

APPENDIX B1

MPWSP Plant Sizing Data: Various Five- and Ten-Year Normal, Dry, and Maximum Month Demand Scenarios

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**Exhibit CA-30
(A.12-04-019)**

**Provided by California American Water
CPUC Evidentiary Hearing
December 2, 2013**

MPWSP – PLANT SIZING DATA

5 Year:

Normal Year - with SB, LOR, PB, TBB

Supply		Demand	
Item	(AFY)	Item	(AFY)
Desal Plant	9,752	5 year Avg Demand	13,291
Carmel River	3,376	Lots of Record	1,180
Sand City	94	Pebble Beach	325
ASR	1,300	Tourism Bounce back	500
Seaside Basin	774	Total	15,296
Total	15,296	Deficit	-

Exh. CA-6, *Direct Testimony of Richard C. Svindland*, dated April 23, 2012 ("Svindland Direct"), pp. 16-18 (desal plant size, ASR), 22 (lots of record), Attachment 3, p. 3 (5-Year Average Demand), 7-8 (Carmel River), 8 (Sand City); Exh. CA-12, *Supplemental Testimony of Richard C. Svindland*, dated January 11, 2013 ("Svindland Supplemental"), pp. 4-5 (Seaside Basin, Tourism Bounce Back, Pebble Beach, 5 year avg demand), Attachment 1, pp. 3 (5 Year avg Demand), 4 (Lots of Record, Pebble Beach, Tourism Bounce Back), 9 (Sand City, Seaside Basin); Exh. CA-21, *Rebuttal Testimony of Richard C. Svindland*, dated March 8, 2013 ("Svindland Rebuttal"), p. 16 (Desal Plant); RT 988:10 - 989:21 (Svindland/CAW [Normal 5 year avg demand]); RT 990:15 - 991:7 (Svindland/CAW [Seaside Basin]).

Dry Year at Start of Desal Operation with SB, LOR, PB, TBB

Supply		Demand	
Item	(AFY)	Item	(AFY)
Desal Plant	9,752	5 year Avg Demand	13,291
Carmel River	3,376	Lots of Record	1,180
Sand City	94	Pebble Beach	325
ASR	-	Tourism Bounce back	500
Seaside Basin	774	Total	15,296
Total	13,996	Deficit	1,300
		System Demand for No Impact	11,991

Exh. CA-6, *Svindland Direct*, pp. 16-18 (desal plant size), 22 (lots of record), Attachment 3, p. 3 (5-Year Average Demand), 7-8 (Carmel River), 8 (Sand City); Exh. CA-12, *Svindland Supplemental*, pp. 4-5 (Seaside Basin, Tourism Bounce Back, Pebble Beach, 5-year avg demand), Attachment 1, pp. 3 (5 year avg demand), 4 (Lots of Record, Pebble Beach, Tourism Bounce Back), 9 (Sand

City, Seaside Basin); Exh. CA-21, Svindland Rebuttal, p. 16 (Desal Plant); RT 990:15 - 991:7 (Svindland/CAW [Seaside Basin]).

Max Demand Year at Start of Desal Operation with SB, LOR, PB, TBB

Supply		Demand	
Item	(AFY)	Item	(AFY)
Desal Plant	9,752	5 year Max Demand	14,644
Carmel River	3,376	Lots of Record	-
Sand City	94	Pebble Beach	325
ASR	1,300	Tourism Bounce back	500
Seaside Basin	774	Total	15,469
Total	15,296	Deficit	173
		System Demand for No Impact	14,471

Exh. CA-6, Svindland Direct, pp. 16-18 (desal plant size), Attachment 3, pp. 7-8 (Carmel River supply), 8 (Sand City); Exh. CA-12, Svindland Supplemental, pp. 4 (Seaside Basin, Tourism Bounce Back, Pebble Beach), Attachment 1, p. 4 (Pebble Beach, Tourism Bounce Back), 9 (Sand City, Seaside Basin); Exh. CA-21, Svindland Rebuttal, p. 16 (Desal Plant); RT 990:15 - 991:7 (Svindland/CAW); RT 990:15 - 991:7 (Svindland/CAW [Seaside Basin]).

Max Demand Year at Start of Desal Operation - DRY Year, with SB, PB, TBB

Supply		Demand	
Item	(AFY)	Item	(AFY)
Desal Plant	9,752	5 year Max Demand	14,644
Carmel River	3,376	Lots of Record	-
Sand City	94	Pebble Beach	325
ASR		Tourism Bounce back	500
Seaside Basin	774	Total	15,469
Total	13,996	Deficit	1,473
		System Demand for No Impact	13,171

Exh. CA-6, Svindland Direct, pp. 16-18 (desal plant size), Attachment 3, pp. 7-8 (Carmel River supply), 8 (Sand City); Exh. CA-12, Svindland Supplemental, pp. 4 (Seaside Basin, Tourism Bounce Back, Pebble Beach), Attachment 1, p. 4 (Pebble Beach, Tourism Bounce Back), 9 (Sand City, Seaside Basin); Exh. CA-21, Svindland Rebuttal, p. 16 (Desal Plant); RT 990:15 - 991:7 (Svindland/CAW); RT 990:15 - 991:7 (Svindland/CAW [Seaside Basin]).

Max Demand Year at Start of Desal Operation - DRY Year, PB, TBB, no SB

Supply		Demand	
Item	(AFY)	Item	(AFY)
Desal Plant	9,752	5 year Max Demand	14,644
Carmel River	3,376	Lots of Record	-
Sand City	94	Pebble Beach	325
ASR		Tourism Bounce back	500
Seaside Basin	1,474	Total	15,469
Total	14,696	Deficit	773
		System Demand for No Impact	13,871

Exh. CA-6, Svindland Direct, pp. 16-18 (desal plant size), Attachment 3, pp. 7-8 (Carmel River supply), 8 (Sand City, Seaside Basin); Exh. CA-12, Svindland Supplemental, pp. 4 (Seaside Basin, Tourism Bounce Back, Pebble Beach), Attachment 1, p. 4 (Seaside Basin, Pebble Beach, Tourism Back Back), 9 (Sand City, Seaside Basin); Exh. CA-21, Svindland Rebuttal, p. 16 (Desal Plant); RT 990:15 - 991:7 (Svindland/CAW [Seaside Basin]).

10 Year:

Plant Needed to meet 10 year Max Demand & LOR, PB, TBB, SB

Supply		Demand	
Item	(AFY)	Item	(AFY)
Desal Plant	11,623	10 year Max Demand	15,162
Carmel River	3,376	Lots of Record	1,180
Sand City	94	Pebble Beach	325
ASR	1,300	Tourism Bounce back	500
Seaside Basin	774	Total	17,167
Total	17,167	Deficit	-

Exh. CA-6, Svindland Direct, p. 22 (lots of record), Attachment 3, pp. 7-8 (Carmel River supply), 8 (Sand City); Exh. CA-12, Svindland Supplemental, pp. 4 (Seaside Basin, Tourism Bounce Back, Pebble Beach), Attachment 1, p. 4 (Seaside Basin, Lots of Record, Pebble Beach, Tourism Back Back), 9 (Sand City, Seaside Basin); RT 990:15 - 991:7 (Svindland/CAW [Seaside Basin]).

10 year Max Demand - with 9.6 MGD Plant & SB but no LOR, PB, TBB

Supply		Demand	
Item	(AFY)	Item	(AFY)
Desal Plant	9,976	10 year Max Demand	15,162
Carmel River	3,376	Lots of Record	
Sand City	94	Pebble Beach	
ASR	1,300	Tourism Bounce back	
Seaside Basin	774	Total	15,162
Total	15,520	Deficit	(358)

Exh. CA-6, Svindland Direct, Attachment 3, pp. 7-8 (Carmel River supply), 8 (Sand City); Exh. CA-12, Svindland Supplemental, pp. 4 (Seaside Basin), Attachment 1, p. 4 (Seaside Basin), 9 (Sand City, Seaside Basin); RT 990:15 - 991:7 (Svindland/CAW [Seaside Basin]).

10 year Max Demand - with 9.6 MGD Plant DRY Year

Supply		Demand	
Item	(AFY)	Item	(AFY)
Desal Plant	9,976	10 year Max Demand	15,162
Carmel River	3,376	Lots of Record	
Sand City	94	Pebble Beach	
ASR		Tourism Bounce back	
Seaside Basin	774	Total	15,162
Total	14,220	Deficit	942

Exh. CA-6, Svindland Direct, Attachment 3, pp. 7-8 (Carmel River supply), 8 (Sand City); Exh. CA-12, Svindland Supplemental, pp. 4 (Seaside Basin), Attachment 1, p. 4 (Seaside Basin), 9 (Sand City, Seaside Basin); RT 990:15 - 991:7 (Svindland/CAW [Seaside Basin]).

10 year Max Demand - with 9.6 MGD Plant DRY Year & No Basin Payback

Supply		Demand	
Item	(AFY)	Item	(AFY)
Desal Plant	9,976	10 year Max Demand	15,162
Carmel River	3,376	Lots of Record	
Sand City ASR	94	Pebble Beach Tourism Bounce back	
Seaside Basin	1,474	Total	15,162
Total	14,920	Deficit	242

Exh. CA-6, Svindland Direct, Attachment 3, pp. 7-8 (Carmel River supply), 8 (Sand City, Seaside Basin); Exh. CA-12, Svindland Supplemental, pp. 4 (Seaside Basin), Attachment 1, p. 4 (Seaside Basin), 9 (Sand City, Seaside Basin); RT 990:15 - 991:7 (Svindland/CAW [Seaside Basin]).

Max Month:

Maximum Month - 5 yr Avg

Supply		Demand	
Item	(AF)	Item	(AFY)
Desal Plant	813	5 year Average	1,388
Carmel River	100	Lots of Record	113
Sand City	8	Pebble Beach	31
ASR (Extraction)	433	Tourism Bounce back	48
Seaside Basin	370	Total	1,580
Total	1,724	Deficit	(143)

Exh. CA-6, Svindland Direct, p. 17 (maximum demand months/days).

Maximum Month - 5 yr High

Supply		Demand	
Item	(AF)	Item	(AFY)
Desal Plant	813	5 year Max	1,532
Carmel River	100	Lots of Record	113
Sand City	8	Pebble Beach	31
ASR (Extraction)	433	Tourism Bounce back	48
Seaside Basin	370	Total	1,724
Total	1,724	Deficit	1

Exh. CA-6, Svindland Direct, p. 17 (maximum demand months/days).

Maximum Month - 10 yr High

Supply		Demand	
Item	(AF)	Item	(AFY)
Desal Plant	813	10 year Max	1,709
Carmel River	200	Lots of Record	113
Sand City	8	Pebble Beach	31
ASR (Extraction)	433	Tourism Bounce back	48
Seaside Basin	448	Total	1,901
Total	1,902	Deficit	(0)

Exh. CA-6, Svindland Direct, p. 17 (maximum demand months/days).

Maximum Month - 10 yr High - DRY Year at Plant Start Up

Supply		Demand	
Item	(AF)	Item	(AFY)
Desal Plant	813	10 year Max	1,709
Carmel River	200	Lots of Record	113
Sand City	8	Pebble Beach	31
ASR (Extraction)		Tourism Bounce back	48
Seaside Basin	448	Total	1,901
Total	1,469	Deficit	433

Exh. CA-6, Svindland Direct, p. 17 (maximum demand months/days).

SVRG:

Desal Plant Size		Customer			Remaining	Excess
MGD	AFY	Demand	SV Return	Available	for	Availability
		AFY	AFY	AFY	Operations	%
					AFY	
9.6	10,752	9,752	880	1,000	120	1.1%
6.9	7,728	6,752	590	976	386	5.0%
6.4	7,168	6,252	550	916	366	5.1%

Exh. CA-12, Svindland Supplemental, pp. 11 (Desal Plant Size and Demand); Exh. CA-21, Svindland Rebuttal, p. 16 (Desal Plant).