCs from the wells.

MS. Ly stated that remediation and monitoring activities are being conducted under the oversight of the RWQCB. She noted that, currently, light non-aqueous phase liquid (LNAPL) is being actively removed throughout the site. She added that in March 2011, the RWQCB approved a work plan to conduct pilot studies (bioventing, air sparging, and in-well air stripping) for remediation of shallow soils, deep soils, and the saturated zone. She stated that the RWQCB expects to receive a final report on the pilot study results in October 2011.

5. DESIGN AND CONSTRUCTION SERVICES FOR THE SAFE DRINKING WATER PROGRAM

Associate Engineer Charlene King provided an update on the District's Safe Drinking Water Program. Ms. King discussed the mechanics of the Grant and the Loan Programs stating that the Grant Program is for wells with contamination from man-made sources such as volatile organic compounds (VOC) and the Loan Program is for wells with contamination from natural sources such as iron, manganese and arsenic. She explained that as a grant, the District is the lead agency for design and construction of the facility and retains ownership. She noted that for the loan, the pumper is the lead agency securing the design and construction of the facility and ultimately ownership of the treatment system at the end of the loan payments.

Director Calderon stated that, as good public stewards, he would like to see the District take a more active role in the design and construction phase of the Loan Program.

Discussion followed. The Committee recommended that revisions be made to the District's standard loan agreements to reflect the suggested changes and bring it back to the Committee at the next meeting. The Committee also requested language providing for an "expiration date" for when awarded grants must be used with a provision for an extension if needed.

6. DIRECTORS' REPORTS, INQUIRIES, AND FOLLOW UP OF DIRECTIONS TO STAFF

The next Committee meeting is scheduled Wednesday, August 24 at 12:30 p.m.

7. ADJOURNMENT

There being no further business to come before the Committee, the meeting was adjourned at 10:20 a.m.

Chairperson

Attest:

Director



MEMORANDUM

ITEM NO. 4

Prepared by: Cathy Chang
Reviewed by: Ted Johnson
Approved by: Robb Whitaker

DATE: AUGUST 31, 2011

TO: GROUNDWATER QUALITY COMMITTEE

FROM: ROBB WHITAKER, GENERAL MANAGER

SUBJECT: GROUNDWATER QUALITY UPDATE – FINAL PUBLIC HEALTH GOAL FOR HEXAVALENT CHROMIUM

SUMMARY

On July 27, 2011, California's Office of Environmental Health Hazard Assessment (OEHHA) announced a final public health goal (PHG) for hexavalent chromium (also known as chromium 6) of 0.02 µg/L or parts per billion (ppb). The federal government and California currently regulate only total chromium at 100 ppb and 50 ppb, respectively. (Total chromium consists of chromium 3 and chromium 6.) The California PHG for hexavalent chromium is the first in the nation. The eventual drinking water standard Maximum Contaminant Limit (MCL) for hexavalent chromium, once it is established, is expected to be the first standard in the nation to address hexavalent chromium in drinking water. The current state MCL for total chromium will remain in effect until a specific state standard for hexavalent chromium is established. This memo discusses the basis for the PHG and its implications, current analytical capability, and treatment options.

OEHHA adopted the conservatively low value of 0.02 ppb after taking into account human subpopulations that may be more sensitive to hexavalent chromium than average adults, such as young children. Hexavalent chromium can occur naturally but it can also enter drinking water sources by leaks from industrial hazardous waste sites. Hexavalent chromium is known to be a carcinogen when inhaled. It was recently found to also cause cancer in laboratory mice and rats that were exposed through drinking water.

It is important to note that a PHG is not an enforceable drinking water standard and is derived solely on theoretical risk assessments and without consideration of the ability to either detect or remove the constituent. A PHG is the first step in the process of setting the MCL. The PHG does not define a boundary between "safe" and "unsafe." Drinking water can still be acceptable for public consumption if it contains contaminants at levels higher than the PHG.

The California Department of Public Health (CDPH) will use the PHG to develop a hexavalent chromium MCL that balances risk with technical and economic feasibility. The process of developing an MCL is expected to take 18 to 24 months. CDPH has posted information concerning their hexavalent chromium regulatory process and frequently asked questions

about this constituent on their website
(www.cdph.ca.gov/certlic/drinkingwater/Pages/Chromium6.aspx).

Hexavalent chromium can be removed from water using a few proven treatment techniques depending on the concentrations present, the removal goals, other water quality parameters present, competing treatment objectives, and treatment waste disposal options. Anion exchange (both strong-base and weak-base), membrane filtration by nanofiltration and reverse osmosis, reduction followed by coagulation and precipitation, and adsorption can remove hexavalent chromium from drinking water. Research conducted by a collaboration of southern California drinking water utilities, US EPA, and the Water Research Foundation (WRF) found that weak base anion exchange and reduction-coagulation-filtration could remove hexavalent chromium to below 5 ppb for the utilities' particular groundwater source. The WRF study estimated that, for systems operating at 500 gallons per minute, the capital costs associated with reducing hexavalent chromium to less than 5 ppb range from \$1 million to \$3.4 million, with the associated annual operation and maintenance costs of about \$200,000, both expressed in 2008 dollars. The cost to treat hexavalent chromium in drinking water to achieve compliance will depend largely on the final MCL value and cannot be reasonably projected at this time since treatment cost versus contaminant removal is not necessarily a linear relationship. The technical feasibility as well as the treatment cost will be considered and published by CDPH during the MCL development process.

No additional actions are required by water agencies as a result of the announcement of the final PHG. Staff will continue working with stakeholders in the water industry to assess the impacts of the future California hexavalent chromium standard and assist in providing comments and data to support a sound regulation. Staff will periodically update this committee when CDPH provides updates on its hexavalent chromium MCL development process.

FISCAL IMPACT

None at this time.

STAFF RECOMMENDATION

For information.



MEMORANDUM

ITEM NO. 5

Prepared by: Phuong Ly

Reviewed by: Ted Johnson

Approved by: Robb Whitaker

DATE: AUGUST 31, 2011

TO: GROUNDWATER QUALITY COMMITTEE

FROM: ROBB WHITAKER, GENERAL MANAGER

SUBJECT: WORLEYPARSONS CONTRACT AMENDMENT FOR ASSISTANCE WITH CONTAMINATED SITE INVESTIGATION AND EXPEDITED CLEANUP

SUMMARY

In June 2009, WRD entered into a contract with WorleyParsons for a Benefit-Cost-Risk Analysis for potential cleanup and cost recovery of contaminated sites in addition to as-needed consulting services for assistance with contaminated site investigations. Although that work has been completed, more work exists for WorleyParsons to perform to assist Staff with ongoing groundwater contamination issues.

The work performed by WorleyParsons has supported the District's Groundwater Contamination Prevention Program, specifically in regards to the Omega Chemical Superfund Site, which is located in Whittier, California, and the former AAD Distribution and Dry Cleaning facility, which is located in Vernon, California. For the Omega Chemical Superfund Site, WorleyParsons assisted WRD in providing comments to the United States Environmental Protection Agency (USEPA) on their proposed remediation plans for the 4.5-mile off-site groundwater contamination plume by conducting an evaluation of USEPA's conceptual model and groundwater model of the off-site plume. For the former AAD Distribution and Dry Cleaning facility, WorleyParsons reviewed historical records and agency databases for potential upgradient sources for the high levels of perchlorate and volatile organic compounds (VOCs) that had been detected in groundwater beneath the former dry cleaning facility.

Since initiation of the contract, WorleyParsons has performed competently in all aspects of service to the District. The consultant's strengths include their extensive experience on groundwater remediation projects and their knowledge of the geology and hydrogeology of the groundwater basins. On all projects to date, they have been able to provide invaluable technical recommendations, have prepared thorough and well-written technical reports, and completed all project tasks on time. These efforts are helping WRD staff to expedite site cleanups within the District and support regulatory agencies in addressing key issues affecting these high-priority contaminated groundwater sites.

The existing contract with WorleyParsons expired on June 30, 2011, but based on successful performance over the past year, WRD staff recommends extending the term of the contract for an additional year and amending the contract amount by an additional \$25,000. This work had been anticipated and the budget was included for fiscal year 11-12. Anticipated tasks

include continuation of the work described above, primarily with the investigation of perchlorate sources in the Vernon area and an evaluation of the Del Amo Superfund site in the Harbor Gateway area near Carson and Torrance with respect to the Technical Impracticability waiver issued by the EPA.

FISCAL IMPACT

\$25,000. Funding for this work is included in the fiscal year 11-12 budget.

STAFF RECOMMENDATION

Amend the existing contract with WorleyParsons to increase the budget amount by an additional \$25,000 and a time extension to June 30, 2012.



MEMORANDUM

ITEM NO. 6

Prepared by: Paul Fu

Reviewed by: Ted Johnson

Approved by: Robb Whitaker

DATE: AUGUST 31, 2011

TO: GROUNDWATER QUALITY COMMITTEE

FROM: ROBB WHITAKER, GENERAL MANAGER

SUBJECT: RFP FOR GOLDSWORTHY DESALTER EXPANSION FEASIBILITY STUDY

SUMMARY

WRD's Goldsworthy Desalter (Desalter) has been in operations since 2002 and has extracted over 18,000 acre feet of saline groundwater from the aquifer. The treated water is supplied to City of Torrance's drinking water system. The City has enjoyed the water quality of the product water from the existing Desalter and would like to maximize the utilization of its local resources including expansion of the Desalter.

WRD is considering the expansion of the Desalter and its associated groundwater extraction system. The District has been awarded a grant through the WaterSMART Program administered by the U.S. Bureau of Reclamation (USBR) to partially fund development of a feasibility study for the expansion of the Desalter. The awarded amount is \$132,555 for reimbursement of 50 percent of the fees associated with the feasibility study. The funding agreement with USBR is being processed and is expected to be executed prior to September 30, 2011.

The proposed feasibility study will examine and address the technical, legal, and institutional issues necessary to expand this saline groundwater reclamation facility from its current capacity of 2.5 million gallons per day (mgd) to a total 5 mgd. Expansion of the facility will allow WRD to increase the production and reclamation of saline groundwater in the vicinity.

The Desalter feasibility study will be performed under the leadership of the WRD and will include close collaboration with key study partners as required.

The goals of the feasibility study are:

- Protect quality of life and water quality in the basin
- Recharge the basin with high quality water
- Minimize environmental and energy footprints
- Reduce the impacts of the saline plume

As part of the feasibility study, District will investigate several project issues, including:

- New source wells options including areas with the highest chloride concentration
- Pipeline routes from the new well locations to the Desalter

- Water quality of new wells
- Institutional arrangements for the pumping rights of the water and for distribution of the product water
- Type of wells
- Environmental impacts for support of future environmental documentation
- Improvements to the existing Desalter facility
- Energy efficiency options for the Desalter facility
- Estimate capital and operations and maintenance costs of the expanded facility
- Identify any necessary permits and approvals required for implementation of the project.

To proceed with the expansion project, staff recommends that the Groundwater Quality Committee recommend to the Board of Directors to instruct staff to issue a request for proposals (RFP) to procure a qualified consultant to perform the feasibility study.

FISCAL IMPACT

None at this time.

STAFF RECOMMENDATION

Issue a request for proposals for the Goldsworthy Desalter expansion feasibility study.



MEMORANDUM

ITEM NO. 7

Prepared by: Charlene King
Reviewed by: Ted Johnson
Approved by: Robb Whitaker

DATE: AUGUST 31, 2011
TO: GROUNDWATER QUALITY COMMITTEE
FROM: ROBB WHITAKER, GENERAL MANAGER
SUBJECT: SAFE DRINKING WATER PROGRAM

SUMMARY

The District administers the Safe Drinking Water Program (SDWP) to assist basin pumpers in sustaining active production from contaminated wells. The program provides wellhead treatment facilities to remove contaminants and improve water quality. Wells are evaluated for assistance based on factors such as water quality data and production history.

The District offers both a Grant Program for wells with contamination from man-made sources such as volatile organic compounds, and a Loan Program for wells with contamination from natural sources such as iron, manganese and arsenic. As a grant, the District is the lead agency for design and construction of the facility and retains ownership. As a loan, the pumper is the lead agency securing the design and construction of the facility and ultimately ownership of the treatment system at the end of the loan payments.

When assistance is deemed necessary, WRD and the groundwater producer jointly develop a treatment solution for the subject well based on well data, type of contaminates, affected duration of their wells, and site constraints.

The Committee Chairman has requested that the Committee discuss modifications to standard agreements and program application for the Safe Drinking Water Program. Staff will provide a verbal update on the District's Safe Drinking Water Program at the Committee meeting.

FISCAL IMPACT

None at this time.

STAFF RECOMMENDATION

For discussion.