

**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, APRIL 24, 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 FEBRUARY 28, 2008**
Staff Recommendation: Approve the minutes as submitted.
- 4. GROUNDWATER QUALITY UPDATE – STANDARDS SETTING PROCESS**
Staff Recommendation: For information.
- 5. GROUNDWATER CONTAMINATION UPDATE**
Staff Recommendation: For information.
- 6. GOLDSWORTHY DESALTER UPDATE**
Staff Recommendation: For information.
- 7. SALINE PLUME UPDATE**
Staff Recommendation: For information.
- 8. DIRECTORS' REPORTS, INQUIRIES, AND REVIEW OF DIRECTIONS TO STAFF**
- 9. ADJOURNMENT**

Posted by Abigail C. Andom, Deputy Secretary, April 18, 2008.

UNAPPROVED
MINUTES

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**MINUTES OF FEBRUARY 28, 2008
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 February 28, 2008 at 12:25 p.m., at the District Office, 4040 Paramount Boulevard, California. Chairperson Willard H. Murray, Jr. called the meeting to order and presided thereover. Administrative Specialist Sheryll A. Petty recorded the minutes.

1. DETERMINATION OF A QUORUM

Committee: Directors Willard H. Murray, Jr. and Sergio Calderon
Staff: Ted Johnson, Robert Siemak, Hoover Ng, Paul Fu, Nancy Matsumoto, Charlene King.
Public: Jim Glancy, City of Lakewood.

2. PUBLIC COMMENT

None.

3. MINUTES OF THE MEETING OF NOVEMBER 15, 2007

The minutes were approved as submitted.

The agenda items were taken out of order.

6. SAFE DRINKING WATER PROGRAM – NEW CANDIDATES

Associate Engineer Charlene King said that the district has received two new candidates for the wellhead treatment program: one is the City of Vernon and the other is the City of Lakewood. She said that the City of Lakewood is requesting \$2.2 M for the removal of manganese and the City of Vernon has two wells that need removal of VOC's and iron and manganese.

Mr. Jim Glancy, City of Lakewood, said that the City has experienced a new development with well No. 22 which now has arsenic up to 25 parts per billion and he is revising his request and ask that well No. 27 be considered for treatment at this time instead of Well No. 22. He also request treatment for Well 22 but at a later date.

Ms. King revised the staff recommendation as follows: "That the Board approves the City of Vernon Wells No. 9 & 10 and the City of Lakewood Well 27 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 27 well as well as the previously approved Huntington Park Well 17 expansion.

The Committee concurred with the revised staff recommendation and asked the Board to approve the same.

4. GROUNDWATER QUALITY UPDATE – SECONDARY MCLS

Senior Engineer Hoover Ng said that there are constituents in water that affect taste, odor or the appearance of the water and even though they may be aesthetically unpleasing, if the water meets the primary MCLs it would still be considered safe to drink. He said that these are Secondary MCLs also known as “Consumer Acceptance Contaminant Levels”. He said that chlorine is commonly used to disinfect local water supplies, however, many people are sensitive to its presence. He said that there may be an off taste due to higher minerals or total dissolved solids contained in groundwater, and also metallic tastes due to the presence of aluminum, copper, iron or zinc that could be a byproduct of corrosion in piping or hot water tanks. He said that plastic may also affect the taste of stored water. Algae may grow in surface reservoirs and cause taste and odor problems. He said that some of the basic remedies for these problems is refrigerating or boiling the water and then letting it cool off or adding lemon juice to tap water before consumption. Finally, home treatment devices such as granular activated charcoal may be installed

5. SAFE DRINKING WATER PROGRAM – COMMERCE WELL 4 GAC REPAIR

Associate Engineer Charlene King said that the City of Commerce contacted the District for assistance because the well had to be shut down due to consistently high levels of bacteria. After many efforts by the City to locate the source of the bacteria buildup, it was determined that the source was related to the two GAC vessels. She said that after removing all carbon from the vessels, the District had the interior of the vessels inspected and it was determined that multiple corrosion spots located on the interior of the vessel walls as well as nozzles and man way openings aided in bacteria development. To place the system back into service, both vessels are in need of lining repair, disinfection, and carbon replacement. The original staff recommendation was for a total amount not to exceed \$60,000. Ms. King said that staff has revised their recommendation to allow the general manager to authorize the initial \$10,000 to expedite the task of the lining repair and then Board approval for the remaining \$50,000 for disinfection and carbon replacement. The committee concurred with the staff recommendation to approve the repair of the carbon vessels at Commerce Well 4 with immediate approval for the General Manager to authorize \$10,000 for the repair lining and the remaining to be approved by the Board for a combined total not to exceed \$60,000.

7. SALINE PLUME UPDATE

Senior Hydrogeologist Nancy Matsumoto said that the saline plume is a brackish groundwater plume that is contaminating the western portion of the West Coast Basin. She said that staff estimates that it is a little over

250,000 acre feet. Staff have been identifying and investigating possible remediation strategies for addressing the saline plume. She said that staffs' planned tasks included evaluating the data used in the 2006 map; conducting surface geophysical surveys to map resistivity, which provides information on the location of the plume; installing monitoring wells in selected locations; sampling these and existing wells all around the same time, and compiling data into a revised map and preparing recommendations for future strategies. Ms. Matsumoto stated that staff have completed the first two listed tasks. She said that with Board approval staff selected a consultant to conduct the geophysical surveys which were conducted in mid-February. She concluded saying that staff expects the results in the next month or so. She said that this data will be used to place future WRD nested monitoring wells, then sample wells. From that, data will be compiled into a revised saline plume map. Staff will then prepare recommendations.

8. GOLDSWORTHY DESALTER UPDATE

Senior Engineer Paul Fu said that the desalter resumed operation on January 22, 2008 after being shut down for repair. He said the desalter had produced 45 acre feet of potable water which was supplied to the City of Torrance in January. He said that staff is working with the contract operator to repair several deficiencies associated with instrumentation and controls that the desalter has recently experienced. He said that the plant would run more efficiently after the repair.

Director Murray asked when we can expect the plant to be run more efficiently. Staff will meet with the contract operator to discuss what areas are most likely to fail and have replacement parts available. Staff will also provide the committee with an evaluation of the Desalter's expansion potential.

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

Director Calderon thanked Charlene for all her work on Title 22. He said that he is hearing good reports on her work.

10. ADJOURNMENT

There being no further business to come before the Committee, the meeting was adjourned at 2:10 p.m.

Chairperson

Attest:

Director



MEMORANDUM

ITEM NO. 4

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

DATE: APRIL 24, 2008

TO: GROUNDWATER QUALITY COMMITTEE

FROM: ROBB WHITAKER, GENERAL MANAGER

SUBJECT: GROUNDWATER QUALITY UPDATE – STANDARDS SETTING PROCESS

SUMMARY

Both the EPA and the California Department of Public Health (CDPH) oversee drinking water quality in the state and are responsible for setting appropriate standards to ensure the safety of the water. The following summarizes how standards are established.

A contaminant may become a potential candidate if it meets several requirements. It may have adverse health effects for the general population or a subgroup. It is likely to be present in drinking water supplies. Analytical methods have been developed to be able to reliably detect and measure the contaminant at the levels of concern. And, treatment is readily available to reduce or eliminate its presence if it is found.

To determine if there are adverse health effects, studies are conducted which may require extensive effort over several years and then the results are thoroughly reviewed. For the federal government, maximum contaminant level goals (MCLG) are established. In California, public health goals (PHG) are established by the Office of Environmental Health Hazard Assessment (OEHHA). These levels are based solely on health effects studies and may or may not be realistically achievable. Health effects include carcinogenic and non carcinogenic effects of chemicals and microbial risks.

In California, CDPH may establish advisory, non-enforceable levels of contaminants prior to the establishment of an enforceable standard known as notification levels (NL). If an NL is exceeded, CDPH can require water purveyors to notify the local governing body such as the City or County. If the contaminant detection is from 10 to 100 times the NL, the CDPH can recommend discontinuing the use of the water to the water purveyor. Because an NL is advisory only and not an enforceable standard, CDPH cannot require a water purveyor to remove a source from service.

To determine if the occurrence of a contaminant is widespread, both EPA and the state may require all water purveyors to collect data for this purpose. If monitoring is required, it is conducted under an Unregulated Contaminant Monitoring Regulation (UCMR) program where data is collected during a fixed period.

Analytical methods are reviewed to determine if they are sufficiently sensitive at the levels of concern. For some contaminants, the analytical methods are not low enough to meet the PHG. These methods need to be developed to be reliable and commercially available.

If a contaminant is found above a proposed standard, treatment will be necessary to treat to remove the contaminant. Again, studies need to be conducted to demonstrate that a proposed treatment process is effective and reliable. Best Available Treatment (BAT) processes are identified and costs are established.

Both the EPA and CDPH review health effects results, and also consider technical and economic feasibility in setting an enforceable standard, also known as a Maximum Contaminant Level (MCL). They cannot set such standards if there are no reliable analytical methods to measure the contaminant or treatment processes to reduce or remove the contaminant. In addition, they also consider the treatment costs to ensure that they are not excessive relative to the benefits.

Finally a draft MCL is proposed and adopted. Public comments are solicited at various stages. The entire process may take several years. If the EPA established a federal MCL, the state must also establish a standard at that same level or lower. Once an MCL has been established, water purveyors are required to provide water below it.

As an example of the time required to establish an MCL, a state Notification Level was initially established for perchlorate in 2002. A PHG was proposed and adopted and an MCL in California was proposed and then adopted on October 18, 2007. The federal government has not established an MCL yet.

FISCAL IMPACT

None.

STAFF RECOMMENDATION

For information.



MEMORANDUM

ITEM NO. 5

Prepared by: Nancy Matsumoto

Reviewed by: Ted Johnson

Approved by: Robb Whitaker

DATE: APRIL 24, 2008
TO: GROUNDWATER QUALITY COMMITTEE
FROM: ROBB WHITAKER, GENERAL MANAGER
SUBJECT: GROUNDWATER CONTAMINATION UPDATE

SUMMARY

Staff will provide updates to the Committee on recent activities associated with the District's Groundwater Contamination Prevention Program, including: the Omega Chemical site, the AB303 grant proposal for the Central Basin Groundwater Contamination Study; and other topics.

FISCAL IMPACT

None.

STAFF RECOMMENDATION

For information.



MEMORANDUM

ITEM NO. 6

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

DATE: APRIL 24, 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.

The Desalter supplied approximately 138 acre feet of potable water to Torrance in March. The facility was shut down for one week in early March to repair a faulty power supply module for the clearwell level sensor.

The District staff met with Eco Resources (ECO), the contract operator, on March 12th to review the current operation of the facilities per our contract and to identify potential opportunities to improve the facility's efficiency, flexibility and reliability. ECO is finalizing the annual report and will provide the report to WRD by the end of April. The report will include a review of last year's operations, opportunities for improvements and an implementation schedule. Staff will provide periodic updates on the progress to the Committee.

FISCAL IMPACT

None at this time.

STAFF RECOMMENDATION

For information.



MEMORANDUM

ITEM NO. 7

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

DATE: APRIL 24, 2008
TO: GROUNDWATER QUALITY COMMITTEE
FROM: ROBB WHITAKER, GENERAL MANAGER
SUBJECT: SALINE PLUME UPDATE

This is a continuing item wherein Staff is developing a saline plume policy for consideration by the Committee and the Board of Directors. The aim of the policy is to present a clear District direction as to how the agency intends to manage the remnant saltwater contamination (saline plume) in the West Coast Basin in the near and long-term future. It will be developed using a combination of technical, economic, and policy factors along with input from District stakeholders.

Staff recently completed 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. The consultant is finalizing the interpretation of the data and a report is expected in May. Upon receipt of the final report, 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 (its movement and threat to supply wells) to help develop the saline plume policy. Locations for at least two new nested monitoring wells will be determined and computer modeling of the revised plume map are scheduled for later this year.

Concurrent with the geophysical work, staff has been meeting to discuss the benefits and concerns of cleaning up the saline plume.

Further discussions of the saline plume policy will be discussed at the meeting.

FISCAL IMPACT

None.

STAFF RECOMMENDATION

For information.