

MPWSP Water Demand and Supplies

CalAm Service Area Demand

Based on SWRCB Order WR 95-10 and the Seaside Groundwater Basin adjudication, CalAm must develop a replacement water supply to meet existing demand in its service area. In addition, the proposed Monterey Peninsula Water Supply Project would provide sufficient supplies to meet demand associated with existing legal lots of record and water entitlements in the Del Monte Forest area, and to accommodate tourism demand under recovered economic conditions. The proposed project would, in conjunction with other supply sources, meet an average annual demand of 15,296 afy.¹

TABLE 1
DEMAND ASSUMPTIONS

Demand Component	Annual Demand (acre-feet) ^a
Existing System Demand	13,291
Pebble Beach Water Entitlements	325
Hospitality Industry Bounce-Back / Economic Recovery	500
Legal Lots of Record	1,180
Total	15,296

^a The source for values shown is the January 2013 technical memorandum on desalination plant sizing (Findley, 2013) included with CalAm's January 2013 supplemental testimony (Svindland, 2013a). Other CalAm testimony (Svindland, 2012, 2013a) shows 1,181 afy for lots of record.

SOURCE: Findley, 2013.

Available Supplies

With implementation of the Monterey Peninsula Water Supply Project, CalAm's proposed water supply portfolio would meet a total projected demand of 15,296 afy in the Monterey District service area. **Table 2** shows the individual supply sources, both with and without the proposed Groundwater Replenishment Project (GWR).

¹ The demand and supply components are discussed in term of the annual averages. However, all water suppliers must ensure their supplies are adequate to meet peak demands. The rated capacity of a desalination plant (generally characterized in terms of millions of gallons per day) would therefore, be sized to meet peak as well as average demands.

TABLE 2
CAL AM MONTEREY DISTRICT WATER SUPPLIES
WITH PROPOSED MPWSP
(acre-feet per year)

Supply Source	<u>During Replenishment of the Seaside Groundwater Basin</u>		<u>After Replenishment of the Seaside Groundwater Basin</u>	
	Without GWR (9.6-mgd Desalination Plant)	With GWR (6.4-mgd Desalination Plant)	Without GWR (9.6-mgd Desalination Plant)	With GWR (6.4-mgd Desalination Plant)
Carmel River ^a	3,376	3,376	3,376	3,376
Seaside Groundwater Basin ^b	774	774	1,474	1,474
Aquifer Storage and Recovery (ASR) ^c	1,300	1,300	1,300	1,300
Sand City Coastal Desalination Plant ^d	94	94	94	94
Groundwater Replenishment Project (GWR) ^e	0	3,500	0	3,500
Proposed MPWSP Desalination Plant ^f	9,752	6,252	9,752 ^g	6,252 ^g
Total	15,296	15,296	15,996^g	15,996^g

NOTE: mgd = million gallons per day

^a CalAm's recognized right to Carmel River water established in Order 95-10.

^b CalAm's adjudicated water right in the Seaside Groundwater Basin is 1,474 afy; in-lieu recharge of 700 afy is assumed during Seaside Groundwater Basin replenishment.

^c Assumed average annual yield with completion of Phase II of the ASR; Phase I of the ASR is currently in operation, and Phase II is under construction.

^d Quantity shown is CalAm's long-term share of plant production pursuant to agreements between CalAm and the city of Sand City.

^e The GWR project is in preliminary planning stages and may not be operational in time for CalAm to meet the Order 2009-0060 deadline; therefore, supply scenarios with and without the GWR are provided.

^f Estimates for the desalination plant size assume two scenarios, one with and one without the GWR project.

^g Assumes the MPWSP desalination plant would be operated at the same level during and after replenishment of the Seaside Groundwater Basin.

SOURCE: Findley, 2013.

Potential Future Changes in Demand

CalAm is not proposing that the Monterey Peninsula Water Supply Project meet future demands associated with general plan buildout, although the proposed project does include water for some future development (i.e., development of vacant lots of record and development in the Del Monte Forest commensurate with existing Pebble Beach water entitlements). Phase 2 of the previously approved Regional Project included water to meet projected future service area demands; the MPWMD prepared that estimate of future water needs in 2006 based on information obtained from the service area jurisdictions (MPWMD, 2006b).

Since the 2006 estimate was prepared, the future water needs of two jurisdictions have been revised, lowering the overall total. Monterey County has adopted a new general plan that provides revised water demand estimates (Monterey County, 2010), and the City of Pacific Grove recently submitted testimony on the proposed project revising its estimate of water needed to accommodate general plan buildout (Hardgrave, 2013). With these revisions, future demand would total 3,514 afy. **Table 3** shows the MPWMD’s 2006 future demand estimates and these estimates with the two revisions.

TABLE 3
FUTURE WATER DEMAND – SERVICE AREA JURISDICTIONS
(acre-feet per year)

Jurisdiction	Future Supply Needs (2006 Estimate) ^a	Future Supply Needs (Revised)
City of Carmel	288	288
City of Del Rey Oaks	48	48
City of Monterey	705	705
City of Pacific Grove	1,264	500 ^b
City of Sand City	386	386
City of Seaside	582	582
Monterey County (Unincorporated)	1,135	1,005 ^{c,d}
Monterey Peninsula Airport District	138	See note d
Total	4,545	3,514

^a Based on the MPWMD’s “Estimated Long-Term Water Needs by Jurisdiction Based on General Plan Build-out in Acre-Feet,” Exhibit 1-C of Special Meeting/Board Workshop Agenda Item 1, MPWMD Board of Directors Packet, May 18, 2006b.

^b Revised based on testimony submitted to the CPUC by the City of Pacific Grove revising its 2006 estimate as shown.

^c Revised based on the Final EIR prepared for the 2010 *Monterey County General Plan*; the estimate shown is for the unincorporated county areas served by the Carmel River and Seaside Basin aquifer in the general plan horizon year (2030), rather than general plan buildout (which is not expected until 2092).

^d The estimate provided in the 2010 General Plan Final EIR for the unincorporated county area served by the Carmel River and Seaside Basin aquifer includes 492 acre feet for the Highway 68/Airport affordable housing overlay, as well as supply for Greater Monterey Peninsula area (316 acre feet), the Carmel Mid-Valley affordable housing overlay (75 acre feet), Cachagua (partial) (5 acre feet), Carmel Valley (60 acre feet), unincorporated Carmel (37 acre feet), and Del Monte Forest (20 acre feet).

SOURCES: MPWMD, 2006b; Monterey County, 2010; Hardgrave, 2013.