MEETING OF THE GROUNDWATER QUALITY COMMITTEE
OF THE BOARD OF DIRECTORS
WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA
4040 PARAMOUNT BOULEVARD, LAKEWOOD, CA 90712
12:00 P.M., WEDNESDAY, AUGUST 26, 2009

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 JUNE 11, 2009 AND JUNE 24, 2009**
   Staff Recommendation: Approve the minutes of June 11, 2009 and June 24, 2009 as submitted.

4. **CONTRACT TERM EXTENSION FOR OPERATONS OF GOLDSWORTHY DESALTER**
   Staff Recommendation: Amend the existing agreement, subject to approval of form by District Counsel, with the Southwest Water Company Services, Inc., to extend the term of the operation services of the Goldsworthy Desalter to December 31, 2009, with a provision for an additional term of 12 months if necessary.

5. **AGREEMENT WITH DTSC FOR GROUNDWATER SAMPLING**
   Staff Recommendation: Approve the renewal agreement with DTSC and fund one round of monitoring and sampling of the six wells outside the AAD site for a cost not to exceed $35,000.

6. **WATER RESEARCH FOUNDATION RENEWAL**
   Staff recommendation: Renew subscription with the Water Research Foundation in the amount of $51,537 for the period October 2009 to September 2010.

7. **SAFE DRINKING WATER PROGRAM**
   Staff recommendation: For information.

8. **GROUNDWATER CONTAMINATION UPDATE**
   Staff Recommendation: For information.

9. **DIRECTORS' REPORTS, INQUIRIES, AND REVIEW OF DIRECTIONS TO STAFF**

10. **ADJOURNMENT**

Posted by Abigail C. Andom, Deputy Secretary, August 20, 2009.

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 JUNE 11, 2009
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 Thursday, June 11, 2009, 9:26 a.m., at the District Office, 4040 Paramount Boulevard, California. Chairperson Rob Katherman called the meeting to order and presided thereover. Administrative Specialist Sheryll A. Moffat recorded the minutes.

1. DETERMINATION OF A QUORUM

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

2. PUBLIC COMMENT

None.

3. MINUTES OF THE SPECIAL MEETING OF APRIL 30, 2009

The minutes were approved as submitted.

4. GROUNDWATER QUALITY COMMITTEE – CONSUMER CONFIDENCE REPORTS

Associate Engineer Charlene King said that since 1991 the State Department of Public Health has required water purveyors to provide Consumer Confidence Report (CCR) to their customers. She said that for the District's Title 22 participants which includes 21 pumpers, staff is responsible for their reports including the Spanish version. She distributed copies of the reports for the City of South Gate and the Bellflower Municipal Water System. She concluded saying that the reports are due to the public by July 1st and staff sent these out to the pumpers by the end of May.

Senior Engineer Hoover Ng complimented Ms. King on the tremendous effort she put forward in completing these reports in such a timely and high quality manner.

The committee requested that this report be presented to the Board as an informational item at a future meeting.

5. GROUNDWATER CONTAMINATION UPDATE

Water Quality Specialist Phuong Ly said that she will be discussing two sites that are high-priority contaminated groundwater sites within the District's boundaries: Phibro Tech in Santa Fe Springs and the Mobil-Torrance Refinery in Carson. She distributed several handouts to supplement her presentation.

She stated that Phibro-Tech is an active facility that receives hazardous liquid wastes and recyclable materials. In this area, the groundwater flows to the southwest. There are a total of 28 on-site groundwater monitoring wells; 14 wells are sampled quarterly. Of the 28 wells, one well is screened in the shallow and consistently unsaturated Gage Aquifer, 20 wells are screened in the upper portion of the Hollydale Aquifer and 7 wells are screened in the lower portion of the Hollydale Aquifer. She said the last groundwater samples were collected in October 2008 and that a soil vapor extraction (SVE) system (7 extraction wells) has been removing volatile organic compounds (VOCs) from the soil at the site.
She said that the Mobil Torrance Refinery includes multiple above ground storage tanks (ASTs), pipelines, process areas and equipment, material and waste storage areas, and treatment and disposal units. She said that the groundwater flows in an easterly direction and that groundwater extraction wells have been installed at the southeastern portion of the site and have operated since 1988 to contain and prevent migration of the plume.
In conclusion, it is the District's responsibility to monitor all of the contaminated sites and ensure that the regulators are managing the clean-up expediently.

6. AWARD OF PROFESSIONAL SERVICES CONTRACT FOR BENEFIT-COST-RISK ANALYSIS, FOR CONTAMINATED SITE INVESTIGATIONS, REMEDIATION AND COST RECOVERY

Senior Hydrogeologist Nancy Matsumoto stated that the Committee had requested that a benefit-cost-risk analysis be performed for each of the various alternatives for expansion of the District's Groundwater Contamination Prevention Program. An RFP was issued to perform the analysis, and staff evaluated each submitted proposal utilizing a weighted system. Following interviews of the highest-ranked firms, staff selected the engineering firm of Worley Parsons Komex, which has done substantive work of this type.

The Committee unanimously approved the staff recommendation, but with the additional conditions: 1) The project budget include a 20% contingency for Worley Parsons Komex services ($11,000.00 plus $55,000.00), 2) Worley Parsons Komex subcontracts Musick, Peeler & Garrett LLP for legal input and assistance on the project for an amount not to exceed $20,000. Therefore, the total authorized amount would be $86,000.

As a matter of disclosure, Director Katherman noted that he has done work with URS, one of the firms which submitted a proposal for this project.

7. SALINE PLUME POLICY UPDATE

Chief Hydrogeologist Ted Johnson stated that the newest WRD nested monitoring well by Columbia Park has not been sampled yet, but that geophysical logs show saline groundwater between approximately 320'-350' below ground surface. Staff plans to install a second well at the Madrona Marsh parking lot and is waiting for the City of Torrance to approve this location.

Staff has updated the draft Saline Plume Policy resolution per the Committee's previous comments. In keeping with the District's commitment to the pumping community, a saline plume working group was being formed and staff was compiling contacts for the group and scheduling the first meeting in June or July. After some discussion, the Committee recommended that the saline plume working group incorporating into the West Coast Basin Optimization Study group.

8. DIRECTORS' REPORTS, INQUIRIES AND REVIEW OF DIRECTIONS TO STAFF

Director Calderon asked if staff had received any applications for the wellhead treatment program to which Ms. King said yes and she would be bringing back a report to this committee at the next meeting.

9. ADJOURNMENT

There being no further business to come before the Committee, the meeting was adjourned at 10:55 a.m.

_____
Chairperson

Attest:

_____
Director

MINUTES OF JUNE 24, 2009
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 Thursday, June 24, 2009, 12:15 p.m., at the District Office, 4040 Paramount Boulevard, California. Chairperson Rob Katherman called the meeting to order and presided thereover. Administrative Specialist Sheryll A. Moffat recorded the minutes.

1. DETERMINATION OF A QUORUM

Committee: Directors Rob Katherman and Sergio Calderon
Staff: Ted Johnson, Bob Siemak, Hoover Ng, Nancy Matsumoto, Phuong Ly.

2. PUBLIC COMMENT

Director Calderon introduced Matthew Wagner, a local resident, and Ms. Matsumoto introduced Bob Scott of The Boeing Company and Chris Ross of Hargis & Associates, Inc., The Boeing Company's consultant.

3. CONSIDERATION OF RESOLUTION NO. 09-853 FOR A REPLENISHMENT ASSESSMENT EXEMPTION AND RESOLUTION NO. 09-854 FOR A NONCONSUMPTIVE WATER USE PERMIT FOR GROUNDWATER CLEANUP AT THE BOEING C-1 FACILITY SITE, CITY OF LONG BEACH, CENTRAL BASIN, CALIFORNIA

Senior Hydrogeologist Nancy Matsumoto stated that the District has received an application from The Boeing Company for a Replenishment Assessment (RA) Exemption for the clean up of shallow, isolated groundwater contamination beneath its former C1 Facility. She explained that this remediation consists of extracting groundwater from 16 wells and treating the water in granular activated carbon vessels before discharging it to the sanitary sewer. WRD has the authority to provide RA Exemptions to encourage groundwater treatment programs such as this, which remedy groundwater contamination but cannot effectively put the treated water to beneficial use.

WRD also has the authority to issue Nonconsumptive Water use (NWU) Permits to exempt such pumping from the Central Basin Judgment. Because The Boeing Company is not a party to the Judgment, District counsel recommends that a valid water rights holder apply for the NWU Permit and then assign it to The Boeing Company. This has been done in the past for other entities. Accordingly, the City of Long Beach, which has water rights in the Central Basin, has entered into an agreement with The Boeing Company to assign its NWU Permit to Boeing so that it can pump and treat the contaminated groundwater.

Following Ms. Matsumoto's introductory statements, Mr. Ross and Mr. Scott gave a PowerPoint presentation detailing their research and findings with respect to the technical and economic infeasibility of reinjecting the treated groundwater or otherwise putting it to beneficial use.

Director Katherman indicated that in the future, due to potential increased demands on local recycled water, the treated groundwater from the former C1 Facility may need to be reassessed for its suitability for reuse. Ms. Matsumoto indicated that this is part of the RA Exemption and NWU Permit renewal process.

The RA Exemption and NWU Permit for the former C1 Facility would be valid for 5 years, with pumping not to exceed 97 acre-feet per year.

The Committee unanimously approved the staff recommendation to 1) Adopt Resolution No. 09-853 to grant a Replenishment Assessment Exemption for the extraction of contaminated groundwater at The Boeing Company's Former C1 Facility; 2) Adopt Resolution No. 09-854 to grant a Non-consumptive Water Use permit to the City of Long Beach for assignment to the Boeing Company, for the extraction of contaminated groundwater at the Boeing Company's Former C1 Facility.

4. GROUNDWATER QUALITY REGULATORY UPDATE

Senior Engineer Hoover Ng said that he would be giving an update on three different water quality constituents: arsenic, perchlorate and Chromium 6. He said the first compound, arsenic, occurs naturally in groundwater at varying concentrations. He stated that in California, the State's Office of Environmental health Hazard Assessment (OEHHA) finalized a public health goal (PHG) for arsenic in April 2004 at 0.004ppb, which is 2,500 times lower than the Federal MCL. He said that before a drinking water standard is set the following questions must be answered: can it be effectively treated, can it be detected and can it be properly tested for. He said that there are 10 production wells in the District's service area that have arsenic levels that exceed 10ppb and continue to be in service as a result of treatment or blending, or have been removed from service.

He said that the next contaminant, perchlorate, is of industrial origin. It is a component of rocket fuel, missiles, and fireworks, and can inhibit the uptake of iodide by the thyroid gland, which leads to impairment of metabolism, proper development of young children and creation of tumors in the thyroid. He said there are two production wells in our service area that have perchlorate; one of those was just taken out of service last October and the other has been treated by California Water Service for 4 years using ion exchange. There is also some evidence that perchlorate may be formed as a byproduct of disinfection; research is ongoing.

He said that final compound he will discuss is Chromium 6 and that chromium exists in two forms: chromium 3 and chromium 6. Chromium 3 is a nutrient that is found in food and vitamins and chromium 6 is known to cause cancer when inhaled. The conversion of chromium 6 to chromium 3 is likely to occur in the gastric juices in the stomach, suggesting there may not be a problem with drinking low levels of chromium 6 as it will convert to chromium 3 but research is ongoing. He said the OEHHA has yet to establish a PHG for chromium 6. The most promising treatment is reduction of chromium 6 to chromium 3 followed by coagulation and filtration based on research conducted for the City of Glendale.

5. GROUNDWATER CONTAMINATION UPDATE

Water Quality Specialist Phuong Ly said that she will be discussing two of the total 47 contaminated groundwater sites: Honeywell International Corp. in El Segundo and Thrifty Oil Station #010 in Montebello. She said that the Honeywell facility is located in the West Coast Basin at the corner of Sepulveda and Rosecrans. She said that staff will follow up on the vinyl chloride detected in the Gage Aquifer and assist the Regional Water Quality Control Board in cleaning it up.

She said that the Thrifty Oil Station #010 is now an active retail/gasoline station/convenience store owned by Thrifty Oil Co. The site is located in the Montebello Forebay of the Central Basin. She said that in June 1988, four single-walled underground storage tanks (USTs) were replaced by three 10,000 gallon double-walled USTs at the site.

She said that since January 2005, a soil vapor extraction (SVE) system has been operating through the use of six extraction wells. The SVE system was shut down on March 19, 2009 due to low hydrocarbon concentrations in the influent. She said that two criteria must be met for case closure: 1.) the plume has to be defined and 2.) concentrations are no longer increasing. Case closure was requested from the Regional Water Quality Control Board (RWQCB). The District will provide RWQCB with the results of our review.

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

There were none.

7. ADJOURNMENT

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

_____

Chairperson

Attest:

Director

WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA

MEMORANDUM

ITEM NO. 4

Prepared by:	Paul Fu
Reviewed by:	Robert Siemak
Approved by:	Robb Whitaker

DATE: AUGUST 26, 2009

TO: GROUNDWATER QUALITY COMMITTEE

FROM: ROBB WHITAKER, GENERAL MANAGER

SUBJECT: CONTRACT TERM EXTENSION FOR OPERATIONS OF GOLDSWORTHY DESALTER

SUMMARY

The District entered into an agreement with the Southwest Water Company Services Inc. (SWWC, formerly Eco Resources) in October 2001 for the operations of the Goldsowrthy Desalter, which has since supplied approximately 12,000 acre feet of potable water to the City of Torrance (the City). During April 2006, approximately 6 months prior to the expiration of the agreement, the District and the City discussed the possibility of the City taking over operations of the Desalter, since the Desalter's product water goes directly into Torrance's water system. At that time, the City determined that it was not ready for the operations of the Desalter and asked that the District continue to operate the facility. Therefore, the District proceeded with a competitive selection process for a new contract operator and selected SWWC to continue with the operations of the facility. The agreement with the SWWC was amended in September 2006 for a 3-year term extension with an expiration date on October 1, 2009.

A meeting held in March 2009 between staffs of the District and Torrance's Public Works reopened discussions on the subject of the City taking over the operations of the facility prior to the expiration of the current operations agreement with SWWC in October 2009. Discussions with the City were encouraging and they agreed to evaluate their situation and seek internal approval from the City Manager. The District and the City have since worked together on the conditions and requirements for the operations of the Desalter, and the City verbally agreed in early August to take over the operations but requested some time to complete the transition process. As a result, it is necessary for SWWC to continue to operate the facility until the end of this year to allow Torrance with sufficient time to prepare itself for operations of the facility.

SWWC agreed to continue to operate the Desalter for an additional three months, that is, until the end of this year to allow for a smooth transition to Torrance. SWWC has requested that, if the District desires to extend the operations agreement beyond the end of this year, the additional term of extension must be 12 months as a month-to-month extension presents staffing issues for SWWC.

Staff met with City's management on August 17, 2009 to discuss the schedule and requirements for the transition of operations. The parties believe that the City should be able to take over the operations by the end of this year. The City does have to conduct a "meet

and confer" session with the City's employees union to receive union approval. This session is scheduled for the week of August 24th .City also requested support from the District to train its operators to prepare for the operations and the District agreed to provide this support including hiring a consultant specializing in reverse osmosis treatment plant operations to assist during the transition period. Over the next 2 months, the two parties will jointly develop an agreement for the operations of the Desalter and District staff will bring to the Groundwater Committee for review and to the Board for approval.

Staff recommends that the existing operations agreement with SWWC be extended to the end of this year to allow a smooth transition of the operations to the City. The attached draft amendment to the agreement is required for an extension of term. The draft amendment is being reviewed by District's Counsel.

The net benefits of the City operating the facility are:

- More reliable operations as the City controls the operation of one of its water sources.
- More efficient and integrated management and operations structure.
- No increase in cost to the District, and the District may realize a net savings in the long run since it is contracting with an organization that does not have a profit motive.
- Additional operating expertise in desalting facilities by the City in the event that similar facilities are built in the future to manage the regional saline plume.

FISCAL IMPACT

The operations and maintenance of Goldsworthy Desalter is covered under the FY 2009-010 Budget for the Desalter.

STAFF RECOMMENDATION

Amend the existing agreement, subject to approval of form by District Counsel, with the Southwest Water Company Services Inc., to extend the term of the operation services of the Goldsworthy Desalter to December 31, 2009, with a provision for an additional term of 12 months if necessary.

AMENDMENT NO. 2

TO CONTRACT NO. 87
AGREEMENT FOR PROFESSIONAL SERVICES
BETWEEN
WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA
AND
SOUTHWEST WATER COMPANY SERVICES, INC.

This Amendment to Agreement For Professional Services effective as of **October 1st, 2009** ("Effective Date"), is entered into by and between the Water Replenishment District of Southern California (hereinafter "WRD"), a public entity, and the **SouthWest Water Company Services, Inc.**, formerly known as ECO Resources, Inc. (hereinafter "Service Provider"). The WRD and Service Provider are collectively referred to as PARTIES.

RECITALS

A. On the First day of October 2001, a certain agreement, hereinafter referred to as Contract No. 87, was executed between the PARTIES for operations and maintenance of the Goldsworthy Desalter.

B. On the First day of October 2006, Amendment No. 1 to Contract No. 87, was executed between the PARTIES for operations and maintenance of the Goldsworthy Desalter.

C. The PARTIES desire to enter into Amendment No. 2, and have agreed to amend the Term of the Agreement provision of Contract No. 87, together with Amendment No. 1 (collectively referred to as "AGREEMENT").

AMENDMENT

NOW, THEREFORE, in consideration of the mutual covenants, promises, and agreements set forth, it is agreed the aforesaid Contract No. 87, a copy of which is attached and incorporated herein by reference, shall remain in full force and effect, except as otherwise hereinafter provided.

The PARTIES agree to amend the AGREEMENT as follows:

1. Term of Agreement: The term of the Agreement shall be extended to December 31, 2009 (the "Expiration Date"). WRD will notify Service Provider in writings at least 30 days prior to the Expiration Date with its decision on whether to extend the term of the AGREEMENT beyond the Expiration Date. If the decision is for a contract extension, the AGREEMENT shall be extended to December 31,

2010.

2. Remaining Portions of the Agreement: Except as otherwise expressly set forth in this Amendment No. 2, all other provisions of the AGREEMENT remain in full force and effect between the PARTIES.

IN WITNESS WHEREOF, the PARTIES have caused this AMENDMENT No. 2 to the AGREEMENT to be executed the day and year first above written.

WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA

_____	_____
Signature	*Signature*
Albert Robles	Lillian Kawasaki
President, Board of Directors	Secretary, Board of Directors

SOUTHWEST WATER COMPANY ("Service Provider")

_____
Signature

_____
Print Name

_____
Title

Approved As To Form:
MEYERS, NAVE, RIBACK, SILVER & WILSON

_____
James M. Casso, General Counsel
Water Replenishment District of Southern California

WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA

MEMORANDUM

ITEM NO. 5

Prepared by: Nancy Matsumoto
Reviewed by: Ted Johnson
Approved by: Robb Whitaker

DATE: AUGUST 26, 2009

TO: GROUNDWATER QUALITY COMMITTEE

FROM: ROBB WHITAKER, GENERAL MANAGER

SUBJECT: AGREEMENT WITH DTSC FOR GROUNDWATER SAMPLING

SUMMARY

The abandoned AAD Distribution and Dry Cleaning Facility in the city of Vernon is included on the District's list of high-priority contaminated sites and therefore is closely monitored by Staff. Shallow soil contamination consisting of perchloroethylene (PCE) had been detected beneath the site as well as PCE and trichloroethylene (TCE) in six deep groundwater monitoring wells around the perimeter of the site. Funding of the investigation and cleanup of the soil has been under the purview of the State Department of Toxic Substances Control (DTSC).

During their investigation, the DTSC determined that the AAD site is unlikely to have caused the deep groundwater contamination and therefore the source of this groundwater contamination is not known. Both DTSC and WRD recognize that this groundwater contamination warrants further investigation. DTSC received State funds to pursue a "Site Discovery" screening-level investigation of potential sources for this contamination and this work is in progress. Meanwhile, DTSC is exhausting their remaining funds for cleanup of the AAD site.

In 2007, DTSC requested WRD's assistance in continuing groundwater monitoring of the six deep wells outside the AAD site. An Agreement was executed between DTSC and WRD, authorizing WRD to fund one round of water level measurements and groundwater sampling for selected constituents, including PCE and TCE. The work was performed in 2008 by a consultant managed by DTSC. Results from the work were reported by Staff at the District's Central and West Coast Basin Groundwater Contamination Forum meeting, and will be discussed at the Committee meeting.

This year, DTSC has requested that WRD fund a subsequent round of water level measurements and groundwater sampling of the six wells. A renewal Agreement was drafted by DTSC and approved by WRD legal counsel. As before, the work would be performed by a consultant managed by DTSC during the current Fiscal Year 2009 – 2010.

FISCAL IMPACT

$35,000.00 to fund one round of monitoring and sampling of the six wells. Funding for this Agreement is included in WRD's budget for Fiscal Year 2009 – 2010, under Project 006 (Water Quality).

STAFF RECOMMENDATION

Approve the renewal Agreement with DTSC and fund one round of monitoring and sampling of the six wells outside the AAD site for a cost not to exceed $35,000.

WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA

MEMORANDUM

ITEM NO. 6

Prepared by:	Hoover Ng
Reviewed by:	Ted Johnson
Approved by:	Robb Whitaker

DATE: AUGUST 26, 2009

TO: GROUNDWATER QUALITY COMMITTEE

FROM: ROBB WHITAKER, GENERAL MANAGER

SUBJECT: WATER RESEARCH FOUNDATION RENEWAL

SUMMARY

The Water Research Foundation (WRF or Foundation), formerly the American Water Works Association Research Foundation (AwwaRF), sponsors applied research for all aspects of the drinking water industry including water resources, supply, quality, and distribution. Much of this research has had direct applicability to WRD's projects and programs as discussed in more detail below. Membership affords WRD and local purveyors' access to and participation in state-of-the-art research developments in the water industry, and also maximizes leverage of pooling resources for mutually beneficial projects and investigations. WRD as a member is also able to submit proposals for new research ideas for consideration by the Foundation.

In recent years, the Foundation has conducted or sponsored research of particular relevance to WRD and our purveyors, including:

- *Soil aquifer treatment (SAT) of recycled water used for groundwater recharge;*
- *Emerging contaminants, including pharmaceuticals, endocrine disruptors, and personal care products – occurrence, toxicological impacts, analytical methods, and methods of treatment and control;*
- *Climate change and impacts to water supply and water quality;*
- *Tracking the movement of contaminants;*
- *Groundwater contamination occurrence and treatment – arsenic, chromium, and perchlorate;*
- *Desalination;*
- *Iron and manganese treatment;*
- *Evaluation of membrane technologies;*
- *Disinfection byproducts (DBP's);*
- *Distribution system water quality;*
- *Enhanced communication on drinking water issues.*

Being a member of the Foundation also provides an opportunity to sit on prestigious Project Advisory Committee (PAC) panels which provides technical review and guidance to their research projects. Recently, WRD staff has sat on PAC panels related to Groundwater Recharge Facilities, Carbon Sequestration, and Vadose Zone recharge wells. Sitting on the PAC panel affords the opportunity to guide the research project to areas directly related to WRD's activities. The Foundation has recently asked WRD to sit on an upcoming Phase II Research Project on clean coal technology – geologic carbon sequestration, and its potential negative effects on groundwater quality.

Research is funded through subscriber membership fees which are typically based on the annual amount of water delivered or served to customers. WRD has been a subscriber since 1992. Other

subscribers from the local area include the Central and West Basin Municipal Water Districts, Golden State Water Company, the Los Angeles Department of Water and Power, Long Beach Water Department and the Metropolitan Water District of Southern California.

FISCAL IMPACT

For the subscription period of October 2009 to September 2010, the membership fees are $51,537. It has been included in the current year 2009-10 budget under Project 006.

STAFF RECOMMENDATION

Renew subscription with the Water Research Foundation in the amount of $51,537 for the period October 2009 to September 2010.

WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA

MEMORANDUM

ITEM NO. 7

Prepared by:	Charlene King
Reviewed by:	Robert Siemak
Approved by:	Robb Whitaker

DATE: AUGUST 26, 2009

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. When assistance is deemed necessary, WRD and the groundwater producer jointly develop a treatment solution for the subject well. The well data, type of contaminates and affected duration of their wells is used to prioritize candidates.

There are currently fourteen (14) Safe Drinking Water Program project facilities in operation. The cities of Huntington Park, Commerce, and Paramount each have two facilities online. There are three facilities located in Norwalk. The other facilities are located in the cities of Bell Gardens, Signal Hill, South Gate, Bell, and Los Angeles. One facility, located in Pico Rivera, completed the use of treatment.

Project Updates

A. City of Huntington Park – Well 17 Treatment Expansion

The City of Huntington Park's Well 17 is currently affected with carbon tetrachloride, a volatile organic compound (VOC), at levels exceeding the maximum contaminant level allowed by the State of California Department of Public Health. Through the assistance of the District's Safe Drinking Water Program, the well was placed back into service in 2001 using two granular activated carbon (GAC) units; however, based on the effluent water quality and the carbon service life, the well is being operated at a reduced flow rate of 1400 GPM as opposed to the full capacity of 2100 GPM. In order to achieve the full capacity of the well, the City of Huntington Park submitted a formal request to the District to expand the treatment system and the Board approved the request at an amount not to exceed $700,000. At this time, the carbon systems have been installed and site construction is nearly complete. The City is awaiting final operational permit from the Department of Public Health.

B. City of Vernon – Wells 9 and 10

The City of Vernon purchased two industrial wells with the interest of using the wells as a potable water source; however, wellhead treatment will be needed at both wells. The 1000 gallon per minute (gpm) wells are currently affected by Carbon Tetrachloride (CCl4), 1,2-Dichloroethane (1,2-DCA), Trichloroethylene (TCE), and manganese. The City of Vernon submitted a formal request to be a participant of the WRD Safe Drinking Water Program and the Board approved appropriating funding for this project on March 21, 2008. The City of Vernon has received a waiver from the Department of Public Health (DPH) for manganese; however, treatment is required for VOC removal. URS Corporation, recently contracted by the District for professional services for the Safe Drinking Water Program has evaluated the wells and site conditions and determined that granular activated carbon (GAC) is the most efficient and economical treatment option currently approved by DPH. A technical memorandum of the treatment technology evaluation was submitted to the District and the City of Vernon.

C. Maywood Mutual Water Company No. 2 – Well 52nd

On June 19, 2009 the Board executed an agreement between Maywood Mutual Water Company No.2 and WRD for wellhead treatment at their 52nd Pump lot well. As the lead for this project, Maywood Mutual Water Company No 2 has contracted Layne to construct the manganese removal system. The company's 52nd Pump Lot Well is currently affected with manganese at levels exceeding the state standard. The company anticipates completion of the project by the end of summer.

D. New Candidates

The District received a formal request regarding participation in the Safe Drinking Water Program from Bellflower Home Garden Mutual Water Company. The company's Well 2 is currently affected with manganese at levels exceeding the state standard. Bellflower Home Garden inquired about treatment for manganese for their well. The company will submit the well data and history of their well for consideration.

The District has also received a formal request regarding participation from Park Water Company. The company's Well 9D is currently affected with arsenic and manganese. The company will submit the well data and water quality history for review and consideration.

E. Program Policy

At the April 2009 Groundwater Quality Committee meeting, the committee requested a discussion on options to increase participation of the Safe Drinking Water Program. While over the past few years, participation hit a decline; however, due to the current situation of the economy, interest in the program has started to increase. Pumpers are now gravitating to the option to restore inactive wells to reduce their cost of purchasing imported water.

SAFE DRINKING WATER PROGRAM
POLICY GUIDELINES

1) WRD will design, construct, and install equipment at any drinking water well containing primary (health-based) drinking water standard constituents of anthropogenic (man-made origin), as determined by the WRD Board, in excess of the maximum contaminant level.

2) At WRD's sole discretion, it will provide interest-free financing to drinking water well owners for treatment equipment to remove secondary (aesthetic-based) or naturally occurring primary (health-based) drinking water standard constituents in excess of the maximum contaminant level. Such projects shall be funded on a secondary priority to projects that satisfy Item #1 above, and the use of such remaining funds for the program shall be at the WRD Board's discretion.

3) Demonstration projects that have wide-spread application (as determined by the WRD Board) for other contaminants may also be considered for funding for design, construction, and installation.

4) WRD may remove the equipment and transfer it to another location. At WRD's sole discretion, ownership of the treatment equipment may be conveyed to the well owner.

5) Funding limits shall be subject to the annual program budget.

6) Well owner is responsible for proper operation and maintenance of treatment system.

FISCAL IMPACT

None.

STAFF RECOMMENDATION

For information.

WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA

MEMORANDUM

ITEM NO. 8

Prepared by:	Phuong Ly
Reviewed by:	Ted Johnson
Approved by:	Robb Whitaker

DATE: AUGUST 26, 2009

TO: GROUNDWATER QUALITY COMMITTEE

FROM: ROBB WHITAKER, GENERAL MANAGER

SUBJECT: GROUNDWATER CONTAMINATION UPDATE

CONTAMINATED GROUNDWATER SITES

With the cooperation and support of stakeholders such as the United States Environmental Protection Agency (USEPA), California Regional Water Quality Control Board (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 47 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, offer data collection, review and recommendations as needed, and facilitate progress in site characterization and cleanup. Below is a discussion of two sites that were recently updated with information obtained from the regulatory agency.

FORMER MCKESSON CHEMICAL COMPANY, INC. (CITY OF SANTA FE SPRINGS, CENTRAL BASIN, MONTEBELLO FOREBAY)

From 1976 to 1986, McKesson Chemical Company, Inc. (McKesson) occupied the 4.3-acre site & operated as a bulk chemical (primarily chlorinated solvents) repackaging facility. Chemicals were stored in aboveground storage tanks (ASTs) & underground storage tanks (USTs) and piped to packaging areas. Bulk chemicals were transported to and from the site by truck and rail. When site operations ceased in 1986, all USTs and ASTs were emptied. In 1992, all ASTs were removed; in 1996, all USTs were removed from the site. Under the oversight of the DTSC, McKesson began conducting investigations at the site in June 1984.

The property immediately north of the site was formerly occupied by Angeles Chemical Company (Angeles), which had operated as a chemical repackaging facility (existing WRD Category 1 Groundwater Contaminated Site) from 1976 through 2000. Both the McKesson and Angeles properties are located within the Omega Chemical (existing WRD Category 1 Groundwater Contaminated Site) groundwater VOC plume.

There are a total of 24 on-site groundwater monitoring wells, screened in the Gage and Hollydale Aquifers, that are monitored quarterly. The constituents of concern in soil and

groundwater beneath the site are chlorinated volatile organic compounds (VOCs) and 1,4-dioxane, with the highest concentrations detected in the upper Hollydale Aquifer. Since 2004, trichloroethene (TCE) has been detected in the nearest production well at concentrations up to 2.2 micrograms per liter (ug/L). Below is a summary of the most recent analytical results of groundwater samples collected from the site.

SUMMARY OF RECENT GROUNDWATER ANALYTICAL RESULTS Former McKesson Chemical Company, Inc., City of Santa Fe Springs		
Chemical	**Concentration In Groundwater (March 2009)**	**Maximum Contaminant Level (MCL)**
Tetrachloroethene (PCE)	170 ug/L (Well SB-20)	5 ug/L
Trichloroethene (TCE)	250 ug/L (Well MW-01)	5 ug/L
1,1-Dichloroethene (1,1-DCE)	470 ug/L (Well SB-36)	6 ug/L
cis-1,2-Dichloroethene (cis-1,2-DCE)	1,700 ug/L (Well SB-36)	6 ug/L
Vinyl chloride	230 ug/L (Well SB-07)	0.5 ug/L
1,1-Dichloroethane (1,1-DCA)	1,100 ug/L (Well SB-36)	5 ug/L
1,2-Dichloroethane (1,2-DCA)	53 ug/L (Well MPE-5)	0.5 ug/L
1,4-Dioxane	120 ug/L (Well SB-07)	None

Since 1994, a soil vapor extraction (SVE) system (4 extraction wells) has been removing VOCs from soil beneath the site. Since 1999, a groundwater pump and treat system has been operating at the site. An in situ thermal treatment system was recently constructed at the site. McKesson is in the process of obtaining an Air Quality Management District (AQMD) permit to operate this treatment system. DTSC hopes to initiate in situ thermal remediation at the site this year.

TURCO PRODUCTS, INC. (CITY OF CARSON, WEST COAST BASIN)

From 1960 to 1989, Turco Products, Inc. (Turco) manufactured industrial and janitorial chemicals, such as floor finishers, metal cleaners, and paint strippers. Hazardous wastes generated at the site included chromates, chromic acid, paint stripper waste containing phenol, halogenated and non-halogenated hydrocarbons, esters, ketones, oil, grease, and surfactants. The wastes were treated in the on-site wastewater treatment system and stored in 55-gallon drums and underground & aboveground tanks. In the 1980s, multiple violations were issued to Turco in relation to their hazardous waste handling and storage practices. Various soil, soil gas, and groundwater investigations commenced at the site in 1987, under the oversight of the DTSC. In 2000, the site was purchased by Pedro First LLC and the current tenant conducts warehousing and distribution of non-hazardous goods.

A total of 15 groundwater monitoring wells are sampled on a quarterly basis. All wells are screened in the Gage Aquifer. The constituents of concern at the site are aromatic and halogenated VOCs, specifically chemicals associated with chlorinated solvents and petroleum products. Below is a summary of the most recent analytical results of groundwater samples collected from the site.

SUMMARY OF RECENT GROUNDWATER ANALYTICAL RESULTS Turco Products, Inc., City of Carson		
Chemical	**Concentration in Groundwater (March 2009)**	**Maximum Contaminant Level (MCL)**
Benzene	1,900 ug/L (Well MW-16)	1 ug/L
Toluene	160 ug/L (Well MW-9)	150 ug/L
Ethylbenzene	320 ug/L (Well MW-16)	300 ug/L
Tetrachloroethene (PCE)	9,200 ug/L (Well MW-12S)	5 ug/L
Trichloroethene (TCE)	3,100 ug/L (Well MW-13D)	5 ug/L
1,1-Dichloroethene (1,1-DCE)	26 ug/L (Well MW-11S)	6 ug/L
cis-1,1-Dichloroethene (cis-1,1-DCE)	2,300 ug/L (Well MW-12S)	6 ug/L
trans-1,1-Dichloroethene (trans-1,1-DCE)	46 ug/L (Well MW-12S)	10 ug/L
1,1-Dichloroethane (1,1-DCA)	9.2 ug/L (Well MW-12S)	5 ug/L
1,2-Dichloroethane (1,2-DCA)	24 ug/L (Well MW-9)	0.5 ug/L
Vinyl chloride	400 ug/L (Well MW-12D)	0.5 ug/L
1,1,2-Trichloroethane (1,1,2-TCA)	14 ug/L (Well MW-12S)	5 ug/L
1,2,3-Trichloropropane (1,2,3-TCP)	6.7 ug/L (Well MW-1)	None
Tertiary butyl ether (TBA)	850 ug/L (Well MW-9)	None
Naphthalene	99 ug/L (Well MW-16)	None

Beginning in July 2008, a soil vapor extraction (SVE) system has been removing VOCs from soil beneath the site. As of March 2009, over 1,350 lbs of VOCs have been removed.

The property immediately east of the site was formerly occupied by a Shell Oil Products (Shell) tank farm. The property is currently occupied by residential properties and is an active California Regional Water Quality Control Board (RWQCB) case. The RWQCB is working with Shell to initiate a site investigation. DTSC hopes to coordinate groundwater investigation activities with RWQCB if groundwater contamination is confirmed at the former Shell tank farm property. DTSC is planning to further delineate the groundwater VOC plume and install additional monitoring wells.

FISCAL IMPACT

None at this time.

STAFF RECOMMENDATION

For information.