

**MEETING OF THE GROUNDWATER QUALITY COMMITTEE
OF THE BOARD OF DIRECTORS
WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA
4040 PARAMOUNT BOULEVARD, LAKEWOOD, CA 90712
8:30 A.M., TUESDAY, APRIL 11, 2017**

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.

- 1. DETERMINATION OF A QUORUM**
- 2. PUBLIC COMMENT**
Pursuant to Government Code Section 54954.3
- 3. APPROVAL OF MINUTES OF MARCH 14, 2017**
Staff Recommendation: The Groundwater Quality Committee approve the minutes as submitted.
- 4. SAFE DRINKING WATER PROGRAM - DISADVANTAGED COMMUNITIES OUTREACH PILOT PROGRAM UPDATE**
Staff Recommendation: For discussion.
- 5. ENVIRONMENTAL SITES REVIEW**
Staff Recommendation: For information.
- 6. DIRECTORS REPORTS, INQUIRIES AND FOLLOW UP OF DIRECTIONS TO STAFF**
- 7. ADJOURNMENT**
The Committee will adjourn to the next regular meeting currently scheduled for May 9, 2017 at 8:30 A.M.

Agenda posted by Sherri Brown, Senior Administrative Specialist on April 6, 2017. In compliance with ADA requirements, this document can be made available in alternative formats upon request.

In compliance with the Americans with Disabilities Act (ADA), if special assistance is needed to participate in the meeting, please contact Senior Administrative Specialist Sherri Brown 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.

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EXHAUSTION OF ADMINISTRATIVE REMEDIES If you challenge a District action in court, you may be limited to raising only those issues you or someone else raised at the public hearing described in this notice, or in written correspondence delivered to the District office at, or prior to, the public hearing. Any written correspondence delivered to the District will become a part of the administrative record.



MEMORANDUM

ITEM NO. 3

DATE: APRIL 11, 2017
TO: GROUNDWATER QUALITY COMMITTEE
FROM: ROBB WHITAKER, GENERAL MANAGER
SUBJECT: MINUTES OF MARCH 14, 2017

**MINUTES OF MARCH 14, 2017
MEETING OF THE GROUNDWATER QUALITY COMMITTEE
OF THE BOARD OF DIRECTORS
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 Tuesday, March 14, 2017 at 8:52 a.m., at the District Office, 4040 Paramount Boulevard, Lakewood, California 90712. Committee Chair John D. S. Allen called the meeting to order and presided thereafter. Senior Administrative Assistant Sherri Brown recorded the minutes.

1. DETERMINATION OF A QUORUM

A quorum was present, which included:

Committee: Committee Chair John D. S. Allen;
President Rob Katherman (by phone)

Staff: Ken Ortega; Ted Johnson; Charlene King; Brian Partington; Pete Brown; Angie Mancillas

Public: Thomas Lee and Barmerhwar Rai, City of Inglewood

2. PUBLIC COMMENT

Pursuant to Government Code Section 54954.3

None.

3. APPROVAL OF MINUTES OF SPECIAL MEETING FEBRUARY 14, 2017

The Committee unanimously approved the minutes as submitted.

4. SAFE DRINKING WATER PROGRAM – DISADVANTAGED COMMUNITIES OUTREACH PILOT PROGRAM UPDATE

Associate Engineer Charlene King reported that the Board of Directors had approved the three projects – City of Lynwood, City of Huntington Park and California American Water Arlington Well, last year. She said all three projects have man-made contaminants, and fall under grants. She said that Maywood Mutual #2 received AB 240 funding from the State and WRD is the lead moving forward regarding the State requirements for the funding. She stated that last week WRD, the design team and Maywood Mutual #2 met and were working on the preliminary design, and the design should be complete by the end of May.

Ms. King continued with her report on the seven water systems participating in the District's Disadvantaged Communities Outreach Pilot Program and receiving assistance. She said they are City of Bell Gardens, City of Compton, City of Huntington Park, City of Lynwood, Maywood Mutual #2, Maywood Mutual #3 and Sativa. She said still waiting for Compton, and that Sativa is submitting a second application on their own.

Ms. King stated that letters asking for support of the water systems are being drafted to send out to Assembly Members at the end of the week. Discussion followed.

5. ENVIRONMENTAL SITES REVIEW

Chief Hydrogeologist Ted Johnson provided an introduction of two Honeywell sites that are located in the West Coast Basin.

Hydrogeologist Brian Partington reported on Honeywell Sepulveda #2. He said the site was formerly an aerospace manufacturing plant, and is currently a commercial parking lot for Los Angeles International Airport. The second site he reported on was Honeywell Site A, which is currently occupied by several office buildings and a manufacturing facility for the aerospace industry.

Mr. Partington said that the groundwater plume of Honeywell Sepulveda #2 extends in an easterly direction, with impacts down to over 200 feet. He reported that Inglewood Well #6 is currently the closest drinking water well, and is about 8,000 feet to the east of the plume. He said that Inglewood is planning Well #7. Discussion followed.

Mr. Partington stated that the potential water supply Well #7 will be closer to the flow to the southeast, but part of the approval process for getting permitting was to submit groundwater flow modeling and research results to the Division of Drinking Water (DDW) and the Regional Water Quality Control Board (RWQCB) for approval. He said that both agencies are also providing feedback for Honeywell Site A in the City of Torrance. He reported that the DDW has given preliminary approval to the City of Torrance to move forward with their water supply wells after the cleanup. Discussion followed.

Mr. Johnson provided an update on a Committee request to evaluate alternative recycled water treatment technologies to reduce the necessary underground retention time for tertiary water, and for alternatives to reverse osmosis for advanced water treatment that can provide the same level of safety at a reduced cost. He stated that the District has an on call water quality consulting firm to provide research regarding these alternatives and will report back to the Groundwater Quality Committee at the next meeting. On a separate note, he reported that the Colorado School of Mines had performed a reverse osmosis study for the District in 2010, and that staff will come back to the Committee at a future date to discuss authorizing them to do some follow up research related to GRIP. Discussion followed.

2. PUBLIC COMMENT

Pursuant to Government Code Section 54954.3

This item was taken out of order.

Barmerhwar Rai and Thomas Lee from the City of Inglewood reported that existing Wells 1, 2 and 6 have undergone testing for a long time. There are no safe drinking water requirements and the water quality is good. They stated that testing results had been submitted to the RWQCB. Discussion followed.

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

None.

7. ADJOURNMENT

There being no further business to come before the Committee, the meeting was adjourned at 9:21 A.M. to the next meeting scheduled for April 11, 2017 at 8:30 A.M.

Chair

ATTEST:

Member

Approved in minutes of:



MEMORANDUM

ITEM NO. 4

DATE: APRIL 11, 2017

TO: GROUNDWATER QUALITY COMMITTEE

FROM: ROBB WHITAKER, GENERAL MANAGER

**SUBJECT: SAFE DRINKING WATER PROGRAM - DISADVANTAGED COMMUNITIES
OUTREACH PILOT PROGRAM UPDATE**

SUMMARY

The District administers the Safe Drinking Water Program (SDWP), providing grant or loan assistance to basin pumpers for wellhead treatment to remove contaminants and improve water quality. The Grant Program provides treatment for removing groundwater contaminants from man-made sources (e.g. Volatile Organic Compounds); whereas the Loan Program provides 10-year, zero-interest loans for water treatment, removing unacceptable levels of contaminants from natural sources (e.g. iron, manganese, and arsenic).

In 2016, the District approved three wellhead treatment projects through the Safe Drinking Water Program: California American Water Arlington Well, Huntington Park Well 15, and Lynwood Well 11. The wellhead treatment system at all three wells will consist of a complete granular activated filtration system built within the boundaries of the existing well sites owned and operated by the water systems. In addition, as part of Assembly Bill No. 240, the District was designated to manage and implement a water quality improvement project in the City of Maywood. The appropriated funds were assigned to the Maywood Avenue Wellhead treatment project for iron and manganese removal.

Safe Drinking Water Pilot Program

As an extension of the District's Safe Drinking Water Program, the District approved the creation of the Safe Drinking Water Disadvantage Communities (DAC) Pilot Program. The goal of this program is to assist water systems located in disadvantaged communities within the District's service area with state and federal funding to address the issues related to their drinking water wells. The focus of the program is to provide technical assistance and extensive outreach to help the systems secure funding that is set aside specifically for disadvantaged communities. Currently there are seven water systems participating in the program and receiving assistance: City of Bell Gardens, City of Compton, City of Huntington Park and City of Lynwood, Maywood Mutual Water Company No. 2, Maywood Mutual Water Company No. 3 and Sativa LA County Water District.

Safe Drinking Water Program Outreach Efforts

Outreach efforts continue as staff is preparing follow-up outreach to cities, particularly disadvantaged communities, to schedule presentations for upcoming city council meetings to further explain WRD's programs.

FISCAL IMPACT

None.

STAFF RECOMMENDATION

For discussion.



MEMORANDUM

ITEM NO. 5

DATE: APRIL 11, 2017

TO: GROUNDWATER QUALITY COMMITTEE

FROM: ROBB WHITAKER, GENERAL MANAGER

SUBJECT: ENVIRONMENTAL SITES REVIEW

BACKGROUND

WRD has and continues to take an active role in groundwater quality protection, cleanup, and investigation. As part of its Groundwater Contamination Prevention Program, WRD established the Central and West Coast Basin Groundwater Contamination Forum, a data-sharing and discussion forum with key stakeholders that include various cities, water purveyors, the United States Environmental Protection Agency (EPA), California Department of Toxic Substances Control (DTSC), Los Angeles Regional Water Quality Control Board (RWQCB), State Water Resources Control Board Division of Drinking Water (DDW), United States Geological Survey (USGS), and California Department of Water Resources (DWR).

In 2005, the stakeholders drafted and signed a Memorandum of Understanding ("MOU") agreeing to meet regularly and share data on major groundwater contaminated sites within the Central Basin and West Coast Basin. WRD acts as the meeting coordinator and data repository/distributor, helping stakeholders to characterize the extent of contamination to identify pathways for contaminants in shallow aquifers to reach deeper drinking water aquifers and develop optimal methods for remediating contaminated groundwater. The overall purpose of the Forum is to expedite the cleanup of these major contaminated sites in the basins.

With the cooperation and support of all stakeholders in the Groundwater Contamination Forum, WRD developed a list of high-priority groundwater contaminated sites ("environmental sites") located within the District. 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 48 sites located throughout the Central Basin and West Coast Basin. The list was developed based on the following criteria:

- Site location and hydrogeology
- Distance to nearest drinking water well
- Depth to shallowest water-supply aquifer beneath site
- Concentration of detected contaminants
- Fate and transport of detected contaminants
- Presence of contamination in nearby drinking water wells
- Status of site characterization with respect to groundwater contamination
- Status of site remediation with respect to groundwater contamination
- Stage of regulatory agency involvement

WRD works in close consultation with the lead regulatory agencies for each of these sites to provide data and technical support to facilitate site characterization and expedite cleanup. An

update is provided below for Pemaco Superfund Site (City of Maywood) and Fairchild Controls Facility (City of Manhattan Beach).

PEMACO SUPERFUND SITE (MAYWOOD, CENTRAL BASIN)

The 1.4-acre facility formerly operated as a chemical blending plant from the late 1940’s to 1991. The facility infrastructure has been removed including chemical storage drums, containers, aboveground storage tanks (ASTs), and underground storage tanks (USTs). The southern portion of the site is currently being remediated and the northern portion was redeveloped as the Maywood Riverfront Park, which opened in May 2008.

Soil and groundwater are impacted with various chlorinated solvents including primarily tetrachloroethene (PCE), trichloroethene (TCE), trichloroethane (TCA), dichloroethane (DCA), and vinyl chloride (VC). In January 1999, the site was added to the National Priorities List (NPL) with environmental related work being overseen and funded by the Environmental Protection Agency (EPA).

Groundwater impacts are present to a depth of approximately 145 feet below ground surface (ft bgs). Shallow groundwater near the site is captured by an existing groundwater treatment system (pump and treat [P&T]) and the deeper water bearing zones generally flow south towards the nearest down-gradient production well owned by Maywood Mutual Water Company No. 3 (well DIST #4) (0.3 miles south of the Site). Site constituents have not been detected in well DIST #4. The most recent readily available groundwater sampling results for the Site are summarized below for December 2015.

Key Indicator Compounds in Groundwater*						
Chemical	MCL	Perched (25’ – 40’)	Exposition Aquifer			
			Zone A (65’ – 75’)	Zone B (80’ – 90’)	Zone C (100’ – 110’)	Zone D (125’ – 145’)
PCE	5	52 in PC-06	ND	ND	ND	ND
TCE	5	14 in PC-06	710 in MW-01-80	640 in MW-02-95	330 in MW-05-105	130 in MW-07-130
c1,2-DCE	6	12 in PB-03	65 in MW-01-80	150 in MW-20-85	45 in MW-05-105	1.6 in MW-05-135
VC	0.5	ND	ND	170 in MW-20-85	ND	ND
1,4-Dioxane	1.0**	18 in B-15	23 in MW-01-80	98 in MW-06-85	3.9 in MW-23-110	13 in MW-25-130

*Maximum detection with results in micrograms per liter (µg/L) / ** indicates Notification Level / ND = Not Detected

The shallow soils and perched water are currently being treated via dual phase extraction (DPE). A P&T system is being used to treat impacted groundwater within upper two water bearing zones of the Exposition Aquifer. The shallow soils were also remediated using electrical resistive heating (ERH). In August 2018, EPA anticipates the treatment system operations will be transferred to the Department of Toxic Substances Control (DTSC).

In addition, a separate groundwater plume with similar constituents was recently identified and appears to be migrating onto the site from the north (also containing 1,4-Dioxane). The source is currently being discussed among multiple regulatory agencies including EPA, DTSC, and the RWQCB.

FAIRCHILD CONTROLS FACILITY (MANHATTAN BEACH, WEST COAST BASIN)

The 9-acre facility formerly operated as a parts manufacturer for the aerospace industry from 1955 to 1992. There was an on-site plating shop that utilized a chrome acid storage tank / clarifier and was a source of hexavalent chromium (Cr⁺⁶). In addition, solvents were used for cleaning / degreasing operations resulting in the release of chlorinated volatile organic compounds (VOCs) (primarily PCE and TCE). Until the 1980s, waste solvents were placed in an underground “waste oil sump,” which was eventually found to be leaking and was

subsequently removed in 1988. The facility was demolished (including all subsurface infrastructure) in 1993/1994. In 1999, the site was redeveloped into the current Manhattan Gateway Shopping Center. The environmental related work is being overseen by the RWQCB.

Groundwater impacts are present in three water bearing zones including a Shallow Zone (65 to 100 ft bgs), Deep Zone (100 to 120 ft bgs), and Lower Gage (130 to 150 ft bgs). The nearest downgradient active public water supply wells are owned and operated by Golden State Water Company (wells Doty #1, Doty #2, and Compton-Doty #1). Site constituents have not been detected in the production wells with the closest one located east of the Site approximately 2.4-miles. The most recent readily available groundwater sampling results for the Site are summarized below for August 2016.

Key Indicator Compounds in Groundwater*				
Chemical	MCL	Shallow Zone (65' – 100')	Deep Zone (100' – 120')	Lower Gage (130' – 150')
PCE	5	6,500 in OB-6S	11,000 in MW-6D	12,000 in OB-31LG
TCE	5	8,700 in GW-15	24,000 in OB-21D	24,000 in OB-21D
c1,2-DCE	6	1,200 in PT-3	1,700 in OB-6D	460 in OB-30LG
Cr ⁺⁶	10	7,600 in OB-28S	23,000 OB-32D	11,000 in OB-32LG

*Maximum detection with results in µg/L

Multiple treatment systems have operated over the years to address soil and groundwater contamination from the Site. A summary is provided as follows:

Type	Dates	Results
Excavation #1	1998	1,069 tons of chromium impacted soil removed by Building 1. RWQCB issued NFA.
SVE #1	1998 to 2000	21,800 pounds removed from vadose zone (primarily PCE/TCE). RWQCB issued NFA.
GW P&T	1999 to 2000	4.6 million gallons of impacted groundwater treated (primarily Cr ⁺⁶ and PCE/TCE).
SVE #2	2004 to 2011	36,345 pounds removed from vadose zone (primarily PCE/TCE).
In-Situ GW #1	2005	CPS pilot testing performed on-site to evaluate treatment options for Cr ⁺⁶ .
In-Situ GW #2	2008	CPS/EVO treatment (on-site and off-site) to address Cr ⁺⁶ and other VOCs.
SVE #3	2010 to 2011	Pilot testing off-site and removed a limited mass of VOCs.
Treatability	2011 to 2012	Studies performed to evaluate applicability of reductive dechlorination for GW.
In-Situ GW #3a	2014 & 2015	Pilot test reductive dechlorination using Cheese Whey (buffered with Calcium Carbonate).
In-Situ GW #3b	2016	Pilot groundwater recirculation wells to help distribute amendments in GW.

NFA = No Further Action / SVE = Soil Vapor Extraction / GW P&T = Groundwater Pump and Treat / CPS = Calcium Polysulfide
EVO = Emulsified Vegetable Oil

FISCAL IMPACT

None.

STAFF RECOMMENDATION

For information.