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April 10, 2007
Marc Lucca
General Manager
Marina Coast Water District
11 Reservation Road
Marina, CA 93933
Subject: Request for Consideration of Use of Water from MCWD System for Injection Testing at MPWMD ASR Facility on General Jim Moore Boulevard

Dear Marc:
This letter is a follow up to our recent discussion regarding the Monterey Peninsula Water Management District's (MPWMD's) inquiry about the use of Marina Coast Water District (MCWD) water to support groundwater injection testing that is planned at our Phase 1 Aquifer Storage and Recovery (ASR) site, located on former Fort Ord property near the intersection of General Jim Moore Boulevard and Eucalyptus Road. Additional background on this project and planned testing is provided below.

Phase 1 ASR Project Background: The MPWMD, in cooperation with California American Water (CAW), has been conducting groundwater injection testing at the existing ASR test facility on former Fort Ord property since the first ASR test well (Santa Margarita Test Injection Well No. 1) was constructed in 2001. Based on the success of that testing, the Phase 1 ASR Project has been proposed to continue and expand diversions of excess winter flows from the Carmel River under specified conditions, and store this water for recovery during low-flow, peak demand periods. The water is diverted from CAW supply sources in Carmel Valley, transported through CAW's existing distribution system to the Phase 1 ASR site, and injected via speciallydesigned ASR wells into the Santa Margarita Aquifer in the Seaside Groundwater Basin. The Phase 1 ASR Project, scheduled for completion in 2008, will include two full-scale ASR wells and associated appurtenant facilities (e.g., pipelines, valves, electrical and treatment equipment). The Environmental Impact Report for the project was certified by the MPWMD Board in August 2006, and construction of the second full-scale ASR well (Santa Margarita Test Injection Well No. 2) began in January 2007.

Planned Injection Testing: The Santa Margarita Test Injection Well No. 2 is near completion, and will be equipped with permanent injection and pumping equipment this summer. Once fully

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equipped, the District desires to conduct a short-term injection test utilizing both of the ASR wells in injection mode simultaneously as a dual-well couplet. This is consistent with the Phase 1 operational design, but it has not yet been tested empirically. Specifically, we would like to collect actual test data to further understand anticipated groundwater basin response and mutual well interference (i.e., "drawup") effects under the design dual-well operation mode. This will facilitate the design and specification of certain appurtenant facilities, as well as help establish long-term injection capacities and other operational considerations at this site, as well as other future sites.

Ideally, we would like to conduct the dual-well simultaneous injection testing for a one to two week period, at a combined injéction rate of 3,000 gallons per minute (gpm). We had originally planned to conduct this testing during the 2007 winter recharge season, but the lack of sufficient rainfall and riverflow this season bave precluded this opportunity. In addition, CAW and MPWMD technical staffs have been working together on this plan and through the course of our coordination meetings, we have concluded that the current infrastructure of the existing CAW distribution system is not sufficient to support this testing until additional pumping and conveyance capacity is developed. The CAW system is currently capable of delivering quantities of water for injection in the range from 1,000 to $1,500 \mathrm{gpm}$, and only during lowdemand periods in winter months when excess Carmel River flows are available to support such diversions to the ASR-site. Additional pumping and pipeline facilities are presently in the design and permitting phase. However, at this time, it is not certain if all the needed additional facilities will be in place to support this level of planned project operation during the upcoming 2008 winter recharge season.

MCWD Capability to Support Planned Injection Testing: It is our understanding that the MCWD potable water delivery pipeline is currently installed along the recently expanded General Jim Moore Boulevard, to a termination point near the intersection with Eucalyptus Road. This places the MCWD pipeline within several hundred feet of connecting to the ASR site, and provides an economical location to intertie the two systems via a temporary aboveground pipeline from the CAW Paralta well site at the southwest corner of the General Jim Moore Boulevard / Eucalyptus Road intersection. Accordingly, we would like to confirm with you: (a) the feasibility of connecting the two pipelines at this location for the purpose of conducting the short-term injection test, (2) the capability of the MCWD distribution system to supply the desired quantity of water for this testing (i.e., approximately 93 acre-feet for a sevenday test at a constant $3,000 \mathrm{gpm}$ rate), and (3) the logistical, jurisdictional, regulatory, financial and other practical considerations you may be aware of that might be associated with this test proposal.

We understand that the MCWD Board will need to consider this inquiry, and we therefore would like to suggest that our respective technical staffs get together to discuss the testing details further, as a means to facilitate any Board-level presentations or questions. A somewhat similar testing program is also being planned at the proposed "Bayonet" site farther to the north from the Phase 1 ASR site, as part of the technical studies presently being developed for the ASR component of the CAW Coastal Water Project, and we understand that your agency will need to

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take that planned testing into consideration as well. To that end, it may be prudent to combine meetings on both projects to optimize consideration of both these planned tests.

Please contact me at your convenience (658-5640 or joe@mpwmd.dst.ca.us) once you have had the opportunity to review and discuss this matter with your Board. On behalf of the MPWMD, I truly appreciate your time and effort on this inquiry, and look forward to our continued discussion.


Darby Fuerst, Dave Berger, MPWMD
Charley Kemp, John Klein, CAW
Steve Tanner, Pueblo Water Resources

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