

**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, SEPTEMBER 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. GROUNDWATER QUALITY UPDATE – FEDERAL GROUNDWATER RULE**
Staff Recommendation: For information.
- 4. SALINE PLUME UPDATE**
Staff Recommendation: For information.
- 5. AMERICAN WATER WORKS ASSOCIATION RESEARCH FOUNDATION RENEWAL**
Staff Recommendation: Renew subscription with the American Water Works Association Research Foundation in the amount of \$49,083 for the period October 2008 to September 2009.
- 6. DIRECTORS' REPORTS, INQUIRIES, AND REVIEW OF DIRECTIONS TO STAFF**
- 7. ADJOURNMENT**

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.

Posted by Abigail C. Andom, Deputy Secretary, September 19, 2008.



MEMORANDUM

ITEM NO. 3

Prepared by: Hoover Ng

Reviewed by: Ted Johnson

Approved by: Robb Whitaker

DATE: SEPTEMBER 24, 2008

TO: GROUNDWATER QUALITY COMMITTEE

FROM: ROBB WHITAKER, GENERAL MANAGER

SUBJECT: GROUNDWATER QUALITY UPDATE – FEDERAL GROUNDWATER RULE

SUMMARY

All groundwater systems in California currently have to meet stringent requirements in the design, construction, and operation of wells to safeguard them against microbial contamination. Such contamination can lead to immediate and acute public health episodes that would require immediate shut downs and boil water notices. The State Department of Public Health enforces these requirements through ongoing review of monitoring reports and periodic onsite inspections. Depending upon the population served, up to 120 bacteriological samples are collected and analyzed weekly to protect water systems against microbial contamination.

The U.S. Environmental Protection Agency promulgated the federal Ground Water Rule on November 8, 2006 to improve nationwide protection of groundwater supplies against microbial contamination. This new regulation will require public water systems throughout the nation that serve groundwater to perform initial assessments on their systems to determine their vulnerability to contamination from bacteria, viruses, protozoa and other microbes. Private well owners are exempt from this rule.

This rule is a result of the 1996 Amendments to the Safe Drinking Water Act. It was originally intended to require disinfection of groundwater systems “as necessary” to protect public health, and was interpreted initially as making disinfection mandatory for all groundwater systems. However, up to 147,000 systems would have been affected. This final rule allows for a targeted risk approach and would require disinfection or other treatment only if systems are deemed to have significant deficiencies and would be vulnerable to contamination.

In addition, the federal Total Coliform Rule (TCR) currently requires water systems to monitor for distribution system water quality. If results show that contamination is occurring and the cause of contamination would most likely be from a well and not from the distribution system (pipes, tanks, etc.), then the Groundwater Rule would also be invoked at that time.

Some of the requirements of this rule include the following:

- 1) Periodic sanitary surveys – review of the reliability, quality, and quantity of the source of supply, well construction, treatment, distribution system, monitoring program, management and operation, and operator certification and training. Identification of any significant deficiencies that might cause groundwater contamination.
- 2) Hydrogeologic sensitivity assessments – review of the lithology of wells and likelihood of exposure to fecal contamination (e.g., sand/ gravel versus clay soils) and determine if any wells are particularly sensitive or vulnerable.
- 3) Triggered source water monitoring – test for the presence of indicator bacteria, including *E. coli*, enterococci, or coliphage a wells if the TCR finds positive results in the distribution system and there is no disinfection treatment. Fecal contamination can be caused by failed septic systems, leaking sewer lines, or defective well construction or operating conditions that allows contamination to enter groundwater supply.
- 4) Corrective actions
 - a. correct the significant deficiency
 - b. eliminate source of contamination
 - c. provide alternate source of water
 - d. provide acceptable treatment
- 5) Follow up compliance monitoring to ensure effective treatment.

The States are required to adopt this rule within 2 years. Compliance monitoring must be completed by December 1, 2009. Sanitary surveys must be completed by December 31, 2012. The State Department of Public Health will notify local purveyors of the specific requirements of this rule.

EPA estimates that the costs to comply with this rule are \$62 million nationwide. Financial assistance may be available as Congress appropriates funds for infrastructure improvements.

Currently, the District ensures compliance with Title 22 regulations for participating pumpers for their source water only. It does not include distribution system water quality for bacteriological samples. Under this new Groundwater Rule, triggered monitoring would require water systems to conduct bacteriological monitoring of their source water and the District may be required to do this. The District will clarify its responsibility with the CDPH and with the participating pumpers.

FISCAL IMPACT

None.

STAFF RECOMMENDATION

For information.



MEMORANDUM

ITEM NO. 4

Prepared by: Ted Johnson
Reviewed by: Bob Siemak
Approved by: Robb Whitaker

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

Staff continues to investigate the current state of the saline plume in the West Coast Basin which will lead to the development of a recommended Saline Plume Policy for consideration by the Committee by the end of the year. The Policy is intended to help the District evaluate to what extent, if any, it will expand its efforts to remediate the large area of saltwater contamination that exists in the West Coast Basin. The Policy will be developed using a combination of technical, economic, and policy factors.

Since the last Committee update, the following work has been performed:

- The District's consultant has completed the final report for the geophysical investigation of the saline plume. A total of 35 field sites were investigated for the vertical distribution of saltwater. Numerous cross sections were constructed to show the results of the study, and where areas of freshwater, suspected brackish water, and suspected saltwater intrusion were located.
- Staff is taking the results of the investigation and finalizing the location for two new District monitoring wells to confirm the geophysical results and for long term monitoring of the movement of the saline plume. Two sites in the City of Torrance have been identified, and Staff is working with the City to secure access for drilling.
- Staff is preparing to collect chloride samples from over 50 production and monitoring wells in the saline plume area for an updated picture of the concentration and location of the plume. Coordination is being made with pumpers and LA County who own the wells that need to be sampled. The results will help complete the picture of the current status of the plume in the basin.
- Staff is working on the economics of saline plume remediation which will be incorporated into the cost/benefit analysis for the proposed Policy. Potential local, State, and Federal funding sources are also being researched.

FISCAL IMPACT

None.

STAFF RECOMMENDATION

For information.



MEMORANDUM

ITEM NO. 5

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

DATE: SEPTEMBER 24, 2008
TO: GROUNDWATER QUALITY COMMITTEE
FROM: ROBB WHITAKER, GENERAL MANAGER
SUBJECT: AMERICAN WATER WORKS ASSOCIATION RESEARCH FOUNDATION RENEWAL

SUMMARY

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. AWWARF 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 AWWARF.

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

- *Soil aquifer treatment (SAT) of recycled water*
- *Emerging contaminants, especially pharmaceuticals and endocrine disruptors – occurrence, toxicological impacts, analytical methods, and methods of treatment and control*
- *Tracking the movement of contaminants*
- *Groundwater contamination – arsenic, chromium, and perchlorate*
- *Desalination*
- *Iron and manganese treatment*
- *Evaluation of membrane technologies*
- *Wellhead treatment methods*
- *Disinfection byproducts (DBP's)*
- *Enhanced communication on drinking water issues*

Being an AWWARF member also provides an opportunity to sit on prestigious Project Advisory Committee (PAC) panels which are the technical review backbone to AWWARF 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.

AWWARF 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 of AWWARF since 1992. Other subscribers in the area include the Central and West Basin Municipal Water Districts, 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 2008 to September 2009, the membership fees are \$49,083. Staff anticipated this amount and included it in the budget for Project 006 for the current year.

STAFF RECOMMENDATION

Renew subscription with the American Water Works Association Research Foundation in the amount of \$49,083 for the period October 2008 to September 2009.