

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

In the Matter of the California American)
Water Ryan Ranch Unit,)
Hearing on Insufficient Physical Supplies)

Hearing Date: January 21, 2009

DECLARATION OF DARBY W. FUERST
GENERAL MANAGER

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

DECLARATION OF DARBY W. FUERST

I, Darby W. Fuerst, provide the following prepared declaration (Exhibit DF-1) under penalty of perjury and in relation to the Monterey Peninsula Water Management District (MPWMD or District) hearing on insufficient physical supplies to the California American Water (CAW or Cal-Am) Ryan Ranch Unit Water Distribution System (WDS). The following are true statements to the best of my knowledge and belief.

1 **Q1. PLEASE STATE YOUR NAME AND SUMMARIZE YOUR QUALIFICATIONS.**

2
3 1. My name is Darby W. Fuerst. My education includes a M.S. degree in water
4 resources administration from the University of Arizona, a B.S. degree in geological sciences from
5 the University of Washington, a B.A. degree in English literature from Occidental College, and an
6 A.A. degree in mathematics from Cañada College. I am a Certified Professional Hydrologist (No.
7 1658) with the American Institute of Hydrology. My professional memberships include the
8 American Water Resources Association, Groundwater Resources Association of California, and
9 American Geophysical Union. I have more than 27 years of professional experience in the field of
10 surface water hydrology and water resources administration working for local, state, and federal
11 agencies. Except for a one-year period (October 1988 through September 1989), I have worked for
12 the Monterey Peninsula Water Management District (MPWMD or District) for the past 24 years. I
13 have been employed by the Water Management District as the General Manager since December
14 2008. My resume is provided as Exhibit DF-2.

15 2. As General Manager, I am responsible for all activities of the Water Management
16 District, including operations of the administrative services, planning and engineering, water
17 resources, and water demand divisions. I previously served as the General Manager of the Water
18 Management District for approximately five years between December 1995 and June 2001 and as
19 Interim General Manager between March and November 2008. During my tenure as General
20 Manager, I have been involved with regulation of a number of water distribution systems within the
21 District, including California American Water's (CAW or Cal-Am) main Monterey system and its
22 Ryan Ranch system since 1989. This involvement has included establishment and review of system
23 capacities, i.e., annual production limits, and expansion capacities, i.e., connection limits, for a
24 number of water distribution systems.

1 Q2. PLEASE SUMMARIZE THE WATER MANAGEMENT DISTRICT'S
2 AUTHORITY TO REGULATE WATER DISTRIBUTION SYSTEMS AND ESTABLISH
3 CAPACITY LIMITS.

4
5 3. The Monterey Peninsula Water Management District is a special district created
6 by the California State Legislature. The Legislature created the Water Management District
7 following its passage of a 1977 statute (Water Code Appendix, Sec. 118, et. seq.) and ratification
8 by a majority of voters within the proposed MPWMD boundary in June 1978.

9 4. This enabling statute provides the sole legislative authority for integrated
10 management of water resources within the Monterey Peninsula area, encompassing the surface
11 and subsurface waters of the Carmel River, the Seaside Groundwater Basin, and all other water-
12 bearing geologic formations within the MPWMD boundaries.

13 5. Because the MPWMD statute directs the District to integrate the management of
14 all water resources of the Monterey Peninsula area, MPWMD is uniquely empowered to regulate
15 and manage all local water distribution systems and water sources. With respect to water system
16 management, the MPWMD controls formation of new water systems and additions of new
17 sources of supply, connections, or service territory to existing systems. The MPWMD manages
18 water demand by setting a maximum number of connections and quantity of annual production
19 for each water distribution system.

20 6. Specifically, District Rule 22, which is attached as **Exhibit DF-3**, summarizes
21 the process for creating or establishing a water distribution system. In order to approve an
22 application to create a water distribution system, certain minimum standards must be met (Rule
23 22-C) which include compliance with Title 22 of the California Administrative Code and certain
24 mandatory conditions of approval must be established (Rule 22-D-1) including an Expansion
25 Capacity Limit that sets the total number of connections that can be served and a System
26 Capacity that sets the maximum annual production in acre-feet per year. Other conditions of

1 approval that may be imposed include whether or not interties to other systems are allowed (Rule
2 22-D-1-h) and acceptance of the permit conditions by the applicant (Rule 22-D-1-m).

3 7. The terms Expansion Capacity Limit and System Capacity are defined in
4 District Rule 11. Specifically, the Expansion Capacity Limit is defined as the maximum number
5 of connections beyond which a Water Distribution System is not authorized to expand. The
6 System Capacity is defined as the amount of water in gallons, cubic feet, or acre-feet than can be
7 produced for annual delivery to a Water Distribution System based on the cumulative sustained
8 yield of wells adjusted for periodic lowering of the water table and projected yield of other
9 sources of supply. Further, Water Distribution Systems are defined as all works within the
10 District used for the collection, storage, transmission or distribution of water from the source of
11 supply to the connection of a system providing water service to any connection including all
12 water-gathering facilities and water-measuring devices. Excerpts from District Rule 11 with
13 these definitions are included in Exhibit DF-4.

14
15 **Q3. PLEASE SUMMARIZE THE WATER MANAGEMENT DISTRICT'S PREVIOUS**
16 **ACTIONS IN CREATING THE RYAN RANCH WATER DISTRIBUTION SYSTEM AND**
17 **AMENDING THE SYSTEM CAPACITY AND EXPANSION CAPACITY LIMITS.**

18
19 8. The Water Management District approved creation of the Ryan Ranch Water
20 Distribution System on December 13, 1982. As approved, the System Capacity was limited to 60
21 acre-feet per year and the Expansion Capacity Limit was set at 30 connections. The system was
22 served by three production wells.

23 9. On September 24, 1984, the Water Management District approved an amendment to
24 the Ryan Ranch system that increased the System Capacity to 100.5 acre-feet per year and required
25 development of two additional production wells. The Expansion Capacity Limit was not amended
26 at that time.

1 10. On April 10, 1989, the Water Management District approved a further amendment
2 to the Ryan Ranch Mutual Water Company system that increased the System Capacity to 175 acre-
3 feet per year and the Expansion Capacity Limit to 190 connections. The system was served by five
4 production wells. As part of the approval, the system operator agreed to maintain a leak detection
5 and correction system to ensure that unaccounted-for-water use in the system is limited to five
6 percent of annual production and implement a comprehensive water production, delivery, and
7 hydrogeologic monitoring program.

8 11. On November 13, 1989, the Water Management District approved Cal-Am's request
9 to annex the Ryan Ranch Mutual Water Company system into its service area. In its request, Cal-
10 Am proposed to operate the Ryan Ranch system as a separate unit with an emergency connection to
11 its main system and indicated that the existing system was served by five production wells that were
12 designed to deliver 250 gallons per minute (GPM). A copy of Cal-Am's application to annex the
13 Ryan Ranch system into its service area is included as Exhibit DF-5. As approved, the Expansion
14 Capacity Limit and System Capacity remained unchanged at 190 connections and 175 acre-feet per
15 year, respectively. In addition, Cal-Am was allowed to establish an interconnection between the
16 existing Cal-Am main system and the Ryan Ranch subunit that could only be used during
17 emergency events. Any transfers of water from Cal-Am's main system must be metered and
18 reported to the District within one week of occurrence.

19 12. On December 7, 1989, District staff notified Cal-Am's management that the District
20 Board had conditionally approved annexation of the Ryan Ranch Mutual Water Company system
21 into Cal-Am's service area and provided a copy of the revised conditions of approval for Cal-Am's
22 review and acceptance. The conditions included the April 10, 1989 conditions of approval to
23 expand the System Capacity and Expansion Capacity Limit and the November 13, 1989 conditions
24 of approval to annex the Ryan Ranch Mutual Water Company system. A copy of this notification
25 letter and enclosed conditions of approval is included as Exhibit DF-6.

1 13. On December 22, 1989, Cal-Am management responded and confirmed acceptance
2 of the conditions dated April 10, 1989 and November 13, 1989. A copy of Cal-Am's acceptance of
3 the conditions of approval is included as Exhibit DF-7. These conditions of approval are currently
4 in effect and limit annual production to 175 acre-feet and allow up to 190 connections. The system
5 is presently served by two active production wells.

6
7 **Q4. PLEASE SUMMARIZE THE WATER MANAGEMENT DISTRICT'S CURRENT**
8 **ACTION IN ASSESSING THE PHYSICAL ABILITY OF THE RYAN RANCH WATER**
9 **DISTRIBUTION SYSTEM TO MEET EXISTING AND FUTURE WATER DEMANDS.**

10
11 14. On September 19, 2008, District staff notified Cal-Am that staff had determined
12 that the physical water supplies that serve Cal-Am's Ryan Ranch Water Distribution System
13 appeared to be insufficient to support the System Capacity, i.e., 175 acre-feet per year, that was
14 specified for the Ryan Ranch system by the District Board in November 1989. As noted in the
15 notification letter, which is attached as Exhibit DF-8, the determination was based on a number
16 of factors including the limited number of active wells and the limited production capacity of
17 these wells serving the Ryan Ranch system. The letter also noted that Cal-Am had utilized water
18 transferred from its main system through an emergency intertie to supply its customers in each of
19 the past six years, i.e., Water Years 2003 through 2008. In addition, the letter noted that Cal-Am
20 in its testimony to the California Public Utilities Commission for a rate increase had indicated
21 that its Ryan Ranch system did not have "sufficient capacity to meet demands during peak events
22 and, as a result, has been forced to utilize an emergency interconnection with the main Monterey
23 Service Area". District staff's action is consistent with District Rule 40-B which authorizes
24 modification of System Capacity (production) and Expansion Capacity (connection) limits when
25 physical supplies do not appear sufficient to support either the System Capacity or Expansion
26 Capacity of a system. A copy of District Rule 40 is included as Exhibit DF-9.

1 15. In the September 19, 2008 letter, District staff notified Cal-Am, as owner and
2 operator of the Ryan Ranch system, that a hearing before the District Board would be convened
3 on November 17, 2008, to determine whether, and to what extent, modifications should be made
4 to the System Capacity or Expansion Capacity limits presently specified for the Ryan Ranch
5 system. If the Board finds that the physical supplies are not sufficient to meet the permitted
6 System or Expansion Capacity limits, then the Board will determine new System or Expansion
7 Capacity limits for the system, based on substantial evidence, including credible expert evidence.
8 In the interim, consistent with District Rule 40-B, District staff has suspended receipt of all
9 expansion and extension applications for the Ryan Ranch system and has suspended processing
10 of current applications in progress. At present, there are no applications in progress for the Ryan
11 Ranch system.

12 16. On November 4, 2008, District staff notified Cal-Am that the hearing planned for
13 November 17, 2008, had been rescheduled and would convene at the District office on January
14 21, 2009 at 8:30 a.m. A copy of this notice is included as Exhibit DF-10.

15
16 **Q5. PLEASE SUMMARIZE THE WATER MANAGEMENT DISTRICT'S ANALYSIS**
17 **OF THE PHYSICAL ABILITY OF THE RYAN RANCH WATER DISTRIBUTION**
18 **SYSTEM TO MEET EXISTING AND FUTURE WATER DEMANDS.**

19
20 17. Exhibit JO-11 summarizes District staff's analysis of the physical ability of the
21 existing Ryan Ranch system to meet existing and future water demands. Specifically, Exhibit
22 JO-11 is a memorandum report prepared by the District's Water Resources Division Manager,
23 Joseph Oliver. Mr. Oliver is a Professional Geologist and Certified Hydrogeologist in
24 California, with 30 years of professional experience in ground water hydrology. In his report,
25 Mr. Oliver assessed existing well production capacity for the Ryan Ranch system under varying
26 assumptions and existing and future water demands for the Ryan Ranch system under average

1 day and maximum day conditions. In assessing existing well production capacity, Mr. Oliver
2 relied on recent reports prepared by Cal-Am and its consultants and drinking water standards in
3 the California Code of Regulations, Title 22. As concluded in Exhibit JO-11, the current well
4 production capacity for the Ryan Ranch system with both primary wells and standby well in
5 service is sufficient to meet existing average day demand and maximum day demand under
6 existing demand conditions and average day demand under permitted conditions, i.e., 175 acre-
7 feet per year; but is not sufficient to meet maximum day demand under permitted conditions.
8 Further, the current well production capacity with both primary wells but without the standby
9 well in service is sufficient to meet existing average day demand; but is not sufficient to meet
10 maximum day demand under existing conditions or average day demand or maximum day
11 demand under permitted conditions. Lastly, the current well production capacity with the largest
12 producing well out of service is sufficient to meet existing average day demand; but is not
13 sufficient to meet maximum day demand under existing conditions or average day demand or
14 maximum day demand under permitted conditions.

15 18. Given these conclusions, it is clear that the physical ability of Cal-Am's existing
16 Ryan Ranch system with the highest capacity well or standby well out of service is not sufficient
17 to meet the average day or maximum day demands under permitted conditions, i.e., 175 acre-feet
18 per year. Accordingly, the permitted System Capacity limit should be reduced to reflect
19 available production capacity and the suspension on accepting water permit applications should
20 continue until Cal-Am develops additional well production capacity.

21
22 **Q6. PLEASE SUMMARIZE YOUR RECOMMENDED MODIFICATIONS TO THE**
23 **SYSTEM CAPACITY AND EXPANSION CAPACITY LIMIT FOR THE RYAN RANCH**
24 **WATER DISTRIBUTION SYSTEM.**

1 19. Exhibit DF-11 shows the relationship between well production capacity and
2 annual production limits. Specifically, the solid diagonal line shows that as well production
3 capacity increases, the allowable annual production limit also increases. This relationship can be
4 used to (1) determine the appropriate annual production limit for a given well production
5 capacity or (2) determine the required well production capacity for a given annual production
6 limit. For example, in the lower left portion of Exhibit DF-11, three specific well production
7 capacities are shown, i.e., 67, 101, and 122 GPM, and the associated annual production limits are
8 derived, i.e., 48, 72, and 87 AFY. This chart indicates that, if well production capacity equals 67
9 GPM, then the annual production limit should be set at 48 AFY. Similarly, if well production
10 capacity equals 101 GPM, then the annual production limit should be set at 72 AFY. Based on
11 current operational conditions, District staff recommends reducing the System Capacity for the
12 Ryan Ranch System to 72 AFY. Because of uncertainty regarding water connections that have
13 been permitted but are not currently active, District staff recommends maintaining the Expansion
14 Capacity Limit for the Ryan Ranch system at 190 connections at this time and continuing the
15 suspension on accepting new applications.

16 20. As noted above, Exhibit DF-11 can also be used to determine the required well
17 production capacity needed for a given annual production limit. This derivation is shown in the
18 upper portion of Exhibit DF-11. For example, given the System Capacity value of 175 AFY
19 that was set in November 1989, a well production capacity value of 244 GPM is required to
20 serve average day and maximum day demands. This determination indicates that the current well
21 production capacity in the Ryan Ranch system with the largest well out of service (67 GPM) or
22 with the standby well out of service (101 GPM) is significantly below the well production
23 capacity required to meet the permitted annual production limit (244 GPM). In order to meet
24 average day and maximum day demands at the permitted production limit, Cal-Am will need to
25 develop between 143 and 177 GPM of new well production capacity.

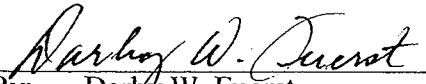
1 **Q7. PLEASE SUMMARIZE POSSIBLE MEASURES TO AUGMENT PRODUCTION**
2 **OR REDUCE DEMAND IN THE RYAN RANCH SYSTEM.**

3
4 21. On August 21, 2006, District staff received a copy of Cal-Am's plan for ensuring
5 an adequate water supply in the Ryan Ranch system. The plan included a June 27, 2006 letter-
6 report prepared by Martin Feeney for Cal-Am that presented an evaluation of opportunities for
7 increasing system supply and reliability. The evaluation included descriptions of possible supply
8 options, required infrastructural improvements, order-of-magnitude costs of implementation, and
9 identification of the regulatory, institutional, and jurisdictional challenges of each option. The
10 plan was prepared in response to a Compliance Order issued by the Monterey County Health
11 Department that ordered Cal-Am to prepare and implement a plan for necessary improvements to
12 the Ryan Ranch system to ensure a permanent, continuous, and adequate supply of potable
13 water. Copies of the Compliance Order and Cal-Am's response, including Mr. Feeney's letter-
14 report are included as **Exhibits DF-12 and 13**, respectively.

15 22. As discussed above, Mr. Feeney's letter-report explored possibilities for
16 increasing groundwater supply through new wells, the use of aquifer storage and recovery, and
17 demand management. Specific measures included increasing yield from existing system wells
18 by lowering and replacing pumps and motors, developing additional well sites inside and outside
19 the Seaside Groundwater Basin, implementing a in-lieu Aquifer Storage and Recovery (ASR)
20 Program, and reducing irrigation demand by installing evapotranspiration (ET) irrigation
21 controllers.

1 Executed on January 20, 2009, at Monterey, California.

2
3 MONTEREY PENINSULA WATER
MANAGEMENT DISTRICT

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5 
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