



City of Santa Barbara

Public Works Department

www.SantaBarbaraCA.gov

June 12, 2012

Main Office
630 Garden Street
P.O. Box 1990
Santa Barbara, CA
93102-1990

Administration
Tel: 805.564.5377
Fax: 805.897.2613

Engineering
Tel: 805.564.5363
Fax: 805.564.5467

Facilities
Tel: 805.564.5415
Fax: 805.897.2577

Street Maintenance
Tel: 805.564.5413
Fax: 805.897.1991

Transportation
Tel: 805.564.5385
Fax: 805.564.5467

Water Resources
Tel: 805.564.5387
Fax: 805.897.2613

Peter Brostrom
Water Use and Efficiency Branch
901 P Street, Third Floor
P. O. Box 942836
Sacramento, CA 94236-0001

SUBJECT: Transmittal of Urban Water Management Plan
Addendum

Dear Mr. Brostrom:

We are pleased to submit the enclosed Addendum to the City of Santa Barbara's 2010 Urban Water Management Plan. The document includes additional information requested by Mr. Sergio Fierro, Department of Water Resources, Southern Region Office. following his review of our plan and the data entered into the Department's "Data On-line Submittal Tool (DOST)."

Please contact Bill Ferguson, Project Manager, at (805) 963-0611, Ext. 4532, or BFerguson@SantaBarbaraCA.gov, if you have any questions.

Thank you.

Sincerely,

for Christine F. Andersen
Public Works Director

BF/dm

Enclosure

cc (w/ enclosure): Sergio Fierro, Department of Water Resources,
770 Fairmont Avenue, Glendale, CA 91203

Addendum

City of Santa Barbara
Urban Water Management Plan
2010 Update – Adopted June 2011



June 12, 2012

Addendum

June 12, 2012

City of Santa Barbara Urban Water Management Plan 2010 Update Adopted June 2011

On June 14, 2011, the Santa Barbara City Council adopted the City's 2010 update to its Urban Water Management Plan (UWMP) as Agenda Item No. 15. The plan was submitted in hard copy and electronic format to the California Department of Water Resources (DWR) in accordance with requirements of Urban Water Management Planning statutes. In November, after DWR's Data Online Submittal Tool (DOST) became available, the City entered applicable data on the City's UWMP into DOST. In May 2012, DWR staff provided the City with comments on the UWMP and requested that an addendum be prepared to address those comments relevant to the 2010 update. DWR also provided additional comments for consideration during preparation of the City's 2015 update.

DOST Table 29: Factors Resulting in Inconsistency of Supply

Average Year and Single Dry Year: The discussion at the bottom of page 40 of the UWMP was intended to highlight that supplies available in a single dry year are similar to an average year, due to the multi-year storage capacity of Lake Cachuma. The City uses 2010 (as noted in DOST Table 27) as representative of "average" or "normal" supply conditions based on:

- Reflective of current reservoir capacities and yields;
- Approximately average rainfall, sufficient to allow average deliveries from Gibraltar Reservoir;
- Storage volume at Lake Cachuma sufficient to provide delivery of full entitlement, with a portion of that carried over to address potential drought;
- Approximately average State Water Project delivery allocation and deliveries from Mission Tunnel and groundwater pumping.

DOST Table 11: Total Water Use

The definition of Gross Water Use does not include supplies provided by recycled water. Therefore, for consistency, the City has not included recycled water deliveries as a part of supplies, nor in the tabulation of Total Water Use in DOST Tables 3 – 11. Table 6 on page 14 of the UWMP

tabulates all demands and uses of potable water supplies, including potable water added to recycled water for blending purposes. Because the City’s historical water supply planning has been based on demand as measured by production of both potable and recycled water, recycled water sales are included separately on UWMP Table 6 and Table 9, but only for informational purposes and to maintain the historical demand tracking methodology. Note also that the reference to “Table 11” in the note under the first section of UWMP Table 6 refers to DOST Table 11 – Total Water Use, not UWMP Table 11.

DOST Table 21: Recycled Water – Wastewater Collection and Treatment, and DOST Table 22: Wastewater Disposal – Recycled and Non-Recycled

The following table provides information on wastewater collection and recycled water treatment and discharges, with all values in AFY. All wastewater collected is treated by the City. Note that total wastewater collection is projected to remain essentially flat at 7.7 MGD as shown on UWMP page 7, or 8,630 AFY. Minor increases in demand are expected to be offset by improved water use efficiency. Recycled water treatment and distribution projections reflect the City’s plan to increase recycled water demand from 800 AFY to 1,000 AFY by 2030.

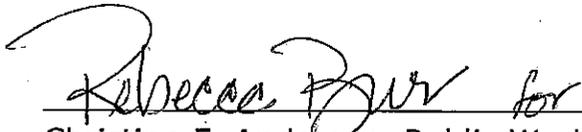
	<i>Actual</i>		<i>Projected</i>			
	2005	2010	2015	2020	2025	2030
Wastewater Collected & Treated	9,860	8,630	8,630	8,630	8,630	8,630
Tertiary Treated Recycled Water	719	696	875	950	1,025	1,100
Disposal to Ocean	Secondary Treatment	7,934	7,755	7,680	7,605	7,530
Usage at Recycled Water User Sites	Tertiary Treatment	696	875	950	1,025	1,100
	Total:	8,630	8,630	8,360	8,630	8,630

Table 33 : Supply and Demand Comparison - Single Dry Year, and Table 34 : Supply and Demand Comparison During Projected Single and Multiple Dry-Year Events

The City’s dry year planning is based on critical drought period analysis using a worksheet model as described on UWMP pages 37-41. UWMP Appendix E includes chart data on a range of water supply scenarios as derived from the model. To complete DOST Table 33 and Table 34, the

model was used to provide projections on 5-year intervals for single dry years and multiple dry year periods for 2015 through 2030. These projections are itemized in Exhibit A-1 and Exhibit A-2, included as a part of this addendum. Total potable supplies are tabulated based on declining yield from Lake Cachuma due to sedimentation, projected deliveries of State Water per UWMP Table 11, and critical drought period assumptions as described in UWMP pages 37-41.

Addendum approved pursuant to City Council authorization, Item 15, June 14, 2011:



Christine F. Andersen, Public Works Director

6-12-2012
Date

* * * * *

Exhibit A-1

DOST Table 33 : Supply and Demand Comparison - Single Dry Year (1977 example)
Water Supplies - Projected (AF)

<i>Potable Water Supplies</i>	<i>Projected</i>			
	2015	2020	2025	2030
Wholesaler: CCWA/State Water	217	250	282	315
<i>Less State Water Deliveries to Carryover/Banked Storage</i>	0	0	0	0
Cachuma Project	8,172	8,070	7,967	7,863
<i>Less Project Water to Local Carryover Storage</i>	0	0	0	0
Gibraltar Reservoir/Devils Canyon	3,206	3,206	3,206	3,206
Mission Tunnel	699	699	699	699
Groundwater	1,820	1,640	1,550	1,530
Drought Supplies (banked supplies, purchases, or desalination)	0	0	0	0
Total Potable Supplies:	14,114	13,865	13,704	13,613
Less Blend Water:	-300	-275	-275	-275
Less Net Exports to GWD:	0	0	0	0
Less Export to Groundwater Storage:	0	0	0	0
Potable Supplies Available for Retail Demand:	13,814	13,590	13,429	13,338
Less Projected Retail Demand:	-12,436	-12,226	-12,093	-12,005
Available for Safety Margin:	1,378	1,364	1,336	1,333
% Available for Safety Margin (10% goal per City policy):	10.0%	10.0%	10.0%	10.0%
Total Demands:	12,736	12,501	12,368	12,280

Notes:

- 1) Maximum CCWA deliveries per Table 11 in City SB UWMP
- 2) Assume no SWP or Cachuma carryover during single worst dry year
- 3) Projections reflect minor projected increases in demand, which are offset by demand reduction from new conservation & recycled water
- 4) Cachuma Project yield reflects 5% reduction over 20-year planning period due to sedimentation
- 5) Gibraltar yield is assumed same as normal years, since this value is less than Cachuma DEIR modeled data for 1977
- 6) Mission Tunnel yield based on Draft EIR for Cachuma water rights hearing
- 7) Groundwater: as needed to maintain 10% safety margin; no groundwater recharge

Exhibit A-2

DOST Table 34 : Supply and Demand Comparison - Multiple Dry Years
Projected Water Supplies (AF)

	5-Year Period Ending 2015					5-Year Period Ending 2020					5-Year Period Ending 2025					5-Year Period Ending 2030				
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Potable Water Supplies																				
Wholesaler: CCWA/SWP	1,132	1,132	1,132	1,132	1,132	1,145	1,145	1,145	1,145	1,145	1,110	1,159	1,159	1,159	1,159	1,065	1,173	1,173	1,173	1,173
Less/Plus SWP Deliveries to/from Carryover/Banked Storage					1,320					1,320					1,320					
Cachuma Project	8,174	7,833	6,539	5,231	4,185	6,070	7,833	6,456	5,165	4,132	7,967	7,833	6,373	5,099	4,079	7,863	6,290	5,032	4,026	1,320
Less/Plus Project Water to/from Local Carryover Storage	15	529	60				425						500					500		
Gibraltar Reservoir/Devils Canyon	3,206	3,161	877	1,961	0	3,206	3,161	877	1,961	0	3,206	3,161	877	1,961	0	3,206	3,161	877	1,961	0
Mission Tunnel	847	656	550	527	500	847	656	550	527	500	847	656	550	527	500	847	656	550	527	500
Groundwater	1,300	1,315	3,700	3,250	4,150	775	775	3,555	3,060	4,000	700	980	2,950	2,965	4,000	700	850	2,925	2,935	4,000
Drought Supplies (purchased water or desalination)					760					725					640					600
Total Potable Supplies:	14,674	14,622	12,858	12,101	12,047	14,043	13,995	12,583	11,858	11,822	13,830	13,789	12,409	11,711	11,698	13,881	13,873	12,316	11,829	11,619
Less Blend Water:	-600	-600	-300	-300	-300	-275	-275	-275	-275	-275	-275	-275	-275	-275	-275	-275	-275	-275	-275	-275
Less Net Exports to GWD:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Less Export to Groundwater Storage:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potable Supplies Available for Retail Demand:	14,074	14,022	12,558	11,801	11,747	13,768	13,720	12,308	11,583	11,547	13,555	13,514	12,134	11,436	11,423	13,406	13,398	12,041	11,554	11,344
Less Projected Retail Demand (adjusted for Planned Demand Reductions):	-12,669	-12,614	-11,301	-10,622	-10,570	-12,397	-12,352	-11,082	-10,429	-10,392	-12,195	-12,166	-10,926	-10,298	-10,279	-12,072	-12,053	-10,832	-10,217	-10,205
Available for Safety Margin:	1,404	1,408	1,257	1,179	1,177	1,371	1,368	1,226	1,154	1,155	1,359	1,348	1,209	1,138	1,144	1,334	1,345	1,209	1,137	1,139
% Available for Safety Margin (10% goal per City policy):	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Total Demands:	13,269	13,214	11,601	10,922	10,870	12,672	12,627	11,357	10,704	10,667	12,470	12,441	11,201	10,573	10,554	12,347	12,328	11,107	10,492	10,480

Notes:

- 1) Maximum CCWA deliveries per Table 11 in City SB UWMP (Average deliveries for six-year 1928-1934 dry period assumed)
- 2) Deliveries from banked SWP 2015 based on 2/3 of 2,000 AF banked, based on Dudley Ridge banking example (2011).
- 3) Projections reflect minor projected increases in demand, which are offset by demand reduction from new conservation & recycled water
- 4) Cachuma Project yield based on deliveries during 1947-1951 critical drought period; interpolated from 2010 to 2030 to reflect estimated reduction in project yield, per below; assume up to 600 AF of carryover available for use during drought
- 5) Gibraltar yield is assumed to be local critical drought period of 1947-1951 for each 5-year period
- 6) Mission Tunnel yield based on Draft EIR for Cachuma water rights hearing (1947-1951 critical drought period)
- 7) Groundwater, as needed to maintain 10% safety margin; no groundwater recharge