

CALIFORNIA ENVIRONMENTAL LAW PROJECT

A Non-Profit Legal Corporation



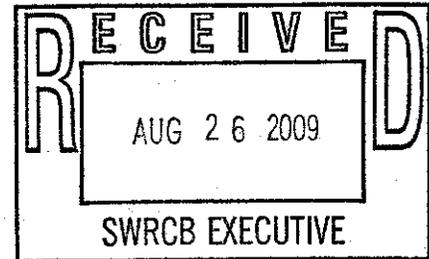
Of Counsel

Laurens H. Silver, Esq.
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August 26, 2009

Sent Via Electronic Mail & Facsimile

Jeanine Townsend, Clerk of the Board
State Water Resource Control Board
1001 I Street
Sacramento, CA 95814



Re: Comment Letter: Cal-Am CDO Hearing Workshop

Dear Board Members:

I. The Order should include the following express prohibition (see §16.5 of proposed Order):

“Cal-Am shall not increase its diversions from the Carmel River to offset any loss in production from the Seaside Basin.”

This will reflect the intent of the Board set forth in §16.5, at p. 42. This intent should be reflected in the text of the Order.

II. Sierra Club asks the Board to reconsider its proposed decision not to take judicial notice of the spring 2009 counts of adult steelhead below San Clemente Dam. This count was performed by the District pursuant to a monthly task that had been performed by District staff for many years. The District presented data on steelhead adults below San Clemente Dam compiled for the years 1954 through 2008. The parties had ample opportunity to challenge the methodology for compiling this data. None did. See KU3 (Number of Adult Steelhead Counted Passing San Clemente Dam Fish Ladder (1954-2008))

There is therefore no valid reason not to take judicial notice of the MPWMD fishery reports for April and May 2009.¹ (See Sierra Club’s Requests for Judicial Notice of the April and May MPWMD

¹ MPWMD prepares monthly fisheries status reports that are presented to the Board at every monthly meeting, and are a regular feature of the Board package. (See MPWMD website, “District Board meetings.”)

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reports). The Board should take note that this represents a dramatic population decline that places the SCCC steelhead DPS (federally listed as threatened) in imminent extinction peril.

III. Through an Application for An Emergency Interim CDO for the Water Year 2009-2010 to Provide Habitat Benefits to the Carmel River Steelhead, filed May 14, 2009, Sierra Club pointed out to the Board that the returns of adult steelhead below San Clemente Dam this spring totaled only 94 individuals. This was a 17 year low. This continues a declining trend since 2001 (804 adults). See Williams Phase II Declaration at 7-8.² Sierra Club sought emergency relief beginning June 1 of this year that would involve an immediate curtailment of Cal-Am diversions to facilitate survival of juvenile steelhead and to maintain suitable water quality in the Lagoon for juvenile steelhead.

The Petition was filed on May 14, 2009. On May 18, 2009 Cal-Am sought guidance from the Board. It wrote:

“If the State Board does not summarily dismiss the application, Cal-Am respectfully requests the Sate Water Board’s guidance and clarification as to how it will process the Application...” (Letter to Arthur Baggett, 5/18/09).

The Board did not timely respond to Sierra Club’s Application for Issuance of Emergency Interim CDO for the water year 2009-1010 to Provide Habitat Benefits to the Carmel River Steelhead. Nor did it respond to Cal-Am’s request for guidance.

Over 2 ½ months later, on August 4, 2009, relatively late in the fish rescue season, the Hearing Officer notified Sierra Club that it would consider Sierra Club’s Application at a “duly noticed” public hearing.

If the hearing on September 2 is the “duly noticed public hearing” referred to in the August 4, 2009 letter, it comes too late in the fish rescue season to order relief through curtailment of diversions in this water year that will provide benefits to survival of juvenile steelhead in the lower stretches in the River. Sierra Club urges the Board, however, to consider the population decline in fashioning relief under the CDO that will better promote benefits to the steelhead and their habitat.

Since Order 2002-02 was issued, the SCCC steelhead DPS shows a declining trend. See MPWMD, KU3, (Chart showing decline since 2002). The best measurement available of population trends in the SCCC steelhead DPS are the numbers of spawning adults returning to the area below San Clemente Dam.

The current Carmel River steelhead population is significantly diminished relative to the already reduced population levels found in the River as late as 1969 (1336 at San Clemente Ladder) See Dettman and Kelley PT. Exhibit 42, p. 19. Thus the minor population gains seen from 1997-2002, (see MPWMD, KU3) are offset by the declining trend from 2003-2008. The continuing diversions each water year deprive the Carmel River steelhead of habitat needed for recovery. Each year’s diversions make a bad situation worse, and are precluding recovery of the species, as well as maintenance of the already diminished population.. The diversions cause reductions in otherwise

² See also MPWMD KU3.

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available critical habitat that is needed to improve the affected population's likelihood of surviving and recovering in the wild. Ambrosius Testimony, PT 39 at 3-6.

It is obvious, on the basis of the existing record, that in light of the documented declining population trend since 2001 (MPWMD, KU3), that the mandated cutbacks in the proposed CDO should be tailored in such a way as to provide greater habitat benefits to the steelhead during the low flow periods in late spring, summer, and fall. Both the prosecution team, through NMFS, and Sierra Club have requested the Board to curtail diversions in low flow periods in excess of the 5% (with 1% annual increments) curtailments now proposed by the Board.

Joyce Ambrosius, NMFS fisheries biologist proposed, on behalf of NMFS that in connection with the CDO, as proposed in February 2008, that:

...the CDO be amended to provide that the annual reduction in water diversion be implemented by reducing the daily mean diversions during the period of April through October by the same percentage as the annual diversion reduction percentage specified in the Order... Under the revision proposed by NMFS, the CDO would further specify that during the months of April through October, CAW must reduce the mean daily diversion amount by at least 15% and implement the remainder of the required annual percentage reduction during the remainder of the year." PT 39 at 10.

Testifying on behalf of Sierra Club, Dr. John Williams proposed the following modification of the proposed CDO with respect to the curtailment of diversions:

"[B]y focusing the reduction in diversions on periods when flows in the river are low [less than 20 cfs at the Jon Juan Bridge gage], ... incremental increases in flow will provide greater benefit to steelhead and other public trust resources. Then, initially require a 25% reduction from base unlawful production during periods of low flow, a 15% reduction during periods of marginal flow, and no reduction in periods of high flow. In each following year, the required reduction would be increased by 2% of base unlawful production for each situation, such that, in the second year, the required reductions would be 27%, 17%, 2%, etc., until illegal diversions no longer occur. (SC20)³

Dr. Williams also proposed that the CDO should provide for 0.5 cfs flows to the Lagoon from Cal-Am pumps so long as the unlawful diversions continue. Declaration at 29. He based this proposal on the deteriorating water quality in the Lagoon during dry years that causes juvenile steelhead mortality and impaired development. Williams Phase II Declaration at pp. 13-18.

All of the experts agree as well that increasing flows would improve water quality in the Lagoon to the benefit of the SCCC steelhead. See Williams Declaration at V-VI. Kevan Urquhart testified: "Delaying the date of de-watering at the MPWMD Highway 1 gage represents an extension of the amount of time a continuous freshwater inflow connection could be maintained in the Lagoon, and also where significant underflow to the lagoon can also be assumed to be occurring. The longer this date is

³ "Marginal Flows" and "Base Unlawful Production" are defined in the Williams Testimony at p.28.

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extended the longer good water quality in the lagoon is likely to be maintained each year." MPWMD KU 1 at 8.

Sierra Club urges the Board to modify the Proposed Order by ordering diversion curtailment when habitat needs of the steelhead are most critical during low flow periods in the River and to follow the recommendations of Dr. Williams during periods of low and marginal flow. Sierra Club urges the Board consistent with Dr. Williams' declaration, to require a 25% reduction from base unlawful production during periods of low flow until the steelhead DPS has recovered, or until Cal-Am has obtained a replacement water supply. Sierra Club also requests the Board require Cal-Am to cause .5 cfs flows to the Lagoon to enhance Lagoon water quality. See Williams Phase II Declaration. If at any time Cal-Am makes a satisfactory showing to the Division of Water Rights that such curtailments will endanger health and safety needs of Cal-Am customers, the Chief would be given authority to make adjustments in the diversion schedule, as needed.⁴

IV. Providing more water in the River during low flow months would provide substantial habitat benefits to steelhead. Therefore the draft CDO should be tailored to provide maximum benefits during low flow months by ensuring that reductions in diversions occur to the maximum extent practicable consistent with public health and safety. Many steelhead fry rear in the habitat below the Narrows. Maintaining flow through the summer in more of this habitat will allow such fish to rear to the smolt life-stage in the river, and avoid the stress and mortality associated with rescue and rearing in an artificial habitat. Even for parts of the river that do eventually go dry, keeping water in the river longer will allow fish more time to grow before they are subjected to rescue. In addition, larger sized steelhead with better swimming ability, are better able to move on their own away from the dry sections of the stream either into the lagoon downstream or into the perennially watered habitat upstream. Some of these larger and more mature steelhead will tend to disperse on their own in search of better habitat, thus saving them from the traumatic stress of handling during rescue. According to the MPWMD fish rescue data, the majority of fish that are rescued come from the AQ3 zone. See Ambrosius testimony, PT 39, passim.

All of the experts (Dr. Williams, Urquhart, (MPWMD) and Ambrosius (NMFS), agree that a significant curtailment of diversions will bring about habitat improvement that will promote recovery of the SCCC steelhead DPS.

In his testimony Mr. Urquhart stated: "The number of days that any flow regime is extended at the USGS near Carmel Gage illustrates how long one may be able to delay the initiation of fish rescues, as once the river begins to dry at that location, the continuous dryback process has inexorably begun for that water year and fish rescues are required from thereon. Delaying fish rescues allows more time for

⁴ Sierra Club would support a condition in the CDO that would protect health and safety concerns of the community. This would be modeled upon §2d of the proposed Order and would provide for authority in the Chief Division of Water Rights to allow for an adjustment in diversions in the event of justifiable, reasonable anticipation of deficits in supply that would threaten health and safety.

Sierra Club suggests the following language: "Cal-Am may petition the State Water Board Deputy Director for Water Rights for relief from reductions in diversions that it reasonably anticipates may endanger public health and safety. Any relief granted shall remain in force and effect only so long as necessary to protect public health and safety. The Deputy Director shall make a finding whether the public health and safety emergency has been produced because the prohibition on new service connections does not remain in effect."

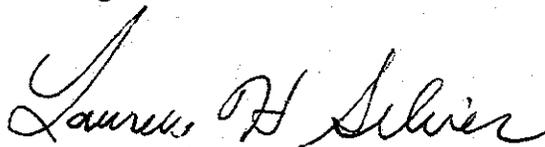
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juvenile steelhead to emerge from their redds (nests), and might increase fish available for rescue. Also, the longer rescues are delayed, the larger the fish are allowed to grow in their natural environment, and larger fish survive the rescue process better, as well as survive and resist disease outbreaks better while being reared by the District at the SHSRF, until release the following winter." MPWMD, KU Exhibit I at 8. Urquhart stated as well: "Therefore, if the final CDO could keep any significant amount of additional stream habitat in this area [the reach below the Narrows] wet throughout the summer and fall, it would likely result in additional fall production of juvenile steelhead for the watershed as a whole." *Id.*⁵

V. The SWRCB announced by letter dated January 15, 2008 its intention to issue a CDO in this matter. That letter put Cal-Am and its customers on notice that the CDO contemplated substantial curtailments of diversion that could result in a moratorium on development. Sierra Club requests the Board to use January 15, 2008 as the cut-off date for "will serve" letters. The Board's CDO should read: "Cal-Am shall not divert water from the Carmel River for new service connections that were not provided a "will serve commitment before January 15, 2008."

VI. The draft CDO significantly underestimates the outdoor water usage in the Cal-Am service area and thus underestimates the reductions in outdoor water savings that could be achieved. See Statement of Peter Vorster, consulting hydrologist, attached with exhibits. Mr. Vorster estimates that the total outdoor water use of Cal-Am Monterey service area customers is 3000 acre feet per annum, rather than the 500 afa estimate that is used in the proposed CDO.

Sierra Club requests that the Board use 3000 afy as the base for outdoor water use. Assuming outdoor water use savings of 20% , the outdoor water use savings would be 600 afy rather than 100 afy. The annual savings increment would be 72 afa instead of 12 afa. Sierra Club requests that §2c(2) of the proposed Order be amended to provide that "the base shall be further reduced by 181 afa through savings that will accrue from (1) reduced system losses; (2) the retrofit program, and (3) the reduction of potable water used for outdoor irrigation."



Laurens H. Silver, Esq.
California Environmental Law Project
Attorney for Sierra Club

⁵ See Sierra Club's closing brief at 4-7.

Attachment 1

Statement of Peter Vorster

1. My name is Peter Vorster. I am a consulting hydrologist with over 33 years experience in water resources management. A copy of my vitae and biography is attached. One of my specialties is the analysis of urban water use and management including developing indicators of urban water use and water conservation. I have been asked by Sierra Club to review the State Water Resources Control Draft Cease and Desist Order against the California American Water Service Company unauthorized diversion of water from the Carmel River in Monterey County, issued on July 27, 2009 (Draft CDO).
2. The focus of my review is on the water conservation actions that the State Board determined could reduce the need to divert water from the Carmel River. The Draft CDO significantly underestimates the outdoor water usage in the California American Company Monterey Division service area (Cal Am) and thus underestimates the reductions in outdoor water savings that could be achieved. On Page 41, the Draft CDO states "Outdoor water usage is estimated to be about 500 afa; less than 5 percent of total potable water use. (RT, Ph. 2, Vol. IV, p. 1062, 8-23.)". Based upon my analysis of the monthly water use data that Cal Am submits to the California Department of Water Resources Public Water Systems Survey (PWSS), I estimate that the total outdoor water use of Cal Am Monterey service area customers is about 3000 acre-feet per annum (afa); the outdoor water use of residential customers is estimated to be about 1700 afa. Those estimates are derived by assuming that water demand in the winter months is largely indoor water use and if that value is projected out for 12 months, the difference between that value and the total annual use can be largely attributed to outdoor water use.¹ Although winter time usage may include a small amount of landscape irrigation and the usage above the minimum in other months may include increased indoor use in the commercial sector (e.g. increased occupancy of tourist accommodations), this minimum month method is commonly used as a means to estimate outdoor water use. Table 1 shows the estimated outdoor water use for single family residential, single and multi-family residential, and the total for all sectors.² The PWSS records for the years 2004 to 2008 are attached.
3. If the Draft CDO assumed that the outdoor water use was 3000 afa and applied the Monterey Peninsula Water Management District (MPWMD) potential savings estimate of 20% (MPWMD-SP12, p. 8, 6-9.), then the outdoor water use savings would be 600 acre-feet not 100 acre-feet and the annual savings increment could

¹ The winter usage was an average of the two lowest months of use except for 2007, which was an average of January through March (3 months) because the data for January and February did not reflect a full months use due to change in the billing.

² The estimated outdoor use is less than the calculated use shown in the Table to account for the possibility that some of the total increase in the summer months may be due to increased indoor use.

be 72 afa instead of 12 afa. Even greater outdoor water savings are possible given recently adopted best management practices and incentives to reduce landscape water budgets. Also the recent (July 30) promulgation by the California Building Standards Commission (BSC) of new code language for residential graywater reuse should allow for greater outdoor water savings. The new rules ease permitting requirements for certain types of graywater systems and should allow residential users to develop much less expensive greywater systems water for outdoor irrigation.

4. The Draft CDO determination for indoor water savings is also underestimated. Starting on Page 40 the Draft CDO describes the logic for estimating future indoor savings and assumes the future savings for accounts not retrofitted will be proportional to savings already achieved since 1987. The savings that will be achieved with the remaining accounts should be greater than the past savings since the efficiency of the water using appliances (toilets, washing machines, and dishwashers) have increased over time and will continue to increase. For example beginning in 2010, the plumbing code standard for toilets will begin to switch over to a 1.28 gallons per flush, 20% less than the 1.6 gallons per flush requirement that has been in place since 1992. High efficiency toilets that use 1.28 gallons per flush or less are already on the market and will become even more common as the standard is fully promulgated. Similarly washing machines and dishwashers have greatly increased their water efficiency over the last 20 years. Also, the Draft CDO did not take into account that accounts that were retrofitted in the past will be replacing their appliances with more efficient water using appliances over time.

Table 1

California American Water
 Monterey Service Area
 Annual Outdoor Water Use
 (all values in acre-feet)

Year	SFR	SFR + MFR	All sectors
2004	2,086	2,264	4,292
2005	1,979	2,159	3,705
2006	1,545	1,640	3,234
2007	1,505	1,682	2,801
2008	1,822	1,977	3,404
2004-2008 Average	1,787	1,945	3,487
2006-2008 Average	1,624	1,767	3,146

SFR- Single Family Residential

MFR- Multi- Family Residential

All sectors - all water using sectors, residential and non-residential

Note- Water use data prior to 2006 may include areas that are served by Cal Am but are outside the Carmel River supply area.

VITAE

EXHIBIT 1

NAME: Peter Vorster

ADDRESS : The Bay Institute (TBI) Home Office
500 Palm Drive 3901 Balfour Ave.
Novato, CA 94949 Oakland, California 94610

TELEPHONE, E-MAIL: The Bay Institute: 415 878-2929 vorster@bay.org
Home Office: (415) 272-4209, vorster@bay.org; petervor@pacbell.net

EMPLOYMENT HISTORY: 10/96 - present Hydrologist, The Bay Institute, Novato, CA.
1986 - present: Consulting hydrologist, Oakland, CA.
1993-96 Lecturer, California State University East Bay, Department of
Geography and Environmental Studies, classes taught: California Geography,
Environmental Studies, Resource Management, and Water Resources
1979-86: Water Resource Analyst, Philip Williams and Associates, San
Francisco, CA.
1977-78: Principal Researcher, California Water Atlas, Governor's Office of
Planning and Research, Sacramento, CA.
1976: Hydrological Field Assistant, U. S. Geological Survey, Medford, OR.

SPECIAL APPOINTMENTS: Member of steering committee, California Environment and Water Modeling
Forum (1995 - current);
Water Bond 2000 Conjunctive Use Advisory Committee (2001 - 2003);
Friends of the Water Resources Archives (Chairperson, 2000 - 2003,
reappointment to board in 2005);

EDUCATION: A. B. in Geography and Geology (double major), 1975
University of California, Berkeley.
M. A. in Geography, 1986
California State University at Hayward.
Ph.D. program in Environmental Planning, University of California,
Berkeley, completed Ph.D. coursework, 1989-92.

MASTERS THESIS: A Water Balance Forecast Model for Mono Lake, California. June, 1985.

AWARDS: Switzer Fellow, 1990-91; Switzer Environmental Leadership Grant, 1995, 1996, 1998.

EXPERTISE AND INTERESTS: Water management, water balance and system operations modeling,
environmental restoration, climatology, historical geography of California,
mountain environments, geomorphology, museum education.

TBI RESPONSIBILITIES: Principal technical specialist for the San Joaquin River restoration and water
supply planning process in *NRDC v. Patterson* litigation.

Principal for TBI's Ecological Scorecard project, developed the San Francisco
Bay Index in 2003 and the 2005 update

Researcher and writer for Oakland Museum's Creek and Watershed Maps for
the San Francisco Bay Area

Project manager, editor, and researcher for TBI report "From the Sierra to the
Sea: The Ecological History of the San Francisco Bay-Delta Watershed."

EXPERT WITNESS: Expert Witness in Mono Lake Water Rights Cases, Superior Court of the
State of California for the County of El Dorado and State Water
Resources Control Board.

REPRESENTATIVE
CONSULTING CLIENTS

Expert Witness for California Department of Fish and Game on the hydrology of Santa Clara River in a Section 1600 arbitration.

Mono Lake Committee, Lee Vining, CA, (1986 to current), hydrology and water management of the Mono Basin and Los Angeles Aqueduct system; lead consultant and expert witness on Mono Lake water rights cases, restoration of stream and waterfowl habitat.

California Trout, San Francisco, CA (2004 to current, 1991-97) hydrology and water management of Mammoth Lakes Basin; previously expert witness on Mono Lake water rights cases

Owens Valley Committee, Bishop, CA (2005 to current), hydrology and water management for the Lower Owens River rewatering and restoration.

Natural Heritage Institute, San Francisco, CA, (1994 -95) conjunctive use feasibility study for Central Valley river basins.

Oakland Museum natural science department, (1989-94) principal content specialist for major traveling exhibit on water in California.

PUBLICATIONS:

"The Role of Science in Resolution of Environmental Crises at Kesterson Reservoir and Mono Lake California" (with Nigel Quinn, lead author), *Lakes and Reservoirs: Research and Management*, 3: 187-191, 1998.

"Changing Water Balance Over Time in Rush Creek, Eastern California, 1860-1992" (with G.M. Kondolf). *Water Resources Bulletin*, Vol. 28(8), October, 1993.

"Development and Decline of Agriculture in the Owens Valley", University of California White Mountain Research Station Symposium Vol. 4, 1992.

"Management Implications of Stream-Groundwater Interactions in the Eastern Sierra Nevada, California" (with G. M. Kondolf, lead author). University of California White Mountain Research Station Symposium Vol. 4, 1992.

"Restoration of Riparian and Aquatic Habitats in the Mono Lake Watershed" (lead author with G. M. Kondolf). *Proceedings of the Second Californian Riparian Systems Conference*, Davis, CA, 1988.

"Hydrologic and Channel Stability Considerations in Stream Habitat Restoration" (with G. M. Kondolf, lead author, and J. W. Williams). *Proceedings of Restoring the Earth Conference*. Berkeley, CA, 1988.

"A Water Balance Forecast Model for Mono Lake, California." *Earth Resources Monograph No. 10*, USDA United States Forest Service Region 5, May 1985.

"Hydrologic Analysis of the Colorado River Floods of 1983" (with William Vandivere, lead author). *GeoJournal*, Vol. 9.4, December 1984.

"A Procedure for Deriving Terminal Lake Water Balance Forecast Models." Abstract, *Proceedings of the Pacific Division American Association for the Advancement of Science*, 65th Annual Meeting, San Francisco, June 1984.

"Destruction of Riparian Systems Due to Water Development in the Mono Lake Watershed" (with Scott Stine, lead author, and David Gaines).

SELECTED
TECHNICAL REPORTS

California Riparian Systems Proceedings, University of California, Davis, pp. 528-533. Sept. 17-19, 1981.

"Rainmaking Regulated" (lead author with Linda Adams). OPR (Office of Planning and Research) Journal, Vol. 2.1, July 1979.

San Francisco Bay Index. (co-authored with Anitra Pawley, Tina Swanson, Gary Bobker), The Bay Institute, Novato, CA 2003; updated in 2005

From the Sierra to the Sea: The Ecological History of the San Francisco Bay-Delta Watershed. The Bay Institute, Novato, CA 1998

Hydrologic Studies for the Lee Vining Creek Instream Flow Studies (co-authored with G.M. Kondolf). Technical report submitted to Aquatic Systems Research, Loomis, CA, December, 1991.

The Effects of Enlarging Crowley Lake Reservoir on the Operations of the Los Angeles Aqueduct System (lead author with Larry Fishbain). Technical report for Mono County, July, 1987.

Changes in Short Duration Spring Flow Peaks into San Francisco Bay Due to Upstream Water Diversion (with Philip Williams, lead author). Technical report for Paul Romberg Center for Environmental Studies, San Francisco State University, May 1987.

"Hydrologic Analysis of the Colorado River Floods of 1982 and 1983" (with William Vandivere, lead author). Technical report for Friends of the River, March, 1984.

The Effect of Timber Harvesting on the Hydrology and Water Quality of the Little Applegate River, Oregon (lead author with Fred Euphrat). Technical report for Friends of Little Applegate River, June, 1981.

Review of Alternative Water Supplies for the Los Angeles Department of Water and Power as Replacement for Mono Basin Diversions. Technical report for Morrison and Foerster, San Francisco, CA, October, 1979.

Hydrologic, Topographic, and Biologic Assessment of Charleston Slough (with Lewis Semprini, lead author, and Robert Voeks). Technical report for the Santa Clara Valley Audubon Society, October 1978.

CITIZENSHIP:

USA, Swiss

LANGUAGES:

Native English; understand and speak some German (spoken at home as a child); elementary French comprehension (two years of high school French)

COMPUTERS

Work in both Macintosh and Windows; have programming experience

PUBLIC WATER SYSTEM STATISTICS

Calendar Year 2007

1. General Information

Please follow the provided instructions.

Contact: Craig Anthony

Title: General Manager

Phone: 831-646-3214

Fax: 831-375-4367

E-mail: craig.anthony@armwater.com

Website: www.armwater.com

County: Monterey

Population served: 95,104

Names of communities served: Monterey, Seaside,

Sand City, Del Rey Oaks, Pacific Grove, Carmel, Pebble Beach, Carmel Valley

Cal American WC - Monterey
 Craig Anthony, General Manager
 PO Box 951
 Monterey, CA 93942-0951
PWS# 2710004 SJD

2. Active Service Connections

Customer Class	Potable Water		Recycled Water	
	Metered	Unmetered	Metered	Unmetered
Single Family Residential	32370			
Multi-family Residential	1362			
Commercial/Institutional	3182			
Industrial	5			
Landscape Irrigation				
Other	1343			
Agricultural Irrigation				
TOTAL	38262			

3. Total Water into the System - Units of production:

acre-feet million gallons hundred cubic feet

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Wells	935.02	829.91	1031.83	1113.23	1312.16	1349.13	1473.87	1447.98	1358.61	1168.54	1057.4	910.67	13988.35
Surface													
Purchased ^{1/}													
Total Potable	935.02	829.91	1031.83	1113.23	1312.16	1349.13	1473.87	1447.98	1358.61	1168.54	1057.4	910.67	13988.35
Untreated Water													
Recycled ^{2/}													

1/ Potable wholesale supplier(s):

2/ Recycled wholesale supplier(s):

Level of treatment:

4. Metered Water Deliveries - Units of delivery:

acre-feet million gallons hundred cubic feet

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
A. Single Family Residential	580.0608	257.1208	402.5502	490.4408	508.6246	638.7472	669.8916	664.5669	687.7407	586.2762	491.8268	486.2075	6463.854
B. Multi-family Residential	113.5607	75.9516	100.2482	99.5672	102.0877	131.4409	124.5204	131.0236	114.3231	131.1033	106.0150	106.5540	1336.396
C. Commercial/Institutional	277.4741	139.4675	205.4591	238.0973	238.0167	273.6154	308.4091	311.6940	298.9977	270.4960	227.3418	213.6584	3002.727
D. Industrial	6.3518	6.4322	6.8615	7.7615	7.2586	8.6933	7.8350	9.3293	9.2834	8.4800	2.1738	11.9142	92.3746
E. Landscape Irrigation													
F. Other	104.2717	51.0478	74.0836	98.1015	169.3189	160.4566	111.2505	190.0518	186.9096	162.7216	116.8905	84.4413	1509.545
Total Urban Retail (A thru F)	1081.719	530.0199	789.2026	933.9683	1025.307	1212.953	1221.707	1308.666	1297.255	1159.077	944.2479	902.7754	12404.9
Agricultural Irrigation													
Wholesale (to other agencies)													

DWR 38 (Rev. 12/07)

Cal American WC - Monterey
 Steven Leonard, Vice Pres./Div. Manager
 PO Box 951
 Monterey, CA 93942-0951
 PWS# 2710004 SJD

Exhibit 3
 Department of Water Resources
PUBLIC WATER SYSTEM STATISTICS
 Calendar Year 2006

The Resources Agency

1. General Information
 Please follow the provided instructions.

Contact: Steven Leonard
 Title: Vice Pres./Div. Manager
 Phone: (831) 646-3214
 Fax: (831) 375-4367
 E-mail: sleonard@camwater.com
 Website:
 County: Monterey

Population served: Est. 91,439
 Names of communities served: Monterey, Seaside,
 Sand City, Del Rey Oaks, Pacific Grove, Carmel, Pebble Beach, Carmel Valley

2. Active Service Connections

Customer Class	Potable Water		Recycled Water	
	Metered	Unmetered	Metered	Unmetered
Single Family Residential	32219			
Multi-family Residential	1322			
Commercial/Institutional	3237			
Industrial	5			
Landscape Irrigation		1432		
Other				
Agricultural Irrigation				
TOTAL	38215			

3. Total Water Into the System - Units of production:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Wells	834.05	874.87	859.9	811.66	1291.29	1418.18	1593.58	1522.33	1321.41	1265.57	1019.81	931.55	13744.20
Surface													
Purchased 1/													
Total Potable	834.05	874.87	859.9	811.66	1291.29	1418.18	1593.58	1522.33	1321.41	1265.57	1019.81	931.55	13744.20
Untreated Water													
Recycled 2/													

Level of treatment: acre-feet million gallons hundred cubic feet

4. Metered Water Deliveries - Units of delivery:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
A. Single Family Residential	423.963	372.989	419.940	363.758	440.132	613.677	713.580	699.703	646.502	606.673	538.719	462.904	6302.54
B. Multi-family Residential	97.736	89.800	99.195	89.937	93.398	110.002	119.686	124.768	111.018	114.405	97.233	97.690	1244.87
C. Commercial/Institutional	202.332	192.765	215.395	203.428	228.635	276.502	319.158	329.423	289.837	277.695	248.763	211.167	2995.10
D. Industrial	4.977	4.293	6.042	5.773	5.879	6.203	6.368	7.103	6.522	8.531	7.475	6.724	75.89
E. Landscape Irrigation													
F. Other	32.767	43.892	52.729	46.925	73.531	171.609	165.736	213.150	167.039	169.867	175.657	95.586	1408.49
Total Urban Retail (A thru F)	761.775	703.738	793.302	709.822	841.575	1177.992	1324.527	1374.147	1220.918	1177.170	1067.846	874.071	12026.88
Agricultural Irrigation													
Wholesale (to other agencies)													

Level of treatment: acre-feet million gallons hundred cubic feet

PUBLIC WATER SYSTEM STATISTICS

1. General Information

Please follow the guidelines on the back of this form.

Contact: Steven Leonard
 Title: Vice Pres./Div. Manager
 Phone: (831) 646-3214
 Fax: (831) 375-4367
 E-mail: sleonard@amwater.com
 Website:
 Communities served: 7
 County: Monterey
 Population served Est. 90,715

Cal-American WC - Monterey
 Steven Leonard, Vice Pres./Div. Manager
 P.O. Box 951
 Monterey, CA 93942-0951
 PWS# 2710004

SJD

2. Active Service Connections

Customer Class	Recycled Water		Potable Water		Inside City Limits		Outside City Limits	
	Metered	Unmetered	Metered	Unmetered	Metered	Unmetered	Metered	Unmetered
Single Family Residential			32904					
Multi-family Residential			1333					
Commercial/Institutional			3407					
Industrial			6					
Landscape Irrigation								
Other			691					
Agricultural Irrigation								
TOTAL			38341					

Complete this portion if the system serves all or part of an incorporated city

3. Total Water Into the System - Units of production:

	Units of production												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Wells	892.31	823.04	942.88	1008.88	1334.27	1483.83	1583.71	1543.46	1450.5	1371.42	1136.52	912.9	14483.72
Surface													
Purchased ^{1/}													
Total Potable	892.31	823.04	942.88	1008.88	1334.27	1483.83	1583.71	1543.46	1450.5	1371.42	1136.52	912.9	14483.72
Recycled ^{2/}													

acre-feet million gallons hundred cubic feet

1/ Potable wholesale supplier(s):

2/ Recycled wholesale supplier(s):

Level of treatment:

4. Metered Water Deliveries - Units of delivery:

	Units of delivery												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
A. Single Family Residential	422.2774	381.7928	391.1958	435.8506	492.6633	670.4097	699.5617	719.4042	686.4227	654.3336	579.2914	484.1893	6617.3925
B. Multi-family Residential	94.3801	92.2305	93.269	99.0608	99.7478	123.1078	119.8807	124.1173	120.4186	118.5254	102.0235	105.3677	1292.1292
C. Commercial/Institutional	201.8082	192.9252	210.1998	237.6488	249.7115	313.5523	321.6582	346.3479	317.2363	292.541	257.0408	223.1679	3163.8379
D. Industrial	5.1395	5.0869	5.9387	6.7306	6.9349	7.7064	7.2288	7.6488	7.1485	6.3726	5.654	5.7298	77.3195
E. Landscape Irrigation													
F. Other	55.1769	59.6342	66.5944	71.3512	169.4586	141.5183	158.8617	201.9419	270.9926	203.1388	87.4428	61.169	1547.2804
Total Urban Retail(A thru F)	778.7821	731.6896	767.1977	850.642	1018.5161	1256.2945	1307.1911	1399.4601	1402.2187	1274.9114	1031.4525	879.6237	12697.96
Agricultural Irrigation													
Wholesale(to other agencies)													

acre-feet million gallons hundred cubic feet

PUBLIC WATER SYSTEM STATISTICS

2. Active Service Connections

Customer Class	Potable Water		Recycled Water	
	Metered	Unmetered	Metered	Unmetered
Single Family Residential	32485			
Multi-family Residential	1334			
Commercial/Institutional	3253			
Industrial	5			
Landscape Irrigation	0			
Other	1367			
TOTAL	38444			

1. General Information
 Please follow the provided instructions.
 Contact: Craig Anthony
 Title: General Manager
 Phone: 831-646-3214
 Fax: 831-375-4367
 E-mail: craig_anthony@amwater.com
 Website: www.amwater.com
 County: Monterey
 Population served: 97,922
 Names of communities served: Monterey, Seaside,
 Sand City, Del Rey Oaks, Pacific Grove, Carmel, Carmel Highlands, Pebble Beach, Carmel Valley

3. Total Water Into the System - Units of production:

	Level of treatment:												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Wells	878.00	840.09	1042.24	1148.65	1322.36	1391.06	1436.03	1405.31	1388.53	1246.89	959.27	857.97	13916.4
Surface	0	0	0	0	0	0	0	0	0	0	0	0	0
Purchased ^{1/}													
Total Potable	878	840.09	1042.24	1148.65	1322.36	1391.06	1436.03	1405.31	1388.53	1246.89	959.27	857.97	13916.4
Untreated Water													
Recycled ^{2/}													

1/ Potable wholesale supplier(s):
 2/ Recycled wholesale supplier(s):

4. Metered Water Deliveries - Units of delivery:

	Level of treatment:												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
A. Single Family Residential	417,5552	369,9287	382,0128	514,1620	561,6725	627,3717	664,7833	625,5380	633,8087	592,5825	499,7912	444,1487	6333,355
B. Multi-family Residential	95,4410	93,5249	94,2025	109,2502	103,3713	118,7318	119,3746	106,1281	121,8231	118,6155	103,5877	97,9415	1281,992
C. Commercial/Institutional	202,8577	186,3254	199,0966	257,8441	250,8130	280,9876	301,9948	304,5158	283,8650	275,1938	222,9534	201,2711	2967,718
D. Industrial	6,3840	6,1498	6,4299	1,6779	6,7721	1,8960	8,0850	8,0507	8,9344	8,6889	7,2449	6,3128	76,6264
E. Landscape Irrigation													
F. Other	41,4368	72,6230	39,1583	118,5889	135,3818	111,1702	240,5317	194,4587	154,5158	128,7913	154,7811	49,9703	1441,408
Total Urban Retail (A thru F)	763,6747	728,5518	720,9001	1001,523	1058,011	1140,157	1334,769	1238,691	1202,947	1123,872	988,3583	799,8444	12101.1
Agricultural Irrigation													
Wholesale (to other agencies)													

1/ Potable wholesale supplier(s):
 2/ Recycled wholesale supplier(s):

PUBLIC WATER SYSTEM STATISTICS

1. General Information
 Please follow the guidelines on the back of this form.

Customer Class: Single Family Residential
 Contact: Steven Leonard
 Title: Vice Pres./Div. Manager
 Phone: (831) 646-3214
 Fax: (831) 375-4367
 E-mail: sleonard@amwater.com
 Website:
 Communities served: 7 Agricultural Irrigation
 * 2004 REV. TO DEDUCT CHUALAR
 County: Monterey
 Population served Est. 82884
 TOTAL

Cal-American WC - Monterey
 Steven Leonard
 P.O. Box 951
 Monterey, CA 93942-0951
 PWS# 2710004 SJD

2. Active Service Connections

	Recycled Water		Potable Water		Inside City Limits		Outside City Limits	
	Metered	Unmetered	Metered	Unmetered	Metered	Unmetered	Metered	Unmetered
Single Family Residential	32461		1330					
Multi-family Residential	3332		6					
Commercial/Institutional								
Industrial								
Landscape Irrigation								
Other			693					
Agricultural Irrigation								
TOTAL			37822					

3. Total Water Into the System - Units of production:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Wells	906.05	872.59	1140.3	1380.24	1876.34	1590.39	1557.23	1539.51	1504.83	1191.56	964.39	963.8	15257.23
Surface													
Purchased ^{1/}													
Total Potable	906.05	872.59	1110.3	1380.24	1676.34	1590.39	1557.23	1539.51	1504.83	1191.56	964.39	963.8	15257.23

1/ Potable wholesale supplier(s): _____
 2/ Recycled wholesale supplier(s): _____

4. Metered Water Deliveries - Units of delivery:

	Level of treatment:		acre-feet		million gallons		hundred cubic feet						
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
A. Single Family Residential	411.79	399.88	447.48	593.15	694.85	717.75	688.1	700.16	738.06	644.43	448.67	472.03	6956.35
B. Multi-family Residential	101.36	95.94	104.05	114.99	119.98	127.86	125.21	123.11	137.11	113.96	95.65	102.88	1361.7
C. Commercial/Institutional	211.36	204.08	223.72	288.49	307.37	315.26	327.92	343.2	340.13	304.86	220.89	229.47	3316.75
D. Industrial	6.41	6.07	6.04	6.72	6.72	7.53	7.74	9.09	8.37	7.39	6.05	7.2	85.33
E. Landscape Irrigation													
F. Other	104.81	104.81	70.57	94.52	363.73	235.25	200.65	225.1	240.09	132.92	68.75	85.92	1822.31
Total Urban Retail (A thru F)	730.92	810.78	851.86	1097.87	1492.65	1403.45	1349.62	1400.66	1463.76	1203.56	840.01	897.3	13542.44
Agricultural Irrigation													
Wholesale (to other agencies)													

Exhibit 7

Peter Vorster Biography

Peter Vorster has over 33 years of experience as a hydrologist, much of it focused on California's water resources and the landmark environmental water conflicts in the Eastern Sierra (Mono Lake and the Owens Valley) and the San Francisco Bay-Delta watershed. After working for the United States Geological Survey in Oregon as a hydrographer, his work on California water issues began with his tenure as a principal researcher on the California Water Atlas. In 1979 Mr. Vorster became the primary technical consultant to the Mono Lake Committee, and was a key player in the successful effort to restore flows to Mono Basin streams and to raise the level of Mono Lake. His 1985 master's thesis, "A Water Balance Forecast Model for Mono Lake, California," was found by the Special Master in the Mono Lake relicted lands litigation to be the most complete and accurate representation of the water balance of the Mono Basin.

From 1979 to 1986, Peter worked for the firm of Philip Williams and Associates, and from 1986 to 1996 he was an independent consultant in hydrology. He continues to provide consulting services to the Mono Lake Committee and other public interest groups in the Eastern Sierra including the Owens Valley Committee and California Trout. From 1993-96 he was also a lecturer in the Dept of Geography and Environmental Studies at California State University of the East Bay.

In 1996 Peter joined The Bay Institute (TBI), a public interest research and advocacy group working to protect and restore the San Francisco Bay-Delta estuary and its 61 thousand square mile watershed. At TBI he was a project manager and a principal author of *Sierra to the Sea: The Ecological History of the San Francisco Bay-Delta Watershed*, published by TBI in 1998. Currently, Mr. Vorster leads the technical effort on the San Joaquin River restoration program for TBI and is involved in both water supply and restoration efforts. He also works on the ongoing efforts to restore the Delta's ecological services and provide a reliable water supply. Peter is one of principals for TBI's Ecological Scorecard project, which develops suites of indicators for the San Francisco Bay-Delta system and local watersheds including indicators of water use efficiency. He is also working with the Oakland Museum on their urban creek and watershed map series for the Bay Area. Peter was a Switzer Fellow in 1990-91 and received a Switzer Environmental Leadership Grant, 1995, 1996, 1998. He holds an A.B. in Geography and Geology from UC Berkeley, an M.A. in Geography from California State University of the East Bay, and has completed Ph.D. coursework in environmental planning at the University of California, Berkeley.

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State Water Resource Control Board
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TJamison@FentonKeller.com

Monterey County Hospitality Association
Bob McKenzie
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Carmel, CA 93922
bobmck@mbay.net
Planning and Conservation League
Jonas Minton
1107 9th Street, Suite 360
Sacramento, CA 95814
jminton@pcl.org

Service List
August 26, 2009

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City of Carmel-by-the-Sea Donald G. Freeman P. O. Box CC Carmel-by-the-Sea, CA 93921 cityatty@ix.netcom.com	Monterey County Hospitality Association Bob McKenzie P. O. Box 223542 Carmel, CA 93922 bobmck@mbay.net
Division of Ratepayer Advocates Andrew Ulmer California Public Utilities Commission 505 Van Ness Avenue San Francisco, CA 94102 eau@cpuc.ca.gov	