COMMENTS ON DRAFT BULLETIN 160-98
CALIFORNIA WATER PLAN UPDATE

GENERAL COMMENTS

URBAN WATER CONSERVATION BEST MANAGEMENT PRACTICES AND ADDITIONAL CONSERVATION OPTION

Metropolitan recognizes water conservation is an important component of any resource plan. Therefore, Metropolitan is committed to full implementation of urban water conservation "best management practices", or BMPs, as stated in the memorandum of understanding of the California Water Conservation Coalition. However, Metropolitan is concerned with the estimates of water demand reductions used in the Draft Bulletin. The Draft Bulletin references the 1991 MOU Regarding Urban Water Conservation and assumes "full implementation" of BMPs for all urban users in the baseline projections. The final Bulletin needs to recognize that the MOU requires full implementation of all cost-effective BMPs by individual agencies.

Under the MOU, participating urban water agencies commit to use "good-faith efforts" to implement proven water conservation measures, develop new measures, and implement them as they become feasible. In return for this commitment, the environmental and public interest groups participating in the BMP development process have agreed that BMP implementation provides the best available methods for achieving water conservation and that the State Water Resources Control Board should only use reliable estimates of conservation savings developed through this process. As mandated by the MOU, the California Urban Water Conservation Council (CUWCC) was formed to develop methodology to quantify the water savings from identified BMPs, continually evaluate currently identified BMPs, and develop potential conservation practices. It is critical that DWR, in cooperation with the CUWCC, engages in evaluating the effectiveness of BMPs and devise realistic, credible estimates of water savings.

Metropolitan is concerned that the Draft Bulletin assumes water conservation measures beyond BMPs to reduce future water shortages. It is not clear on how the Draft Bulletin arrives at the estimated savings due to these potential BMPs. As Bulletin 160 has been an important source document for the State Water Resources Control Board in the Water Rights proceedings, Bulletin 160-98 should adhere to estimates provided by CUWCC.

RECYCLED WATER

It is stated in the Draft Bulletin that potential supply from water recycling is based on a 1995 DWR survey. We request that the survey data be included as an appendix to the final Bulletin to assure full public review of available production and cost data.

Summarized data in the Draft Bulletin from your 1995 survey for South Coast Region seems significantly different from Metropolitan's database for recycled water production and costs.

Some examples of differences are:

- The Draft Bulletin shows 80 projects currently producing 210,000 AF/Y of recycled water in Southern California, and those projects are expected to increase production to 330,000 AF/Y by the year 2020 (p. 7-108). Metropolitan's current database identifies 80 recycling projects producing a total of about 140,000 AF in FY 1995 and these projects are expected to produce about 234,000 AF/Y by the year 2020 (see attached table).

- The Draft Bulletin indicates that there is the potential to develop an additional 640,000 AF/Y of recycled water supply with a net "new water" yield of 556,000 AF/Y (p. 7-108; Table 7-32). Of the 556,000 AF/Y of new water from potential new recycling projects, 441,000 AF/Y can be developed at a cost less than $500/AF (Table 7-32, p. 7-115). Metropolitan's survey in 1993 (see attached IRP Volume 3) identified the following costs for projects that were <u>not operating</u> or under construction at that time:

Cost Range	Yield (AF/Y)
< $500/AF	92,000
$500 to $1000/AF	155,000
$1000 to $1500/AF	160,000
> $1500/AF	60,000

The final Bulletin should also note that salinity impacts; failure to fully develop recycled water markets; and cost escalation due to construction constraints in urban areas could result in increased project unit costs from those identified in our 1993 survey.

We would like to obtain the data from DWR's 1995 survey such that the difference can be reconciled.

TABLES LISTING WATER SUPPLY AND DEMAND MANAGEMENT OPTIONS AVAILABLE TO REGIONS

While it is helpful to provide listings of projects and programs that various agencies are studying to augment supplies or manage demands, those projects inevitably represent a snap shot in the planning effort. We recommend that the tables be titled "List of Potential Water Supply and Demand Management Options" instead of "___ Region Options Comprehensive List".

DATA SOURCES AND EXPLANATION

There are frequent instances throughout the document where data or information is used with neither a source identified, nor enough explanation to understand where the data came from and how it should be used. The result is that the reader is frequently not given enough information to determine the validity of what is presented. While it is recognized that this is a very data-intensive document and it would

be difficult to identify all sources or explain each number, it would be beneficial, at a minimum, to reference sources that are not widely known to readers.

Some examples where additional information is needed include:

- The sources for the recycling projects and costs listed as options for each hydrologic region.
- The assumptions used in estimating water conservation savings with full implementation of the urban Best Management Practices (BMPs). Information could be included as an appendix to the final Bulletin.
- The basis for assuming current BMPs can effect reduction of 12 to 15 percent water use in the commercial, institutional and industrial sector (page 6-12).
- The basis for reducing commercial, institutional and industrial water use by 2 to 3 percent, in the South Coast Region, beyond what is expected to be achieved by the BMPs (page 7-98).
- The sources used for developing the costs for various conservation measures.

DATA INCONSISTENCIES

The Draft Bulletin contains a number of discrepancies and inconsistencies between data discussed in the text and tables, and from one table to another table. It is also difficult to follow how the water supply and demand management options are used to calculate the water budget with recommended options. Some examples are:

- Management options and augmentation options listed in Table 10-4 do not seem to agree with those in Table 10-3.
- It is unclear what options listed in Table 7-32 for the South Coast Region were used in Table 7-33.

Recyling Production for Projects in Metropolitan's Service Area that Existed in FY 1995 (acre-feet)

	1995	1996	1997	1998	1999	2000	2001	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Oak Park/North Ranch Water Reclamation Proj.	12	260	880	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300
Century Reclamation Program	2,221	2,736	3,201	3,475	3,775	4,075	4,375	5,500	5,500	5,500	5,500	5,500	5,500	5,500	5,500	5,500	5,500	5,500	5,500	5,500	5,500	5,500	5,500	5,500	5,500
Cerritos Reclaimed Water Expansion Project	198	254	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260
Lakewood Water Reclamation Project	425	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440
Rio Hondo Water Reclamation Program	101	170	281	500	600	700	800	970	1,020	1,070	1,120	1,170	1,220	1,270	1,320	1,370	1,420	1,470	1,520	1,570	1,620	1,670	1,720	1,770	1,850
San Clemente Water Reclamation Project	339	355	358	450	450	650	850	1,180	1,360	1,540	1,720	1,900	2,080	2,260	2,440	2,620	2,800	2,980	3,160	3,340	3,520	3,700	3,880	4,000	4,000
South Laguna Reclamation Project	694	776	358	430	860	860	860	860	860	860	860	860	860	860	860	860	860	860	860	860	860	860	860	860	860
Rancho California Reclamation Expansion	1,160	1,473	2,058	2,000	2,200	2,400	2,600	3,010	3,220	3,340	3,550	3,760	3,970	4,180	4,390	4,600	4,810	5,020	5,230	5,440	5,650	5,860	6,000	6,000	6,000
Glendale Water Reclamation Expansion Project	276	306	348	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350
Calabasas Reclaimed Water System Expansion	539	491	441	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700
Las Virgenes Reclamation Project	2,251	2,968	3,784	2,700	2,700	2,700	2,700	2,700	2,700	2,700	2,700	2,700	2,700	2,700	2,700	2,700	2,700	2,700	2,700	2,700	2,700	2,700	2,700	2,700	2,700
Long Beach Reclamation Project	1,088	1,260	1,345	1,500	1,500	1,500	1,500	1,510	1,520	1,530	1,540	1,550	1,560	1,570	1,580	1,590	1,600	1,610	1,620	1,630	1,640	1,650	1,660	1,670	1,700
Los Angeles Greenbelt Project	625	791	937	1,400	1,500	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,610	1,610	1,610	1,610	1,610	1,610	1,610	1,610	1,610	1,610	1,610	1,610	1,610
Irvine Ranch Reclamation Project	8,243	10,000	8,900	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Moulton Niguel Reclamation Project	1,425	1,594	2,038	2,500	2,800	3,100	3,400	3,950	4,200	4,450	4,700	4,950	5,200	5,450	5,700	5,950	6,200	6,450	6,700	6,950	7,200	7,450	7,700	7,950	8,000
Green Acres Reclamation Project	814	1,320	1,671	1,808	3,000	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500
Santa Margarita Reclamation Expansion Project	1,561	1,801	1,885	2,000	2,100	2,300	2,600	2,940	2,980	3,020	3,060	3,100	3,140	3,180	3,220	3,260	3,300	3,340	3,380	3,420	3,460	3,500	3,540	3,580	3,600
Trabuco Canyon Reclamation Expansion Project	197	412	369	672	672	672	672	672	672	672	672	672	672	672	672	672	672	672	672	672	672	672	672	672	672
Encina Basin Water Reclamation Project Phase I	974	1,245	1,340	1,700	2,050	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100
Encina Water Pollution Control Facility Recl. Proj.	130	163	187	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165
Fallbrook Reclamation Project	259	507	707	700	800	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	1,200	1,200	1,200	1,200	1,200
Oceanside Water Reclamation Project	4	18	85	160	170	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300
Otay Water Reclamation Project	678	919	896	1,450	1,450	1,450	1,450	1,450	1,450	1,450	1,450	1,450	1,450	1,450	1,450	1,450	1,450	1,450	1,450	1,450	1,450	1,450	1,450	1,450	1,450
San Pasqual Reclamation Project	75	244	243	400	400	400	400	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100
Shadowridge Reclaimed Water System	270	338	346	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375
Walnut Valley Reclamation Expansion Project	126	500	466	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
West Basin Water Reclamation Program	261	10,991	14,446	17,500	22,000	27,000	32,500	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000
PSD Power Plant	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900
Caltrans	21	30	39	47	56	65	65	65	65	65	65	65	65	65	65	69	72	76	79	83	86	90	93	97	100
Media City Center	25	25	25	25	25	25	28	33	35	38	40	43	45	48	50	50	50	50	50	50	50	50	50	50	50
Montebello Forebay	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000
Cerritos Reclamation Project	2,000	2,400	2,800	3,200	3,600	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
Bellflower Reclamation Project	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Western Hills Country Club	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
Ontario Golf Course and Westwind Park	590	600	600	600	600	690	690	690	690	690	690	690	690	690	690	690	690	690	690	690	690	690	690	690	690
California Institution for Men	700	700	700	1,341	1,341	1,341	1,341	1,341	1,341	1,341	1,341	1,341	1,341	1,341	1,341	1,341	1,341	1,341	1,341	1,341	1,341	1,341	1,341	1,341	1,341
El Prado Park and Golf Course	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040
Upland Hills Country Club	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224
Hemet/SJ Reg. Rec. - Recharge Phase A	1,037	1,037	1,037	1,037	1,037	1,037	1,037	1,037	1,037	1,037	1,037	1,037	1,037	1,037	1,037	1,037	1,037	1,037	1,037	1,037	1,037	1,037	1,037	1,037	1,037
Hemet/SJ Regional Reclamation - Direct	7,078	6,097	6,782	6,782	6,782	7,060	7,200	7,500	7,600	7,760	7,760	7,760	7,760	7,760	7,760	7,760	7,760	7,760	7,760	7,760	7,760	7,760	7,760	7,760	7,760
Sun City Golf Courses	652	652	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Moreno Valley Reclamation	7,100	4,158	5,000	5,880	5,880	4,580	4,580	4,580	4,580	4,580	4,580	4,580	4,580	4,580	4,580	4,580	4,580	4,580	4,580	4,580	4,580	4,580	4,580	4,580	4,580
Perris Valley Regional Reclamation	2,420	5,173	5,890	7,160	7,780	7,990	8,000	8,000	8,000	8,130	8,140	8,140	8,240	8,340	8,430	8,540	8,540	8,640	8,640	8,730	8,730	8,730	8,730	8,730	8,730
Temecula Valley Reclamation - Phase A	2,050	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
South Lasselle Reclamation	74	71	200	200	200	490	550	650	675	690	690	690	690	690	690	690	690	690	690	690	690	690	690	690	690
Winchester/Temecula Regional Reclamation Sys.	1,281	1,388	1,500	1,600	2,025	2,050	2,100	2,300	2,400	2,500	2,500	2,500	2,500	2,500	2,550	2,550	2,550	2,550	2,550	2,575	2,575	2,575	2,575	2,575	2,575
La Canada-Flintridge Country Club	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135
Power Plant Project	260	371	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
Las Virgenes Valley System	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300
Calabasas System	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Long Beach Reclamation Project	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500
Griffith Park	832	1,000	1,000	1,000	1,000	1,000	1,100	1,300	1,400	1,500	1,600	1,700	1,800	1,900	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Cal Trans (5 & 134 Fwys)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Moulton Niguel WD Existing	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470
El Toro Existing	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Los Alisos WD	1,700	1,780	1,860	1,940	2,020	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100
OCWD WF21 Above 12-yr. Avg.	4,692	4,692	4,692	4,692	4,692	4,692	4,692	4,692	4,692	4,692	4,692	4,692	4,692	4,692	4,692	4,692	4,692	4,692	4,692	4,692	4,692	4,692	4,692	4,692	4,692
Santa Margarita WD - Oso	1,148	1,148	1,148	1,148	1,148	1,148	1,162	1,189	1,202	1,216	1,230	1,243	1,257	1,270	1,284	1,284	1,284	1,284	1,284	1,284	1,284	1,284	1,284	1,284	1,284
Santa Monica Water Gardens	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
Santa Maria - Phase A	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700
Camp Pendleton	3,900	3,900	3,900	3,900	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
Valley Center - Phase A	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300
San Vincente	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600
Fairbanks Ranch	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150
Whispering Palms	200	190	180	170	160	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150
Rancho Santa Fe (Existing)	200	200	200	200	200	200	210	230	240	250	260	270	280	290	300	305	310	315	320	325	330	335	340	345	350
Pomona Reclamation Project	9,000	9,080	9,160	9,240	9,320	9,400	9,420	9,460	9,480	9,500	9,520	9,540	9,560	9,580	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600
City of Industry Reclaimed System - Phase A	3,360	3,360	3,360	3,360	3,360	3,360	3,360	3,360	3,360	3,360	3,360	3,360	3,360	3,360	3,360	3,360	3,360	3,360	3,360	3,360	3,360	3,360	3,360	3,360	3,360
Walnut Valley Reclamation Project	1,500	1,600	1,700	1,800	1,900	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
California Country Club	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375
March Reclamation Project	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261
Indian Hills Reclamation Project	1,310	1,310	1,310	1,310	1,310	1,310	1,310	1,310	1,310	1,310	1,310	1,310	1,310	1,310	1,310	1,310	1,310	1,310	1,310	1,310	1,310	1,310	1,310	1,310	1,310
Rancho California Reclamation (Existing non-LPP)	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
Elsinore Valley/Railroad Canyon Reclamation	730	730	730	730	730	730	730	730	730	730	730	730	730	730	730	730	730	730	730	730	730	730	730	730	730
Elsinore Valley/Horse Thief Reclamation	110	133	156	178	201	224	258	325	358	392	426	459	493	526	560	560	560	560	560	560	560	560	560	560	560
Santa Rosa Water Reclamation Facility	1	1	1	2	2	2	2	2	2	3	3	3	3	3	3	3	3	4	4	4	4	4	5	5	5
MGM/SONY Building	0	0	5	7	9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Los Angeles Greenbelt Project - MCA	325	325	325	325	325	325	325	325	325	325	325	325	325	325	325	325	325	325	325	325	325	325	325	325	325
Trabuco Canyon Reclamation Project (Existing)	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280
Eastern Regional Reclaimed Water System (non-LPP)	0	1,458	1,860	1,860	1,960	2,605	2,705	2,705	2,705	2,705	2,705	2,705	2,705	2,705	2,805	2,805	2,805	2,805	2,805	2,805	2,805	2,805	2,805	2,805	2,805
Total Recycling	139,626	158,727	167,661	178,404	186,415	194,466	201,906	209,000	210,145	221,380	222,310	223,230	224,259	225,279	226,439	227,298	228,046	228,895	229,644	230,508	231,606	232,355	233,034	233,512	233,701

c:\excel\files\lrp\costyiel\projects.xls:Project Yields

C-014222

C—014222

FIRST CL

LOS ANGELES
JUL 01 '98
METER 57638
U.S. POSTAGE
1.70

MWD
METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA
Box 54153, Los Angeles, California 90054-0153
Return Postage Guaranteed

Mr. Lester Snow
Executive Director
CALFED Bay-Delta
1416 Ninth Street, Suite 1155
Sacramento, California 95814

Form 136 3/94

DEPARTMENT OF WATER RESOURCES
SACRAMENTO
98 JUL -6 AM 10:20

C-014223

C-014223