

SC-2A

ITEM: CONSENT CALENDAR**15. RECEIVE AND FILE DISTRICT-WIDE ANNUAL WATER PRODUCTION SUMMARY REPORT FOR WATER YEAR 2007**

Meeting Date:	April 21, 2008	Budgeted:	N/A
From:	Darby Fuerst, General Manager	Program/ Line Item No.:	Hydrologic Monitoring N/A
Prepared By:	Thomas Lindberg	Cost Estimate:	N/A

General Counsel Approval: N/A
Committee Recommendation: N/A
CEQA Compliance: N/A

SUMMARY: Staff has prepared a draft Water Production Summary Report of all registered production sources, i.e., wells and surface water diversions, within the Monterey Peninsula Water Management District (District) for Water Year 2007 (WY 2007). WY 2007 covers the 12-month period from October 1, 2006 through September 30, 2007. Preliminary computations indicate that 19,200 acre-feet (AF) of ground water were produced from registered wells in the District during WY 2007. In addition, 106 AF of surface water were diverted by private users. Combined surface and ground water production from all sources within the District in WY 2007 is calculated at 19,306 AF. This report presents comparisons of California American Water (CAW) and non CAW production in WY 2007 and WY 2006; and compares WY 2007 production with the District's current water allocation program limits.

RECOMMENDATION: This report is for informational purposes only. The Board should review the draft summary report and provide staff with any comments or questions. Staff will complete and file the final report, incorporating any late revisions, if this item is approved with the Consent Calendar.

BACKGROUND: District Rules and Regulations require well owners and operators to submit annual water production information to the District. Well production is calculated by either the Land Use or Water Meter reporting method and is described below.

Number of Wells – Presently, there are 1,139 registered wells in the District. Of this total, 727 wells are active, and 333 wells are inactive. A well is considered active if it has produced any water in the last reporting period, i.e., WY 2007. Information on the remaining 79 registered wells is not available because reporting forms were not returned by owners of those wells.

Data Adjustments – For certain wells, staff estimated actual production to more accurately quantify water produced during WY 2007. Data adjustments were required to estimate water production from 98 wells that had either incomplete water meter records or reported water production for a period longer than the water year. Production from metered wells with incomplete records was estimated by using generalized non CAW monthly distribution factors developed by staff. In 14 cases, production records were incomplete because reported meter readings covered a period shorter than WY 2007. In 25 other cases, production records were incomplete because meters were replaced or repaired after the start of WY 2007. There are also at least 14 meters that still needed replacement or repair at the end of WY 2007. The application of monthly distribution factors allowed staff to reasonably account for the percentage of production that was not reported for each of these wells, which was then added to the annual total for these wells.

Similarly, there were 45 cases in which production was reported for a period longer than WY 2007. Estimates of the amounts that were over-reported were made based on the monthly distribution factors. These amounts were then subtracted from the reported totals. In three cases, production from wells with non-functioning water meters during WY 2007 was estimated based on historical production reports for these wells.

Reported production from both the CAW Main System and the Seaside Municipal Water System in WY 2007 was adjusted to account for 4.57 AF of water that was produced by CAW and delivered to the Seaside Municipal Water System. Water that was produced for backwashing purposes by wells in the CAW Main System was also deducted from CAW's production.

District-wide Production - Preliminary production values for WY 2007 are summarized by reporting method (Water Meter or Land Use), reporting status (active, inactive, or not reporting), and source area in **Exhibit 15-A**. For comparison, production values for WY 2006 are presented in **Exhibit 15-B**. The various source areas are shown in **Exhibit 15-C**. The volume of water produced from each source area is shown in **Exhibit 15-D**. The number of active non CAW wells and the volume of water produced by each reporting method in WY 2007 and WY 2006 are compared in **Exhibit 15-E**.

District-wide, total water production increased by 475 AF (2.5%) in WY 2007 compared to WY 2006. Specifically, ground water withdrawals increased by 409 AF (2.2%), while surface diversions increased by 66 AF (164.7%) in WY 2007. No surface water has been diverted within the CAW main system since WY 2003 because of seismic safety and sedimentation concerns at San Clemente Dam and Reservoir. WY 2004 marked the first year since 1921, when San Clemente Dam was completed, that CAW or its predecessor did not divert surface water from San Clemente Reservoir.

Monterey Peninsula Water Resources System (MPWRS) – The MPWRS includes surface water in the Carmel River and its tributaries, and ground water in the Carmel Valley alluvial aquifer and coastal subareas of the Seaside Ground Water Basin. Overall water production within the MPWRS in WY 2007 increased by 215 AF (1.3%) compared to WY 2006. Specifically, CAW production in WY 2007 decreased by 141 AF (1.0%), and non CAW production increased by 356 AF (13.0%) relative to reported production in WY 2006. CAW production from Carmel Valley decreased 498 AF (4.5%), and CAW production from the coastal areas of the Seaside Basin increased by 357 AF (10.9%). Non CAW production from Carmel Valley increased by 457 AF (23.6%) compared to WY 2006, and non CAW production from the coastal areas of the Seaside Basin decreased by 35 AF (4.2%).

Of the 10,456 AF of CAW production from Carmel Valley, 12 AF were produced and delivered to the District's Santa Margarita Test Injection Well (SMTIW) No. 1 for injection into the Seaside Basin. No recovered water from the District's SMTIW No. 1 was delivered to CAW in WY 2007. For reference, since the District's Seaside Injection/Recovery Program began testing in WY 1998 through the end of WY 2007, a total of 1,875 AF has been injected into the Seaside Basin and 1,139 AF have been recovered or produced from the SMTIW No.1 for delivery into the CAW System.

Water Allocation Program – With respect to the District's Water Allocation Program limits, CAW production from the MPWRS in WY 2007 was 14,076 acre-feet, or 3,565 acre-feet (20.2%) less than the CAW production limit of 17,641 acre-feet that was established with the adoption of Ordinance No. 87 in 1997. Non CAW production within the MPWRS in WY 2007 was 3,097 acre-feet, or 51 acre-feet (1.7%) more than the non CAW production limit of 3,046 acre-feet established by Ordinance No. 87. The increase in non CAW production is believed to be the result of a combination of two factors. First, due to regulatory constraints on the CAW system, more non CAW wells have been drilled and put into use. Second, from a hydrological standpoint, WY 2007 was characterized as a "critically dry" year, and therefore, the reported increased water usage is likely due in part to the lower than normal precipitation.

Although non CAW production exceeded the limit, it is important to note that for the purpose of monitoring compliance with the allocation limits, CAW and non CAW production are tracked collectively. Combined production from CAW and non CAW sources within the MPWRS was 17,173 acre-feet in WY 2007, which is 3,514 acre-feet (17.0%) less than the 20,687 acre-feet production limit set for the MPWRS as part of the District's Water Allocation Program. Therefore, no action is necessary at this time, although staff will continue to monitor production trends within the MPWRS and District-wide. A comparison of reported water production from the MPWRS in WY 2007 relative to the District's Water Allocation limits is presented in **Exhibit 15-F**.

Lastly, it should be noted that 99% of the ground water production within the District was reported by the water meter method in WY 2007. In addition, over 90% of registered well owners in the District reported annual production for their wells in WY 2007.

EXHIBITS

- 15-A** District-wide Water Production Summary for Water Year 2007
- 15-B** District-wide Water Production Summary for Water Year 2006
- 15-C** MPWMD Water Production Source Areas
- 15-D** Water Production by Source Area for Water Year 2007
- 15-E** District-wide Production by Reporting Method for non CAW Wells in WY 2007 and WY 2006
- 15-F** Comparison of Reported Production to Production Limits within the MPWRS in WY 2007

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EXHIBIT 15-A

**MONTEREY PENINSULA WATER MANAGEMENT DISTRICT
DRAFT WATER PRODUCTION SUMMARY FOR WATER YEAR 2007
October 1, 2006 - September 30, 2007**

SOURCE AREAS ^{1,2}	NON CAW (NON CAL-AM) WELLS						CAW (CAL-AM) WELLS			AQUIFER SUBUNIT TOTALS	
	WATER METER		LAND USE		SUB-TOTAL		WATER METER		NO. OF WELLS	PRODUCTION (AF)	
	NO. OF WELLS	PRODUCTION (AF)	NO. OF WELLS	PRODUCTION (AF)	NO. OF WELLS	PRODUCTION (AF)	NO. OF WELLS	PRODUCTION (AF)			
AS1	7	121.3	1	1.2	8	122.5	2	373.9	10	496.5	
AS2	45	175.0	37	38.6	82	213.6	1	86.7	83	300.3	
AS3	119	1,206.6	47	55.5	166	1,262.1	8	7,956.5	174	9,218.6	
AS4	28	690.5	7	2.4	35	692.8	1	2,038.4	36	2,731.2	
SCS	8	804.1	2	1.6	10	805.7	6	3,620.5	16	4,426.2	
CAC	7	35.4	9	14.3	16	49.7	0	0.0	16	49.7	
CVU	235	588.4	44	42.8	279	631.2	0	0.0	279	631.2	
LSS	9	506.0	2	3.5	11	509.5	4	434.8	15	944.3	
MIS	84	373.5	14	28.6	98	402.1	0	0.0	98	402.1	
ACTIVE	542	4,500.9	163	188.4	705	4,689.3	22	14,510.8	727	19,200.1	
INACTIVE	281		32		313		20		333		
NOT REPORTING	57		22		79		0		79		
METHOD TOTALS:	880	4,500.9	217	188.4	1,097	4,689.3	42	14,510.8	1,139	19,200.1	

DISTRICT-WIDE PRODUCTION	
SURFACE WATER DIVERSIONS:	
CAW Diversions (San Clemente Dam):	0.0
Non Cal-Am Diversions:	105.8
CAW WELLS:	
SEASIDE:	3,620.5
CARMEL VALLEY:	10,455.5
Within the Water Resources System:	14,076.0
Outside the Water Resources System:	434.8
NON CAW WELLS:	
CAW TOTAL, Wells and Diversion:	14,510.8
Within the Water Resources System:	3,096.8
Outside the Water Resources System:	1,592.5
NON CAW TOTAL, Wells and Diversion:	4,795.1
GRAND TOTAL:	19,305.9

NOTES:
 1. Shaded areas indicate production within the Monterey Peninsula Water Resources System
 2. CAW - California American Water
 3. Source areas are as follows:
 AS1 - UPPER CARMEL VALLEY - San Clemente Dam to Esquiline Bridge
 AS2 - MID CARMEL VALLEY - Esquiline Bridge to Narrows
 AS3 - LOWER CARMEL VALLEY - Narrows to Via Mallorca Bridge
 AS4 - LOWER CARMEL VALLEY - Via Mallorca Bridge to Lagoon
 SCS - SEASIDE COASTAL SUBAREAS
 CAC - CACHAGUA CREEK and UPPER WATERSHED AREAS
 CVU - CARMEL VALLEY UPLAND - Hillisides and Tularcitos Creek Area
 LSS - LAGUNA SECA SUBAREA (Ryan Ranch Area is within LSS)
 MIS - PENINSULA, CARMEL HIGHLANDS AND SAN JOSE CREEK AREAS
 4. Any minor numerical discrepancies in addition are due to rounding.

EXHIBIT 15-B

**MONTEREY PENINSULA WATER MANAGEMENT DISTRICT
DRAFT WATER PRODUCTION SUMMARY FOR WATER YEAR 2006
October 1, 2005 - September 30, 2006**

SOURCE AREAS ^{1,2}	NON CAW (NON CAL-AM) WELLS						SUB-TOTAL			CAW (CAL-AM) WELLS			AQUIFER SUBUNIT TOTALS	
	WATER METER		LAND USE		PRODUCTION (AF)		NO. OF WELLS	PRODUCTION (AF)	WATER METER		NO. OF WELLS	PRODUCTION (AF)	NO. OF WELLS	PRODUCTION (AF)
	NO. OF WELLS	PRODUCTION (AF)	NO. OF WELLS	PRODUCTION (AF)	NO. OF WELLS	PRODUCTION (AF)								
AS1	7	136.0	1	1.2	8	137.2	2	662.8	10	800.0				
AS2	48	144.5	36	37.9	84	182.4	1	240.5	85	422.9				
AS3	116	925.4	52	61.1	168	986.5	7	7,758.0	175	8,744.5				
AS4	33	590.1	8	3.5	41	593.5	1	2,292.4	42	2,885.9				
SCS	9	839.2	2	1.6	11	840.7	8	3,263.9	19	4,104.6				
CAC	7	40.8	9	14.3	16	55.1	0	0.0	16	55.1				
CVU	210	437.6	43	43.2	253	480.8	0	0.0	253	480.8				
LSS	8	451.8	2	3.5	10	455.2	4	445.9	14	901.1				
MIS	72	364.2	13	31.9	85	396.1	0	0.0	85	396.1				
ACTIVE	510	3,929.4	166	198.1	676	4,127.5	23	14,663.4	699	18,790.9				
INACTIVE	251		28		279		20		299					
NOT REPORTING	65		21		86		0		86					
METHOD TOTALS:	826	3,929.4	215	198.1	1,041	4,127.5	43	14,663.4	1,084	18,790.9				

DISTRICT-WIDE PRODUCTION	
SURFACE WATER DIVERSIONS:	
CAW Diversions (San Clemente Dam):	0.0
Non Cal-Am Diversions:	40.0
CAW WELLS:	
SEASIDE:	3,263.9
CARMEL VALLEY:	10,953.6
Within the Water Resources System:	14,217.5
Outside the Water Resources System:	445.9
NON CAW WELLS:	
CAW TOTAL, Wells and Diversion:	14,663.4
Within the Water Resources System:	2,740.4
Outside the Water Resources System:	1,387.2
NON CAW TOTAL, Wells and Diversion:	4,167.5
GRAND TOTAL:	18,830.9

NOTES:

1. Shaded areas indicate production within the Monterey Peninsula Water Resources System

2. CAW - California American Water

3. Source areas are as follows:

- AS1 - UPPER CARMEL VALLEY - San Clemente Dam to Esquiline Bridge
- AS2 - MID CARMEL VALLEY - Esquiline Bridge to Narrows
- AS3 - LOWER CARMEL VALLEY - Narrows to Via Mallorca Bridge
- AS4 - LOWER CARMEL VALLEY - Via Mallorca Bridge to Lagoon
- SCS - SEASIDE COASTAL SUBAREAS
- CAC - CACHAGUA CREEK and UPPER WATERSHED AREAS
- CVU - CARMEL VALLEY UPLAND - Hillsides and Tularcitos Creek Area
- LSS - LAGUNA SECA SUBAREA (Ryan Ranch Area is within LSS)
- MIS - PENINSULA, CARMEL HIGHLANDS AND SAN JOSE CREEK AREAS

4. Any minor numerical discrepancies in addition are due to rounding.

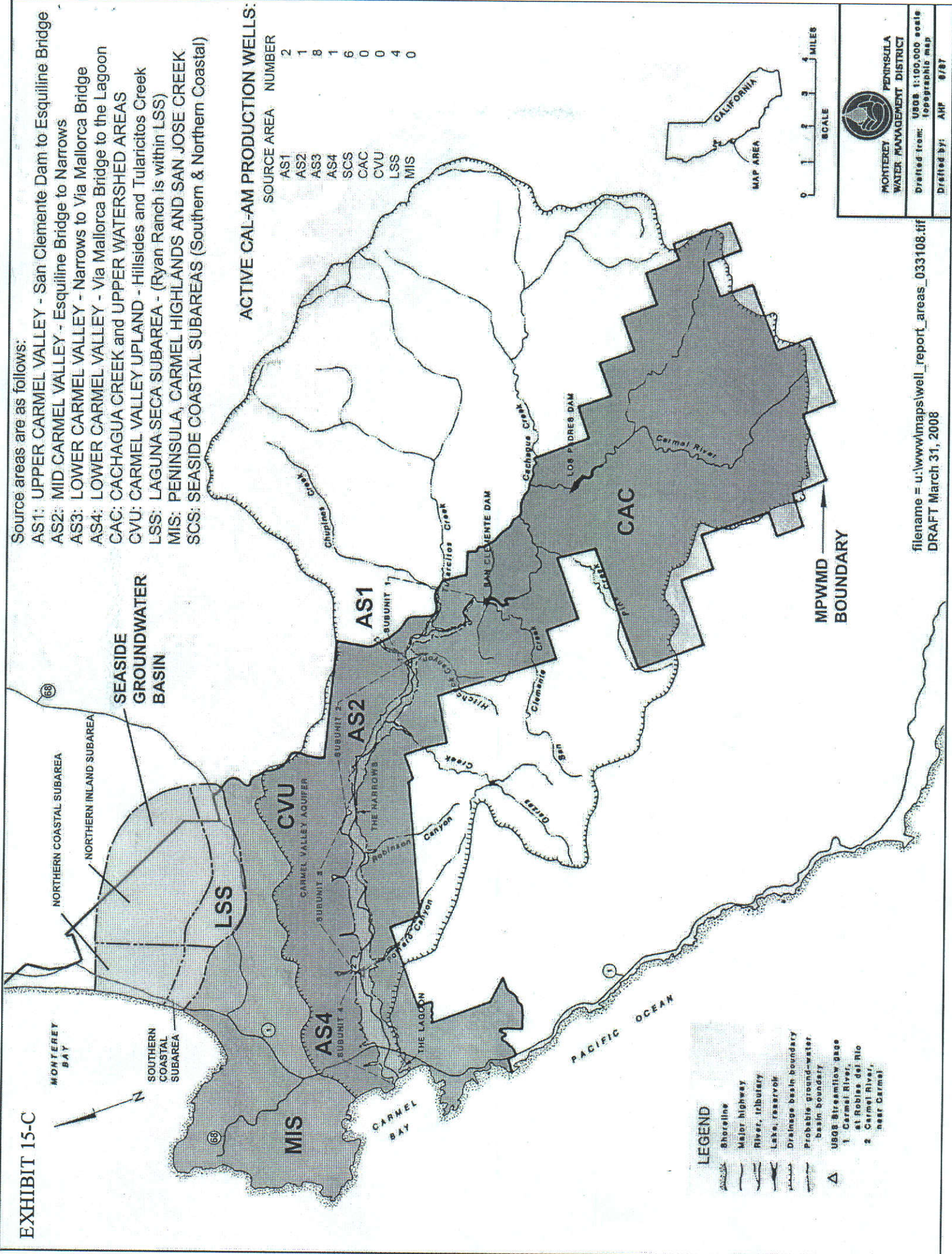
EXHIBIT 15-C

Source areas are as follows:

- AS1: UPPER CARMEL VALLEY - San Clemente Dam to Esquiline Bridge
- AS2: MID CARMEL VALLEY - Esquiline Bridge to Narrows
- AS3: LOWER CARMEL VALLEY - Narrows to Via Mallorca Bridge
- AS4: LOWER CARMEL VALLEY - Via Mallorca Bridge to the Lagoon
- CAC: CACHAGUA CREEK and UPPER WATERSHED AREAS
- CVU: CARMEL VALLEY UPLAND - Hillsides and Tularicos Creek
- LSS: LAGUNA SECA SUBAREA - (Ryan Ranch is within LSS)
- MIS: PENINSULA, CARMEL HIGHLANDS AND SAN JOSE CREEK
- SCS: SEASIDE COASTAL SUBAREAS (Southern & Northern Coastal)

ACTIVE CAL-AM PRODUCTION WELLS:

SOURCE AREA	NUMBER
AS1	2
AS2	1
AS3	8
AS4	1
SCS	6
CAC	0
CVU	0
LSS	4
MIS	0



LEGEND

- Shoreline
- Major highway
- River, tributary
- Lake, reservoir
- Drainage basin boundary
- Probable ground-water basin boundary
- USGS Streamflow gage
 - 1 Carmel River, at Robles del Rio
 - 2 Carmel River, near Carmel

filename = u:\ww\maps\well_report_areas_033108.tiff
 DRAFT March 31, 2008

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT
 Drafted from: US08 1:100,000 scale topographic map
 Drafted by: AMW 8/87

EXHIBIT 15-D

WATER PRODUCTION BY SOURCE AREA
WATER YEAR 2007

TOTAL PRODUCTION = 19,306 Acre-Feet (AF)

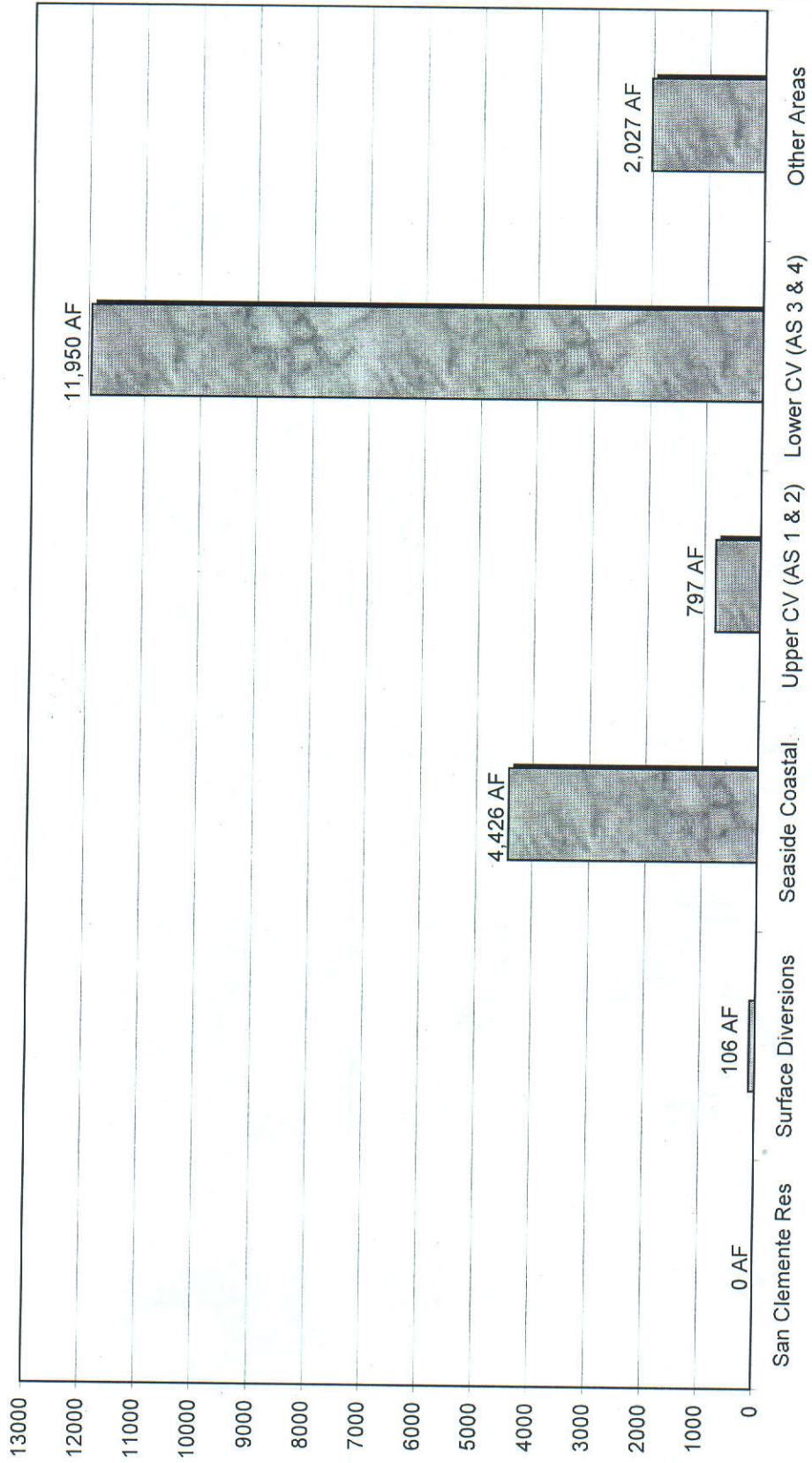
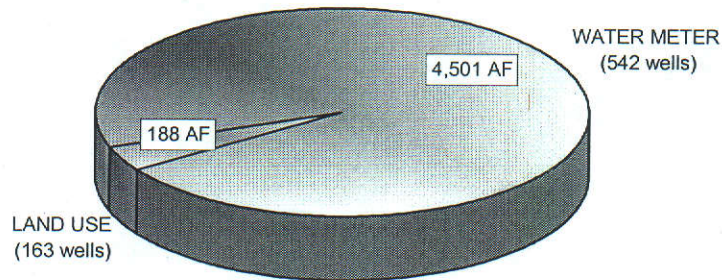


EXHIBIT 15-E

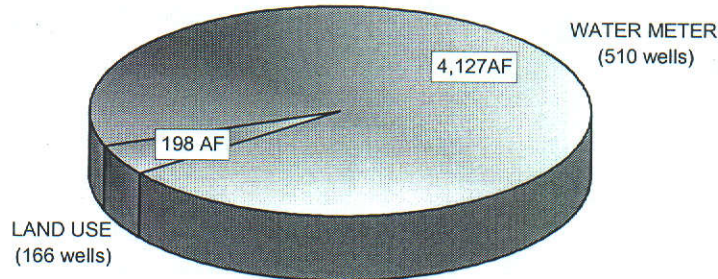
MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

District-Wide Active Non CAW Wells and Water Production by Reporting Method in WY 2007



TOTAL WY 2007 PRODUCTION = 4,689 ACRE-FEET
(not including 106 AF of reported surface water diversions)

District-Wide Active Non CAW Wells and Water Production by Reporting Method in WY 2006



TOTAL WY 2006 PRODUCTION = 4,127 ACRE-FEET
(not including 40 AF of reported surface water diversions)

EXHIBIT 15-F

Comparison of Reported Production to Allocation Limits
within the Monterey Peninsula Water Resources System - Water Year 2007

Reported Production Allocation Limit

