

**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, SEPTEMBER 28, 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 SPECIAL MEETING OF AUGUST 31, 2011**
Staff Recommendation: Approve as submitted.
- 4. GOVERNMENT ACCOUNTABILITY OFFICE'S REPORT ON PHARMACEUTICALS IN NATION'S DRINKING WATER**
Staff Recommendation: For information.
- 5. GROUNDWATER CONTAMINATION UPDATE**
Staff Recommendation: For information.
- 6. TIME EXTENSION WITH DEPARTMENT OF WATER RESOURCES FOR AB303 GRANT**
Staff Recommendation: Authorize the General Manager to execute an amendment to the Local Groundwater Assistance grant agreement (AB303) with the State of California Department of Water Resources to extend the termination date to July 31, 2012. All other conditions of the agreement will remain the same.
- 7. SAFE DRINKING WATER PROGRAM STANDARD AGREEMENTS**
Staff Recommendation: For discussion.
- 8. SAFE DRINKING WATER PROGRAM – REQUEST FROM MAYWOOD MUTUAL #3**
Staff Recommendation: Approve the Maywood Mutual Water Company No. 3 Prospect Well as a project funded through the Safe Drinking Water Program and enter into an Agreement with Maywood Mutual Water Company No. 3, subject to approval as to form by District Counsel, to construct a wellhead treatment system at Prospect Well for an amount not to exceed \$800,000.

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

10. ADJOURNMENT

Posted by Abigail C. Andom, Deputy Secretary, September 22, 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.

**MINUTES OF AUGUST 31, 2011
SPECIAL MEETING OF THE GROUNDWATER QUALITY COMMITTEE
OF THE BOARD OF DIRECTORS OF THE
WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA**

A special meeting of the Groundwater Quality Committee of the Board of Directors of the Water Replenishment District of Southern California was held on Wednesday, August 31, 2011, 12:55 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, Cathy Chang, Charlene King, and
Special Counsel David Alvarez

2. PUBLIC COMMENT

None.

3. MINUTES OF THE MEETINGS OF MAY 25, 2011, JUNE 22, 2011, AND JULY 29, 2011

The minutes were approved as submitted.

4. GROUNDWATER QUALITY UPDATE – FINAL PUBLIC HEALTH GOAL FOR HEXAVALENT CHROMIUM

Dr. Cathy Chang informed the Committee that on July 27, 2011, the California Office of Environmental Health Hazard Assessment (OEHHA) announced a final public health goal (PHG) for hexavalent chromium (aka chromium 6) of .02 parts per billion (ppb). Dr. Chang explained that currently, the federal and state governments only regulate total chromium (consisting of chromium 3 and chromium 6) at 100 ppb and 50 ppb, respectively. She noted that the California PHG for hexavalent chromium is the first in the nation and, once established, the maximum contaminant limit (MCL) for hexavalent chromium is expected to also be the first nationally to address hexavalent chromium in drinking water. Dr. Chang noted that the current state MCL for total chromium will remain in effect until a specific standard for hexavalent chromium is established.

Dr. Chang stated that the OEHHA adopted a conservatively low PHG of 0.02 ppb after taking into account young children who are more sensitive to hexavalent chromium's effects than adults. She stated that hexavalent chromium can occur naturally, enter the drinking water sources by leaks from industrial hazardous waste sites, and is a known carcinogen when inhaled. In addition, recent studies have shown carcinogenicity of chromium-6 in laboratory animals when exposed through drinking water.

Dr. Chang stated that hexavalent chromium can be removed from water using proven treatment techniques like anion exchange, membrane filtration by nanofiltration reverse osmosis, and reduction-coagulation-filtration to below 5 ppb range.

Dr. Chang stated that very low ppbs (mostly in fractions of ppbs) of hexavalent chromium have been detected in WRD's service area. She added that the very low detections are indicative of the recent advances in analytical sciences and that detections in themselves should not necessarily be construed as problematic.

Discussion followed. The Committee recommended that pumpers and other stakeholders be informed of the latest PHG and that an MCL may be adopted. The Committee also requested additional information be provided at next month's meeting.

5. WORLEYPARSONS CONTRACT AMENDMENT FOR ASSISTANCE WITH CONTAMINATED SITE INVESTIGATION AND EXPEDITED CLEANUP

Chief Hydrogeologist Ted Johnson stated that staff entered into a contract with WorleyParsons for a benefit-cost-risk analysis for potential cleanup and cost recovery of contaminated sites. He stated that other tasks included as-needed consulting services for assistance with contaminated site investigations. Mr. Johnson noted that staff has been pleased with the work completed by WorleyParsons and would like to recommend extending the term of the contract for an additional year to continue work that still needs to be done. He stated that it would primarily include investigation of perchlorate sources in the Vernon area and evaluation of the Del Amo Superfund site in the Harbor Gateway area near Carson and Torrance.

The Committee concurred with the staff recommendation that the Board amend the existing contract with WorleyParsons increasing the budget amount by an additional \$25,000 and extending the term to June 30, 2012.

6. RFP FOR GOLDSWORTHY DESALTER EXPANSION FEASIBILITY STUDY

Mr. Johnson stated that over 18,000 acre-feet of saline groundwater has been extracted and treated from the Goldsworthy Desalter for use by the City of Torrance. He stated that the District would like to maximize this local resource and consider expansion of the Desalter facility or evaluate potential regional desalting facilities. He explained that the District has been awarded a grant through the WaterSMART Program administered by the U.S. Bureau of Reclamation to partially fund the feasibility study for the Desalter expansion. Mr. Johnson stated that the study will examine and address the technical, legal and

institutional issues necessary to expand the Desalter and increase its capacity of 2.5 million gallon per day (mgd) to a projected total of 5mgd.

The Committee concurred with the staff recommendation that the Board approve issuance of a request for proposal to procure a qualified consultant to perform the Goldsworthy Desalter expansion feasibility study.

7. SAFE DRINKING WATER PROGRAM

Associate Engineer Charlene King presented the Committee with the proposed Safe Drinking Water Program (SDWP) policy guidelines and application, and the amended Loan Agreement. Specifically, Ms. King noted Section 5 – Pre-Approval of Bid Documents, Contractors and Consultants and Section 7 – Signage and Project Publicity of the Loan Agreement addressing the Committee’s concerns raised at last month’s meeting.

Discussion followed. The Committee recommended the Grant and Loan Agreements as modified and the SDWP policy application/guidelines be adopted by the Board at its September meeting.

Ms. King also informed that Committee that a letter was received from Maywood Mutual No.2 asking for an extension in their loan payments.

8. DIRECTORS’ REPORTS, INQUIRIES, AND FOLLOW UP OF DIRECTIONS TO STAFF

The next Committee meeting is scheduled Wednesday, September 28 at 12:30 p.m.

9. ADJOURNMENT

There being no further business to come before the Committee, the meeting was adjourned at 2:05 p.m.

Chairperson

Attest:

Director



MEMORANDUM

ITEM NO. 4

Prepared by: Cathy Chang

Reviewed by: Ted Johnson

Approved by: Robb Whitaker

DATE: SEPTEMBER 28, 2011

TO: GROUNDWATER QUALITY COMMITTEE

FROM: ROBB WHITAKER, GENERAL MANAGER

**SUBJECT: GOVERNMENT ACCOUNTABILITY OFFICE'S REPORT ON
PHARMACEUTICALS IN NATION'S DRINKING WATER**

SUMMARY

On September 8, 2011, the Government Accountability Office (GAO) released a new report on the presence of pharmaceuticals in drinking water supplies. The report concluded that there is limited data on the health effects of low-dose, long-term exposure to pharmaceuticals. In addition, the GAO recommended that the United States Environmental Protection Agency (US EPA) better coordinate with other government agencies to collect more data on occurrence and health effects. Additional findings of the report are described below.

National and regional studies by the U.S. Geological Survey (USGS), US EPA, and others have detected pharmaceuticals in source water, treated drinking water, and treated wastewater at very low levels, typically in parts per trillion. Research has not determined the human health effects of exposure to these concentrations of pharmaceuticals in drinking water.

The report cites certain actions taken by some states and local governments as well as the Drug Enforcement Administration to reduce the extent to which pharmaceuticals occur in drinking water, including drug take-back programs which encourage proper control and disposal of pharmaceuticals. WRD has been involved with discussions about potential drug take-back programs with the Committee and the Sanitation Districts.

Insufficient data on occurrence and health effects of pharmaceuticals and other contaminants in drinking water appear to hinder US EPA from conclusively identifying which, if any, pharmaceuticals should be regulated under Safe Drinking Water Act. US EPA is collaborating with the Food and Drug Administration and USGS on research to help obtain such data. However, these efforts remain largely informal, unsupported by a formal mechanism, such as a long-term strategy or formal agreement, to manage and sustain these collaborative efforts.

GAO previously identified several practices for enhancing and sustaining collaboration among federal agencies, some of which may help clarify such coordination, such as defining the roles and responsibilities of collaborating agencies; leveraging their resources; and

establishing a process for monitoring, evaluating, and reporting to the public the results of the collaborative research efforts.

WRD has participated in numerous research projects with regards to the presence or lack of pharmaceuticals in recharge water, and the effectiveness of various treatment technologies such as soil-aquifer treatment, nano-filters, and reverse osmosis membranes to remove them. WRD expects to continue monitoring and contributing to the science being performed on these compounds to ensure safe and reliable recharge water. Staff is also preparing an informational flyer on the results of the GAO report for distribution on our web site and for emailing to our stakeholders. This flyer will be distributed at the Committee meeting.

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: SEPTEMBER 28, 2011

TO: GROUNDWATER QUALITY COMMITTEE

FROM: ROBB WHITAKER, GENERAL MANAGER

SUBJECT: GROUNDWATER CONTAMINATION UPDATE

BACKGROUND

With the cooperation and support of stakeholders such as the United States Environmental Protection Agency (USEPA), California Regional Water Quality Control Board, Los Angeles Region (RWQCB), and California Department of Toxic Substances Control (DTSC), WRD developed a list of high-priority contaminated groundwater sites within District boundaries. This list is a living document, subject to cleanup and "closure" of sites as well as discovery of new sites warranting further attention. Currently, the list includes 46 sites across the Central and West Coast Basins.

WRD has been working with the lead regulatory agencies for each of these sites to keep abreast of their status, review and provide recommendations as needed, facilitate progress in site characterization and cleanup, and provide technical and financial assistance when necessary. Below is a discussion of two sites that were recently updated with information obtained from the indicated lead regulatory agency.

MONTROSE CHEMICAL CORPORATION SUPERFUND SITE, CITY OF LOS ANGELES (WEST COAST BASIN)

From 1947 to 1982, Montrose Chemical Corporation manufactured dichlorodiphenyl-trichloroethane (DDT) at the 13-acre site. During this period, Montrose Chemical released hazardous substances (including DDT, chlorobenzene, solvents, petroleum hydrocarbons) to soils at and adjacent to the site and to groundwater via an unlined wastewater settling/recycling pond (a.k.a., surface impoundment), underground wastewater holding and neutralization/treatment tanks, in-ground waste conveyance trenches, leaks from processing equipment, piping, and multiple aboveground tanks that contained feedstock chemicals, concentrated acid, and waste acid. The surface impoundment was used for a variety of purposes, including neutralization of acid wastes, staging of tars and caustic liquors, and drying sludges. By 1985, the entire site was razed and capped with asphalt and remains vacant today. In 1989, the site was added to the USEPA's National Priority List (NPL) and thus, investigations and cleanups are being conducted under the oversight of the USEPA.

The constituents of concern in groundwater are volatile organic compounds (VOCs), mainly chlorobenzene, para-chlorobenzene sulfonic acid, and chloroform. Groundwater contamination has been confirmed as deep as the Gage and Lynwood Aquifers. As of June

2011, no chemicals of concern have been detected in the nearest active production (drinking water) wells.

Remediation activities to date include the asphalt cap that was placed over the entire site and the removal of DDT from soils in the surrounding residential properties and streets.

Contaminants in groundwater have migrated approximately 1 mile off site to the southeast and the plume has commingled with contaminants that originate from the adjacent Del Amo Superfund site (directly east of the Montrose Chemical property). A dual site groundwater treatment system is currently being constructed to address the commingled plumes from both Superfund sites. This groundwater remedy includes approximately 14 extraction wells, a treatment plant that will be constructed on the Montrose Chemical property, and re-injection wells for the treated groundwater. The system is expected to begin operating by late 2012/early 2013 and is estimated to operate for approximately 50 years.

DEL AMO SUPERFUND SITE, CITY OF LOS ANGELES (WEST COAST BASIN)

The 280-acre site is the former location of a synthetic rubber manufacturing facility that operated from 1942 to 1972 to produce rubber for World War II. The site was initially owned by the United States (US) government and consisted of three separate plants that produced styrene, butadiene, and rubber. In 1955, the US government sold all three plants to Shell Oil Company and Shell continued to operate these plants until 1971. At each plant, wastes from the production processes, such as aqueous wastes, viscous wastes, acid sludge, lime slurry, petroleum hydrocarbons, sulfur tars, were disposed at the on-site 5-acre Waste Pits Area (southeastern end of site), which consisted of six unlined pits and four unlined evaporation ponds with total depths ranging from 6 feet to 22 feet below ground surface. In 1972, the site was sold to a developer and the site was redeveloped for industrial and commercial uses, including light manufacturing, warehousing, and offices. In 1989, the site was added to the USEPA's National Priority List (NPL) and thus, investigations and cleanups are being conducted under the oversight of the USEPA.

Site cleanup is being addressed as three Operable Units (OUs):

1. OU-1: Soil and Non-Aqueous Phase Liquid (NAPL) – Includes shallow soils and deep soils beneath the entire site, except for the waste pits area
2. OU-2: Waste Pits Area (5-acre southeastern portion of the site that is currently undeveloped) – Includes the 6 unlined waste pits and 4 unlined evaporation ponds and surrounding impacted soil
3. OU-3: Dual Site Groundwater – Includes the commingled groundwater plumes that originated from the Del Amo Superfund site and the adjacent Montrose Chemical Superfund site (to the west)

Due to historical site activities, soil and groundwater beneath the site is contaminated VOCs, mainly benzene, toluene, ethylbenzene, and trichloroethene. Groundwater contamination has been confirmed as deep as the Gage and Lynwood Aquifers. As of June 2011, no chemicals of concern have been detected in the nearest active production (drinking water) wells.

Remediation activities at the on-site Waste Pits Area (OU-2) include a multi-layer impermeable cap (1999) over the waste pits and a soil vapor extraction (SVE) system with in situ



MEMORANDUM

ITEM NO. 6

<i>Prepared by:</i>	Theresa Wu
<i>Reviewed by:</i>	Ted Johnson
<i>Approved by:</i>	Robb Whitaker

DATE: SEPTEMBER 28, 2010

TO: GROUNDWATER QUALITY COMMITTEE

FROM: ROBB WHITAKER, GENERAL MANAGER

SUBJECT: TIME EXTENSION WITH DEPARTMENT OF WATER RESOURCES FOR AB303 GRANT

SUMMARY

On September 19, 2008, the Board approved an agreement with the U.S. Geological Survey (USGS) to conduct the Central Basin Groundwater Contamination Study for an amount not to exceed \$352,140 with the understanding that \$250,000 would be reimbursed to WRD from AB303 Local Groundwater Assistance (LGA) Program grant funds. WRD executed a funding agreement in November 2008 with the California Department of Water Resources (DWR) for a \$250,000 grant through the LGA Program.

In December 2008, in the context of the State's budget crisis, DWR issued instructions to suspend all work funded by the State's general obligation bonds including the AB303 grant funds, advising grantees that continuation of work would be at their own risk. Accordingly, work was stopped in January 2009 and WRD began communicating with DWR regarding how and when to proceed again.

On February 19, 2010 the Board directed staff to resume work on the Central Basin Groundwater Contamination Study with the USGS, recognizing that WRD may not be reimbursed in full for the \$250,000 of AB303 grant funds.

Work resumed April 1, 2010 as mutually agreed with DWR, and in April 2010 DWR unilaterally issued time extensions to accommodate the delays caused by the suspension of work. The first amendment modified the agreement termination date to November 15, 2011. WRD requested in July that the termination date be revised to July 31, 2012 to allow adequate time to complete the Study and final report. The DWR has issued a second amendment to modify the term accordingly.

FISCAL IMPACT

None. This amendment modifies the term of the agreement with DWR.

STAFF RECOMMENDATION

Authorize the General Manager to execute an amendment to the Local Groundwater Assistance grant agreement (AB303) with the State of California Department of Water Resources to extend the termination date to July 31, 2012. All other conditions of the agreement will remain the same.



MEMORANDUM

ITEM NO. 7

Prepared by: Charlene King

Reviewed by: Ted Johnson

Approved by: Robb Whitaker

DATE: SEPTEMBER 28, 2011

TO: GROUNDWATER QUALITY COMMITTEE

FROM: ROBB WHITAKER, GENERAL MANAGER

SUBJECT: SAFE DRINKING WATER PROGRAM STANDARD AGREEMENTS

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 the standard agreements 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.



MEMORANDUM

ITEM NO. 8

Prepared by: Charlene King

Reviewed by: Ted Johnson

Approved by: Robb Whitaker

DATE: SEPTEMBER 28, 2011

TO: GROUNDWATER QUALITY COMMITTEE

FROM: ROBB WHITAKER, GENERAL MANAGER

SUBJECT: SAFE DRINKING WATER PROGRAM – REQUEST FROM MAYWOOD MUTUAL #3

SUMMARY

The District administers the Safe Drinking Water Program (SDWP) to assist basin pumpers in sustaining active production from contaminated wells. Wells are evaluated for assistance based on factors such as water quality data and production history. When assistance is deemed necessary, WRD and the basin pumper jointly develop a treatment solution for the subject well.

Maywood Mutual Water Company No. 3 has a well currently affected with Trichloroethylene (TCE), a Volatile Organic Compound (VOC), at levels exceeding the state drinking water standard and therefore cannot serve the water to the public without treatment. Maywood Mutual No. 3 has formally requested financial assistance from WRD through the SDWP for treatment at their Prospect Well for VOCs. Treatment for VOCs qualifies as a Priority A project for WRD, where the District provides grant funding for design and construction of the treatment system.

The wellhead treatment system will likely consist of one complete granular activated carbon system. A permit to operate the system will be obtained by Maywood Mutual Company No. 3 from the California Department of Public Health and a discharge permit (if needed) will be obtained from the Los Angeles Regional Water Quality Control Board prior to the construction and operation of the facility.

The facility will be built within the boundaries of the well site owned and operated by the Maywood Mutual Water Company, whose personnel will perform the routine operation and maintenance associated with wellhead treatment system. The system will have the capacity to treat the full flow of the well. The treated water will be disinfected prior to entering the distribution system.

FISCAL IMPACT

The construction cost of the treatment system is estimated not to exceed \$800,000. Funds for this project are budgeted.

STAFF RECOMMENDATION

Approve the Maywood Mutual Water Company No. 3 Prospect Well as a project funded through the Safe Drinking Water Program and enter into an Agreement with Maywood Mutual Water Company No. 3, subject to approval as to form by District Counsel, to construct a wellhead treatment system at Prospect Well for an amount not to exceed \$800,000.