

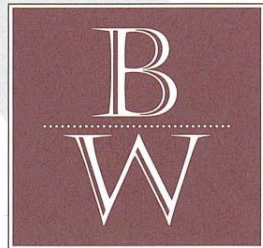
# **Marina Coast Water District**

## **Water, Wastewater and Recycled Water Capacity Fee Study**

### **Final Draft October 17, 2019**



**Marina Coast Water District**  
& MCWD Groundwater Sustainability Agency



**BARTLE WELLS ASSOCIATES**  
INDEPENDENT PUBLIC FINANCE ADVISORS



**BARTLE WELLS ASSOCIATES**  
INDEPENDENT PUBLIC FINANCE ADVISORS

1889 Alcatraz Avenue  
Berkeley, CA 94703  
T: 510-653-3399  
www.bartlewells.com

October 17, 2019

Mike Wegley  
District Engineer  
11 Reservation Road  
Marina, CA 93933

RE: **Final Draft** Water, Wastewater and Recycled Water Capacity Fee Study

Bartle Wells Associates (BWA) is pleased to submit the attached *Water, Wastewater and Recycled Water Capacity Fee Study*. The report develops updated water, wastewater and recycled capacity fees that are designed to equitably recover the costs of infrastructure and assets benefiting new development. Results were developed in conjunction with the 2019 Master Plan provided by Akel Engineering.

The District's prior capacity fee study was completed in September 2013 and recommended fees based on Equivalent Dwelling Unit for both water and wastewater. Recycled water assets and capital were included in the total for the water capacity fee. BWA has updated the fee calculation, EDU estimates, and water use factors.

A summary of proposed fees is shown on Table 10 of this report. The proposed fee calculation includes total fixed assets divided among all projected users in the near-term (2035) plus expansion-related capital projects divided by future users in the near-term.

Proposed Fees

**Central Marina**

- Water, \$/EDU: \$5,741
- Sewer, \$/EDU: \$2,791

**Ord Community**

- Water, \$/EDU: \$19,343
- Sewer, \$/EDU: \$6,516

We have enjoyed working with the District on this assignment and appreciate the input and assistance received from District staff throughout the project. Please contact us anytime if you have questions about this report or related impact fee issues.

BARTLE WELLS ASSOCIATES

Douglas Dove, PE, CIPFA  
Principal/President

Abigail Seaman  
Consultant

<b>1 INTRODUCTION, BACKGROUND, AND GOVERNMENT CODE.....</b>	<b>1</b>
1.1 Background.....	1
1.2 Government Code .....	2
<b>2 CAPACITY FEE METHODOLOGY .....</b>	<b>3</b>
2.1 Current Capacity Fees .....	3
2.1.1 Current EDU Calculation Methodology .....	3
2.2 Facility Cost Valuation.....	4
2.3 Capacity Fee Calculation Overview .....	4
2.3.1 Current Methodology: Average Cost Approach.....	4
2.3.2 Proposed Methodology: Hybrid Buy-In + Marginal Future Cost Methodology .....	5
<b>3 CAPACITY FEE CALCULATION.....</b>	<b>5</b>
3.1 System Buy-In Component – Existing Assets .....	5
3.2 Future Cost Component – Capital Improvement Projects.....	5
3.3 Proposed Updates to Water Use Factors .....	7
3.3.1 Estimated Water Demand per EDU .....	7
3.3.2 Estimated Sewer Flow per EDU .....	7
3.4 Current and Projected Customers to Near-Term.....	8
3.5 Wastewater Capacity Fee Calculation.....	10
3.6 Estimated Plumbing Fixture Units per EDU.....	12
3.7 Accessory Dwelling Units .....	12
3.8 Other Sewer EDU updates.....	13
<b>4 CONCLUSION AND RECOMMENDATIONS .....</b>	<b>13</b>
4.1 Summary of Proposed Fees .....	13
4.2 Capacity Fee Survey of Surrounding Agencies .....	14
4.3 Conclusion .....	15
4.4 Future Fee Adjustments .....	15

## TABLES

<b>Table 1: Current Capacity Fees .....</b>	<b>3</b>
<b>Table 2: Capital Improvement Plan Summary.....</b>	<b>6</b>
<b>Table 3: Recycled Water CIP Detail.....</b>	<b>7</b>
<b>Table 4: Estimated Sewer Flow per EDU .....</b>	<b>8</b>
<b>Table 5: Water Demand Projections &amp; EDUs to Near-Term .....</b>	<b>9</b>
<b>Table 6: Projected EDUs to Near-Term.....</b>	<b>10</b>
<b>Table 7: Proposed Capacity Fee Calculation – Hybrid Buy-In + Marginal Future Cost.....</b>	<b>11</b>
<b>Table 8: Estimated Plumbing Fixture Units per EDU.....</b>	<b>12</b>
<b>Table 9: Example Fixture Unit Calculation for Accessory Dwelling Unit .....</b>	<b>12</b>
<b>Table 10: Summary of Proposed Fees .....</b>	<b>13</b>

## **SUPPORTING DOCUMENTS**

Draft Tables 10/17/2019

MCWD Appendix C (2019 Update)

# 1 Introduction, Background, and Government Code

## 1.1 Background

The Marina Coast Water District (District) retained AKEL Engineering to update its water, sewer and recycled water master plans. As subconsultants to AKEL, Bartle Wells Associates (BWA) has been retained to update the District's water, wastewater and recycled water capacity fees based on the new master plans. The current set of capacity fees were adopted in 2013 and have not been increased.

The District operates public water and sewer utilities that provide service to approximately 38,000 residents and associated public and commercial activities within the District's service area. Customers are located in two service areas, Central Marina (Marina) and the Ord Community (Ord). District operations are further split between water and sewer, resulting in four cost centers, Marina Water, Marina Sewer, Ord Water and Ord Sewer. The cost centers are maintained as separate enterprises and have distinct user rates and capacity fees. This report documents the methodology and assumptions used to develop updated capacity fees for the four enterprises.

## 1.2 Government Code

Capacity fees are governed by California Government Code Section 66000 et. seq. This section of the Code was initially established by Assembly Bill 1600 (AB 1600) and is commonly referred to as the Mitigation Fee Act. Pursuant to the Code, a capacity fee is not a tax or special assessment but is instead a fee levied to defray the cost of public facilities needed to serve a new development.

Section 66013 of the Code specifically governs water and wastewater capacity fees. This section of the Code defines a “capacity charge” to mean “a charge for public facilities in existence at the time a charge is imposed or charges for new public facilities to be acquired or constructed in the future that are of proportional benefit to the person or property being charged.” The Code distinguishes “capacity charges” from “connection fees” which are defined as fees for the physical facilities necessary to make a water or wastewater connection, such as costs related to installation of meters and pipelines from a new building to a water or wastewater main.

According to the Section 66013, a water or wastewater capacity fee “shall not exceed the estimated reasonable cost of providing the service for which the fee or charge is imposed” unless approved by a two-thirds vote of the electorate. As such, the capacity fees calculated in this report represent the maximum fees that the District can levy. Section 66013 does not detail any specific methodology for calculating capacity fees.

Section 66016 of the Code identifies the procedural requirements for adopting or increasing water and wastewater capacity fees and Section 66022 summarizes the general process by which the fees can be legally challenged.

## 2 Capacity Fee Methodology

### 2.1 Current Capacity Fees

The District’s current capacity fees were last evaluated by Carollo Engineers in a September 2013 report which calculated fees using a combined buy-in and future cost approach. Recycled water infrastructure and capital are included in the water capacity fee calculation. Current fees are shown in Table 1.

**Table 1: Current Capacity Fees**

---

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

---

<sup>1</sup> Last updated 2013, does not include regional wastewater fees

#### 2.1.1 Current EDU Calculation Methodology

The District’s current capacity fees are charged based on an Equivalent Dwelling Unit (EDU) Evaluation of each customer.

Water EDUs are assigned per the District’s Appendix C document (attached).

Wastewater EDUs are assigned as follows: Each residential connection including single family, multiple dwelling, condominium, trailer spaces and mobile homes is equal to one EDU. Non-residential wastewater EDUs are calculated based on plumbing fixture units at a current conversion rate of 20 fixture units per EDU. For each hotel/motel unit, a minimum of one EDU per room is applied. Each non-residential connection is a minimum of one EDU.

## 2.2 Facility Cost Valuation

There are a number of widely used methods for valuing infrastructure and assets for cost recovery via capacity fees. BWA developed the capacity fees in this report using an asset valuation approach known as Replacement Cost New Less Depreciation (RCNLD) – This approach escalates the depreciated accounting book value of each asset escalated into current dollars based on the change in the Engineering News-Record (ENR) Construction Cost Index from each asset’s acquisition date. The ENR index is a widely used index for determining construction cost inflation. Asset values for each cost center were determined using the 2018 CAFR value escalated to current dollars less water rights, easements and depreciation.

## 2.3 Capacity Fee Calculation Overview

While the current fee calculation methodology is a widely used and generally appropriate way to recover the future share of the District’s utility system assets and development costs, BWA proposes that the District adopt a more comprehensive cost recovery approach as summarized below.

### **Current Methodology: Average Cost**

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

### **Proposed Methodology: Hybrid Buy-In + Marginal Future Cost**

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

### 2.3.1 Current Methodology: Average Cost Approach

The current capacity fees were calculated with an *average cost approach* fees using the District’s existing system, future projects and buildout projections. Under this approach, new connections pay an average cost of the total value of the system escalated to current dollars and the total Capital Improvement Plan. The fees are calculated based on the total cost of facilities plus total CIP divided by the total capacity the District is projected to serve through build-out. This is a widely used and accepted approach for calculating capacity fees but may not comprehensively recover the future share of existing assets and development from future users. BWA recommends that the District adopt the proposed methodology for capacity fees in the future, as summarized in Section 2.3.2.



## 2.3.2 Proposed Methodology: Hybrid Buy-In + Marginal Future Cost Methodology

Under the proposed approach, new connections buy in to the District's current system based on an average share of the total system, including the value of each enterprise's assets escalated to current dollars and the present value of CIP benefiting all users. New connections also pay for the future cost of expansion by adding the present value of future CIP to the fee basis. The fees are calculated based on the total cost of facilities divided by the total capacity the District is projected to serve through the near-term (2035) plus future CIP divided by future capacity in the near-term. This fee would comprehensively recover the development share of existing facilities and CIP benefiting future users.

## 3 Capacity Fee Calculation

### 3.1 System Buy-In Component – Existing Assets

Under the methodology described in Section 2, updated capacity fees are designed to recover the cost of existing water, wastewater and recycled water system facilities and assets (in current dollars) as well as the cost of system upgrades and expansion needed to serve the District through 2035. Since a detailed list of assets was not available at the time of this study, BWA used the District's FY 2018 Comprehensive Annual Financial Report (CAFR) for the current value of each system's fixed assets by escalating the values in the latest audit to current dollars for the FY 2019 Fiscal Year. Non-depreciable assets such as water rights and easements are not included in the asset valuation.

### 3.2 Future Cost Component – Capital Improvement Projects

The District's 2019 Master Plan outlines the capital improvements needed for each utility to reach near-term buildout in 2035. These projects include upgrades, expansions, regular maintenance, and new facilities. The Master Plan divides project costs into two benefit groups: current customers and future customers. The present value of capital improvements benefiting future customers is included in the capacity fee calculation. Capital Improvement Projects are summarized in Table 2 and provided in the Master Plan developed by Akel Engineering.

**Table 2: 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	\$19,476,500	\$27,391,000
Ord Share Combined Water CIP	\$5,769,390	\$3,843,160	\$9,612,550
<b>Total Water CIP</b>	<b>\$29,253,450</b>	<b>\$28,707,100</b>	<b>\$57,960,550</b>
Marina Recycled Water (Adjusted) <sup>1</sup>	\$8,162,000	\$5,723,458	\$13,885,458
Ord Recycled Water (Adjusted) <sup>1</sup>	\$7,238,000	\$41,231,891	\$48,469,891
<b>Total Recycled CIP</b>	<b>\$15,400,000</b>	<b>\$46,955,349</b>	<b>\$62,355,349</b>
<b>Total Marina Water<sup>2</sup></b>	<b>\$23,731,560</b>	<b>\$11,110,898</b>	<b>\$34,842,458</b>
<b>Total Ord Water<sup>2</sup></b>	<b>\$20,921,890</b>	<b>\$64,551,551</b>	<b>\$85,473,441</b>
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	\$21,841,121	\$36,691,272
Ord Share Combined Wastewater CIP	\$124,780	\$0	\$124,780
<b>Total Wastewater CIP</b>	<b>\$20,099,599</b>	<b>\$24,007,775</b>	<b>\$44,107,374</b>
<b>Total Marina Wastewater</b>	<b>\$5,124,668</b>	<b>\$2,166,654</b>	<b>\$7,291,322</b>
<b>Total Ord Wastewater</b>	<b>\$14,974,931</b>	<b>\$21,841,121</b>	<b>\$36,816,052</b>

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 3 summarizes the adjustments made to the Recycled Water Capital Plan. Capital contributions and grants have been removed from the total project cost and the future user portion of interest costs on three proposed loans have been added to the total project cost. Existing users will pay their share of interest costs on the proposed loans through rates rather than capacity fees. Rates and debt service are paid annually whereas capacity fees are paid upfront for the entirety of the project, so total future interest costs are included in the project cost.

**Table 3: 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 <sup>1</sup>	\$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
	<b>\$3,285,458</b>	<b>\$39,069,891</b>	<b>\$42,355,349</b>
<b>Total Recycled Water Capital Improvement Plan (Nearterm)</b>			
	<b>Central Marina</b>	<b>Ord Community</b>	<b>Total</b>
Existing Users	\$8,162,000	\$7,238,000	\$15,400,000
Future Users	\$5,723,458	\$41,231,891	\$46,955,349
	<b>\$13,885,458</b>	<b>\$48,469,891</b>	<b>\$62,355,349</b>
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			

### 3.3 Proposed Updates to Water Use Factors

#### 3.3.1 Estimated Water Demand per EDU

Marina Coast WD currently defines a water equivalent dwelling unit as the amount a typical residential dwelling would use in a year or 0.33 AF per year. For non-residential development, the District utilizes “Appendix C, Assigned Water Use Factors for Determining Water Capacity Charges” to estimate the annual water use for various types of customers.

The District recently reviewed and updated its water use factors based on 0.28 AF per year. The updated Appendix C is provided following this report.

#### 3.3.2 Estimated Sewer Flow per EDU

Table 4 summarizes the sewer flow per person in the District between 2010 and 2016. The sewer flow trend is downward during this period and the average sewer flow per person is 63 gallons. The District estimates a typical household population of 2.8 persons. Thus, the typical sewer flow from a single-family home is estimated at 174 gallons per day. BWA recommends that the District establish 174 gallons per day as the flow for one EDU.

**Table 4: 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

---

### 3.4 Current and Projected Customers to Near-Term

Table 5 shows current and projected customers in EDUs. Water EDUs were calculated using AKEL Engineering and District updated estimates of average day demand at 0.28AF/yr/EDU and average day demand growth factors from present day to near-term growth in 2035. Wastewater EDUs were calculated using 0.195 AFY/EDU (or 174 gallons per day per BWA’s findings in Section 3.3.2) and average day demand growth factors from present day to near-term growth in 2035.

The District is expecting significant growth to near-term buildout in 2035 per the projections in the latest Sewer Master Plan. BWA evaluated several methodologies for customer growth and concluded that the most reasonable methodology to apply is the projected change in average day demand from 2019 to near-term buildout, representing 24% growth in Marina and 79% growth in Ord between now and 2035. Average Day Water Demand projections are also shown in Table 5.

**Table 5: Water Demand Projections & EDUs to Near-Term**

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
<b>% Growth to Near Term</b>	<b>24%</b>	<b>79%</b>	<b>45%</b>
<b>% Growth to Buildout</b>	<b>24%</b>	<b>361%</b>	<b>155%</b>
Estimated EDUs @			0.28 250
			AFY/EDU 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
<b>% Growth to Near Term</b>	<b>24%</b>	<b>79%</b>	<b>45%</b>
<b>% Growth to Buildout</b>	<b>24%</b>	<b>361%</b>	<b>155%</b>
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
<b>% Growth to Near Term</b>	<b>17%</b>	<b>76%</b>	<b>44%</b>
<b>% Growth to Buildout</b>	<b>17%</b>	<b>318%</b>	<b>153%</b>
Estimated EDUs @			0.195 174
			AFY/EDU 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
<b>% Growth to Near Term</b>	<b>17%</b>	<b>76%</b>	<b>44%</b>
<b>% Growth to Buildout</b>	<b>17%</b>	<b>318%</b>	<b>153%</b>

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

Water and Wastewater EDUs were both estimated using these demand projections. EDU growth projections are summarized in Table 6.

**Table 6: Projected EDUs to Near-Term**

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

1 - Source: Table 3

### 3.5 Wastewater Capacity Fee Calculation

Table 7 shows the detailed calculation of the District’s updated capacity fees using the methodology described in Section 2.3.2 and updated information described in above in Section 3. Recycled Water assets and CIP are included in the water capacity fee featuring adjustments described in Section 3.2. Fees were calculated using EDUs to near-term as a dividing factor. Additional tables which provide further detail are provided following this report.

**Table 7: Proposed Capacity Fee Calculation – Hybrid Buy-In + Marginal Future Cost**

System Capacity Charge	recovers development share of existing facilities + future CIP				
	2019 ENR CCI Adj.	Marina Water	Ord Water	Marina Sewer	Ord Sewer
<b>Existing Asset Component - Applies to All Users</b>					
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)
<b>3 RCNLD of Water Infrastructure in Service (sum of 1 to 2)</b>		<b>\$ 12,053,654</b>	<b>\$ 107,014,589</b>	<b>\$ 5,979,786</b>	<b>\$ 35,669,978</b>
<b>Value of Other Depreciable Assets</b>					
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)
<b>6 RCNLD of Other Depreciable Assets (sum of 4 to 5)</b>		<b>\$ -</b>	<b>\$ (74,698,200)</b>	<b>\$ -</b>	<b>\$ (27,248,400)</b>
<b>7 Total Value of Capital Assets (3 + 6)</b>		<b>\$ 12,053,654</b>	<b>\$ 32,316,389</b>	<b>\$ 5,979,786</b>	<b>\$ 8,421,578</b>
<b>Existing and Future Customer Base- EDUS</b>					
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>
<b>10 Total Number of EDUs to Nearterm (8+9)</b>		<b>9,841</b>	<b>9,001</b>	<b>7,414</b>	<b>9,080</b>
<b>11 Buy In Capacity Fee Component (7/10) \$/EDU</b>		<b>\$ 1,225</b>	<b>\$ 3,590</b>	<b>\$ 807</b>	<b>\$ 927</b>
<b>Future Cost Component - Applies to Future Users Only</b>					
<b>CIP allocated to Future Users - Nearterm 2035</b>					
12 Water Master Plan		\$ 5,387,440	\$ 23,319,660	\$ -	\$ -
13 Sewer Master Plan		\$ -	\$ -	\$ 2,166,654	\$ 21,841,121
14 Recycled Water Master Plan <sup>1</sup>		\$ <u>3,285,458</u>	\$ <u>39,069,891</u>	\$ -	\$ -
<b>15 Total Value of Future CIP to Nearterm (12+13+14)</b>		<b>\$ 8,672,898</b>	<b>\$ 62,389,551</b>	<b>\$ 2,166,654</b>	<b>\$ 21,841,121</b>
<b>Future Customer Base- EDUS</b>					
16 Number of Future EDUs to Nearterm - 2035 (9)		1,920	3,961	1,092	3,908
<b>17 Expansion Capacity Fee Component (15/16) \$/EDU</b>		<b>\$ 4,517</b>	<b>\$ 15,753</b>	<b>\$ 1,984</b>	<b>\$ 5,589</b>
<b>System Capacity Charge Results - EDUs</b>					
<b>18 Estimated System Capacity Charge (11+17) \$/EDU</b>		<b>\$ 5,741</b>	<b>\$ 19,343</b>	<b>\$ 2,791</b>	<b>\$ 6,516</b>
19 Current Capacity Charge \$/EDU		\$ 4,526	\$ 8,010	\$ 2,333	\$ 3,322
20 Difference (18-19)		\$ 1,215	\$ 11,333	\$ 458	\$ 3,194

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

### 3.6 Estimated Plumbing Fixture Units per EDU

Many agencies including the District assign non-residential sewer EDUs based on the count of plumbing fixture units in a new building. Plumbing fixtures are defined in Chapter 7 of the California Plumbing Code (CPC) and various plumbing units are assigned fixture unit counts based on the relative flow associated with that unit. For example, a clothes washer is assigned 3 fixture units and a kitchen sink is assigned 2 fixture units. The District currently equates one EDU with 20 fixture units. As shown in Table 8, a typical single-family home with two bathrooms is currently rated at 19 DFUs based on Table 702.1 of the 2016 CPC. BWA recommends that the District update its fixture unit allocation per EDU to 19 fixture units.

**Table 8: Estimated Plumbing Fixture Units per EDU**

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
<b>Fixture Units in a Typical Single Family Residence =</b>			<b>19</b>

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

### 3.7 Accessory Dwelling Units

Recently enacted state law, Government Code Section 65852.2 (SB 1069) effective January 1, 2018, requires that the capacity fees charged to ADUs must proportionately account for impact on services based on the ADU’s size or number of plumbing fixtures. Table 9 summarizes an example calculation for a hypothetical ADU containing a kitchen sink, bathroom (lavatory) sink, 1.28 gpf toilet and a shower. The ADU in this example would have a rating of 8 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
<b>Fixture Units in Example ADU</b>			<b>8</b>

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



### 3.8 Other Sewer EDU updates

MCWD proposes to revise the Water Code regarding sewer EDU calculations as follows:

- 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
- Updated Sewer Flow per EDU = 62gpd \* 2.8 persons/household = 174gpd/EDU

## 4 Conclusion and Recommendations

### 4.1 Summary of Proposed Fees

Table 10 provides a summary of findings per the methodology and District information detailed in this report. BWA has calculated fees on a \$/EDU basis using the proposed methodology described in Section 2.3.2 and calculated in Table 7.

**Table 10: Summary of Proposed Fees**

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

Ord Community			
<u>Proposed Capacity Fees - Hybrid Approach (Nearterm)</u>	<u>Current</u>	<u>Proposed</u>	<u>\$ Increase (Decrease)</u>
Water Capacity Fee - \$/EDU	\$8,010	\$19,343	\$11,333
Sewer Capacity Fee - \$/EDU	\$3,322	\$6,516	\$3,194
<b>Total Capacity Fee</b>	<b>\$11,332</b>	<b>\$25,859</b>	<b>\$14,527</b>

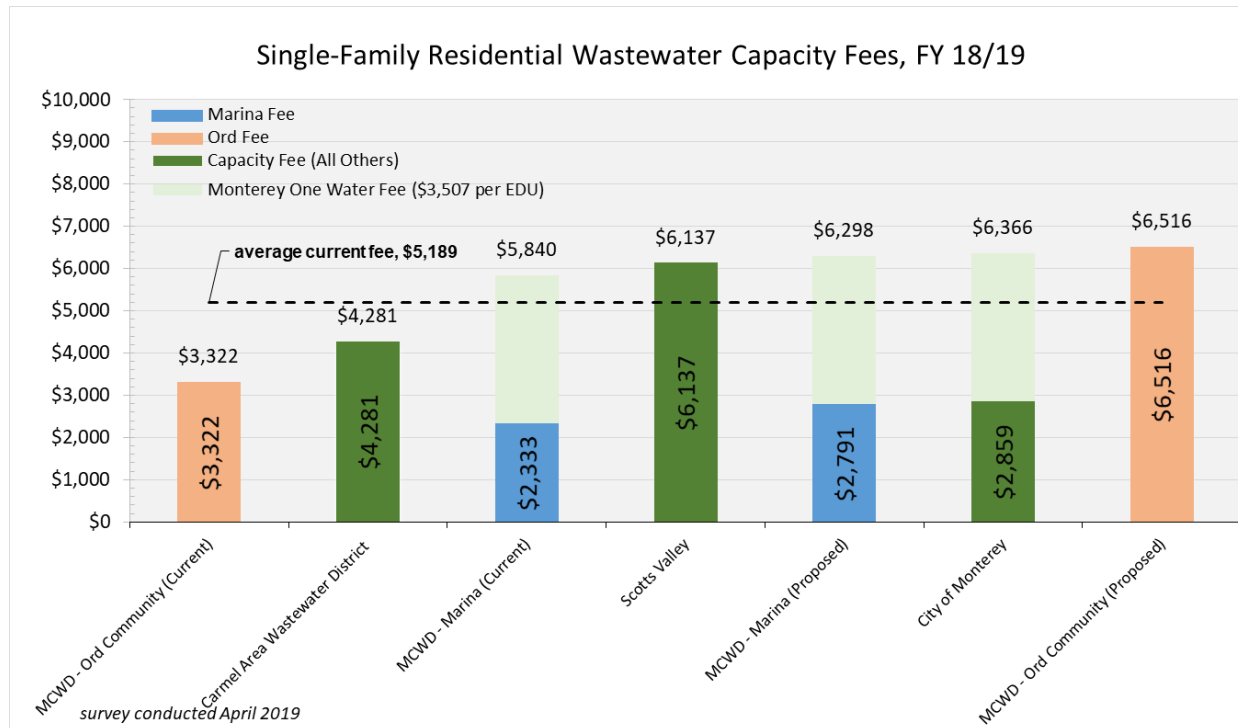
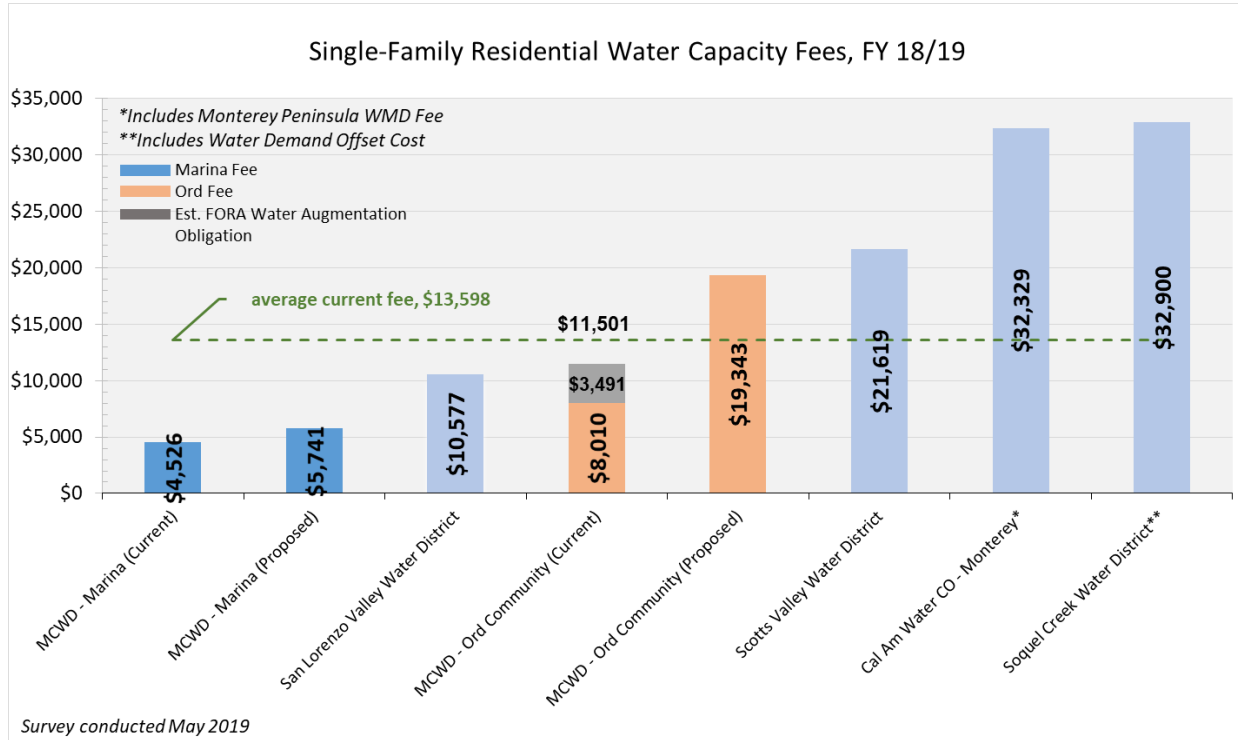
  

**Non Residential Water Fees**  
 Each EDU is equivalent to 0.28 Acre foot water use per year.  
 Refer to MCWD "Appendix C" for assigned water use factors

**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

## 4.2 Capacity Fee Survey of Surrounding Agencies

BWA conducted a capacity fee survey of surrounding water and wastewater agencies to compare with the District's proposed fees. The results are shown below.



### 4.3 Conclusion

BWA finds that the proposed fees follow generally accepted fee design criteria and adhere to the substantive requirements of government code. BWA recommends that the District adopt the fees enclosed in this report by following the procedure to increase capacity fees as follows:

1. Create a nexus study to determine equitable capacity fees (Done by BWA)
2. Set notice the date of a public hearing as required in Government Code
3. Send notice of hearing to developers if specifically requested in writing
4. Hold public hearing and adopt new capacity fees via Resolution
5. Fees may become effective not less than 30 days after adoption

### 4.4 Future Fee Adjustments

In future years, BWA recommends that the District update its capacity fees annually by adjusting the fees by the change in the Engineering News-Record Construction Cost Index (20-Cities Average) to account for future construction cost inflation. Additionally, the District should review and consider updating its capacity fees when substantial revisions are made to anticipated capital improvement costs or to substantial changes in projected demand. In general, BWA recommends that capacity fees be independently reviewed and/or updated approximately once every five years.

# Marina Coast WD



## Water, Wastewater & Recycled Water Capacity Fee Tables

**10/17/2019**



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> <sup>1</sup>	<u>Ord Community</u> <sup>1</sup>
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	<b>\$1,970,000</b>
Marina Share Combined Water CIP	\$13,891,560	\$5,095,440	<b>\$18,987,000</b>
Ord Water	\$7,914,500	\$19,476,500	<b>\$27,391,000</b>
Ord Share Combined Water CIP	\$5,769,390	\$3,843,160	<b>\$9,612,550</b>
<b>Total Water CIP</b>	<b>\$29,253,450</b>	<b>\$28,707,100</b>	<b>\$57,960,550</b>
Marina Recycled Water (Adjusted) <sup>1</sup>	\$8,162,000	\$5,723,458	<b>\$13,885,458</b>
Ord Recycled Water (Adjusted) <sup>1</sup>	\$7,238,000	\$41,231,891	<b>\$48,469,891</b>
<b>Total Recycled CIP</b>	<b>\$15,400,000</b>	<b>\$46,955,349</b>	<b>\$62,355,349</b>
<b>Total Marina Water<sup>2</sup></b>	<b>\$23,731,560</b>	<b>\$11,110,898</b>	<b>\$34,842,458</b>
<b>Total Ord Water<sup>2</sup></b>	<b>\$20,921,890</b>	<b>\$64,551,551</b>	<b>\$85,473,441</b>
Marina Wastewater	\$5,033,148	\$2,166,654	<b>\$7,199,802</b>
Marina Share Combined Wastewater CIP	\$91,520	\$0	<b>\$91,520</b>
Ord Wastewater	\$14,850,151	\$21,841,121	<b>\$36,691,272</b>
Ord Share Combined Wastewater CIP	\$124,780	\$0	<b>\$124,780</b>
<b>Total Wastewater CIP</b>	<b>\$20,099,599</b>	<b>\$24,007,775</b>	<b>\$44,107,374</b>
<b>Total Marina Wastewater</b>	<b>\$5,124,668</b>	<b>\$2,166,654</b>	<b>\$7,291,322</b>
<b>Total Ord Wastewater</b>	<b>\$14,974,931</b>	<b>\$21,841,121</b>	<b>\$36,816,052</b>

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						
<b>Subtotal</b>						<b>\$8,841,000</b>
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
<b>Subtotal</b>						<b>\$15,576,000</b>
G-PS-B	10%	0%	65%	25%	100%	\$737,000
<b>Subtotal</b>						<b>\$737,000</b>
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
<b>Subtotal</b>						<b>\$2,904,000</b>
G-PRV-B1	73%	19%	2%	6%	100%	\$137,000
<b>Subtotal</b>						<b>\$137,000</b>
G-WD1	37%	0%	63%	0%	100%	\$465,000
<b>Subtotal</b>						<b>\$465,000</b>
<b>Total</b>	<b>\$13,891,560</b>	<b>\$5,095,440</b>	<b>\$5,829,840</b>	<b>\$3,843,160</b>	<b>\$28,660,000</b>	<b>\$28,660,000</b>

**Table 2C**  
**Recycled Water CIP Detail**

	<b>Nearterm 2035 Recycled Water CIP</b>		
	<b>Central Marina</b>	<b>Ord Community</b>	<b>Total</b>
Existing Users	\$0	\$0	\$0
Future Users			
Capital Improvement Project Cost	\$3,164,723	\$37,634,141	\$40,798,864
Plus Future Interest Costs <sup>1</sup>	\$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
	<b>\$3,285,458</b>	<b>\$39,069,891</b>	<b>\$42,355,349</b>
<b>Total Recycled Water Capital Improvement Plan (Nearterm)</b>			
	<b>Central Marina</b>	<b>Ord Community</b>	<b>Total</b>
Existing Users	\$8,162,000	\$7,238,000	\$15,400,000
Future Users	\$5,723,458	\$41,231,891	\$46,955,349
	<b>\$13,885,458</b>	<b>\$48,469,891</b>	<b>\$62,355,349</b>

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 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
<b>% Growth to Near Term</b>	<b>24%</b>	<b>79%</b>	<b>45%</b>
<b>% Growth to Buildout</b>	<b>24%</b>	<b>361%</b>	<b>155%</b>

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
<b>% Growth to Near Term</b>	<b>24%</b>	<b>79%</b>	<b>45%</b>
<b>% Growth to Buildout</b>	<b>24%</b>	<b>361%</b>	<b>155%</b>

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
<b>% Growth to Near Term</b>	<b>17%</b>	<b>76%</b>	<b>44%</b>
<b>% Growth to Buildout</b>	<b>17%</b>	<b>318%</b>	<b>153%</b>

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
<b>% Growth to Near Term</b>	<b>17%</b>	<b>76%</b>	<b>44%</b>
<b>% Growth to Buildout</b>	<b>17%</b>	<b>318%</b>	<b>153%</b>

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

**Table 4  
Marina Coast WD  
Growth Projections**

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

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
<b>Existing Asset Component - Applies to All Users</b>					
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)
<b>3 RCNLD of Water Infrastructure in Service (sum of 1 to 2)</b>		<b>\$ 12,053,654</b>	<b>\$ 107,014,589</b>	<b>\$ 5,979,786</b>	<b>\$ 35,669,978</b>
<b>Value of Other Depreciable Assets</b>					
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)
<b>6 RCNLD of Other Depreciable Assets (sum of 4 to 5)</b>		<b>\$ -</b>	<b>\$ (74,698,200)</b>	<b>\$ -</b>	<b>\$ (27,248,400)</b>
<b>7 Total Value of Capital Assets (3 + 6)</b>		<b>\$ 12,053,654</b>	<b>\$ 32,316,389</b>	<b>\$ 5,979,786</b>	<b>\$ 8,421,578</b>
<b>Existing and Future Customer Base- EDUS</b>					
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>
<b>10 Total Number of EDUs to Nearterm (8+9)</b>		<b>9,841</b>	<b>9,001</b>	<b>7,414</b>	<b>9,080</b>
<b>11 Buy In Capacity Fee Component (7/10) \$/EDU</b>		<b>\$ 1,225</b>	<b>\$ 3,590</b>	<b>\$ 807</b>	<b>\$ 927</b>
<b>Future Cost Component - Applies to Future Users Only</b>					
<b>CIP allocated to Future Users - Nearterm 2035</b>					
12 Water Master Plan		\$ 5,387,440	\$ 23,319,660	\$ -	\$ -
13 Sewer Master Plan		\$ -	\$ -	\$ 2,166,654	\$ 21,841,121
14 Recycled Water Master Plan <sup>1</sup>		<u>\$ 3,285,458</u>	<u>\$ 39,069,891</u>	<u>\$ -</u>	<u>\$ -</u>
<b>15 Total Value of Future CIP to Nearterm (12+13+14)</b>		<b>\$ 8,672,898</b>	<b>\$ 62,389,551</b>	<b>\$ 2,166,654</b>	<b>\$ 21,841,121</b>
<b>Future Customer Base- EDUS</b>					
16 Number of Future EDUs to Nearterm - 2035 (9)		1,920	3,961	1,092	3,908
<b>17 Expansion Capacity Fee Component (15/16) \$/EDU</b>		<b>\$ 4,517</b>	<b>\$ 15,753</b>	<b>\$ 1,984</b>	<b>\$ 5,589</b>
<b>System Capacity Charge Results - EDUs</b>					
<b>18 Estimated System Capacity Charge (11+17) \$/EDU</b>		<b>\$ 5,741</b>	<b>\$ 19,343</b>	<b>\$ 2,791</b>	<b>\$ 6,516</b>
19 Current Capacity Charge \$/EDU		\$ 4,526	\$ 8,010	\$ 2,333	\$ 3,322
20 Difference (18-19)		\$ 1,215	\$ 11,333	\$ 458	\$ 3,194

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**

<b>Fixture Type</b>	<b>Quantity</b>	<b>DFU (1)</b>	<b>Total DFU</b>
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
<b>Fixture Units in a Typical Single Family Residence =</b>			<b>19</b>

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**

<b>Fixture Type</b>	<b>Quantity</b>	<b>DFU (1)</b>	<b>Total DFU</b>
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
<b>Fixture Units in Example ADU</b>			<b>8</b>

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>
<b>Total Capacity Fee</b>	<b>\$6,859</b>	<b>\$8,532</b>	<b>\$1,673</b>

Ord Community			
Proposed Capacity Fees - Hybrid Approach (Nearterm)	Current	Proposed	\$ Increase (Decrease)
Water Capacity Fee - \$/EDU	\$8,010	\$19,343	\$11,333
Sewer Capacity Fee - \$/EDU	<u>\$3,322</u>	<u>\$6,516</u>	<u>\$3,194</u>
<b>Total Capacity Fee</b>	<b>\$11,332</b>	<b>\$25,859</b>	<b>\$14,527</b>

**Non Residential Water Fees**

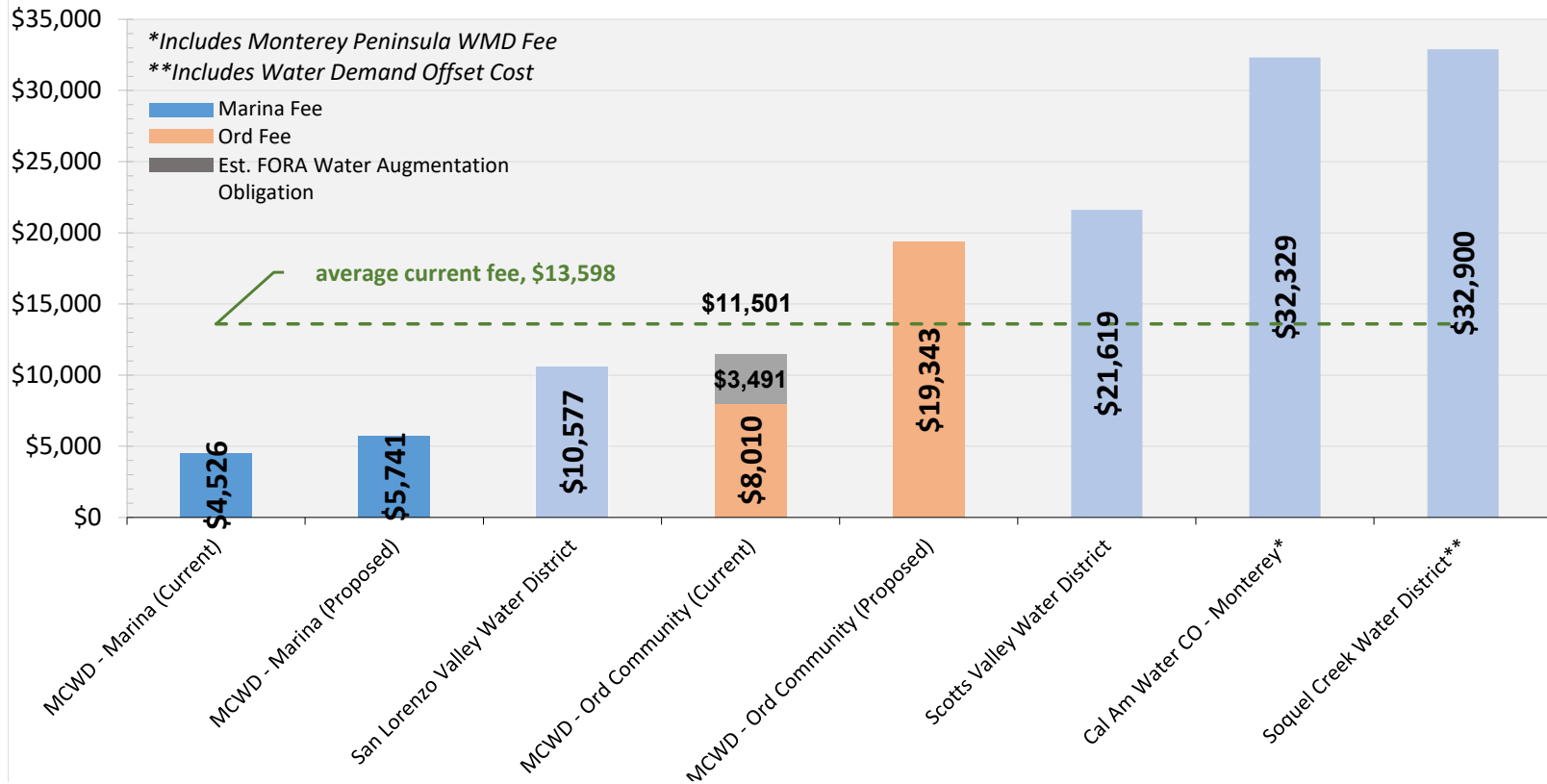
Each EDU is equivalent to 0.28 Acre foot water use per year.  
 Refer to MCWD "Appendix C" for assigned water use factors

**Non Residential Sewer Fees**

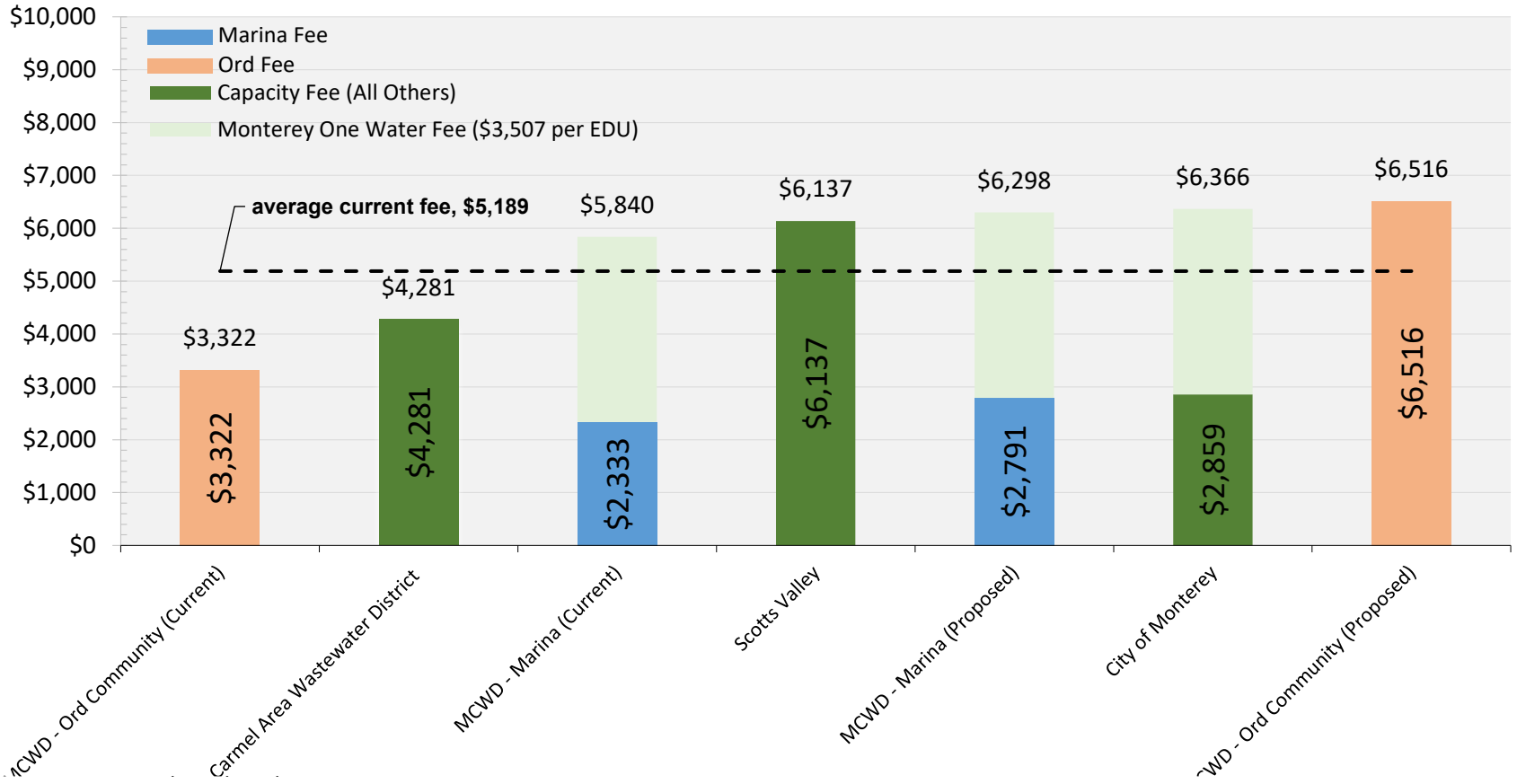
Each nineteen (19) fixture units are equivalent to one (1) equivalent dwelling unit (EDU).  
 Each Single Family Residential connection is one (1) EDU  
 Each Multi Family Residential Connection (multiple dwelling, condominium, trailer space or mobile home) is 0.8 EDU  
 Each nonresidential connection 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



Proposed Marina Coast Water District Water Use Factors for  
Determining Capacity Charges

Type of Use	Basis	Existing Assigned Water Use Rate By Acre-Ft	Proposed Assigned Water Use Rate By Acre-Ft
<b><u>Residential</u></b>			
Multi Family - Apartment	DU	x 0.33	<b>0.21</b>
Apartment (senior complex)	DU	x	<b>0.12</b>
Group Housing (boarding, dormitory, convalescent)	Occupant	x	<b>0.062</b>
Condominium/Townhouse	DU	x <b>0.33</b>	<b>0.24</b>
Mobile Home	DU	x <b>0.33</b>	<b>0.21</b>
Multi-Family - Duplex to Fourplex	DU	x <b>0.33</b>	<b>0.24</b>
Single Family 0<lot<0.08 acres (13 or more units per acre)	DU	x <b>0.33</b>	<b>0.25</b>
Single Family 0.08<=lot<0.12 acres (9-12 Units/Acre)	DU	x <b>0.33</b>	<b>0.28</b>
Single Family 0.12<=lot<0.22 (5-8 Units /Acre)	DU	x <b>0.33</b>	<b>0.33</b>
Single Family 0.22<=lot<0.67 (2- 4 Units/acre)	DU	x <b>0.33</b>	<b>0.52</b>
Single Family (lot>= 0.67 acres)	acres	x	<b>0.89</b>
Accessory Dwelling Unit < 640 sq. ft.	DU	x	<b>0.17</b>
Accessory Dwelling Unit 641 to 800 sq. ft.	DU	x	<b>0.21</b>
Accessory Dwelling Unit 841-1200 sq. ft.	DU	x	<b>0.25</b>
<b><u>Non-Residential</u></b>			
Auto Sales/Repair Shops (Gross Floor Area)	sq. ft.	x 0.00007	<b>0.00006</b>
Bank	sq. ft.	x	<b>0.00030</b>
Bakery	sq. ft.	x	<b>0.00027</b>
Bar (w/o restaurant)	sq. ft.	x 0.024/seat	<b>0.00023</b>
Beauty shop/barber shop	stations	x 0.059	<b>0.050</b>
Car Wash w/ recycle	sq. ft.	x *	<b>*</b>
Child Care	sq. ft.	x 0.0072	<b>0.0061</b>
Dry Cleaners (onsite cleaning)	sq. ft.	x 0.00040	<b>0.00040</b>
Gas Station (w/o minimart or restaurant)	pumps	x 0.1051	<b>0.1051</b>
Gym, Health Club (w/o aquatics)	sq. ft.	x	<b>0.000117</b>
Hotel/Motel/Bed & Breakfast (Guest room portion only)	units	x 0.170	<b>0.110</b>
Laundromat (self-serve)	washers	x 0.202	<b>0.202</b>
Laundry - Commercial	sq. ft.	x 0.1735	<b>*</b>
Office - General (nonmedical, includes chiropractor)	sq. ft.	x 0.00012	<b>0.000102</b>
Office - Government, Education	sq. ft.	x	<b>0.000092</b>
Office - Dental	sq. ft.	x 0.00029	
Office - Medical, Dental	sq. ft.	x 0.00018	<b>0.000162</b>
Manufacturing (other than food, beverage, chemical)	sq. ft.	x	<b>0.056</b>
Manufacturing (food, beverage, chemical)	sq. ft.	x	<b>*</b>
Meeting Halls, Churches, School Room	sq. ft.	x 0.0001	<b>0.000092</b>
Nursing Home (care portion only)	bed	x 0.142/room	<b>0.12</b>
Laboratory	sq. ft.	x	<b>0.000082</b>
Laboratory - Photographic	sq. ft.	x 0.003	<b>0.003</b>
Landscape (non-turf)	acres	x 2.1	<b>1.8</b>
Landscape (turf)	acres	x 2.5	<b>2.1</b>
Plant Nursery	sq. ft.	x 0.00009	<b>0.00009</b>

Proposed Marina Coast Water District Water Use Factors for  
Determining Capacity Charges

Type of Use	Basis	Existing Assigned Water Use Rate By Acre-Ft	Proposed Assigned Water Use Rate By Acre-Ft
<b>Public Restroom</b>	toilets	x 0.0676	<b>0.058</b>
Restaurant (incl. fast food, deli, sandwich shop)	seats	x 0.029	
<b>Restaurant (full service - 3 meals, dish washing)</b>	<b>sq. ft.</b>	<b>x</b>	<b>0.00125</b>
<b>Restaurant (Fast-food/casual with onsite prep)</b>	<b>sq. ft.</b>	<b>x</b>	<b>0.00051</b>
<b>Restaurant (take out w/ minimal onsite prep)</b>	sq. ft.	x 0.0027	<b>0.00027</b>
<b>Store - General Retail (Department Store)</b>	sq. ft.	x 0.00005	<b>0.00005</b>
<b>Store - Grocery and Markets</b>	sq. ft.	x 0.00039	<b>0.00033</b>
<b>Swimming Pool (per 100 sq. ft. pool area)</b>		x 0.020	<b>0.02</b>
<b>Theater</b>	seats	x 0.0014	<b>0.0012</b>
<b>Veterinary</b>	sq. ft.	x 0.00026	<b>0.00022</b>
<b>Warehouse, Distribution, Self Storage</b>	sq. ft.	x 0.00001	<b>0.00001</b>