

**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., THURSDAY, FEBRUARY 28, 2008**

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 MEETING OF NOVEMBER 15, 2007**
Staff Recommendation: Approve the minutes as submitted.
- 4. GROUNDWATER QUALITY UPDATE – SECONDARY MCLS**
Staff Recommendation: For information.
- 5. SAFE DRINKING WATER PROJECT – COMMERCE WELL 4 GAC REPAIR**
Staff Recommendation: Approve the repair of the carbon vessels at Commerce Well 4 for an amount not to exceed \$54,500, plus a 10% contingency for a total of \$60,000.
- 6. SAFE DRINKING WATER PROGRAM – NEW CANDIDATES**
Staff Recommendation: Approve the City of Vernon Wells 9 & 10 and the City of Lakewood Well 22 as projects funded through the Safe Drinking Water Program. Staff also recommends that the Safe Drinking Water Program be increased from \$2 million to \$4 million to accommodate funding for wellhead treatment systems at the City of Vernon Wells 9 & 10 and the City of Lakewood Well 22 as well as the previously approved Huntington Park Well 17 Expansion.
- 7. SALINE PLUME UPDATE**
Staff Recommendation: For information.
- 8. GOLDSWORTHY DESALTER UPDATE**
Staff Recommendation: For information.
- 9. DIRECTORS' REPORTS, INQUIRIES, AND REVIEW OF DIRECTIONS TO STAFF**
- 10. ADJOURNMENT**

Posted by Abigail C. Andom, Deputy Secretary, February 25, 2008

UNAPPROVED
MINUTES

UNAPPROVED
MINUTES

**MINUTES OF NOVEMBER 15, 2007
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 November 15, 2007 at 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. Petty recorded the minutes.

1. DETERMINATION OF A QUORUM

Committee: Directors Sergio Calderon, Willard H. Murray, Jr.

Staff: Robb Whitaker, Ted Johnson, Hoover Ng, Paul Fu

2. PUBLIC COMMENT

None.

3. MINUTES OF THE MEETING OF SEPTEMBER 27, 2007 AND THE MINUTES OF THE JOINT GROUNDWATER QUALITY/WATER RESOURCES COMMITTEES OF OCTOBER 12, 2007

The minutes were approved as submitted.

4. GROUNDWATER QUALITY REGULATORY UPDATE- NEW PERCHLORATE MAXIMUM CONTAMINANT LEVEL (MCL)

Senior Engineer Hoover Ng said that a new drinking water standard was issued by the State Department of Public Health and became effective on October 18, 2007 regarding perchlorate which is a contaminant that has been on everyone's radar screen for some time. Mr. Ng outlined the process of how the State sets a standard. He said they have been monitoring the level of perchlorate for some years and have now set the standard at 6 parts per billion. Perchlorate is an industrial contaminant that is basically from rocket fuels, missiles and fireworks. It is prevalent on aerospace and defense contract companies or wherever there are military bases. He said that it has been known to cause malfunctioning of the thyroid gland and therefore it affects the metabolism of young children and fetuses. He said the best available treatment is ion exchange and biological fluidized bed reactors. He said the difference between the two is that in ion exchange one perchlorate ion is exchanged for another ion, basically a chloride. He said that perchlorate has to be captured in the waste stream and disposed of properly as a hazardous waste. He said that the biological fluidized bed reactors converts perchlorate through biological means with bacteria which will metabolize the perchlorate into chloride ions and oxygen which are more benign by-products with no hazardous waste to be disposed of. Director Murray asked that staff check to see how California Water Services cleaned up its production well. Chief Hydrogeologist Ted Johnson said that San Gabriel Valley just to the north has a very bad perchlorate problem and

noted that they are using the ion exchange system to treat their perchlorate contamination. Mr. Ng concluded saying that because perchlorate is a new MCL the State Department of Public Health requires monitoring for it so for the 19 participants of the District's groundwater monitoring program, staff has been working with them to see what are the best times to do their monitoring for them.

Director Murray asked staff to remind him to speak with the CBMWD President regarding the operation of the Central Basin Protection Project.

5. CHANGE ORDER – STETSON ENGINEERS, INC.

Mr. Johnson said that the District has retained Stetson Engineers to be assisting staff with the top 36 contaminated site investigations. He said that in order for staff to keep abreast of all of these sites, the regulators' offices must be visited and Xerox copy their reports which Stetson does. He said the task has been completed but their report shows 25,000 copies made compared to the 1,200 they had estimated. He said that the change order will be in the amount of \$6,418.38. The committee approved the staff recommendation to approve a \$6,418.38 Change Order to Stetson Engineering, Inc. for the additional costs to their contract for Regulatory Agency Data Collection and Compilation services.

6. AB 303 AUTHORIZING RESOLUTION

Mr. Johnson said that AB303 is a State program – a local groundwater assistance fund which must come before the legislature every year as to whether it will be funded or not. He said it was recently funded with the maximum grant for a single project limited to \$250,000. Staff would like to pursue these funds for a study in Santa Fe Springs that has groundwater contamination from a large superfund site that has contaminated the aquifers. He said that staff is concerned about the shallow contamination getting down deeper to the drinking water aquifers. The committee concurred with the staff recommendation to adopt Resolution No. 07-807 approving submittal of application for a Local Groundwater Assistance Grant pursuant to the Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002 (Water Code Section 79650 et seq.) and to be submitted as a subsequent needs item to the Board at its meeting of November 16, 2007.

7. DTSC MONITORING WELLS

Mr. Johnson said that one of the District's top 36 contamination sites is the AAD Distribution and Dry Cleaning Facility in Vernon. He said that the soil contains both PCE and TCE and the DTSC is remediating that soil contamination. He said that there is also a lot of groundwater contamination in the wells nearby. He said that the DTSC has determined that it is not the fault of AAD. The cause of the contamination is unknown so the DTSC has gotten the EPA to help fund a site discovery project which means they will be looking for who caused the contamination. He said that in the meantime there is no funding to continue sampling the

wells so staff is proposing authorizing up to \$25,000 to help support the continued sampling of those wells by the DTSC. He said that there is a MOU which District Counsel has approved which he passed out. The committee concurred with the staff recommendation to approve the agreement with the DTSC and fund one round of monitoring and sampling of the six wells outside the AAD site for a cost not to exceed \$25,000.

8. AWARD OF CONTRACT FOR SALINE PLUME GEOPHYSICAL SURVEY

Mr. Johnson said that this is a technique called geophysics to try to look for salt underground without drilling any wells or holes – special equipment is used instead. He said that the District tried this technique last year and it worked very well. He explained that this equipment is like using a metal detector to find coins on the beach but can find salt down deeper in the aquifers if open areas such as parks or school yards are available. He said that geophysics is the principle of looking for contrasts and the contrast here is fresh water versus salt water. He said that it could cost millions of dollars to drill new monitoring wells, so this is an attempt to get data without drilling so many wells. He said that staff learned about the process at the international Saltwater Intrusion Conference last year in Sardinia. Director Murray asked why the cost submitted by the companies was so different. Mr. Johnson said that there were variations in the hourly rate and some of the companies did not understand the proposal and provided tasks that were not needed. He said that staff is recommending entering into a contract with Aquifer Science & Technology for professional geophysical services for mapping seawater intrusion for an amount not to exceed \$40,000 plus a \$10,000 contingency for use by staff if needed or a overall project budget of \$50,000.

The committee concurs with staff's recommendation.

9. GOLDSWORTHY DESALTER UPDATE

Senior Engineer Paul Fu said that the Desalter was shut down in October due to a failure of the airblower for the decarbonator at the plant. He said that the decarbonator is like an air stripper that removes carbon dioxide in the water to bring the pH back more neutral before supplying the water to the City of Torrance. He said that the other purpose is to add some chlorine and strip off the hydrogen sulfide in the water. It is an essential process for the water supply. He said that the replacement parts have been ordered and that the material is stainless steel and required special fabrication. He said that the parts were arriving and would be installed during the week of November 19th. Staff will continue to apprise the committee of the status of the ongoing repairs.

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

Director Murray asked Mr. Ng if there was anything else going on that the committee would be interested in. Mr. Ng said that staff has been working with the Water Reuse Association on the state water recycling policy which is associated with ground water monitoring for water recycling in general and staff is trying to make the case to the State Board that it is appropriate for groundwater recharge projects but not as a blanket requirement for all water recycling projects. He said that basically the LA Board is telling the City of Los Angeles that they have to put in groundwater monitoring for irrigating with recycled water on golf courses. The LA Board is saying that they think that it is appropriate so this discussion has been elevated to the State Board in Sacramento. They have included provisions in their draft water recycling policy. The water recycling community believe that there is a need to have a more consistency.

Mr. Johnson said that there will be another Groundwater Contamination Forum at the end of this month. He said that staff has recently identified an increasing trend of some contamination in the Los Angeles Forebay. Staff has been talking to the DTSC about this site – it is very deep TCE contamination down to 600 feet. He also added staff will be coming to the Board next month with a request for four new monitoring wells. Director Calderon asked if there was any kind of workshop that some his constituents from Montebello, Maywood and Bell Gardens could participate in. Mr. Johnson said that he will have Senior External Affairs Representative Elsa Lopez contact him in regard to setting up a tour for those people.

11. ADJOURNMENT

There being no further business to come before the Committee, the meeting was adjourned at 1:12 p.m.

Chairperson

Attest:

Director



MEMORANDUM

ITEM NO. 4

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

DATE: FEBRUARY 28, 2008
TO: GROUNDWATER QUALITY COMMITTEE
FROM: ROBB WHITAKER, GENERAL MANAGER
SUBJECT: GROUNDWATER QUALITY UPDATE – SECONDARY MCLS

SUMMARY

In addition to primary Maximum Contaminant Levels (MCLs), which are health-based drinking water standards set by the California Department of Public Health, secondary MCLs are also assigned to ensure that drinking water is aesthetically pleasing and acceptable to consumers. Secondary MCLs are also known as “Consumer Acceptance Contaminant Levels”. These are generally constituents that affect the taste, odor, or appearance of the water. Even though water may be aesthetically unpleasing (slight color or odor), if it meets the primary MCLs it would still be considered safe to drink. Secondary MCLs exist for the following constituents –

Aluminum	Manganese	Turbidity
Color	Methyl tert butyl ether (MTBE)	Zinc
Copper	Odor	TDS or Specific Conductance
Foaming Agents	Silver	Sulfate
Iron	Thiobencarb	Chloride

Taste and Odor - there are a variety of reasons why water might have a taste or odor problem. Chlorine is commonly used to disinfect local water supplies; however, many people are sensitive to its presence. Highly mineralized water, such as groundwater that contains high levels of total dissolved solids (TDS), sulfates and chlorides, may impart an unpleasant taste for some people who are used to water supplies that are much lower in minerals. There may be a metallic taste due to the presence of aluminum, copper, iron, or zinc that could be a byproduct of corrosion in piping or hot water tanks. The presence of some organic chemicals, such as MTBE or thiobencarb, may cause aesthetic problems. During summer months, excessive algae may grow in surface water supplies and lead to byproducts that cause unpleasant tastes and odors. Finally, water that is stored in plastic containers for extended periods and under warm temperatures may cause an off taste.

There are several remedies that consumers can utilize to improve the taste and eliminate odors. Refrigerating, aerating by stirring, and/or boiling water before consumption oftentimes helps improves the taste and eliminates odors. Adding a bit of lemon juice can improve the taste. Finally, installing activated charcoal filters at the kitchen sink can be effective as well.

Appearance - Water at times may appear cloudy but clears up after a minute or so. The cloudiness is caused by tiny air bubbles created in the flow of water through pumps and

pipelines. They do not impact the safety of the water. If water at the tap is clear but turns color and become reddish-brown or darker, then the likely cause would be naturally occurring high levels of iron or manganese in groundwater. This has been found to be a common occurrence in groundwater in both the Central and West Coast Basins. Iron and manganese exist in soluble forms in water, but when exposed to air, form precipitates that will discolor water. To remedy this situation, treatment is needed to oxidize and filter the water. If water comes out of the tap as reddish-brown or darker and becomes clear after running for a while, then the likely cause is corrosion in the household plumbing or water tanks.

FISCAL IMPACT

None.

STAFF RECOMMENDATION

For information.



MEMORANDUM

ITEM NO. 5

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

DATE: FEBRUARY 28, 2008
TO: GROUNDWATER QUALITY COMMITTEE
FROM: ROBB WHITAKER, GENERAL MANAGER
SUBJECT: SAFE DRINKING WATER PROJECT – COMMERCE WELL 4 GAC REPAIR

SUMMARY

Commerce Well Number 4 located on Garfield Avenue in the City of Commerce is currently affected by Tetrachloroethylene (PCE) and Trichloroethylene (TCE), two volatile organic compounds (VOCs), at levels exceeding the maximum contaminant level allowed by the State of California Department of Public Health (CPDH). The California Water Service Company performs the routine operation and maintenance associated with the wellhead treatment system. The well received granular activated carbon (GAC) treatment through the District's Safe Drinking Water Program. The well system received two (2) GAC vessels that were transferred from the Norwalk Well 8 project that was terminated prior to placing the system in service. The system was placed online at the end of September 2006.

During the first quarter of operation, water samples determined that bacteria growth was constantly occurring even after treatment. Based on the guidelines of the Safe Drinking Water Program, the City of Commerce is responsible for all operations and maintenance. The City and California Water Service Company made every effort to isolate the source of the increased bacteria buildup. The well pump was changed from oil lubed to water lubed during May 2007 to rule out the possibility of oil contamination. The vessels were tested for oil, grease, and phenol. Although the test results were negative, Total Coli form results were positive and the system was required to be shut down. During the summer of 2007, the system was super chlorinated and a caustic wash was performed twice on the carbon inside the vessels. Sample results taken in the fall continued to show high levels of bacteria growth. The City contacted the District for assistance.

After removing all carbon from the vessels, the District had the interior of the vessels inspected and it was determined that multiple corrosion spots were located on the walls as well as the nozzles and man way openings of the vessels aiding in bacteria development. To place the system back into service, both vessels are in need of lining repair, disinfection, and carbon replacement.

The repair cost are as follows:

Task	Cost
Lining Repair for both vessels	\$10,000
Disinfection of the piping and vessels through super chlorination	\$4,500
Carbon media installation for both vessels	\$40,000
Total	\$54,500

FISCAL IMPACT

The cost to repair and restore the treatment vessels is \$54,500. This project was not anticipated and is not included in the current fiscal year budget. Funding for this project would be taken from District reserves.

STAFF RECOMMENDATION

Approve the repair of the carbon vessels at Commerce Well 4 for an amount not to exceed \$54,500, plus a 10% contingency for a total of \$60,000.



MEMORANDUM

ITEM NO. 6

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

DATE: FEBRUARY 28, 2008
TO: GROUNDWATER QUALITY COMMITTEE
FROM: ROBB WHITAKER, GENERAL MANAGER
SUBJECT: SAFE DRINKING WATER PROGRAM – NEW CANDIDATES

SUMMARY

The District administers the Safe Drinking Water Program (SDWP) to assist basin purveyors 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 groundwater producer jointly develop a treatment solution for the subject well. At this time, two area purveyors have approached WRD about receiving financial assistance through the Safe Drinking Water Program (SDWP) for wells that require facilities to treat contaminated groundwater. These purveyors would like to receive consideration for funding now so that they can begin to address their contamination problems.

A. City of Vernon – Wells 9 and 10

The City of Vernon recently 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 Trichloroethylene (TCE), iron, and manganese. On January 9, 2008, the City of Vernon submitted a formal request to be a participant of the WRD Safe Drinking Water Program. Before financial commitments are made preliminary design and environmental reviews need to take place.

B. City of Lakewood – Well 22

The City of Lakewood Hill owns and operates Well No. 22, which is currently affected by arsenic, hydrogen sulfide, and manganese levels exceeding the State's Secondary Drinking Water Standards. The City intends to build a treatment facility to remove the constituents. On February 11, 2008, the City submitted a formal request for funding through the WRD Safe Drinking Water Program in the form of a ten-year no-interest loan. The City of Lakewood would handle the procurement of the facilities, subject to review and approval by WRD staff. The City is also responsible for securing all permits and easements. The City estimates the total cost at \$2.2 million.

Both well systems qualify for the Safe Drinking Water Program; however, based on the current program policy, the City of Vernon wells take first priority as a VOC removal project and any remaining funding will be made available to secondary constituent removal projects, such as the City of Lakewood.

STAFF RECOMMENDATION

That the Board approves the City of Vernon Wells 9 & 10 and the City of Lakewood Well 22 as projects funded through the Safe Drinking Water Program. Staff also recommends that the Safe Drinking Water Program be increased from \$2 million to \$4 million to accommodate funding for wellhead treatment systems at the City of Vernon Wells 9 & 10 and the City of Lakewood Well 22 as well as the previously approved Huntington Park Well 17 Expansion.

FISCAL IMPACT

The total preliminary estimated costs of these projects are \$3.1 million.



MEMORANDUM

ITEM NO. 7

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

DATE: FEBRUARY 28, 2008
TO: GROUNDWATER QUALITY COMMITTEE
FROM: ROBB WHITAKER, GENERAL MANAGER
SUBJECT: SALINE PLUME UPDATE

As reported previously, staff are in the process of developing a saline plume policy to present to the Board for review. The aim of this policy is to direct future District actions with respect to remnant saltwater contamination in the West Coast Basin.

Staff recently completed managing surface geophysical surveys at 35 sites across the West Coast Basin in an attempt to better define the extent of the saline plume by measuring the electrical conductivity of the subsurface. The higher the salt content in the groundwater, the more conductive the subsurface groundwater is. Upon receipt of the final geophysical results, staff will utilize the information to refine the current saline plume map of the region. Staff will also use the information to guide the next steps in refining the understanding of the saline plume and developing a saline plume policy, including recommending locations for at least two new nested monitoring wells scheduled to be installed by WRD later this year.

FISCAL IMPACT

None.

STAFF RECOMMENDATION

For information.



MEMORANDUM

ITEM NO. 8

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

DATE: FEBRUARY 28, 2008
TO: GROUNDWATER QUALITY COMMITTEE
FROM: ROBB WHITAKER, GENERAL MANAGER
SUBJECT: GOLDSWORTHY DESALTER UPDATE

SUMMARY – GOLDSWORTHY DESALTER

The Goldsworthy Desalter has been operating since 2002 to remove salty (brackish) groundwater beneath the City of Torrance in the West Coast Basin. Historic over-pumping of the basin caused seawater to intrude into the aquifers resulting in the brackish water contamination. Seawater barrier injection wells have since been installed to prevent further intrusion, but a significant amount of brackish groundwater remains in the basin which the Goldsworthy Desalter is helping to remove.

After an extended shutdown during the last quarter of 2007 due to failure of the air blower for the decarbonator, the Desalter has resumed its supply of water to Torrance since January 22, 2008. The Desalter supplied approximately 45 acre feet of potable water to Torrance in January.

While maintaining continuous operations of the Desalter, District staff is working with the contract operator to repair several deficiencies associated with instrumentation and controls that the facility has recently experienced. The repair is expected to be completed in March 2008.

FISCAL IMPACT

None at this time.

STAFF RECOMMENDATION

For information.