Submitted by staff at 6-15-2015 Board Meeting Item 19

EXHIBIT 19-C

Quarterly Water Supply Strategy and Budget Report
California American Water
Main Water Distribution System: July - September 2015

1. Management Objectives

The Monterey Peninsula Water Management District (District) desires to maximize the long-term production potential and protect the environmental quality of the Carmel River and Seaside Groundwater Basins. In addition, the District desires to maximize the amount of water that can be diverted from the Carmel River Basin and injected into the Seaside Groundwater Basin while complying with the instream flow requirements recommended by the National Marine Fisheries Service (NMFS) to protect the Carmel River steelhead population. To accomplish these goals, a water supply strategy and budget for production within California American Water's (Cal-Am) Main and Laguna Seca Subarea water distribution systems is reviewed quarterly to determine the optimal strategy for operations, given the current hydrologic and system conditions, and legal constraints on the sources and amounts of water to be produced.

2. Quarterly Water Supply Strategy: July - September 2015

On June 9, 2015, staff from the District and Cal-Am, met and discussed the proposed water supply strategy and related topics for the July - September 2015 period. The United States Fish and Wildlife Service (USFWS) was unable to attend, but staff from the California Department of Fish and Wildlife (CDFW), NMFS, and the State Water Resources Control Board's, Division of Water Rights (SWRCB-DWR) participated in the meeting or by conference call. Currently, flow in the Carmel River is regulated by Los Padres Reservoir (LPR) storage releases, and LPR is no longer spilling. LPR is currently at ~101% of maximum effective storage capacity, i.e., 1,731 AF that occurs with the Los Padres Dam (LPD) spillway's notch flashboard removed, or ~98% of the 1,775 AF of storage capacity achieved when the notch's flashboard is in place. The LPD notch was closed on May 12, 2015, and given this is a dry water year, its placement into the notch was about a month earlier than normal. This was done in order to maximize any potential storage that could be gained this year, so that it can be allocated to sustaining minimum flows in the river over the summer. Flow in the Carmel River is continuous to the lagoon, but just barely so at ~0.22 CFS at the HWY 1 station. The river below RM 3.2 is beginning to dewater and pools are becoming isolated. Rainfall during Water Year (WY) 2015 through May at San Clemente Dam in the upper watershed has totaled 15.9 inches or 76% of the long-term average to date of 20.85 inches at this site, and 75% of the long-term annual average of 21.18 inches. Further, unimpaired runoff at San Clemente Dam for WY 2015 through May has totaled approximately 21,244 AF or about 32% of the long-term average to date for this site of 65,367 AF, and 31% of the long-term annual average of 67,842 AF, making this a "Dry" Water Year Type, to date.

Carmel River Basin Given these conditions, and runoff to date, it was agreed that "Dry" year inflows would be initially assumed to assess Cal-Am's operations during the July through September 2015 period. To meet customer demand, Cal-Am would operate its wells in the Lower Carmel Valley in a downstream-to-upstream sequence, as needed. For the quarterly budget, it was agreed that Cal-Am would attempt to produce no groundwater from its wells in the Upper Carmel Valley during July through September 2015. If sufficient flow in the Carmel River at the District's Don Juan Bridge gage in Garland Park, i.e., any day of 20 or more cubic feet per second (cfs), continues to occur to justify operations allowed under the less restrictive high-flow period, Cal-Am could operate these wells if needed. In addition, it is projected that Cal-Am would produce not more than approximately 1,352, 1,140, and 1,000 AF of groundwater from its wells in the Lower Carmel Valley during July, August and September 2015, respectively, for customer service. **Table 1** included in this month's Staff Note is shows the initial minimum flows agreed to under the 2015 Low Flow Memorandum of Agreement (MOA), but due to the unpredictability of ongoing hydrology in this ongoing drought, the regulatory agencies are already discussing reducing the targets by 0.5 CFS or more through August 17th. This table will be revised and updated monthly with new flow and storage data, for the September, 21, 2015 Board meeting as a formal part of the Annual Low Flow MOA process.

Seaside Groundwater Basin It was also agreed that, subject to rainfall and runoff conditions in the Carmel River, Cal-Am would continue production at 358, 300, and 395 AF per month from their wells in the Coastal Subareas, for July, August and September 2015, in addition to the planned 25 AF per month of production from the Sand City Desalination Plant, so as to achieve maximum utilization of the native water available in the basin under the Seaside Basin Adjudication Decision and in compliance with SWRCB Orders 95-10 and 2002-0060. It was also agreed that only 6, 5, and 5 AF of groundwater would be budgeted from Cal-Am's wells in the Laguna Seca Subarea of the Seaside Basin for customers in the Ryan Ranch, Bishop, and Hidden Hills systems during July, August and September 2015, respectively. It is recognized that, based on recent historical use, Cal-Am's actual production from the Laguna Seca Subarea during this period will likely exceed the proposed monthly targets, which are based on Cal-Am's allocation specified in the Seaside Basin Adjudication Decision. For example, in the July through September 2014 period, Cal-Am produced 38, 35, and 32 AF from the Laguna Seca Subarea to meet customer demand in the Ryan Ranch, Bishop, and Hidden Hills systems. In this context, the production targets represent the maximum monthly production that should occur so that Cal-Am remains within its adjudicated allocation for the Laguna Seca Subarea. Accordingly, actual production beyond these production targets will be subject to replenishment assessment by the Seaside Basin Watermaster.

Table 1 [Version 2c] for EXHIBIT19-C

2015 Low Flow Memorandum of Agreement & Quarterly Water Budget

Carmel River Reservoirs: Diversion and Release Schedule (All Values in Acre-Feet, except as indicated)

Assuming August - December Averages Between Dry to Critically Dry & LPR Drawdown to 1020' Elevation = 904 AF by 8/17/15 and to a Final Low of 1000' Elevation = 403 AF

Month Represents Water Year Type of:	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	
	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	WY 2015
Los Padres Reservoir																
Inflow	25	134	7,230	1,310	5,236	1,543	959	537	202	36	0	0	65	267	645	17,212
Outflow																
Evaporation	22	11	37	4	32	36	31	42	54	58	47	33	22	9	4	407
Spillage	0	0	5,718	813	4,761	1,015	452	4	0	0	0	0	0	0	0	12,763
Release (Fish Ladder)	155	138	492	492	444	492	476	492	0	0	0	0	0	0	0	3,181
Release (Outlet)	0	0	0	0	0	0	0	0	381	412	310	179	179	258	146	1,282
Release (Notch)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Storage																
Beginning of Month	910	758	743	1,726	1,727	1,726	1,726	1,775	1,775	1,542	1,108	751	539	403	403	
End of Month	758	743	1,726	1,727	1,726	1,726	1,726	1,775	1,542	1,108	751	539	403	403	898	
Between Reservoirs																
Inflow	0	0	1,355	484	1,699	552	321	141	0	0	0	0	0	0	179	4,552
Outflow																
Evapotranspiration	37	5	16	21	26	37	53	74	63	68	58	53	37	21	16	510
Private Usage	26	2	2	2	2	2	5	7	40	55	38	29	26	2	2	223
San Clemente Reservoir																
Inflow	92	131	7,547	1,766	6,876	2,020	1,191	556	278	286	204	97	116	235	307	21,044
Outflow																
Evaporation	0	0	10	2	7	9	9	0	0	0	0	0	0	0	0	37
Spillage	0	0	7,035	1,392	6,531	1,640	1,125	0	0	0	0	0	0	235	307	17,723
Diversion (Filter Plant)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Release (Valve)	0	0	0	0	0	0	0	490	281	286	204	98	116	0	0	1,359
Release (Six Ports)	67	100	0	0	0	0	0	501	0	0	0	0	0	0	0	668
Release (Fish Ladder)	0	0	310	310	280	310	0	0	0	0	0	0	0	0	0	1,210
Leakage	61	59	61	61	58	61	59	61	0	0	0	0	0	0	0	483
Total Storage																
Beginning of Month	36	28	5	136	136	137	136	500	3	0	0	0	0	0	0	
End of Month	0	0	136	136	137	136	134	3	0	0	0	0	0	0	0	
Total Release	128	159	7,406	1,763	6,869	2,011	1,184	1,052	281	286	204	98	116	235	307	21,444
Mean Daily Release in cfs	2.1	2.7	120.5	28.7	123.7	32.7	19.9	17.1	4.7	4.7	3.3	1.6	1.9	4.0	5.0	
Mean Daily Diversion in cfs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Mean Daily Diversion in cfs (Russell Wells)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Notes:

1. The minimum pool requirements at Los Padres and San Clemente Reservoirs are 105 acre-feet at elevation 980 ft and 71 acre-feet at elevation 515 ft, respectively.
2. Projected inflows for the April - December 2015 period are based on: A) the average of the monthly mean unimpaired monthly historical flows seen in 2013 and 2014 for May - September, then B) the average of the median Dry and Critiucally Dry flows computed over1902 -2014 for the months of October - December, and starting from a base of assumed May 2015 storage of 1775 acre feet.
3. Projected inflow to San Clemente Reservoir is distributed 100% above Los Padres Dam between May through November.
4. Estimated evaporation from LPR/SCR is based on average monthly reservoir surface area and gross monthly evaporation rates developed by the US Army Corps of Engineers (1981).
5. Releases and diversions are consistent with terms of the 2001 and 2006 Conservation Agreements between the NMFS and Cal-Am and with the conditions in SWRCB Order Nos. 95-10, 98-04, 2002-0002, and 2009-0060.
6. Numbers in **Bold** type are final reported numbers, and those in *Italics* are future estimates.