

**Table A-1  
City of Garden Grove - Water Division  
Water Rate Study**

**General Assumptions and Parameters**

<b>Line</b>												
<b>No General Assumptions and Parameters</b>												
1	Round	-1										
2	Water System Replacement Value, \$M (Placeholder)	\$300										
3												
4			<b>FY 17/18</b>	<b>FY 18/19</b>	<b>FY 19/20</b>	<b>FY 20/21</b>	<b>FY 21/22</b>	<b>FY 22/23</b>	<b>FY 23/24</b>	<b>FY 24/25</b>	<b>FY 25/26</b>	<b>FY 26/27</b>
5	General Inflation		2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
6	Salaries and Wages Escalation (1)		4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
7	CIP Escalation (7)		2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
8	Change in per capital water consumption		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
9												
10												
11	<b>Water supply in Acre-feet, per Fiscal Year</b>											
12	FY 13/14	26,000										
13	FY 14/15	24,062										
14	FY 15/16	21,518										
15	FY 16/17	22,000										
16	FY 17/18	23,000										
17	FY 18/19	23,000										
18	FY 19/20	23,000										
19	FY 20/21	23,000										
20	FY 21/22	23,000										
21	FY 22/23	23,000										
22	FY 23/24	23,000										
23												
24	<b>Intercity Loan Repayment</b>											
25	Repayment Period (Years)	15										
26												
27	<b>Debt Issuance Terms</b>											
28	CIEDB											
29	Annual Interest Rate (%)		3.5% CIEDB debt not used in this rate study									
30	Repayment Period (Years)		20 CIEDB debt not used in this rate study									
31	Capitalized Bond Reserves (% of Principal)		10.0% CIEDB debt not used in this rate study									
32	Annual Loan Fee Rate (% of outstanding principal)		0.0% CIEDB debt not used in this rate study									
33	Cost of Issuance (%)		1.0% CIEDB debt not used in this rate study									
34	Revenue Bond											
35	Annual Interest Rate (%)		5.0%									
36	Repayment Period (Years)		30									
37	Capitalized Bond Reserve (% of Proceeds)		8.75%									
38	Cost of Issuance (%)		2.0%									

**Table A-2  
City of Garden Grove  
Water Division - Water Rate Study**

**Customer Data FY 15/16**

Line No		July	August	September	October	November	December	January	February	March	April	May	June	Total
1	Total Consumption, ccf													
2	Residential													
3	Duplex	3,557	6,483	3,375	7,534	2,607	4,258	4,087	7,219	3,065	6,265	3,363	6,131	57,944
4	Landscape	11,903	14,292	11,058	16,639	9,188	9,912	9,451	8,849	5,811	10,691	10,748	10,295	128,837
5	Multi-unit	200,241	113,834	207,571	123,459	186,900	86,413	217,169	129,200	182,420	109,685	196,361	89,994	1,843,247
6	Sewer/Septic	201	556	215	578	215	461	274	611	207	431	337	367	4,453
7	Single family home	393,106	395,065	359,186	407,142	317,027	231,850	381,414	354,986	274,844	353,927	335,443	369,540	4,173,530
8	Townhome	631	860	121	769	60	241	661	857	71	861	243	663	6,038
9	Commercial													
10	Agriculture	72	152	33	201	132		0	65	0	123	48	0	826
11	Car wash	714	1,569	597	2,451	209	1,714	632	1,380	448	1,864	1,539	1,254	14,371
12	Church	3,307	2,253	2,001	2,439	1,847	730	3,126	2,329	1,945	2,630	1,875	2,250	26,732
13	Commercial	110,990	76,459	107,767	75,922	102,632	52,861	106,975	96,573	93,347	72,246	95,284	64,620	1,055,676
14	Hospital	9,116	1,891	9,773	1,951	8,853	2,034	8,948	2,168	8,090	1,962	7,542	2,056	64,384
15	Hotel/Motel	39,198	1,831	45,202	1,445	37,344	1,174	38,829	1,520	38,059	1,328	40,521	1,063	247,514
16	Industrial	65,888	4,415	67,955	4,556	66,707	617	55,186	16,353	66,240	4,172	61,596	3,827	417,512
17	Landscape	16,757	6,750	17,210	7,348	14,630	4,356	8,726	5,193	8,382	3,643	11,326	5,095	109,416
18	Laundromat	3,521	1,940	3,315	1,729	3,152	1,054	3,361	2,800	3,620	1,713	3,817	1,728	31,750
19	Private school	2,818	1,144	3,359	959	3,249	456	2,321	837	1,837	876	2,490	908	21,254
20	Public school	92,248		107,482		93,851		50,658		29,924		81,837		456,000
21	Public school other	3,234		3,586		2,708		2,432		1,582		1,808		15,350
22	Total, ccf	957,502	629,494	949,806	655,122	851,311	398,131	894,250	630,940	719,892	572,417	856,178	559,791	8,674,834
23														
24	Sum of Indoor Tier ccf													
25	Residential													
26	Duplex	2,858	5,098	2,525	5,882	1,939	3,197	3,326	5,621	2,398	5,045	2,556	4,850	45,295
27	Landscape	1,033	1,519	939	1,510	918	1,103	1,004	1,462	775	1,505	985	1,156	13,909
28	Multi-unit	139,406	84,489	145,074	89,500	131,390	62,446	153,581	100,128	132,891	82,484	140,748	66,576	1,328,713
29	Sewer/Septic	64	358	72	364	90	312	88	391	72	310	181	203	2,503
30	Single family home	254,627	235,861	227,124	247,824	212,941	146,247	275,714	249,007	204,292	239,083	227,536	221,618	2,741,872
31	Townhome	558	750	98	732	60	200	649	778	71	781	199	626	5,502
32	Commercial													
33	Agriculture	72	152	33	156	122		0	65	0	117	48	0	765
34	Car wash	695	1,387	566	2,056	209	1,406	549	1,106	413	1,348	1,048	1,080	11,863
35	Church	3,162	2,166	1,959	2,373	1,719	671	2,663	2,132	1,758	2,170	1,777	2,017	24,566
36	Commercial	100,499	69,087	98,321	68,396	90,636	48,421	94,882	85,429	83,808	63,583	86,288	57,046	946,396
37	Hospital	8,375	1,873	9,183	1,917	8,328	1,886	8,535	2,076	7,593	1,920	7,256	1,878	60,819
38	Hotel/Motel	38,513	1,499	41,399	1,389	34,775	1,112	37,403	1,440	35,501	1,227	39,266	1,002	234,527
39	Industrial	59,681	4,061	61,324	4,170	59,311	533	51,177	14,283	51,929	3,769	55,560	3,418	369,217
40	Landscape	0	0	0	0	0	0	0	0	0	0	0	0	0
41	Laundromat	2,980	1,802	2,843	1,592	2,799	1,054	2,952	2,694	3,087	1,609	3,292	1,590	28,295
42	Private school	2,585	1,090	3,253	902	2,732	406	2,025	801	1,765	795	2,323	817	19,493
43	Public school	87,962		103,710		82,219		43,044		28,331		80,511		425,775
44	Public school other	3,234		3,586		2,589		1,940		1,342		1,801		14,492
45	Total	706,302	411,191	702,009	428,764	632,776	268,994	679,531	467,413	556,025	405,744	651,375	363,877	6,274,002
46														

**Table A-2  
City of Garden Grove  
Water Division - Water Rate Study**

**Customer Data FY 15/16**

Line No		July	August	September	October	November	December	January	February	March	April	May	June	Total
47	Sum of outdoor tier ccf													
48	Residential													
49	Duplex	384	975	525	1,021	313	413	337	519	299	678	455	794	6,712
50	Landscape	6,307	7,041	6,148	6,995	4,186	3,637	3,544	2,793	2,860	4,946	5,846	4,277	58,580
51	Multi-unit	16,803	8,933	19,557	8,621	13,097	4,333	8,927	4,251	9,745	5,999	14,789	6,323	121,378
52	Sewer/Septic	114	188	122	177	84	102	90	79	87	86	129	87	1,345
53	Single family home	109,949	130,734	107,321	122,577	73,780	55,989	60,654	58,236	47,363	83,582	82,951	115,563	1,048,700
54	Townhome	1	15	3	10	0	11	1	11	0	13	12	1	78
55	Commercial													
56	Agriculture	0	0	0	17	10		0	0	0	6	0	0	33
57	Car wash	14	68	31	156	0	143	41	65	25	74	74	115	807
58	Church	53	63	14	16	24	5	116	30	48	120	55	100	644
59	Commercial	5,419	2,530	4,377	2,156	5,501	1,445	5,104	3,223	4,328	2,173	4,110	2,015	42,379
60	Hospital	702	18	488	34	412	129	382	92	400	42	220	178	3,096
61	Hotel/Motel	406	166	619	51	622	42	545	48	609	63	807	61	4,039
62	Industrial	4,354	157	3,486	123	3,180	38	1,719	385	4,346	95	1,726	98	19,707
63	Landscape	11,569	4,919	12,611	5,052	9,529	2,594	4,646	3,088	5,234	2,610	7,841	3,720	73,413
64	Laundromat	271	89	182	74	151	0	228	8	267	0	233	91	1,594
65	Private school	69	16	68	40	142	11	79	21	35	23	51	58	613
66	Public school	1,831		2,323		5,508		2,909		922		756		14,248
67	Public school other	0		0		4		138		61		7		210
68	Total	158,245	155,912	157,873	147,121	116,543	68,890	89,461	72,849	76,630	100,511	120,061	133,481	1,397,579
69														
70	Sum of Excessive Tier ccf													
71	Residential													
72	Duplex	315	410	325	631	355	648	424	1,079	368	542	352	487	5,936
73	Landscape	4,564	5,732	3,971	8,134	4,084	5,172	4,903	4,594	2,176	4,239	3,917	4,863	56,348
74	Multi-unit	44,032	20,412	42,940	25,338	42,414	19,634	54,661	24,821	39,784	21,202	40,824	17,095	393,156
75	Sewer/Septic	24	10	21	37	40	48	96	141	48	35	28	77	605
76	Single family home	28,530	28,471	24,741	36,741	30,306	29,614	45,046	47,743	23,189	31,262	24,957	32,359	382,958
77	Townhome	72	94	20	27	0	31	12	68	0	67	32	35	458
78	Commercial													
79	Agriculture	0	0	0	28	0		0	0	0	0	0	0	28
80	Car wash	5	114	0	239	0	165	42	209	10	442	416	59	1,701
81	Church	92	24	28	50	104	54	347	167	139	340	43	133	1,522
82	Commercial	5,072	4,842	5,069	5,370	6,495	2,995	6,990	7,921	5,210	6,490	4,886	5,559	66,900
83	Hospital	39	0	102	0	113	19	31	0	98	0	66	0	469
84	Hotel/Motel	279	166	3,184	5	1,947	20	881	32	1,948	38	449	0	8,948
85	Industrial	1,854	197	3,145	262	4,216	45	2,289	1,685	9,964	308	4,310	312	28,588
86	Landscape	5,188	1,831	4,599	2,296	5,101	1,762	4,080	2,105	3,148	1,033	3,485	1,375	36,003
87	Laundromat	270	49	290	63	202	0	181	98	266	104	291	47	1,861
88	Private school	164	38	38	16	375	39	217	16	38	59	115	33	1,148
89	Public school	2,455		1,449		6,124		4,706		671		571		15,976
90	Public school other	0		0		115		354		179		0		648
91	Total	92,955	62,390	89,924	79,237	101,992	60,246	125,258	90,677	87,236	66,162	84,742	62,434	1,003,253

**Table A-3**  
**City of Garden Grove - Water Division**  
**Water Rate Study**

Existing Water Rates, as of 7/1/2017

Line	Meter Size (inches)	Bi-Monthly Min Charge	Capital Recovery Charge
1	5/8 x 3/4"	\$12.74	\$1.47
2	1"	\$33.99	\$2.07
3	1-1/2"	\$65.82	\$2.64
4	2"	\$99.79	\$4.27
5	3"	\$165.62	\$16.19
6	4"	\$229.32	\$20.60
7	6"	\$524.45	\$30.90
8	8"	\$819.60	\$42.68
9	10"	\$1,114.73	\$54.45

Effective February 1, 2017, new Commodity Pass-Through  
 Commodity Charge per ccf

Usage, units of water (ccf)	Commodity Pass-Through	Balance	Total
0-36	\$0.82	\$2.25	\$3.07
37-250	\$0.82	\$2.33	\$3.15
251-500	\$0.82	\$2.42	\$3.24
>500	\$0.82	\$2.51	\$3.33

Effective 7/1/2008 Fire Service Rates

Line	Meter Size (inches)	Bi-Monthly Rate
16	5/8"x3/4"	\$11.00
17	1"	\$11.00
18	1 1/2"	\$11.00
19	2"	\$11.00
20	3"	\$14.00
21	4"	\$19.00
22	6"	\$29.00
23	8"	\$38.00
24	10"	\$48.00
25	12"	\$58.00

Historical Commodity Charge, FY 15/16  
 Commodity Charge per ccf

Usage, units of water (ccf)	Commodity Pass-Through	Balance	Total
0-36	\$0.67	\$2.25	\$2.92
37-250	\$0.67	\$2.33	\$3.00
251-500	\$0.67	\$2.42	\$3.09
>500	\$0.67	\$2.51	\$3.18

**Table A-3A**  
**City of Garden Grove**  
**Water Division - Water Rate Study**

**Proposed Water Rates and Example Water Bill Calculation**

Line	Current	1/1/2018	1/1/2019	1/1/2020	1/1/2021	1/1/2022	
<b>Proposed Monthly Rates</b>							
1	Bi-Monthly Min Charge	\$12.74	\$18.02	\$28.15	\$29.63	\$31.95	\$33.85
2	Bi-Monthly Capital Recovery Charge	\$1.47	\$3.00	\$4.00	\$5.00	\$6.00	\$7.00
3	Commodity Charge, \$/ccf						
4	1st Tier	\$3.07	\$2.94	\$2.94	\$2.92	\$2.89	\$2.86
5	Estimated 1st Tier Pass-Through		\$0.00	\$0.07	\$0.15	\$0.20	\$0.29
6	2nd Tier	\$3.15 - \$3.33	\$3.65	\$4.06	\$4.15	\$4.28	\$4.40
7	Estimated 2nd Tier Pass-Through		\$0.00	\$0.08	\$0.17	\$0.25	\$0.28
8							
9	<b>Example Water Bill, Typical Water User</b>						
10	Example Bill Calculation, 15 ccf/month						
11	Monthly Consumption, ccf	15	15	15	15	15	15
12	Bi-Monthly Consumption, ccf	30	30	30	30	30	30
13							
14	Bi-Monthly Bill	\$106.31	\$109.22	\$122.45	\$126.73	\$130.65	\$135.35
15	Change from Previous		\$2.91	\$13.23	\$4.28	\$3.92	\$4.70
16	Monthly Bill	\$53.16	\$54.61	\$61.23	\$63.37	\$65.33	\$67.68
17	Monthly change from previous year		\$1.46	\$6.61	\$2.14	\$1.96	\$2.35
18							
19	Bi-Monthly Bill, Not Including Pass-Throughs		\$109.22	\$120.35	\$122.23	\$124.65	\$126.65
20	Monthly Bill, Not Including Pass-Throughs		\$54.61	\$60.18	\$61.12	\$62.33	\$63.33
21							
22	Amount of Pass-Throughs, Bi-Monthly		\$0.00	\$2.10	\$4.50	\$6.00	\$8.70
23	Amount of Pass-Throughs, Monthly		\$0.00	\$1.05	\$2.25	\$3.00	\$4.35
24							
25	<b>Example Water Bill, High Water User</b>						
26	Example Bill Calculation, 30 ccf/month						
27	Monthly Consumption, ccf	30	30	30	30	30	30
28	Bi-Monthly Consumption, ccf	60	60	60	60	60	60
29							
30	Bi-Monthly Bill	\$200.33	\$216.59	\$243.26	\$252.58	\$262.23	\$271.16
31	Change from Previous		\$16.26	\$26.67	\$9.32	\$9.65	\$8.93
32	Monthly Bill	\$100.17	\$108.30	\$121.63	\$126.29	\$131.12	\$135.58
33	Monthly change from previous year		\$8.13	\$13.34	\$4.66	\$4.83	\$4.47
34							
35	Bi-Monthly Bill, Not Including Pass-Throughs		\$216.59	\$238.79	\$243.04	\$248.88	\$254.03
36	Monthly Bill, Not Including Pass-Throughs		\$108.30	\$119.40	\$121.52	\$124.44	\$127.02
37							
38	Amount of Pass-Throughs, Bi-Monthly		\$0.00	\$4.47	\$9.54	\$13.35	\$17.13
39	Amount of Pass-Throughs, Monthly		\$0.00	\$2.24	\$4.77	\$6.68	\$8.57

**Table A-4  
City of Garden Grove - Water Division  
Water Rate Study**

**Historical and Projected Revenues under Existing Rates**

Line No	ACCT	DESCRIPTION	Fund	Actual (1)	Actual (1)	Actual (3)	Estimate (1,2)					FY 16/17- FY 21/22 Average Annual Growth	
				FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	
1		<b>OPERATING REVENUES</b>											
2	32601	WATER-METERED	601	\$27,813,114	\$25,494,918	\$21,805,999	\$22,208,411	\$29,801,011	\$29,801,011	\$29,801,011	\$29,801,011	\$29,801,011	6.1%
3	32603	WATER-FLAT RATE	601	98,585	98,585	147,878	79,000	79,000	79,000	79,000	79,000	79,000	0.0%
4	32630	WATER PROC FEE	601	2,947	465	0	0	0	0	0	0	0	n/a
5	32636	LATE FEE (4)	601	369,468	360,449	347,843	300,000	150,000	0	0	0	0	-100.0%
6	32638	AFTER HRS SERV CHG	601	1,225	679	1,014	500	500	500	500	500	500	0.0%
7	32640	WATER COSTS (5)	601	6,251,280	6,649,601	6,320,543	6,320,543						-100.0%
8	32855	NSF FEE	601	6,875	6,650	6,600	4,000	4,000	4,000	4,000	4,000	4,000	0.0%
9	32605	CAPITAL RECOVERY	602	440,693	443,124	433,732	353,000	353,000	353,000	353,000	353,000	353,000	0.0%
10	32650	SERVICE INSTALL FEES	602	48,387	48,817	44,774	39,000	39,000	39,000	39,000	39,000	39,000	0.0%
11	32652	FRONTAGE ASSMT FEE	602	20,014	7,297	13,409	6,000	6,000	6,000	6,000	6,000	6,000	0.0%
12	32655	ACREAGE ASSMT FEE	602	14,144	4,695	10,564	4,000	4,000	4,000	4,000	4,000	4,000	0.0%
13		<b>WATER SALES</b>		<b>\$35,066,732</b>	<b>\$33,115,278</b>	<b>\$29,132,355</b>	<b>\$29,314,453</b>	<b>\$30,436,511</b>	<b>\$30,286,511</b>	<b>\$30,286,511</b>	<b>\$30,286,511</b>	<b>\$30,286,511</b>	<b>0.7%</b>
14													
15		<b>Water Sales Subject to Rate Increases</b>		<b>\$34,162,979</b>	<b>\$32,243,103</b>	<b>\$28,274,419</b>	<b>\$28,607,953</b>	<b>\$29,880,011</b>	<b>\$29,880,011</b>	<b>\$29,880,011</b>	<b>\$29,880,011</b>	<b>\$29,880,011</b>	<b>0.9%</b>
16													
17	39012	MISC REVENUE	601	\$113,419	\$22,614	\$20,352	\$22,000	\$22,000	\$22,000	\$22,000	\$22,000	\$22,000	0.0%
18	39025	OVER/SHORT	601	(228)	(337)	90	0	0	0	0	0	0	n/a
19	39515	WRITE-OFF RECOVERY	601	6,065	7,866	4,962	3,000	3,000	3,000	3,000	3,000	3,000	0.0%
20		<b>OTHER</b>		<b>\$119,256</b>	<b>\$30,143</b>	<b>\$25,405</b>	<b>\$25,000</b>	<b>\$25,000</b>	<b>\$25,000</b>	<b>\$25,000</b>	<b>\$25,000</b>	<b>\$25,000</b>	<b>0.0%</b>
21													
22		<b>NON-OPERATING REVENUES (EXPENSES)</b>											
23	34501	INTEREST	601	\$325,662	\$229,250	\$56,385	\$56,385	\$56,385	\$56,385	\$56,385	\$56,385	\$56,385	0.0%
24	34501	INTEREST	602			55,699	55,699	55,699	55,699	55,699	55,699	55,699	
25	34501	INTEREST	603			31,900	31,900	31,900	31,900	31,900	31,900	31,900	
26													
27	34330	SALE OF SCRAP	601	28,737	22,694	14,540	22,000	22,000	22,000	22,000	22,000	22,000	0.0%
28	34340	SALE OF MATERIALS	601	12,158	7,237	44,493	7,000	7,000	7,000	7,000	7,000	7,000	0.0%
29		<b>GAIN ON DISPOSAL OF ASSETS</b>		<b>\$40,895</b>	<b>\$29,932</b>	<b>\$59,033</b>	<b>\$29,000</b>	<b>\$29,000</b>	<b>\$29,000</b>	<b>\$29,000</b>	<b>\$29,000</b>	<b>\$29,000</b>	<b>0.0%</b>
30													
31	38267	2010 FED SUBSIDY	601	\$168,871	\$168,973	\$158,654	\$135,000	\$135,000	\$135,000	\$135,000	\$135,000	\$135,000	0.0%

Notes:

- (1) Source through FY 16/17: Water Utility Revenue Expenditures.xls provided by City of Garden Grove
- (2) Projected to remain at FY 16/17 values, except water metered and water costs. Refer to Table A-5.
- (3) Source FY 15/16: Water Utility Revenue Expenditures.xls provided by City of Garden Grove 1/23/17
- (4) Late fee revenues are not included after 1/1/18 because it is anticipated that late fee revenues will be used to fund the low-income/senior discount
- (5) With proposed changes in rate structures, the pass-through charge will be reset to zero. For the purposes of this rate study, water costs revenues are included in water-metered revenues.

**Table A-5  
City of Garden Grove - Water Division  
Water Rate Study  
Detailed Calculation of Water-Metered and Water Costs Revenues**

Line No	ACCT	DESCRIPTION	Actual		Estimate				
			FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22
1		"Water-Metered" Revenue Estimate							
2		Minimum Charge Revenue (5)	\$3,800,000	\$3,800,000	\$3,800,000	\$3,800,000	\$3,800,000	\$3,800,000	\$3,800,000
3		Commodity Charge Revenue	18,005,099	18,408,411	19,245,156	19,245,156	19,245,156	19,245,156	19,245,156
4		Total	\$21,805,099	\$22,208,411	\$23,045,156	\$23,045,156	\$23,045,156	\$23,045,156	\$23,045,156
5									
6		% of Annual Water Sold (6)							
7		January through April			32%	32%	32%	32%	32%
8		AF/Year Sold, January through April			1,868	1,868	1,868	1,868	1,494
9		AF/Year Sold, Remainder of Fiscal Year			3,882	3,882	3,882	3,882	3,106
10		Total AF/Year Imported			5,750	5,750	5,750	5,750	4,600
11		Total AF/Year Groundwater			17,250	17,250	17,250	17,250	18,400
12									
13		Water Pass-Through Calculation, MWD Imported Water (Tier 2 Pass-Through)							
14		MWD Purchased Water Cost			\$6,602,908	\$6,834,740	\$7,176,477	\$7,535,301	\$6,493,266
15		\$/AF			\$1,148.33	\$1,188.65	\$1,248.08	\$1,310.49	\$1,411.58
16		Change from Previous Year							
17		\$/AF				\$40.3	\$59.4	\$62.4	\$101.1
18		\$/ccf				\$0.09	\$0.14	\$0.14	\$0.23
19		Pass-Through Charge, \$/ccf				\$0.09	\$0.23	\$0.37	\$0.60
20									
21		Water Pass-Through Calculation, Groundwater (Tier 1 Pass-Through)							
22		Groundwater Costs (Including Pumping and Recharge Assessment)			\$8,643,213	\$9,202,137	\$9,796,166	\$10,201,063	\$11,573,746
23		\$/AF			\$501.06	\$533.46	\$567.89	\$591.37	\$629.01
24		Change from Previous Year							
25		\$/AF				\$32.4	\$34.4	\$23.5	\$37.6
26		\$/ccf				\$0.07	\$0.08	\$0.05	\$0.09
27		Pass-Through Charge, \$/ccf				\$0.07	\$0.15	\$0.20	\$0.29
28									
29		Water Pass-Through Calculation, Merged MWD and Groundwater							
30		MWD and Groundwater Costs			\$15,246,121	\$16,036,877	\$16,972,643	\$17,736,364	\$18,067,013
31		\$/AF			\$662.87	\$697.26	\$737.94	\$771.15	\$785.52
32		Change from Previous Year							
33		\$/AF				\$34.4	\$40.7	\$33.2	\$14.4
34		\$/ccf				\$0.08	\$0.09	\$0.08	\$0.03
35		Pass-Through Charge, \$/ccf				\$0.08	\$0.17	\$0.25	\$0.28

Notes:

- (1) Source: Oct 2016 actual multiplied by 12: as shown in Water Bill Coding doc provided by City 12/21/16.
- (2) Pass-Through charge increase in any given year is effective January 1. Revenue from pass through charge increase will be realized from water sales occurring in January through April.

**Table A-6  
City of Garden Grove - Water Division  
Water Rate Study**

**Historical and Projected O&M Expenditures**

Line No	PKG	PKG-NAME	ACCT	DESC	Actual (3)	Budget (1)	Estimate	Budget		Estimated			Notes
					FY 15/16	FY 16/17	FY 16/17	FY 17/18	FY 17/18	FY 18/19	FY 19/20	FY 20/21	
1		<b>Salaries and Wages</b>											
2	0010	CITY COUNCIL			\$2,510	\$ 6,554.00	\$6,554	12,059	12,059	\$12,541	\$13,043	\$13,565	\$14,107
3	0020	MANAGEMENT			76,222	75,720	75,720	79,985	79,985	83,184	86,512	89,972	93,571
4	0023	RESRCH/LEGISLATION			66,000	61,119	61,119	60,936	60,936	63,373	65,908	68,545	71,287
5	0030	REAL PROPERTY			0	6,804	6,804	7,473	7,473	7,772	8,083	8,406	8,742
6	0053	REPROGRAPHICS			0	0	0	0	0	0	0	0	0
7	0060	PUBLIC INFORMATION			0	0	0	0	0	0	0	0	0
8	1020	GENERAL ACCOUNTING			67,077	48,576	48,576	51,859	51,859	53,933	56,091	58,334	60,668
9	1021	FINANCIAL PLANNING			76,563	171,750	171,750	171,724	171,724	178,593	185,737	193,166	200,893
10	1030	UTILITY BILLING			442,672	456,076	456,076	481,387	481,387	500,642	520,668	541,495	563,155
11	2160	PLAN CHECK/PERMITS			35,130	29,741	29,741	33,328	33,328	34,661	36,048	37,489	38,989
12	3000	PUBL WORKS GEN ADMN			116,484	58,017	58,017	60,027	60,027	62,428	64,925	67,522	70,223
13	3010	ENVIRONMENTAL MGMT			22,884	42,839	42,839	47,469	47,469	49,368	51,342	53,396	55,532
14	3043	NPDES PROGRAM			22,330	22,917	22,917	23,769	23,769	24,720	25,709	26,737	27,806
15	3114	DRAINAGE/MISC MAINT			222,996	284,200	284,200	297,940	297,940	309,858	322,252	335,142	348,548
16	3121	TRAFFIC SIGN MAINT			81	0	0	0	0	0	0	0	0
17	3123	TRAFFIC SIG MAINT			246	0	0	0	0	0	0	0	0
17	3220	DEDICATED FAC/WTR			111,259	75,889	75,889	75,374	75,374	78,389	81,525	84,785	88,177
18	3510	GROUND MAINTENANCE			207,383	285,438	285,438	316,624	316,624	329,289	342,461	356,159	370,405
19	3610	EQ SERV OPERATIONS			0	0	0	0	0	0	0	0	0
20	3700	WATER OPERATIONS			3,398,788	3,762,312	3,762,312	4,056,499	4,056,499	4,218,759	4,387,509	4,563,010	4,745,530
21	3710	WATER PRODUCTION			0	0	0	0	0	0	0	0	0
22	6007	EMPLOYEE TRAINING			0	0	0	0	0	0	0	0	0
23	7673		41010	REGULAR SALARIES				1,745,598	0				
24	9800	GASB68 WATER FUND			(438,962)	0	0	0	0	0	0	0	0
25	9807	OPEB WATER FUND			58,780	0	0	0	0	0	0	0	0
26		OPEB ALLOC ADJ			317,045			0					
27		Total Salaries and Wages			\$4,805,488	\$ 5,387,952	\$5,387,952	\$7,522,051	\$5,776,453	\$6,007,511	\$6,247,812	\$6,497,724	\$6,757,633
28					\$4,805,488	\$0	(\$317,045)						
29		<b>Contractual Services</b>											
30	0030	REAL PROPERTY			\$60	\$92	\$92	92	92	\$94	\$97	\$99	\$102
31	0042	ELECT/VOTER ASSIST			0	15,300	15,300	0	0	0	0	0	0
32	0053	REPROGRAPHICS			0	4,600	4,600	4,600	4,600	4,715	4,833	4,954	5,078
33	0060	PUBLIC INFORMATION			25,014	11,500	11,500	11,500	11,500	11,788	12,082	12,384	12,694
34	1000	FINANCE ADMN/ANAL			1,040	2,500	2,500	2,500	2,500	2,563	2,627	2,692	2,760
35	1020	GENERAL ACCOUNTING			0	2,600	2,600	6,593	6,593	6,758	6,927	7,100	7,277
36	1021	FINANCIAL PLANNING			14,486	6,031	6,031	11,116	11,116	11,394	11,679	11,971	12,270
37	1024	ACCOUNTS PAYABLE			0	1,250	1,250	1,250	1,250	1,281	1,313	1,346	1,380
38	1030	UTILITY BILLING			318,664	423,408	423,408	427,277	427,277	437,959	448,908	460,131	471,634
39	1034	REVENUE OPERATIONS			12,026	0	0	0	0	0	0	0	0
40	2160	PLAN CHECK/PERMITS			8,160	0	0	0	0	0	0	0	0
41	3000	PUBL WORKS GEN ADMN			4,132	33,166	33,166	34,480	34,480	35,342	36,226	37,131	38,059
42	3010	ENVIRONMENTAL MGMT			9,504	921	921	964	964	988	1,013	1,038	1,064
43	3043	NPDES PROGRAM			225,069	314,475	314,475	314,475	314,475	322,337	330,395	338,655	347,122
44	3114	DRAINAGE/MISC MAINT			75,442	90,289	90,289	91,822	91,822	94,118	96,470	98,882	101,354
45	3510	GROUND MAINTENANCE			22,079	48,997	48,997	49,216	49,216	50,446	51,708	53,000	54,325
46	3610	EQ SERV OPERATIONS			0	0	0	0	0	0	0	0	0



**Table A-6**  
**City of Garden Grove - Water Division**  
**Water Rate Study**

**Historical and Projected O&M Expenditures**

Line No	PKG	PKG-NAME	ACCT	DESC	Actual (3)	Budget (1)	Estimate	Budget	Estimated				Notes	
					FY 15/16	FY 16/17	FY 16/17	FY 17/18	FY 17/18	FY 18/19	FY 19/20	FY 20/21		FY 21/22
47	3700	WATER OPERATIONS			1,723,051	1,825,966	1,825,966	1,940,746	1,940,746	1,989,265	2,038,996	2,089,971	2,142,220	
48	3710	WATER PRODUCTION			3,116	0	0	0	0	0	0	0	0	
49	3780	WTR LTD,DEPR,O/H							0					
50	3780		42000	CONTRACTUAL SERV	0	3,375	3,375	0	0	0	0	0	0	
51	3780		42544	WATER REPAIR/MAINT	0	0	0	0	0	0	0	0	0	
52	3780		42681	BANK FEES	1,604	0	0	0	0	0	0	0	0	
53	3780		44920	Overhead Fee	2,371,900	2,534,900	2,534,900	2,439,100	2,439,100	2,500,078	2,562,579	2,626,644	2,692,310	
54	3780	WTR LTD,DEPR,O/H	44950	CITY STREET DAMAGES				1,550,000						2
55	3781	WATER LTD-2010A	42000	CONTRACTUAL SERV				3,420						7
56	3781	WATER LTD-2010A	44475	LONG TERM DEBT				685,000						7
57	3781		44950	City Street Damages (Intercity Loan In	719,860	870,000	869,374		830,140	521,191	492,893	463,434	432,768	2
58	3781		44950	City Street Damages (Intercity Loan Principal)			0		663,013	690,196	718,494	747,953	778,619	2
59	3781		44950	City Street Damages		680,000	680,000		719,860	737,856	756,303	775,210	794,591	2
60	3781	WATER LTD-2010A			3,017	0	0							7
61	3782	WATER LTD-2010B			3,017	0	0	3,200						7
62	3783	WATER LTD-2010C			4,108	0	0	3,530						7
63	3784	2015 WTR REV BONDS			108,973	4,815	4,815							7
64	3784	2015 WTR REV BONDS	44475	LONG TERM DEBT				885,000						7
65	5510	LEGAL SERVICES			447	0	0		0	0	0	0	0	
66	6007	EMPLOYEE TRAINING			0	3,175	3,175	3,175	3,175	3,254	3,336	3,419	3,505	
67	6876	800MHZ P25 RDO DEP			0	1,514	1,514	1,614	1,614	1,654	1,696	1,738	1,782	
68	6877	800MHZ VEH FND DEBT			0	4,487	4,487	4,386	4,386	4,496	4,608	4,723	4,841	
69	7359	0	42620	ENGINEERING SERVICES				1,000,000						6
70	7369	0	42000	CONTRACTUAL SERV				1,000,000						6
71	7673	0	42810	DUES/MEMBERSHIPS				400						6
72	7673	0	44020	EQUIP POOL RENTALS				81,816						6
73	9983	INFORMATION SYSTEMS			0	182	182		0	0	0	0	0	
74		ALLOW FOR BAD DEBT ADJ			(12,026)	0	0		0	0	0	0	0	
75		Enterprise Resource Program								500,000				8
76		Total Contractual Services			\$5,642,742	\$6,883,543	\$6,882,917	\$10,557,272	\$7,557,919	\$7,927,772	\$7,583,182	\$7,742,477	\$7,905,754	
77														
78		<b>Materials &amp; Supplies</b>												
79			43000	COMMODITIES	\$ -	\$760,197		17,432,847						3
80			43030	SEEDS/PLANTS	\$ -	0								
81			43050	FERTILIZER	14,450	0								
82			43090	OTHER AGR SUPPLIES	50	0								
83			43110	FOOD	188	0								
84			43120	UNIFORMS	0	0								
85			43160	BOTTLED WATER	3,695	0								
86			43180	OTHER CLOTHING ITEMS	1,998	0								
87			43190	OTHER FOOD ITEMS	0	0								
88			43210	MEDICAL SUPPLIES	91	0								
89			43220	PHOTO/BLUEPRINT SUPP	292	0								
90			43230	LABORATORY CHEMICALS	81,159	0								
91			43270	BOOKS/SUBS/CASSETTES	1,068	0		950						
92			43290	OTHER PROF SUPPLIES	72	0								
93			43320	GREASE/LUBE OIL	10,520	0								

**Table A-6  
City of Garden Grove - Water Division  
Water Rate Study**

**Historical and Projected O&M Expenditures**

Line No	PKG	PKG-NAME	ACCT	DESC	Actual (3)	Budget (1)	Estimate	Budget	Estimated					Notes	
					FY 15/16	FY 16/17	FY 16/17	FY 17/18	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22		
94			43350	MOTOR VEH PARTS	0	0									
95			43410	PAINT/DYE/LUBRICANTS	3,620	0									
96			43420	JANITORIAL SUPPLIES	687	0									
97			43430	ELECTRICAL SUPPLIES	16,469	0									
98			43440	HSHLD EQUIP/SUPPLIES	550	0									
99			43450	PIPES/APPURTENANCES	28,180	0									
100			43480	AIR COND SUPPLIES	0	0									
101			43490	OTHER MAINT ITEMS	355,813	0									
102			43510	PAPER/ENVELOPES	16,998	0									
103			43540	NETWORKING SUPPLIES	60	0									
104			43552	SOFTWARE	10,050	0									
105			43560	OFFICE SUPPLIES/EXP	9,851	0									
106			43610	GUNS/AMMUNITION	0	0									
107			43630	ENG/DRAFTING INST	0	0									
108			43635	MINOR OFFICE FURN/EQ	484	0									
109			43640	GEN PURPOSE TOOLS	6,845	0									
110			43650	MINOR FURN/EQUIP	280	0									
111			43660	SAFETY EQ/SUPPL-SB90	453	0									
112			43670	SAFETY EQ/SUPPLIES	20,494	0									
113			43690	OTHER MINOR TOOLS/EQ	10,558	0									
114			43710	ATHLETIC SUPPLIES	0	0									
115			43720	CRAFT SUPPLIES	0	0									
116			43730	AUDIO/VISUAL SUPP	0	0									
117			43760	AWARDS/TROPHIES	0	0									
118			43810	LUMBER	46	0									
119			43830	WIRE/METALS	0	0									
120			43840	HARDWARE	4,561	0									
121			43860	AGGREGATES/MASONRY	2,222	0									
122			43890	OTHER CONST SUPPLIES	667	0									
123			43910	SIGNS/FLAGS/BANNERS	958	0									
124			43980	EQUITY ASSESSMENT	0	0									
125			43990	MONITORED MINOR EQ	455	0									
126			43991	MONITORED EQUIP	0	0		18,570							
127				ALLOW FOR BAD DEBT ADJ	12,026										
128		<b>Total Materials and Supplies</b>			<b>\$615,910</b>	<b>\$760,197</b>	<b>\$615,910</b>	<b>\$17,452,367</b>	<b>\$709,906</b>	<b>\$727,654</b>	<b>\$745,845</b>	<b>\$764,491</b>	<b>\$783,603</b>	<b>3</b>	
129															
130		<b>Water Production Expenses</b>													
131			46920	GAS-WATER PROD	\$233,507	\$0									
132			46930	ELEC-WATER PROD	\$918,976	0									
133			46950	IMPORT WTR-MWDOC	\$5,536,017	14,822,600									
134			46960	IMPORT WTR-WOCWB	\$8,232	0									
135			46970	WTR PUMPING-OCWD	\$5,212,929	0									
136			46971	GOLDEN STATE WTR	\$0	0									
137				Water Production Costs, FY 17/18 Unit Costs					15,246,121	15,246,121	15,246,121	15,246,121	15,246,121		
138				Increase in Water Production Costs Recovered by Pass Thru					0	790,756	1,726,522	2,490,243	2,820,892		
139				Payments of LT Debt against Net Po: (\$1,400,000)											
140				Reverse of 45] Capital Expenditures	\$7,592,854										

**Table A-6  
City of Garden Grove - Water Division  
Water Rate Study**

**Historical and Projected O&M Expenditures**

Line No	PKG	PKG-NAME	ACCT	DESC	Actual (3)	Budget (1)	Estimate	Budget	Estimated				Notes	
					FY 15/16	FY 16/17	FY 16/17	FY 17/18	FY 17/18	FY 18/19	FY 19/20	FY 20/21		FY 21/22
141							\$1,400,000							
142							(\$7,584,166)							
143		<b>Total Water Production Expenses</b>			\$11,918,348	\$14,822,600	\$13,704,681	\$0	\$15,246,121	\$16,036,877	\$16,972,643	\$17,736,364	\$18,067,013	3, 4
144														
145		<b>Depreciation &amp; Amortization</b>												
146			44340	AMORTIZATION	(\$43,595)	\$13,610	\$13,610	14,847	14,847	\$14,847	\$14,847	\$14,847	\$14,847	
147			44910	DEPRECIATION	3,008,256	3,150,000	3,150,000	3,244,500	3,244,500	3,244,500	3,244,500	3,244,500	3,244,500	
148		<b>Total Depreciation &amp; Amortization</b>			\$2,964,660	\$3,163,610	\$3,163,610	\$3,259,347	\$3,259,347	\$3,259,347	\$3,259,347	\$3,259,347	\$3,259,347	
149														
150		<b>Total Operating Expenses</b>			\$25,947,149	\$31,017,902	\$29,755,069	\$38,791,037	\$32,549,746	\$33,959,161	\$34,808,828	\$36,000,403	\$36,773,350	9
151		<b>Less Depreciation and Amortization</b>			(\$2,964,660)	(\$3,163,610)	(\$3,163,610)	(\$3,259,347)	(\$3,259,347)	(\$3,259,347)	(\$3,259,347)	(\$3,259,347)	(\$3,259,347)	
152		<b>Total O&amp;M Expenses</b>			\$22,982,488	\$27,854,292	\$26,591,459	\$35,531,690	\$29,290,399	\$30,699,814	\$31,549,481	\$32,741,056	\$33,514,003	

NOTES

- (1) Source through FY 16/17: Water Utility Revenue Expenditures.xls provided by City of Garden Grove
- (2) Street repair per City staff July 28, 2017. Refer to Table A-9 for Intercity Loan interest and principal payments
- (3) FY 17/18 per the City's budget. Budget Summary spreadsheet provided by the City, July 2017, merged these costs with Water Production Costs. In this table, Water Production Costs and Commodity costs are separated
- (4) Refer to Imported Water Costs Table A-7.
- (5) Source FY 15/16: Water Utility Revenue Expenditures.xls provided by City of Garden Grove 1/23/17
- (6) This expense is funded out of Fund 602 or 603, and is not considered an Operations and Maintenance expense, for the purposes of this rate study
- (7) Long Term Debt costs are excluded from this Operation and Maintenance expense table, and are instead shown in Table A-9.
- (8) One-time expense in FY 18/19, per City staff, 7/18/17.
- (9) The FY 17/18 budget includes capital and replacement items in addition to operating expenses

**Table A-7**  
**City of Garden Grove - Water Division**  
**Water Rate Study**  
**Imported Water Costs at FY 17/18 Unit Costs**

Line No		Actual (1)			Projected (1) (2)						Notes
		FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	
1	Water Supply										
2	Supply Allocation, AF	26,000	24,062	21,518	22,000	23,000	23,000	23,000	23,000	23,000	
3	Percent % Groundwater	70%	72%	75%	75%	75%	75%	75%	75%	75%	
4	Percent % Purchased	30%	28%	25%	25%	25%	25%	25%	25%	25%	
5	AF Groundwater	18,200	17,422	16,180	16,500	17,250	17,250	17,250	17,250	17,250	
6	AF Purchased, AF										
7	MWD Imported	5,143		3,301	5,500	5,750	5,750	5,750	5,750	5,750	
8	MWD Imported Water (July-Dec)		4,112								
9	MWD Imported Water (Jan-June)		1,816								
10	Well #28 Basin Equity Exemption	2,657									
11	MWD Conjunctive Use Program, CUP		713	2,037							
12											
13	Water Supply Unit Costs										
14	MWD Imported Water Charge, \$/AF	\$893.25		\$942.00	\$979.00	\$1,015.00	\$1,015.00	\$1,015.00	\$1,015.00	\$1,015.00	
15	MWD Imported Water Charge, \$/AF (July-Dec)		\$890.50								
16	MWD Imported Water Charge, \$/AF (Jan-June)		\$923.50								
17	Well #28 Basin Equity Exemption - \$/AF	\$644.00									
18	MWD Conjunctive Use Program CUP \$/AF		\$788.50	\$819.00							
19	RA: Pumped Water, \$/AF	\$276.00	\$294.00	\$322.00	\$402.00	\$422.10	\$422.10	\$422.10	\$422.10	\$422.10	
20	Water Pumping Costs, \$/AF	\$56.49	\$49.83	\$51.32	\$52.86	\$54.45	\$54.45	\$54.45	\$54.45	\$54.45	
21											
22	MWD Imported Water Costs										
23	MWD Imported Water Charge, \$	\$4,593,985		\$3,109,919	\$5,384,500	\$5,836,250	\$5,836,250	\$5,836,250	\$5,836,250	\$5,836,250	
24	MWD Imported Water Charge, (July-Dec)		\$3,661,291								
25	MWD Imported Water Charge, (Jan-June)		\$1,677,261								
26	Well #28 Basin Equity Exemption	\$1,711,108									
27	MWD Conjunctive Use Program, CUP		\$562,200.50	\$1,668,303.00							
28	Calculated MWD Imported Water Charge, \$	\$6,305,093	\$5,901,013	\$3,109,542	\$5,384,500	\$5,836,250	\$5,836,250	\$5,836,250	\$5,836,250	\$5,836,250	
29	MWD Readiness to Serve Charge	\$722,052	\$823,269	\$750,859	\$353,149	\$266,094	\$266,094	\$266,094	\$266,094	\$266,094	
30	MWD Capacity Charge				\$93,900	\$100,260	\$100,260	\$100,260	\$100,260	\$100,260	
31	MWD Connection Charge	\$287,330	\$358,229	\$366,263	\$367,942	\$400,304	400,304	400,304	400,304	400,304	
32	# of Connections	34,206	34,117	33,757	33,602	34,196	34,196	34,196	34,196	34,196	
33	\$/Connection	\$8.40	\$10.50	\$10.85	\$10.95	\$11.50	\$11.50	\$11.50	\$11.50	\$11.50	
34	Subtotal, MWD Imported Water Costs	\$7,314,475	\$7,082,249	\$5,895,344	\$6,199,491	\$6,602,908	\$6,602,908	\$6,602,908	\$6,602,908	\$6,602,908	
35											
36	RA Pumped Water Annual Cost	\$5,023,200	\$5,122,068	\$5,210,089	\$6,633,000	\$7,676,250	\$7,676,250	\$7,676,250	\$7,676,250	\$7,676,250	
37	Water Pumping Costs, Annual (3)	1,028,118	868,138	830,378	872,190	966,963	966,963	966,963	966,963	966,963	
38	Total Imported Water Costs	\$13,365,793	\$13,072,455	\$11,935,811	\$13,704,681	\$15,246,121	\$15,246,121	\$15,246,121	\$15,246,121	\$15,246,121	

Notes

- (1) Source: Unless noted otherwise, Projected Purchased Water Costs, FY 16/17 from the City of Garden Grove.
- (2) Data Source: Projected Purchased Water Costs\_6.5.17 from City Staff, 6/5/17.
- (3) FY 17/18 Pumping Costs are calculated so that the total Water Production Cost equals that shown in the City's FY 17/18 budget.

**Table A-8**  
**City of Garden Grove - Water Division**  
**Water Rate Study**  
**Imported Water Costs at Projected Future Unit Costs**

Line No		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	Notes
1	Water Supply						
2	Supply Allocation, AF	23,000	23,000	23,000	23,000	23,000	
3	Percent % Groundwater	75%	75%	75%	75%	80%	
4	Percent % Purchased	25%	25%	25%	25%	20%	
5	AF Groundwater	17,250	17,250	17,250	17,250	18,400	
6	AF Purchased, AF						
7	MWD Imported	5,750	5,750	5,750	5,750	4,600	
8							
9	Water Supply Unit Costs						
10	MWD Imported Water Charge, \$/AF	\$1,015.00	\$1,053.00	\$1,092.00	\$1,123.00	\$1,164.00	
11	RA: Pumped Water, \$/AF	\$422.10	\$443.21	\$465.37	\$488.63	\$488.63	
12	Water Pumping Costs, \$/AF	\$54.45	\$56.08	\$57.76	\$59.49	\$59.49	
13							
14	MWD Imported Water Costs						
15	Calculated MWD Imported Water Charge, \$	\$5,836,250	\$6,128,063	\$6,434,466	\$6,756,189	\$5,675,199	
16	MWD Readiness to Serve Charge	\$266,094	\$279,399	\$293,369	\$308,037	\$323,439	
17	MWD Capacity Charge	\$100,260	\$0	\$0	\$0	\$0	(2)
18	MWD Connection Charge	\$400,304	427,279	448,643	471,075	494,629	
19	# of Connections	34,196	34,196	34,196	34,196	34,197	
20	\$/Connection	\$11.50	\$12.07	\$12.68	\$13.31	\$14.31	
21	Subtotal, MWD Imported Water Costs	\$6,602,908	\$6,834,740	\$7,176,477	\$7,535,301	\$6,493,266	
22							
23	RA Pumped Water Annual Cost	\$7,676,250	\$8,211,000	\$8,780,250	\$9,159,750	\$10,506,400	
24	Water Pumping Costs, Annual (4)	966,963	991,137	1,015,916	1,041,313	1,067,346	
25	Total Imported Water Costs	\$15,246,121	\$16,036,877	\$16,972,643	\$17,736,364	\$18,067,013	
26							
27	Change from FY 17/18						
28	MWD Imported Water Costs	\$0	\$231,832	\$573,569	\$932,393	(\$109,642)	
29	Groundwater Costs	\$0	\$558,924	\$1,152,953	\$1,557,850	\$2,930,533	
30	Total	\$0	\$790,756	\$1,726,522	\$2,490,243	\$2,820,892	

Notes

- (1) Source: Unless noted otherwise, Projected Purchased Water Costs, FY 16/17 from the City of Garden Grove. MWD Imported Water Costs, in \$/AF, from 2018 forward, from MWD's 2016 Ten-Year Financial Forecast (Attachment 2 to 2016/2017 and 2017/2018 Biennial Budget.)
- (2) Capacity Charge beginning FY 18/19 projected to increase at 3% per year. This is approximately equal to the rate of inflation used in the MWD Ten-Year Financial Forecast
- (3) Data Source: Projected Purchased Water Costs\_6.5.17 from City Staff, 6/5/17.
- (4) FY 17/18 Pumping Costs are calculated so that the total Water Production Cost equals that shown in the City's FY 17/18 budget. Subsequent year pumping cost is increased by General Inflation.

**Table A-9**  
**City of Garden Grove - Water Division**  
**Water Rate Study**

**Existing and Future Debt Service**

Line No	Existing Revenue Bond Debt Service	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24			
1	Revenue Bond 2010A	\$910,163	\$918,638	\$914,263	\$906,913	\$909,413	\$905,038	\$911,506	\$906,550			
2	Revenue Bond 2010B (Balloon 12/15/28 \$4.125M)	258,349	258,349	258,349	258,349	258,349	258,349	258,349	258,349			
3	Revenue Bond 2010C (Balloon 12/15/30 \$3.195M)	204,129	204,129	204,129	204,129	204,129	204,129	204,129	204,129			
4	Revenue and Refunding Bonds 2015	1,003,850	1,006,350	998,550	1,010,350	1,001,750	1,002,850	1,013,450	939,300			
5	2010 Bonds Premium Amortization	4,853	4,853	4,853	4,853	4,853	4,853	4,853	4,853			
6	2015 Bonds Premium Amortization	11,135	14,847	14,847	14,847	14,847	14,847	14,847	7,424			
7	<b>Total</b>	<b>\$2,392,478</b>	<b>\$2,407,164</b>	<b>\$2,394,989</b>	<b>\$2,399,439</b>	<b>\$2,393,339</b>	<b>\$2,390,064</b>	<b>\$2,407,133</b>	<b>\$2,320,603</b>			
8												
9												
10	<b>Proposed Debt Service</b>	<b>Issue Date</b>	<b>Issuance Amount</b>	<b>Interest Rate</b>	<b>Total Principal and Interest Payment</b>							
					<b>FY 17/18</b>	<b>FY 18/19</b>	<b>FY 19/20</b>	<b>FY 20/21</b>	<b>FY 21/22</b>	<b>FY 22/23</b>	<b>FY 23/24</b>	
11	CIEDB	17/18	\$0	3.5%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
12	CIEDB	18/19	\$0	3.5%		0	0	0	0	0	0	
13	CIEDB	19/20	\$0	3.5%			0	0	0	0	0	
14	CIEDB	20/21	\$0	3.5%				0	0	0	0	
15	CIEDB	21/22	\$0	3.5%					0	0	0	
16	CIEDB	22/23	\$0	3.5%						0	0	
17	CIEDB	23/24	\$0	3.5%							0	
18	<b>Total</b>				<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	
19												
20	Revenue Bond/Private Placement	17/18	\$0	5.0%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
21	Revenue Bond/Private Placement	18/19	\$15,375,000	5.0%		1,120,634	1,120,634	1,120,634	1,120,634	1,120,634	1,120,634	
22	Revenue Bond/Private Placement	19/20	\$0	5.0%			0	0	0	0	0	
23	Revenue Bond/Private Placement	20/21	\$0	5.0%				0	0	0	0	
24	Revenue Bond/Private Placement	21/22	\$0	5.0%					0	0	0	
25	Revenue Bond/Private Placement	22/23	\$0	5.0%						0	0	
26	Revenue Bond/Private Placement	23/24	\$0	5.0%							0	
27	<b>Total</b>				<b>\$0</b>	<b>\$1,120,634</b>	<b>\$1,120,634</b>	<b>\$1,120,634</b>	<b>\$1,120,634</b>	<b>\$1,120,634</b>	<b>\$1,120,634</b>	
28												
29	<b>Intercity Loan Debt Service</b>				<b>FY 16/17</b>	<b>FY 17/18</b>	<b>FY 18/19</b>	<b>FY 19/20</b>	<b>FY 20/21</b>	<b>FY 21/22</b>	<b>FY 22/23</b>	<b>FY 23/24</b>
30	Outstanding Principal Beginning year				\$13,374,978	\$13,374,978	\$12,711,965	\$12,021,769	\$11,303,274	\$10,555,322	\$9,776,703	\$8,966,161
31	Interest Rate (1)				6.50%	4.10%	4.10%	4.10%	4.10%	4.10%	4.10%	4.10%
32	Interest Payment				\$869,374	\$548,374	\$521,191	\$492,893	\$463,434	\$432,768	\$400,845	\$367,613
33	Principal Payment				0	663,013	690,196	718,494	747,953	778,619	810,542	843,774
34	Outstanding Principal, End of Year				\$13,374,978	\$12,711,965	\$12,021,769	\$11,303,274	\$10,555,322	\$9,776,703	\$8,966,161	\$8,122,386

Note:

(1) Interest rate changed to 4.1% beginning FY 17/18 per City Staff 11/9/2017

**Table A-10  
City of Garden Grove - Water Division  
Water Rate Study**

**Water Utility Operating Statement**

Line No		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	Notes
1	<b>FUND 601 (WATER OPERATIONS) SOURCES OF FUNDS</b>						
2	Beginning of Year Balance, Fund 601	\$8,610,247	\$8,427,620	\$7,312,240	\$7,308,926	\$8,443,710	
3							
4	Rate Revenues						
5	Water Sales Revenues under Existing Rates	\$29,880,011	\$29,880,011	\$29,880,011	\$29,880,011	\$29,880,011	(1)
6							
7	Additional Revenues From Rate Increases						(7)
8							
9	<u>Fiscal Year</u> <u>Percent Increase</u> <u>Months of Revenue</u>						
10	FY 17/18      12.40%      4	1,235,040	3,705,121	3,705,121	3,705,121	3,705,121	(7)
11	FY 18/19      11.30%      4		1,265,040	3,795,120	3,795,120	3,795,120	(7)
12	FY 19/20      3.50%      4			436,103	1,308,309	1,308,309	(7)
13	FY 20/21      3.50%      4				451,367	1,354,100	(7)
14	FY 21/22      3.50%      4					467,164	(7)
15	Total Additional Revenues	\$1,235,040	\$4,970,161	\$7,936,344	\$9,259,917	\$10,629,814	
16							
17	Total Rate Revenues	\$31,115,051	\$34,850,172	\$37,816,355	\$39,139,928	\$40,509,825	(2)
18							
19	Other Income						
20	Other Water Sales Revenue	\$154,500	\$4,500	\$4,500	\$4,500	\$4,500	
21	Other Revenues	25,000	25,000	25,000	25,000	25,000	
22	Non-Operating Revenues	220,385	220,385	220,385	220,385	220,385	
23	Total Other Income	\$399,885	\$249,885	\$249,885	\$249,885	\$249,885	
24							
25	Total Revenues	\$31,514,936	\$35,100,057	\$38,066,240	\$39,389,813	\$40,759,710	
26							
27	Total Sources of Funds	\$40,125,183	\$43,527,677	\$45,378,480	\$46,698,739	\$49,203,420	
28	<b>FUND 601 USES OF FUNDS</b>						
29	O&M Expenditures						
30	Salaries & Wages	\$5,776,453	\$6,007,511	\$6,247,812	\$6,497,724	\$6,757,633	
31	Contractual Services	7,557,919	7,927,772	7,583,182	7,742,477	7,905,754	
32	Materials & Supplies	709,906	727,654	745,845	764,491	783,603	
33	Water Production Expenses	15,246,121	16,036,877	16,972,643	17,736,364	18,067,013	
34	Subtotal O&M Expenditures	\$29,290,399	\$30,699,814	\$31,549,481	\$32,741,056	\$33,514,003	(4)
35							
36	Debt Service						
37	Future CIEDB Debt Service						

**Table A-10  
City of Garden Grove - Water Division  
Water Rate Study**

**Water Utility Operating Statement**

<b>Line No</b>		<b>FY 17/18</b>	<b>FY 18/19</b>	<b>FY 19/20</b>	<b>FY 20/21</b>	<b>FY 21/22</b>	<b>Notes</b>
38	Existing Revenue Bond Debt Service	\$2,407,164	\$2,394,989	\$2,399,439	\$2,393,339	\$2,390,064	
39	Future Revenue Bond Debt Service	0	1,120,634	1,120,634	1,120,634	1,120,634	
40	Subtotal Debt Service	\$2,407,164	\$3,515,623	\$3,520,073	\$3,513,973	\$3,510,698	
41							
42	Transfer to Fund 602	\$0	\$0	\$0	\$0	\$0	
43	Transfer to Fund 603	\$0	\$2,000,000	\$3,000,000	\$2,000,000	\$2,000,000	
44							
45	Total Uses of Funds	\$31,697,563	\$36,215,438	\$38,069,554	\$38,255,030	\$39,024,701	
46							
47	End of Year Balance, Fund 601	\$8,427,620	\$7,312,240	\$7,308,926	\$8,443,710	\$10,178,719	
48							
49	<b>FINANCIAL PERFORMANCE INDICATORS</b>						
50	End of Year (EOY) Reserve Balance Criteria #1						
51	EOY601 Fund Reserve Balance	\$8,427,620	\$7,312,240	\$7,308,926	\$8,443,710	\$10,178,719	
52	Target Reserve Balance						
53	2 Months O&M Expenses	\$4,881,733	\$5,116,636	\$5,258,247	\$5,456,843	\$5,585,667	
54	Plus \$500,000 for Contingencies	500,000	500,000	500,000	500,000	500,000	
55	Subtotal	\$5,381,733	\$5,616,636	\$5,758,247	\$5,956,843	\$6,085,667	
56	Exceeds Target?	Yes	Yes	Yes	Yes	Yes	
57							
58	End of Year (EOY) Reserve Balance Criteria #2						
59	Criteria: Total combined fund 601,602,603 Reserves						
60	Combined EOY 601,602,603 Balance	\$13,936,280	\$23,415,602	\$19,667,032	\$16,072,197	\$13,093,770	
61	Target Reserve Balance						
62	2 months O&M Expenses	4,881,733	5,116,636	5,258,247	5,456,843	5,585,667	
63	Plus \$500,000 for Contingencies	500,000	500,000	500,000	500,000	500,000	
64	Plus 5% of Net Plant (3)	6,940,000	6,940,000	6,940,000	6,940,000	6,940,000	
65	Subtotal	\$12,321,733	\$12,556,636	\$12,698,247	\$12,896,843	\$13,025,667	
66	Exceeds Target?	Yes	Yes	Yes	Yes	Yes	
67	Available Reserves for Capital Projects	\$1,614,547	\$10,858,966	\$6,968,786	\$3,175,354	\$68,103	
68							
69	Debt Service Coverage Ratio						
70	Gross Revenue	\$32,019,126	\$35,648,373	\$38,649,598	\$39,988,807	\$41,374,888	
71	Less O&M Expenses	(\$27,797,246)	(\$29,488,427)	(\$30,338,094)	(\$31,529,669)	(\$32,302,616)	(4)
72	Revenue Available for Debt Service	\$4,221,880	\$6,159,946	\$8,311,504	\$8,459,138	\$9,072,272	
73							
74	Revenue Bond Debt Service	\$2,407,164	\$3,515,623	\$3,520,073	\$3,513,973	\$3,510,698	



**Table A-10  
City of Garden Grove - Water Division  
Water Rate Study**

**Water Utility Operating Statement**

<b>Line No</b>		<b>FY 17/18</b>	<b>FY 18/19</b>	<b>FY 19/20</b>	<b>FY 20/21</b>	<b>FY 21/22</b>	<b>Notes</b>
75	Debt Service Coverage Ratio	1.75	1.75	2.36	2.41	2.58	
76							
77	<b>FUND 602 (WATER CAPITAL) SOURCES OF FUNDS</b>						
78	Beginning of Year Balance, Fund 602	\$8,744,205	\$5,395,365	\$15,465,650	\$11,195,978	\$6,941,942	
79							
80	Capital Improvement Charge						
81	Revenues Under Existing Rates	\$353,000	\$353,000	\$353,000	\$353,000	\$353,000	
82							
83	Additional Rate Revenues						(7)
84							
85	<b>Fiscal Year</b>	<b>% Increase</b>	<b>Months of Revenue</b>				
86	FY 17/18	12.40%	4	14,591	43,772	43,772	43,772 (7)
87	FY 18/19	11.30%	4		14,945	44,835	44,835 (7)
88	FY 19/20	3.50%	4			5,152	15,456 (7)
89	FY 20/21	3.50%	4			5,332	15,997 (7)
90	FY 21/22	3.50%	4			5,519	5,519 (7)
91	Total Additional Revenues Required	\$14,591	\$58,717	\$93,759	\$109,395	\$125,579	
92							
93	Other Revenues	\$104,699	\$104,699	\$104,699	\$104,699	\$104,699	
94	CIEDB Debt Proceeds	0	0	0	0	0	
95	Revenue Bond Debt Proceeds	0	15,375,000	0	0	0	
96	Transfer From Fund 601	0	0	0	0	0	
97	Total Sources of Funds, 602	\$9,216,495	\$21,286,781	\$16,017,108	\$11,763,072	\$7,525,220	
98							
99	<b>FUND 602 (WATER CAPITAL) USES OF FUNDS</b>						
100	Capital Improvements	\$3,821,130	\$3,821,130	\$3,821,130	\$3,821,130	\$3,821,130	(5)
101	Transfer to Fund 603	0	2,000,000	1,000,000	1,000,000	1,000,000	
102	Capitalized Labor	0	0	0	0	0	
103	Total Use of Funds	\$3,821,130	\$5,821,130	\$4,821,130	\$4,821,130	\$4,821,130	
104							
105	Ending Year Fund Balance, Fund 602	\$5,395,365	\$15,465,650	\$11,195,978	\$6,941,942	\$2,704,089	
106							
107	<b>FUND 603 (WATER REPLACEMENT) SOURCES OF FUNDS</b>						
108	Beginning of Year Balance, Fund 603	\$3,588,879	\$113,295	\$637,712	\$1,162,129	\$686,545	
109							
110	Other Revenues (Interest)	\$31,900	\$31,900	\$31,900	\$31,900	\$31,900	
111	Transfer From Fund 601	0	2,000,000	3,000,000	2,000,000	2,000,000	

**Table A-10  
City of Garden Grove - Water Division  
Water Rate Study**

**Water Utility Operating Statement**

<b>Line No</b>		<b>FY 17/18</b>	<b>FY 18/19</b>	<b>FY 19/20</b>	<b>FY 20/21</b>	<b>FY 21/22</b>	<b>Notes</b>
112	Transfer From Fund 602	0	2,000,000	1,000,000	1,000,000	1,000,000	
113	Total Sources of Funds, 603	\$3,620,778	\$4,145,195	\$4,669,612	\$4,194,028	\$3,718,445	
114							
115	<b>FUND 603 (WATER REPLACEMENT) USES OF FUNDS</b>						
116	Replacement Expenditures	\$3,507,483	\$3,507,483	\$3,507,483	\$3,507,483	\$3,507,483	(6)
117	Capitalized Labor	0	0	0	0	0	
118	Total Use of Funds	\$3,507,483	\$3,507,483	\$3,507,483	\$3,507,483	\$3,507,483	
119							
120	Ending Year Fund Balance, Fund 603	\$113,295	\$637,712	\$1,162,129	\$686,545	\$210,962	

Notes

- (1) Includes all revenues from the Monthly Minimum Charge and the Commodity Charge, including revenues currently labelled as "Water Costs".
- (2) Includes a portion of the Commodity Delivery Charge that is adjusted on an annual basis, based on changes in water production expenses
- (3) Five percent of Net Plant is calculated as 5% of \$138.8M, cost of original plant, per City.
- (4) O&M expenses for purposes of debt service coverage calculation do not include intercity loan interest and intercity loan principal  
The O&M expenses in the debt service calculation will differ from the O&M expense on line 35 above.
- (5) Equals five-year capital cost estimate of \$19,105,652 spread evenly over the five-year period.
- (6) Equals five-year replacement cost estimate of \$17,537,415 spread evenly over the five-year period.
- (7) Revenues from Rate Increases are shown as percentage increases over current revenues and do not reflect the proposed rate structure shown in Table C-1.