

HAND
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August 18, 2004

Mr. Rick Dickhaut
Acting General Manager
Monterey Peninsula Water Management District
5 Harris Court, Bldg. G
Monterey, CA 93942-0085

RECEIVED

AUG 19 2004

Subject: MONTERRA RANCH MUTUAL WATER COMPANY – ANNUAL WATER
MONITORING PROGRAM REPORT FOR WATER YEAR 2003 **MPWMD**

Dear Mr. Dickhaut:

Provided here are responses to comments contained in your letter of July 8, 2004, to Michael Waxer (Carmel Development Company) regarding the Water Year 2003 (WY 2003) annual monitoring report for the Monterra Ranch Mutual Water Company (MRMWC).

1. **Breakdown of Monthly Well Production.** This comment requests that future annual monitoring program reports include a “bar graph” format for presentation of monthly water production data for easier visual understanding of the relative distribution of water uses in the system.

Response. Bar graphs will be provided as requested in future annual monitoring program reports.

2. **Summary of Annual Well Production, Reverse Osmosis (RO) Plant Production and Sub-potable Use.** This comment requests that future annual monitoring program reports include a “bar graph” format for presentation of annual well production, treatment plant and sub-potable water uses for easier visual understanding of the trends over time for these elements of the system.

Response. Bar graphs will be provided as requested in future annual monitoring program reports.

3. **Summary of Annual Residential Water Use.** This comment requests that future annual monitoring program reports include a “bar graph” format for presentation of monthly annual residential water use data for easier visual understanding of the status of annual residential water use trends.

Response. Bar graphs will be provided as requested in future annual monitoring program reports.

4. **Summary of Buildout Status.** This comment requests that future annual monitoring program reports include a “bar graph” format for presentation of

monthly water production data for easier visual understanding of the status of residential buildout within the water system service area.

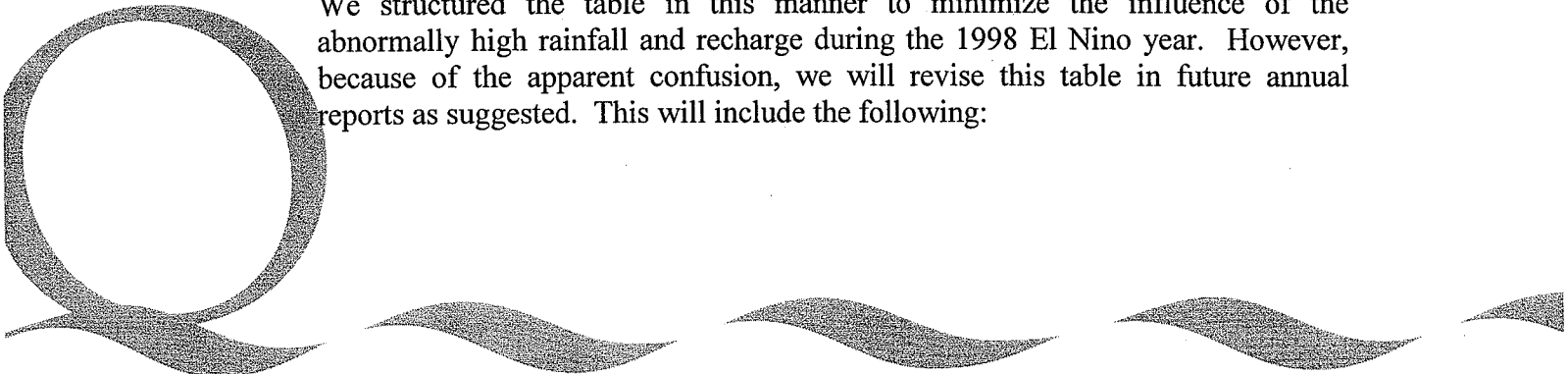
Response. Bar graphs will be provided as requested in future annual monitoring program reports.

5. **Well Production Capacity.** This comment requests a meeting and further discussion of a suitable technical approach for annual updates of the water well production capacities in the system to comply with permit Condition #15. The reporting information supplied for the California American (Cal Am) Water system is presented as an acceptable example.

Response. We welcome the opportunity to meet with District staff for further discussion of this issue prior to preparation and submission of the WY 2004 annual report. In anticipation of further discussions, we have reviewed the Cal Am reporting data (Enclosure 5) and have prepared and attached a similar table for the MRMWC system (see **Table A**). The information in the table shows peak production capacities in gallons per minute (GPM), cubic feet per second (CFS), and acre-feet per day (AFD). As indicated by the footnotes to **Table A**, these capacities do not necessarily reflect the actual use of the wells, but rather their respective peak capacities, which is typically limited by the size of the pump in each well. The actual use of the wells is less than the indicated capacities due to various factors, including, for example: (a) the current low demand in the system; (b) flow limitations at the water treatment plant; and (c) operator decisions based on water quality considerations.

6. **Table 2 Revisions.** This comment raises questions about the annual water balance data presented in **Table 2**, and requests review, clarification and changes.

Response. The annual water balance data presented in **Table 2** have been checked and found to be accurate. For clarification: (a) the estimated total recharge values appearing in the far right-hand column are rounded to the nearest 5 acre-feet per year; (b) the average annual rainfall (18.83 inches) is for the entire period of record for the Monterey Airport station, which extends from Jan. 1996 to September 2003; it is not the average of the six annual entries listed in the table; and (c) the annual recharge for "Average Conditions" shown in the bottom row of the table is calculated from the average rainfall (18.88 inches); it is not calculated as the average of the recharge for the six years presented in the table. We structured the table in this manner to minimize the influence of the abnormally high rainfall and recharge during the 1998 El Nino year. However, because of the apparent confusion, we will revise this table in future annual reports as suggested. This will include the following:



- change the title of the first column to "Water Year" and revise each row to cover the data for October-September of the respective water year;
- check and/or recalculate the rainfall, runoff, ET and recharge values to match the revised amounts for the respective water year, rather than reporting year; and
- present the "Average Conditions" values in the bottom row as simply the average of the respective values (by column) for each water year in the table.

7. **Miscellaneous Discrepancies.** This comment points out several minor discrepancies between data shown in the summary table (**Table 1**) as compared and other source tables within the document. A discrepancy on page 10 of the report regarding historical water level ranges for well M-1 is also noted.

Response. The minor discrepancies resulting from mistakes in transcribing data from the source tables to the summary table (Table 1) have been corrected. Attached is a corrected copy of **Table 1**. The text on page 10 of the report has also been corrected; a copy is attached.

We trust this is the information you require at this time. Please call if there are any questions.

Sincerely,



Norman N. Hantzsche, P.E.
Principal/Managing Engineer

xc: Michael Waxer, Carmel Development Company
Dave Fuller, WWD Corporation

Attachments (Table A, Table 1)

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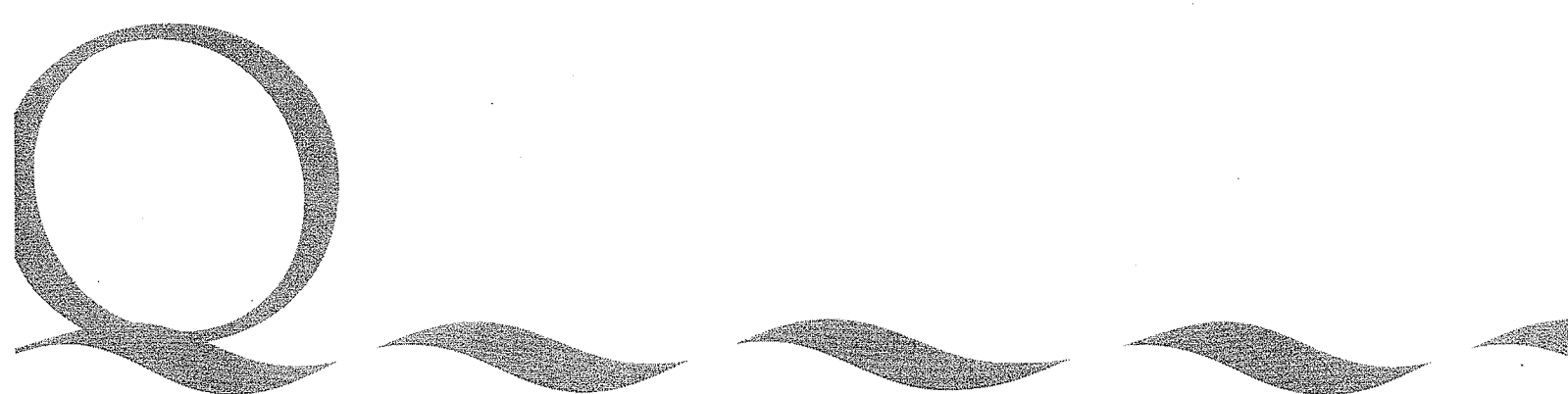


Table A

**Monterra Ranch Mutual Water Company
Production Wells and Pumping Capacities^{1,2,3}**

Source Well	GPM	CFS	AFD
M-1	120	0.27	0.53
M-5	70	0.16	0.31
M-8	70	0.16	0.31
M-13	70	0.16	0.31
M-15	100	0.22	0.44
HW-1	(220) ⁴	(0.49) ⁴	(0.97) ⁴
HW-2	220	0.49	0.97
Total	650	1.46	2.87

Notes:

1. GPM refers to gallons per minute; CFS to cubic feet per second; and AFD to acre-foot per day.
2. The listed capacities reflect the maximum amount of groundwater production for a peak day; the totals do not necessarily represent the long-term, annualized production capacity of the MRMWC water system.
3. Pumping capacities (GPM) are based on the size of the respective pump in each well; the wells are not necessarily used to their maximum capacity for various reasons, including, for example: (a) lack of demand at this stage of project development; (b) flow limitations of the RO Water Treatment Plant; and (c) water quality factors favoring one well source over another.
4. HW-1 and HW-2 operate in tandem, drawing from the same source area and each well serving as a backup to the other; the capacity of HW-1 is not included in the totals.

Table 1 (revised 8/18/04)

Summary of Production, Delivery, and Connection Data for Monterey Ranch Mutual Water Company
Annual Water Monitoring Program: 1996-2003¹

	<u>RY 1996</u>	<u>RY 1997</u>	<u>RY 1998</u>	<u>RY 1999</u>	<u>RY 2000</u>	<u>RY 2001</u>	<u>RP 2001</u>	<u>WY 2002</u>	<u>WY 2003</u>
Production (acre-feet)									
Total Well (Potable + Subpotable)	1.53	1.23	10.46	12.83	17.89	89.33	101.97	171.43	129.65
Total RO Plant Production	-.2	-.2	-.2	11.72	15.22	22.92	31.92	27.79	35.97
RO Brine Conc. Production	-.2	-.2	-.2	1.11	2.67	3.56	5.22	3.89	6.19
RO Plant % of Well ((RO+Brine)/Total Well)	-.2	-.2	-.2	100%	100%	30%	36%	18%	33%
Brine Reject % (Brine/(RO+Brine))	-.2	-.2	-.2	8.7%	14.9%	13.4%	14.1%	12.3%	14.7%
Delivery (acre-feet)									
Total Metered Consumption	-.2	-.2	-.2	10.46	14.24	20.38	28.33	26.21	34.01
Consumption % Loss (RO-Consump./RO)	-.2	-.2	-.2	11%	6%	11%	11%	6%	5%
Active Connections									
Residential - inclusionary homes	-.2	-.2	42	42	42	4	42	42	42
Residential - market-rate homes	-.2	-.2	0	1	3	4	11	11	12
Irrigation	-.2	-.2	2	2	2	4	2	2	2
Non-residential/commercial	-.2	-.2	0	1	3	4	3	6	8
Construction - temporary	-.2	-.2	0	0	0	4	9	7	7
Total	-.2	-.2	44	46	50	4	67	68	71
Delivery/Connection (acre-feet/connection)									
Residential - inclusionary homes	-.2	-.2	0.18	0.23	0.28	4	0.30	0.30	0.34
Residential - market-rate homes	-.2	-.2	-.3	-.3	0.46	4	0.40	0.60	0.83 0.77
Irrigation	-.2	-.2	0.17	0.05	0.05 0.08	4	0.26	0.21	0.66
Construction - temporary	-.2	-.2	-.3	-.3	-.3	4	0.06	0.14	0.20 0.18
Sales office	-.2	-.2	-.3	0.14	0.88	4	0.48	0.22	0.47
Golf course clubhouse	-.2	-.2	-.3	-.3	0.01	4	3.84	3.83	4.12 3.95
Golf course maintenance building	-.2	-.2	-.3	-.3	-.3	4	0.31	0.31	0.34
Golf course 13th fairway bathroom	-.2	-.2	-.3	-.3	-.3	4	-.3	0.02	0.01
Golf course 16th fairway bathroom	-.2	-.2	-.3	-.3	-.3	4	-.3	0.04	0.03
Mid-gate guard house	-.2	-.2	-.3	-.3	-.3	4	-.3	0.91	2.21
Front gate guard house	-.2	-.2	-.3	-.3	-.3	4	-.3	-.3	0.05

Notes: (1) RY refers to Reporting Year from July 1 to June 30 of year shown, RP refers to the 15-month Reporting Period from July 1, 2000 to September 30, 2001; WY refers to Water Year from October 1 to September 30 of year shown. (2) RY 1998 represents the first year that the inclusionary housing units were occupied; information on connections and delivery is not available before that time. (3) No connections during this time period, or incomplete water use record (i.e., connection became active after reporting year began). (4) Connection and delivery information based on RP 2001, not RY 2001.