

# **EXHIBIT RRT-11**



# MARINA COAST WATER DISTRICT

11 RESERVATION ROAD, MARINA, CA 93933-2099

Home Page: [www.mcwd.org](http://www.mcwd.org)

TEL: (831) 384-6131 FAX: (831) 883-5995

**DIRECTORS**  
HOWARD GUSTAFSON  
*President*

KENNETH K. NISHI  
*Vice President*

THOMAS P. MOORE  
WILLIAM Y. LEE  
DAN BURNS

---

**Date:** June 12, 2009

**To:** Jan R. Sweigert, P.E.  
California Department of Public Health

**From:** Jim Heitzman  
MCWD General Manager

**Address:** 1 Lower Ragsdale, Building 1, Suite 120  
Monterey, CA 93940

**Subject:** **Response to "Desalination Treatment Plant - Source Water Quality Monitoring Plan Marina Coast Water District"**

**For Questions Contact:** Celine Trussell (Trussell Technologies, Inc) 858-458-1030 #110  
Ryan Alameda (RMC Water and Environment) : 415-321-3430  
Jim Heitzman (MCWD): 831-883-5938

**Requested Action:** Please approve course of action described in Item 4.

---

Dear Ms. Sweigert:

Thank you for your letter dated May 12, 2009 confirming the review of the following documents:

- a) Source water monitoring plan (December 22, 2008),
- b) Revised monitoring well location (January 22, 2009),
- c) Electronic mail from Dr. Rhodes Trussell (January 25, 2009).

The purpose of this letter is to respond to the May 12, 2009 letter, acknowledge the determinations made by the California Department of Public Health (CDPH), and submit our plan and schedule regarding the plant construction and ground water under the direct influence of surface water (GWUDI) testing. The following is an itemized response to your letter:

Item #1:

*"1. The proposed use of the existing monitoring well designated as DMW-2 located on the MCWD site for the existing desalination plant is considered acceptable for characterizing the ground water quality of the future production wells for the proposed 3.0 MGD desalination treatment plant with respect to the presence of chemical constituents. Marina Coast WD should submit the results of the monitoring results for the first quarterly sampling event and the proposed monitoring for the second quarter to the Department for review prior to conducting the monitoring for the second quarter."*

Our plan is to complete the sampling plan using the DMW-2 well to characterize the groundwater quality of the future production wells with respect to chemical constituents. On June 3, 2009, we submitted our first quarter sampling results to CDPH. Please note that the second quarterly sampling event had already been conducted on May 19, 2009, as originally planned before the receipt of the CDPH letter. The previously detected chemicals from the first sampling event, general water characteristics, and microbiological constituents (see Table 3 and 4 in the sampling plan submitted

on December 22, 2008 for details) were measured in the second quarter samples, following the approach approved in your letter. If upon reviewing the first quarter results CDPH has further requirements, we will resolve the issue at that time. The second quarter sampling results will be submitted to CDPH in advance of the third quarter sampling event.

Item #2:

*“2. The scope of the ground water monitoring program as described in Section 4 and shown in Tables 3 and 4 is considered adequate with the exception of the microbiological monitoring category. The monitoring frequency for Total Coliform and E. coli should be increased to monthly and the monitoring conducted within 24 hours after the highest high tide event of each month.”*

We have modified our sampling plan to now include monthly monitoring for total coliform and *E. coli*. Scheduling this monthly sample within 24 hours after the highest high tide event of each month would require 16 days of overtime for the District and the laboratories involved due to the time involved with the analytical method. We propose modifying your proposed schedule slightly to take the monthly samples within 24 hours after the highest monthly Sunday high tide (Table 1). Using this collection schedule would reduce the number of District Staff over time to 4 days.

We would also like to request a clarification for the duration of this monthly total coliform and *E. coli* sampling. Our last quarterly sample will be taken at the end of 2009. Should we also end our monthly sampling at this time?

**Table 1 – Monthly Total Coliform and *E. coli* Proposed Sample Collection Schedule**

Month	CDPH Proposal		MCWD Proposal		Difference (ft)
	Date of Highest Monthly High Tide*	Tide (ft)	Date of Highest Monthly Sunday High Tide*	Tide (ft)	
June	6/22/09	6.5	6/21/09	6.4	-0.1
July	7/21/09	6.6	7/19/09	6.3	-0.3
August	8/18/09	6.3	8/16/09	5.9	-0.4
September	9/15/09	5.6	9/20/09	5.5	-0.1
October	10/18/09	5.7	10/18/09	5.7	0
November	11/4/09	5.9	11/15/09	5.8	-0.1
December	12/31/09	6.5	12/13/09	5.8	-0.7

\*2009 NOAA Tide Predictions at Moss Landing

Item #3 and Item #4

*“3. The existing monitoring well DMW-2 is not considered adequate for establishing whether the ground water within the sphere of influence of the proposed production wells for the 3.0 MGD desalination plant would be under the direct influence of surface water (GWUDI) conducted for the existing well serving the Marina Coast desalination plant is not considered to be representative of the hydrogeologic response of the ground water aquifer that would be anticipated during operation of the proposed production wells for the 3.0 MGD desalination treatment plant. Therefore the Department will require a GWUDI evaluation of the completed production wells for the 3.0 MGD desalination facility.”*

“4. The Department recognizes that the Marina Coast Water District is interested in placing the desalination plant on-line as soon as possible and does not want to delay the design and construction of the desalination plant until the production wells are installed and the GWUDI evaluation is completed. Consequently, the Department will allow the Marina Coast Water District to initially operate the 3.0 MGD desalination plant prior to completion of the GWUDI evaluation for the production wells with the condition that the treatment plant is operated to meet the minimum requirements of the Surface Water Treatment Rule by providing filtration and disinfection to ensure 3-log *Giardia*, 4-log virus and 2-log cryptosporidium reduction. However, the Department may increase the pathogen log reduction requirements of the desalination treatment plant if the results of the GWUDI evaluation demonstrate elevated pathogen levels in the ground water.”

We understand CDPH’s need to require that the GWUDI evaluation be conducted using the future full-scale production wells. Due to our need to avoid delays, we are planning to build a full-scale plant that can meet the maximum requirements of the Surface Water Treatment Rule (See Table 2) by providing up to 5-log *Giardia*, 6-log virus and 5.5-log cryptosporidium reductions using the processes outlined in our sampling plan and summarized in Table 3 below. After the plant start up, the District would start the GWUDI evaluation.

**Table 2 – Regulatory requirements for pathogen removal/inactivation**

Parameter	Units	Surface Water/GWUDI		Groundwater <sup>a</sup>	
		Minimum	Maximum	Minimum	Maximum
<i>Giardia</i>	log removal	3	5	no removal requirement	
<i>Cryptosporidium</i>	log removal	2	5.5	no removal requirement	
Viruses	log removal	4	6	no removal requirement	4

<sup>a</sup> Not classified as GWUDI

**Table 3 - Pathogen removal and inactivation in proposed GWRO design by process**

Process	Pathogen log removal		
	<i>Giardia</i>	<i>Cryptosporidium</i>	Viruses
Pretreatment	-	-	-
RO membranes	2	2	2
UV disinfection	3	3.5	-
Chlorine disinfection	-	-	4
<b>Total</b>	<b>5</b>	<b>5.5</b>	<b>6</b>

Item #5:

Since the sampling plan was submitted in December 2008, it has become clear that the 3.0 mgd plant proposed by MCWD could become the centerpiece of a Regional Water Supply Project, and, as such the initial plant capacity would likely be between 10 and 13 mgd. At this capacity, the desalination plant would provide water to both MCWD and California American Water for service to the Monterey Peninsula. The final decision regarding plant capacity will not be known for several months. We would like to confirm that the sampling plan and permitting approach approved for the 3 mgd plant is also acceptable for this larger plant capacity.

We are available to answer any questions you may have and are looking forward to your response.

Sincerely,

Jim Heitzman, General Manager