

ITEM: PUBLIC HEARING

13. CONSIDER ADOPTION OF JANUARY THROUGH MARCH 2012 QUARTERLY WATER SUPPLY STRATEGY AND BUDGET

Meeting Date:	December 12, 2011	Budgeted:	N/A
From:	David J. Stoldt, General Manager	Program/ Line Item No.:	N/A
Prepared By:	Kevan Urquhart & Jonathan Lear	Cost Estimate:	N/A

General Counsel Review: N/A

Committee Recommendation: N/A

CEQA Compliance: Notice of Exemption, CEQA, Article 19, Section 15301 (Class 1)

ESA Compliance: Consistent with the 2001 Conservation Agreement, 2009 Settlement Agreement between the National Marine Fisheries Service and California American Water to minimize take of listed steelhead in the Carmel River, and SWRCB WR Order Nos. 95-10, 98-04, 2002-0002, and 2009-0060.

SUMMARY: The Board will accept public comment and take action on the January through March 2012 Quarterly Water Supply Strategy and Budget for California American Water's (Cal-Am's) Main and Laguna Seca Subarea Water Distribution Systems (WDS). The proposed budget, which is included as **Exhibit 13-A and 13-B**, shows monthly production by source of supply that is required to meet projected customer demand in Cal-Am's Main and Laguna Seca Subarea systems, i.e., Ryan Ranch, Bishop, and Hidden Hills, during the January through March 2012 period. The proposed strategy and budgets are designed to maximize the long-term production potential and protect the environmental quality of the Seaside Groundwater and Carmel River Basins.

Exhibit 13-A shows the anticipated production by Cal-Am's Main system for each production source and the actual production values for Water Year (WY) 2012 to date through the end of November 2011. Please note that the anticipated production values for customer service assume that Cal-Am's annual Main system production for Water Year (WY) 2012 will not exceed 12,977 acre-feet (AF), which is comprised of 2,669 AF from the Coastal Subareas of the Seaside Groundwater Basin, 300 AF from the Sand City Desalination Plant, and 10,008 AF from the Carmel River Basin (comprised of 1,117 AF of Water Project 1 recovery and 8,891 AF of direct diversion). The total from the Carmel River Basin is consistent with State Water Resources Control Board (SWRCB) Order No. 95-10, 98-04, 2002-0002 and 2009-0060; and the total from the Seaside Groundwater Basin is consistent with the Seaside Basin adjudication decision. In December 2011, the Seaside Watermaster determined there was 32 AF of native groundwater not produced by Cal-Am under the Seaside Basin Adjudication Decision in WY 2011, and this water will carry over to WY 2012. The 32 AF carryover will be applied to the next quarterly water budget. The "Carryover Credit" from WY 2011 is water that Cal-Am was allowed to produce, but did not produce that year due to physical constraints within its existing delivery system. For the purpose of this budget, it is conservatively assumed that normal inflow conditions will occur for the rest of the Water Year.

Exhibit 13-B shows the anticipated production by Cal-Am's Laguna Seca Subarea systems for each production source and the actual production values for WY 2012 to date through the end of November 2011. Please note that the budgeted production values assume that Cal-Am's annual Laguna Seca Subarea systems' production for WY 2012 will not exceed 147 AF from the Laguna Seca Subarea of the Seaside Groundwater Basin. This total is consistent with the Seaside Basin adjudication decision.

If streamflow in the Carmel River exceeds the instream flow requirements specified by National Marine Fisheries Service (NMFS), a portion of the "excess" groundwater may be diverted from the Carmel River Alluvial Aquifer by Cal-Am for injection into the Seaside Groundwater Basin as part of Water Projects 1 and 2 (i.e., Aquifer Storage and Recovery [ASR] Phase 1 and 2). The amount of water diverted from the Carmel River Alluvial Aquifer that is treated and delivered for injection will also depend on customer demand and Cal-Am production system availability at that time.

RECOMMENDATION: The Board should receive public input, close the Public Hearing, and discuss the proposed quarterly water supply budget. District staff recommends adoption of the proposed budget. The budgets are described in greater detail in **Exhibit 13-C**, Quarterly Water Supply Strategy Report: January – March 2012.

BACKGROUND: The Quarterly Water Supply Strategy and Budget pertains to production within Cal-Am's Main and Laguna Seca Subarea systems for the three-month period of January, February, and March 2012. Staff from the District, Cal-Am, and California Department of Fish and Game (CDFG), cooperatively developed this strategy on December 8, 2011. Staff from the National Marine Fisheries Service (NMFS) were unable to attend, but were consulted by phone for their approval. Based on current reservoir and Carmel River Alluvial Aquifer storage conditions, the higher than average base river flows in October and November 2011, it was agreed that "normal" year inflows would be used to conservatively assess Cal-Am's operations and set monthly production targets for Cal-Am's systems.

To meet customer demand in its main system, Cal-Am intends to avoid producing any groundwater from its wells in the Upper Carmel Valley during January through March 2012, and will focus instead on producing approximately 834, 863, and 1,016 AF of groundwater from its wells in the Lower Carmel Valley during January, February, and March 2012, respectively. Of this production, it is assumed that 230, 300, and 340 AF would be diverted from the Carmel River Alluvial Aquifer and injected for storage into the Seaside Groundwater Basin during the January through March 2012 period. These latter targets are based on the long-term average diversion rate for Water Project 1 and half of Water Project 2 (ASR) capacity, predicted by average values from the Carmel Valley Simulation Model (CVSIM) for that month.

It was also agreed that if rainfall and runoff conditions in the Carmel River Basin were sufficient to allow diversion to storage in Water Project's 1 and 2 (ASR), Cal-Am would produce some water from the Coastal Subareas of the Seaside Basin during this period, in addition to 25 AF per month from the Sand City Desalination Plant. If rainfall and runoff are insufficient to justify ASR injection, then Cal-Am will not produce any native groundwater from the Seaside Coastal Subareas, and would allow the basin to naturally recharge. In addition, it was also agreed that Cal-Am would

plan to produce only 7, 6, and 9 AF of groundwater from its wells in the Laguna Seca Subarea for its customers in the Ryan Ranch, Bishop, and Hidden Hills systems during this period. Lastly, it was agreed that Cal-Am would not divert any water from San Clemente Reservoir through the Carmel Valley Filter Plant during this quarter. Cal-Am will operate its wells in the Lower Carmel Valley in a downstream-to-upstream order. If actual inflows are more or less than projected for the budget period, the group will reconvene and adjust the diversion and release rates accordingly.

Rule 101, Section B of the District Rules and Regulations requires that a Public Hearing be held at the time of determination of the District water supply management strategy. Notice of this Public Hearing has been published in The Herald. Adoption of the quarterly water supply strategy and budget is categorically exempt from the California Environmental Quality Act (CEQA) requirements as per Article 19, Section 15301 (Class 1). A Notice of Exemption will be filed with the Monterey County Clerk's office, pending Board action on this item.

EXHIBITS

- 13-A** Quarterly Water Supply Strategy and Budget for Cal-Am Main System: January - March 2012
- 13-B** Quarterly Water Supply Strategy and Budget for Cal-Am Laguna Seca Subarea: January - March 2012
- 13-C** Quarterly Water Supply Strategy and Budget Report: January – March 2012

EXHIBIT 13-A

**California American Water Main Distribution System
Quarterly Water Supply Strategy and Budget: January - March 2012**

Proposed Production Values by Source in Acre-Feet

SOURCE/USE	MONTH			YEAR-TO-DATE		
	Jan-12	Feb-12	Mar-12	Oct-11 - Nov-11	% of YTD	% of Annual Budget
Source						
San Clemente Reservoir	0	0	0	0	0.0%	0.0%
Carmel Valley Aquifer						
Upper Subunits	0	0	0	0	0.0%	0.0%
Lower Subunits	834	863	1,016	1,032	108.1%	12.3%
Seaside Groundwater Basin						
Coastal Subareas	186	174	186	38	10.7%	0.3%
Phase 1 ASR Recovery	0	0	0	728	97.7%	65.2%
Sand City Desalination	25	25	25	43	86.0%	14.3%
Total	1,045	1,062	1,227	1,841		
Use						
Customer Service	815	762	887	1,898		
Phase 1 ASR Storage	230	300	340	0		
Total	1,045	1,062	1,227	1,898		

Notes:

1. The budget reflects "Normal" inflow conditions and assumes that the monthly unimpaired inflows at the San Clemente Dam site during the December 2011-March 2012 period will equal the 50% exceedence flows , i.e., 2,324, 6,406, 10,990 and 11,771 AF, respectively. The exceedence values are based on simulated flows for the 1902-2011 period of record.
2. The annual budget period corresponds to the Water Year, which begins on October 1 and ends on September 30 of the following Calendar Year.
3. Total monthly production for "Customer Service" in CAW's main system was calculated by multiplying total annual production (12,977 AF) times the average percentage of annual production for January, February and March (6.28%, 5.87%, and 6.83%, respectively). According to District Rule 162, the annual production total was based on the assumption that production from the Coastal Subareas of the Seaside Groundwater Basin would not exceed 2,669 AF and production from Carmel River sources, without adjustments for water produced from water resources projects, would not exceed 10,308 AF in WY 2012. In December 2011, the Seaside Watermaster determined there was 32 AF of native groundwater not produced under the Seaside Basin Adjudication Decision in WY 2011 and this water will carryover to WY 2012. The 32 AF carryover will be applied to the next quarterly water budget. The average production percentages were based on monthly data for customer service from WY 2001 to 2010.
4. Maximum daily production values for "Phase 1 and 2 ASR Storage" are based on an average diversion rate of approximately 3,000 gallons per minute (gpm) or 13.3 AF per day and 1,500 gpm or 6.6 AF per day, respectively, from CAW's sources in the Carmel River Basin. Maximum daily production combined for Phase 1 and 2 ASR sites is 19.9 AF per day. Total monthly production is estimated by multiplying the maximum daily production by operational days per month for "Normal" flow conditions at San Clemente Dam.
5. No surface water diversions from San Clemente Reservoir (SCR) are assumed for this period based on concerns regarding water quality (elevated turbidity) and lowered water levels required by the Division of Dam Safety as part of the San Clemente Reservoir Drawdown Project that usually occur at this time of year.
6. The production targets for CAW's wells in the Upper Subunits of the Carmel Valley Aquifer are set at 0, based on CAW's goal to avoid use of these wells, year round. However, production could be higher under existing State water rights and interagency operating agreements.
7. The production targets for CAW's wells in the Seaside Coastal Subareas are based on the assumption that sufficient flow will occur in the Carmel River to allow ASR injection at the targeted levels. It is planned that Coastal Subarea pumping will not occur, or will be proportionally reduced, if ASR injection does not occur at the targeted levels.

EXHIBIT 13-B

**California American Water Laguna Seca Subarea Distribution Systems
Quarterly Water Supply Strategy and Budget: January - March 2012
Proposed Production Targets by Source and Projected Use in Acre-Feet**

SOURCE/USE	MONTH			YEAR-TO-DATE		
	Jan-12	Feb-12	Mar-12	Oct-11 - Nov-11	% of YTD	% of Annual Budget
Source						
Seaside Groundwater Basin						
Laguna Seca Subarea	7	6	9	59	242.4%	40.1%
Other	0	0	0	0		
Use						
Customer Service	7	6	9			
Total	7	6	9	59		

Notes:

- The annual budget period corresponds to the Water Year, which begins on October 1 and ends on September 30 of the following Calendar Year.
- Total monthly production for "Customer Service" in CAW's Highway 68 systems was calculated by multiplying total annual production (147 AF) times the average percentage of annual production for January, February, and March (4.78%, 4.30%, and 5.82%, respectively). The annual production total was based on the assumption that production from the Laguna Seca Subarea of the Seaside Groundwater Basin would not exceed 147 AF. The average production percentages were based on monthly data for customer service from WY 2001 to 2010. The 147 AF annual production limit is based on procedures specified in the Seaside Basin Adjudication Decision.
- It should be noted that, based on recent historical use, actual monthly use will likely exceed the proposed monthly production targets. For example, in the January through March 2011 period, CAW produced 21, 21, and 21 AF to meet customer demand in its Highway 68 systems. In this context, the production targets represent the maximum monthly production that should occur so that CAW remains within its Standard Production Allocation for the Laguna Seca Subarea specified in the Seaside Decision. However, because the Seaside Decision allows CAW to combine its production in the Coastal Subareas with its production in the Laguna Seca Subarea in determining compliance, CAW can use production savings in the Coastal Subareas to offset overproduction in the Laguna Seca Subarea.
- "Other" production sources refer to supplies transferred to Highway 68 customers from CAW's Carmel River sources, water rights acquired from other producers in the Seaside Basin, or supplies transferred from other systems outside of the Laguna Seca Subarea to produce additional water.

EXHIBIT 13-C

Quarterly Water Supply Strategy and Budget Report California American Water Main Water Distribution System: January– March 2012

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 (Ca-Am's) 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: January - March 2012

On December 8, 2011, staff from the District, Cal-Am, and the California Department of Fish and Game (CDFG) met and discussed the proposed water supply strategy and related topics for the remainder of December 2011 and the January-March 2012 period. Staff from NMFS were unable to attend, but were consulted by phone for their approval. Currently, flow in the Carmel River is still partially regulated by releases from Los Padres Reservoir (LPR). Both San Clemente Reservoir (SCR) and LPR are not yet spilling, and LPR is at 65% of effective storage capacity, i.e., 1148.9 vs. 1774.5 AF at the end of November, with the notch's flashboard in place. Flow in the Carmel River is continuous to the lagoon, and the lagoon mouth is closed, but has been opened once so far this winter by Monterey County to prevent the lagoon from inundating nearby homes. Rainfall during Water Year 2012 to date at San Clemente Dam in the upper watershed has totaled 3.30 inches or 115% of the long-term average to date at this site, and 15.0% of the long-term annual average of 21.45 inches. Further, unimpaired runoff at San Clemente Dam for WY 2012 through November has totaled approximately 1,863 AF or about 112 % of the long-term average to date for this site, and 3.0% of the long-term annual average of 69,199 AF.

Carmel River Basin Given these conditions, and early season runoff to date, it was agreed that "normal year" inflows would be initially assumed to assess Cal-Am's operations during the January through March 2012 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 produce no groundwater from its wells in the Upper Carmel Valley during January through March 2012. If sufficient flow in the Carmel River at the District's Don Juan Bridge gage in Garland Park, i.e., five consecutive days of 20 or more cubic feet per second (cfs), occurs to justify operations allowed under the less restrictive high-

EXHIBIT 13-C

Quarterly Water Supply Strategy and Budget Report California American Water Main Water Distribution System: January– March 2012

flow period, Cal-Am could operate these wells if needed. In addition, it is projected that Cal-Am would produce approximately 834, 863, and 1,016 AF of groundwater from its wells in the Lower Carmel Valley during January, February, and March 2012, respectively.

It was also agreed that the Low Flow MOA Group would reconvene to consider increasing releases from Los Padres Reservoir by 5 cfs during December to a target of 23 cfs at the Sleepy Hollow Weir, once the Carmel River Lagoon was open. No action has yet been taken in order to avoid contributing to an artificial breach of the lagoon. This action would be taken in order to enhance flow in the Carmel River that would potentially provide marginally adequate downstream passage flows for juvenile steelhead, and increase inflow into the lagoon to maximize its water quality and volume. This increase will also provide additional flow and habitat in the lower Carmel River for resident juvenile steelhead, as well as those that have been released from the District's Sleepy Hollow Steelhead Rearing Facility into the Carmel River. District staff began releasing juveniles from the facility on November 1, 2011 and finished on November 8, 2011.

Lastly, it was assumed that 230, 300, and 340 AF of groundwater would be diverted from the Carmel River Basin and injected into the Seaside Groundwater Basin during the during January, February, and March 2012, respectively. Because of the uncertainty in predicting future rainfall and runoff amounts, this assumption is subject to change.

Seaside Groundwater Basin It was also agreed that if rainfall and runoff conditions in the Carmel River Basin were sufficient to allow diversion to storage in Water Project's 1 and 2 (i.e., Aquifer Storage and Recovery [ASR]), Cal-Am would also produce some water from the Coastal Subareas of the Seaside Basin during this period, in addition to 25 AF per month from the Sand City Desalination Plant. If rainfall and runoff are insufficient to justify ASR injection, then Cal-Am will not produce any native groundwater from the Seaside Coastal Subareas, and would allow the basin to naturally recharge. It was also agreed that Cal-Am would attempt to produce only 7, 6, and 9 AF of groundwater from its wells in the Laguna Seca Subarea of the Seaside Basin for customers in the Ryan Ranch, Bishop, and Hidden Hills systems during January, February, and March 2012, 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 January through March 2011 period, Cal-Am produced 21, 21, and 21 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. Under the amended Seaside Basin Decision, Cal-Am is allowed to use production savings in the Coastal Subareas to offset over-

EXHIBIT 13-C

**Quarterly Water Supply Strategy and Budget Report
California American Water
Main Water Distribution System: January– March 2012**

production in the Laguna Seca Subarea. However, not much if any production savings are likely with the restrictions imposed on Carmel River diversions by the State Water Resources Control Board's Water Rights Order No. 2009-0060.

U:\kevan\Flows\QWB\QWB20111212Item13_Exh13Cv3.docm

EXHIBIT 13-C, TABLE 1 [Version 2]

2012 [Draft] Low Flow Memorandum of Agreement & Quarterly Water Budget

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

Assuming Normal Water Year Inflow Conditions [December 2011-December 2012] & LPR Drawdown to 995' Elevation = 315 AF

	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	WY 2012
Los Padres Reservoir																
Inflow	780	889	1,859	5,125	8,792	9,417	4,787	2,265	862	281	62	55	190	498	1,859	35,174
Outflow																
Evaporation	9	6	5	13	13	34	33	36	50	57	60	44	19	11	5	360
Spillage	0	0	657	4,497	8,224	8,769	4,159	1,614	174	0	0	0	0	0	0	28,094
Release (Fish Ladder)	615	595	615	615	555	615	595	615	595	470	470	455	470	455	615	6,809
Release (Outlet)	433	253	0	0	0	0	0	0	0	0	0	0	0	0	0	686
Release (Notch)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Storage																
Beginning of Month	1,390	1,114	1,149	1,731	1,731	1,731	1,731	1,731	1,731	1,775	1,528	1,060	616	317	348	
End of Month	1,114	1,149	1,731	1,731	1,731	1,731	1,731	1,731	1,775	1,528	1,060	616	317	348	1,588	
Between Reservoirs																
Inflow	143	325	465	1,281	2,198	2,354	1,197	566	215	70	15	14	47	124	465	8,843
Outflow																
Evapotranspiration	37	21	16	21	20	37	53	61	63	68	58	53	37	21	16	507
Private Usage	5	2	2	2	2	2	5	7	8	8	8	6	5	2	2	58
San Clemente Reservoir																
Inflow	1,149	1,150	1,718	6,370	10,955	11,698	5,893	2,727	912	464	419	411	475	556	1,062	43,867
Outflow																
Evaporation	4	0	2	5	6	13	14	11	16	14	11	9	4	3	4	105
Spillage	0	0	974	5,689	10,338	11,009	5,225	2,040	242	0	0	0	0	0	315	35,518
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	0	0	0	0	0	0	0	0	0
Release (Six Ports)	1,084	1,091	0	0	0	0	0	0	0	454	347	342	410	493	0	3,318
Release (Fish Ladder)	0	0	615	615	555	615	595	615	595	0	0	0	0	0	615	4,204
Leakage	61	59	61	61	56	61	59	61	59	61	61	59	61	59	61	724
Total Storage																
Beginning of Month	71	71	71	137	137	137	137	137	137	137	71	71	71	71	71	
End of Month	71	71	137	137	137	137	137	137	137	71	71	71	71	71	137	
Total Release	1,146	1,150	1,650	6,365	10,949	11,685	5,879	2,716	896	516	408	401	471	553	992	43,764
Mean Daily Release in cfs	18.6	19.3	26.8	103.5	197.2	190.1	98.8	44.2	15.1	8.4	6.6	6.7	7.7	9.3	16.1	
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:

- 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.
- Projected inflows for the December 2011 through December 2012 period are based on the expectation that unimpaired flows at San Clemente Dam will represent a "Normal" Water Year Type or 50% exceedance values for reconstructed unimpaired monthly historical flows (WY 1902-2011).
- Projected inflow to San Clemente Reservoir is distributed 80% above Los Padres Dam and 20% between Los Padres and San Clemente Dams.
- 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).
- 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.
- Numbers in **Bold** type are final reported numbers, and those in *Italics* are future estimates.