

Marina Coast WD



Water, Wastewater & Recycled Water Capacity Fee Tables

11/22/2019



BARTLE WELLS ASSOCIATES

Independent Public Finance Advisors

Table 1
Marina Coast WD
Current Capacity Fees

Residential Fees

<u>Water Capacity Fees</u>	<u>Central Marina</u> ¹	<u>Ord Community</u> ¹
Water Capacity Fee (per EDU)	\$4,526	\$8,010
Sewer Capacity Fee (per EDU)	\$2,333	\$3,322

1 Last updated 2013, does not include regional wastewater fees

Each residential connection (single-family, multiple dwelling, condominium, trailer space, or mobile home) is one (1) EDU.

Non Residential Water Fees

Each EDU is equivalent to 0.33 Acre foot water use per year.
Refer to MCWD "Appendix c" for assigned water use factors

Non Residential Sewer Fees

Each twenty (20) fixture units are equivalent to one (1) equivalent dwelling unit (EDU).
For each hotel/motel unit a minimum of one (1) EDU per room will be applied.
Each nonresidential connection is a minimum of one (1) EDU.

Table 2A
Marina Coast WD
Capital Improvement Plan Summary

	Nearterm 2035 CIP		
	Allocation to Existing	Allocation to Future	Total to Nearterm
Marina Water CIP	\$1,678,000	\$292,000	\$1,970,000
Marina Share Combined Water CIP	\$13,891,560	\$5,095,440	\$18,987,000
Ord Water	\$7,914,500	\$18,529,500	\$26,444,000
Ord Share Combined Water CIP	\$5,829,840	\$3,843,160	\$9,673,000
Total Water CIP	\$29,313,900	\$27,760,100	\$57,074,000
Marina Recycled Water (Adjusted) ¹	\$8,162,000	\$5,723,458	\$13,885,458
Ord Recycled Water (Adjusted) ¹	\$7,238,000	\$41,231,891	\$48,469,891
Total Recycled CIP	\$15,400,000	\$46,955,349	\$62,355,349
Total Marina Water²	\$23,731,560	\$11,110,898	\$34,842,458
Total Ord Water²	\$20,982,340	\$63,604,551	\$84,586,891
Marina Wastewater	\$5,033,148	\$2,166,654	\$7,199,802
Marina Share Combined Wastewater CIP	\$91,520	\$0	\$91,520
Ord Wastewater	\$14,850,151	\$19,551,521	\$34,401,672
Ord Share Combined Wastewater CIP	\$124,780	\$0	\$124,780
Total Wastewater CIP	\$20,099,599	\$21,718,175	\$41,817,774
Total Marina Wastewater	\$5,124,668	\$2,166,654	\$7,291,322
Total Ord Wastewater	\$14,974,931	\$19,551,521	\$34,526,452

1 - Includes future interest costs, excludes capital contributions and grants See Table 2B

2 - Includes Water & Recycled Water CIP

See 2019 Master Plan, AKEL Engineering for Detail

Table 2B
Marina Coast WD
Capital Improvement Plan - Combined CIP Detail

Project	Nearterm Water CIP - Combined				% Total	Cost Total
	Marina Existing	Marina Future	Ord Existing	Ord Future		
G-P1	97%	0%	3%	0%	100%	\$1,890,000
G-P2	10%	0%	65%	25%	100%	\$155,000
G-P3	8%	0%	52%	40%	100%	\$194,000
G-P4	97%	0%	3%	0%	100%	\$194,000
G-P5	73%	19%	2%	6%	100%	\$194,000
G-P6	13%	0%	87%	0%	100%	\$1,169,000
G-P7	0%	77%	0%	23%	100%	\$1,640,000
G-P8	0%	77%	0%	23%	100%	\$2,120,000
G-P9						
G-P10	0%	77%	0%	23%	100%	\$1,285,000
G-P11						
Subtotal						\$8,841,000
G-T-A1	97%	0%	3%	0%	100%	\$5,841,000
G-T-A2	73%	19%	2%	6%	100%	\$5,841,000
G-T-B2	6%	0%	44%	50%	100%	\$3,894,000
Subtotal						\$15,576,000
G-PS-B	10%	0%	65%	25%	100%	\$737,000
Subtotal						\$737,000
G-W31						
G-W34						
G-W35	0%	37%	0%	63%	100%	\$103,000
G-G36						
G-W1	37%	0%	63%	0%	100%	\$2,801,000
Subtotal						\$2,904,000
G-PRV-B1	73%	19%	2%	6%	100%	\$137,000
Subtotal						\$137,000
G-WD1	37%	0%	63%	0%	100%	\$465,000
Subtotal						\$465,000
Total	\$13,891,560	\$5,095,440	\$5,829,840	\$3,843,160	\$28,660,000	\$28,660,000

See 2019 Master Plan, AKEL Engineering for Project Details

Table 2C
Recycled Water CIP Detail

	Nearterm 2035 Recycled Water CIP		
	Central Marina	Ord Community	Total
Existing Users	\$0	\$0	\$0
Future Users			
Capital Improvement Project Cost	\$3,164,723	\$37,634,141	\$40,798,864
Plus Future Interest Costs ¹	\$996,206	\$11,846,641	\$12,842,847
(Less Capital Contributions & Grants)	(\$875,471)	(\$10,410,891)	(\$11,286,362)
Total Future Users	\$3,285,458	\$39,069,891	\$42,355,349
	\$3,285,458	\$39,069,891	\$42,355,349
Total Recycled Water Capital Improvement Plan (Nearterm)			
	Central Marina	Ord Community	Total
Existing Users	\$8,162,000	\$7,238,000	\$15,400,000
Future Users	\$5,723,458	\$41,231,891	\$46,955,349
	\$13,885,458	\$48,469,891	\$62,355,349

1 - 3 loans to fund RW projects, 30 year terms:

\$18m @ 1.8% interest Year 1, \$11.5m @ 2.5% interest Year 6, \$4.5m @ 3% interest Year 12 respectively

Source: MCWD

Source - 2019 Master Plan, AKEL Engineering and MCWD Estimates

Table 2D
Master Plan CIP Projects Excluded from Master Plan

Projects attributable to a single development

	Allocation to Existing	Allocation to Future	Total to Nearterm
Marina Central - Water			
M-P3	\$0	\$2,997,000	\$2,997,000
Total Water	\$0	\$2,997,000	\$2,997,000
Ord Community - Water			
O-P7	\$0	\$2,108,000	\$2,108,000
O-P9	\$0	\$535,000	\$535,000
O-P10	\$0	\$4,312,000	\$4,312,000
O-P25	\$0	\$5,349,000	\$5,349,000
Total Ord Water	\$0	\$12,304,000	\$12,304,000
Total Water	\$0	\$15,301,000	\$15,301,000
Ord Community - Sewer			
O-P15	\$0	\$2,046,300	\$2,046,300
Total Ord Sewer	\$0	\$2,046,300	\$2,046,300
Total Sewer	\$0	\$2,046,300	\$2,046,300
Total Exclusions	\$0	\$17,347,300	\$17,347,300

See 2019 Master Plan, AKEL Engineering for Project Details

Table 3
Marina Coast WD
Master Plan - Water Demand and Wastewater Flow Projection

Average Day Demands - Water			
Development Horizon	Central Marina (mgd)	Ord Community (mgd)	Total (mgd)
Existing (2019)	1.98	1.26	3.24
Nearterm (to 2035)	2.46	2.25	4.71
Buildout (to 2050)	2.46	5.81	8.27
% Growth to Near Term	24%	79%	45%
% Growth to Buildout	24%	361%	155%

Estimated EDUs @	0.28	AFY/EDU
	250	gpd

Development Horizon	Central Marina (EDU)	Ord Community (EDU)	Total (EDU)
Existing (2018)	7,921	5,041	12,962
Nearterm (to 2035)	9,841	9,001	18,842
Buildout (to 2050)	9,841	23,243	33,084
% Growth to Near Term	24%	79%	45%
% Growth to Buildout	24%	361%	155%

Average Day Use - Wastewater			
Development Horizon	Central Marina (mgd)	Ord Community (mgd)	Total (mgd)
Existing (2018)	1.10	0.90	2.00
Nearterm (to 2035)	1.29	1.58	2.87
Buildout (to 2050)	1.29	3.76	5.05
% Growth to Near Term	17%	76%	44%
% Growth to Buildout	17%	318%	153%

Estimated EDUs @	0.195	AFY/EDU
	174	gpd

Development Horizon	Central Marina (EDU)	Ord Community (EDU)	Total (EDU)
Existing (2018)	6,322	5,172	11,494
Near Term (to 2035)	7,414	9,080	16,494
Buildout (to 2050)	7,414	21,609	29,023
% Growth to Near Term	17%	76%	44%
% Growth to Buildout	17%	318%	153%

Source: Akel Engineering flow & use estimates, MCWD use factors

**Table 4
Marina Coast WD
Growth Projections**

Current FY 2019 EDUs	Units	% Growth to Nearterm 2035¹	# Growth to Nearterm 2035	Est. Total EDUs to Nearterm 2035
<u>City of Marina</u>				
7,921	<i>Water EDUs</i>	24%	1,920	9,841
6,322	<i>Wastewater EDUs</i>	17%	1,092	7,414
<u>Ord Community</u>				
5,041	<i>Water EDUs</i>	79%	3,961	9,001
5,172	<i>Wastewater EDUs</i>	76%	3,908	9,080
<u>Total System</u>				
12,962	<i>Water EDUs</i>	45%	5,881	18,842
11,494	<i>Wastewater EDUs</i>	44%	5,000	16,494

1 - Source: Table 3

Table 5
Marina Coast WD
Capacity Fee Methodologies Overview

Current Methodology: Average Cost

$$\frac{\textit{Existing Asset Value} + \textit{Total CIP}}{\textit{Total Units}}$$

Proposed Methodology: Hybrid Buy-In + Marginal Future Cost

$$\frac{\textit{Existing Asset Value}}{\textit{Total Units}} + \frac{\textit{Future User Share of CIP}}{\textit{Future Units}}$$

Table 6 - Proposed Fee Calculation
Marina Coast WD
Final Draft 2019 Capacity Charge Calculations - Hybrid Buy-In + Marginal Future Cost Methodology (to Nearterm 2035)

System Capacity Charge	recovers development share of existing facilities + future CIP				
	2019 ENR CCI Adj.	Marina Water	Ord Water	Marina Sewer	Ord Sewer
Existing Asset Component - Applies to All Users					
1 2018 CAFR Existing Infrastructure Asset Value	4.4%	\$ 29,329,840	\$ 119,244,541	\$ 11,566,871	\$ 39,849,292
2 Less Accumulated Depreciation on Existing Infrastructure Assets	4.4%	\$ (17,276,185)	\$ (12,229,952)	\$ (5,587,085)	\$ (4,179,314)
3 RCNLD of Water Infrastructure in Service (sum of 1 to 2)		\$ 12,053,654	\$ 107,014,589	\$ 5,979,786	\$ 35,669,978
Value of Other Depreciable Assets					
4 Less Value of Easements	4.4%	\$ -	\$ (14,720,400)	\$ -	\$ (11,275,200)
5 Less Water/Sewer Rights Assets	4.4%	\$ -	\$ (59,977,800)	\$ -	\$ (15,973,200)
6 RCNLD of Other Depreciable Assets (sum of 4 to 5)		\$ -	\$ (74,698,200)	\$ -	\$ (27,248,400)
7 Total Value of Capital Assets (3 + 6)		\$ 12,053,654	\$ 32,316,389	\$ 5,979,786	\$ 8,421,578
Existing and Future Customer Base- EDUS					
8 Total Existing EDUs		7,921	5,041	6,322	5,172
9 Number of Future EDUs to Nearterm - 2035		<u>1,920</u>	<u>3,961</u>	<u>1,092</u>	<u>3,908</u>
10 Total Number of EDUs to Nearterm (8+9)		9,841	9,001	7,414	9,080
11 Buy In Capacity Fee Component (7/10) \$/EDU		\$ 1,225	\$ 3,590	\$ 807	\$ 927
Future Cost Component - Applies to Future Users Only					
CIP allocated to Future Users - Nearterm 2035					
12 Water Master Plan		\$ 5,387,440	\$ 22,372,660	\$ -	\$ -
13 Sewer Master Plan		\$ -	\$ -	\$ 2,166,654	\$ 19,551,521
14 Recycled Water Master Plan ¹		<u>\$ 3,285,458</u>	<u>\$ 39,069,891</u>	<u>\$ -</u>	<u>\$ -</u>
15 Total Value of Future CIP to Nearterm (12+13+14)		\$ 8,672,898	\$ 61,442,551	\$ 2,166,654	\$ 19,551,521
Future Customer Base- EDUS					
16 Number of Future EDUs to Nearterm - 2035 (9)		1,920	3,961	1,092	3,908
17 Expansion Capacity Fee Component (15/16) \$/EDU		\$ 4,517	\$ 15,514	\$ 1,984	\$ 5,003
System Capacity Charge Results - EDUs					
18 Estimated System Capacity Charge (11+17) \$/EDU		\$ 5,741	\$ 19,104	\$ 2,791	\$ 5,930
19 Current Capacity Charge \$/EDU		\$ 4,526	\$ 8,010	\$ 2,333	\$ 3,322
20 Difference (18-19)		\$ 1,215	\$ 11,094	\$ 458	\$ 2,608

1 - excludes Capital Contributions and Grants. Includes Interest Cost, See Table 2C

Table 7
Marina Coast WD
Estimated Sewer Flow Per EDU

Estimated population per household: **2.8** people.

Year	Population	Sewer Flow gpcd
2010	30,840	68
2011	31,141	67
2012	31,445	64
2013	31,752	64
2014	32,062	61
2015	32,375	56
2016	33,346	<u>58</u>
Average		63

ADWF sewer flow per day per person, the average from 2010 to 2016 is 63 gpcd.
The sewer flow trend is downward from approximately 68 gpcd in 2010 to 58 gpcd in 2016.

Source: AKEL Engineering

Table 8
Marina Coast WD
Calculation of Typical Single Family Residence (2 bathroom) Fixture Units

Fixture Type	Quantity	DFU (1)	Total DFU
Bathtub(with or without shower)	1	2	2
Clothes Washer	1	3	3
Dishwasher	1	2	2
Lavatory Sink	2	1	2
Shower (single)	1	2	2
Kitchen Sink	1	2	2
Toilet (1.28 gal per flush)	2	3	6
Fixture Units in a Typical Single Family Residence =			19

1. DFU=Drainage Fixture Units as defined in Chapter 7 of California Plumbing Code

Table 9
Marina Coast WD
Example Calculation of ADU (1 bathroom) Fixture Units

Fixture Type	Quantity	DFU (1)	Total DFU
Bathtub(with or without shower)	0	2	0
Clothes Washer	0	3	0
Dishwasher	0	2	0
Lavatory Sink	1	1	1
Shower (single)	1	2	2
Kitchen Sink	1	2	2
Toilet (1.28 gal per flush)	1	3	3
Fixture Units in Example ADU			8

1. DFU=Drainage Fixture Units as defined in Chapter 7 of the California Plumbing Code

Table 10
Marina Coast WD
Proposed Capacity Fees

Residential Fees

Marina Central			
Proposed Capacity Fees - Hybrid Approach (Nearterm)	Current	Proposed	\$ Increase (Decrease)
Water Capacity Fee - \$/EDU	\$4,526	\$5,741	\$1,215
Sewer Capacity Fee - \$/EDU	<u>\$2,333</u>	<u>\$2,791</u>	<u>\$458</u>
Total Capacity Fee	\$6,859	\$8,532	\$1,673

Ord Community			
Proposed Capacity Fees - Hybrid Approach (Nearterm)	Current	Proposed	\$ Increase (Decrease)
Water Capacity Fee - \$/EDU	\$8,010	\$19,104	\$11,094
Sewer Capacity Fee - \$/EDU	<u>\$3,322</u>	<u>\$5,930</u>	<u>\$2,608</u>
Total Capacity Fee	\$11,332	\$25,034	\$13,702

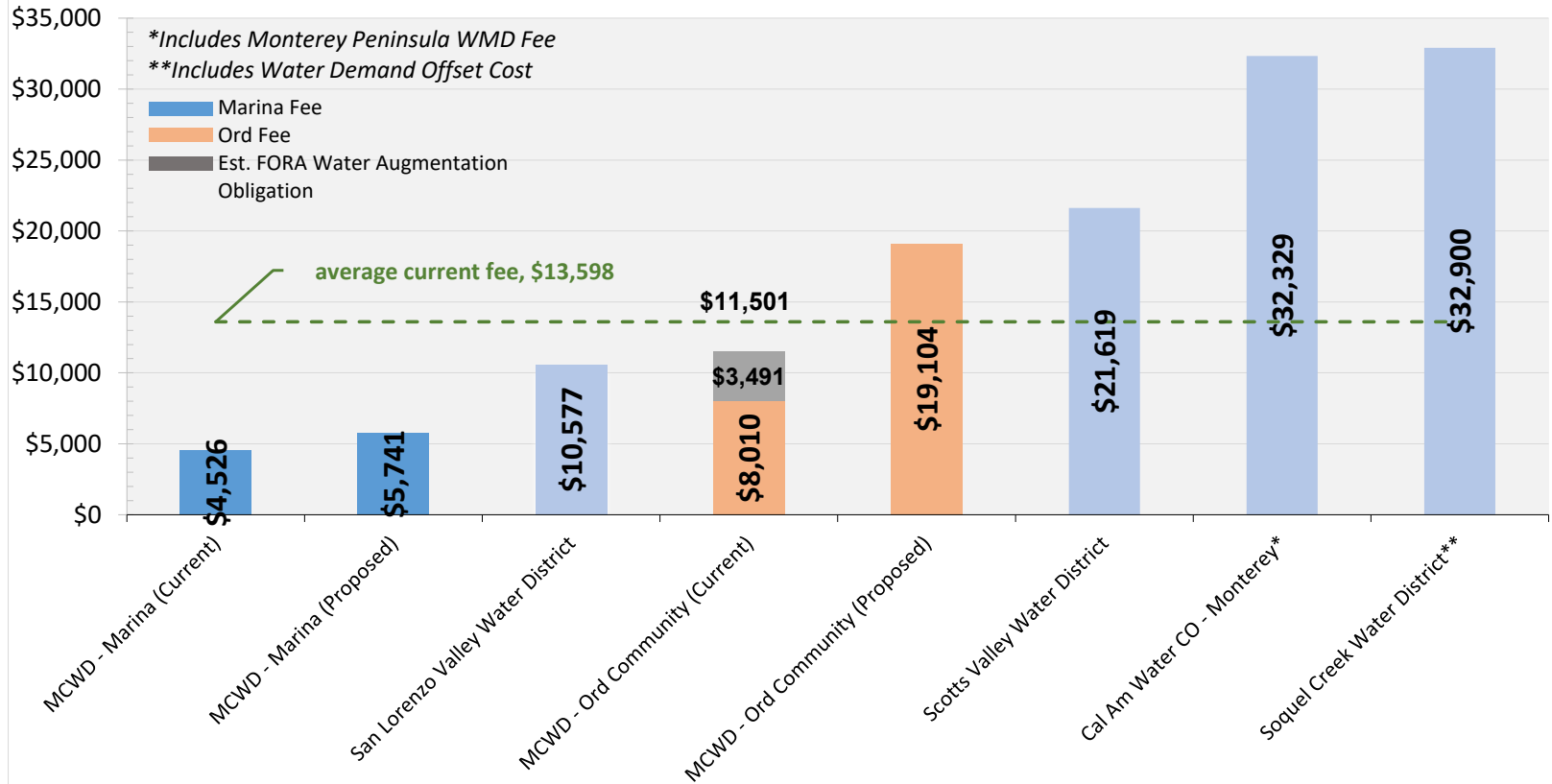
Non Residential Water Fees

Each EDU is equivalent to 0.28 Acre foot water use per year.
 Refer to MCWD "Appendix C" for assigned water use factors

Non Residential Sewer Fees

Each nineteen (19) fixture units are equivalent to one (1) equivalent dwelling unit (EDU).
 Each Single Family Residential connection is one (1) EDU
 Each Multi Family Residential Connection (multiple dwelling, condominium, trailer space or mobile home) is 0.8 EDU
 Each nonresidential connection is a minimum of one (1) EDU.
 Hotels are considered non-residential units and are a minimum of one (1) EDU
 Updated Sewer Flow per EDU = 62gpd * 2.8 persons/household = 174gpd/EDU

Single-Family Residential Water Capacity Fees, FY 18/19



Single-Family Residential Wastewater Capacity Fees, FY 18/19

