

Rialto Development Impact Fee Update Calculations and Benchmarking

APPENDIX B

Wastewater Treatment

Line

No. Step 1. Existing Wastewater Treatment DIF

1			Existing Fee,
2			Effective
3	Development Fee Category	Unit	7/1/2018
4	Group I - Residential Uses Estate / Single Family per EDU	EDU	\$3,577.61
5	Group I - Residential Uses Multi Family per EDU	EDU	\$2,785.43
6	Group II - Commercial (Low Strength) Auto Parking	1000 SF	\$276.46
7	Group II - Commercial (Low Strength) Barber Shop	1000 SF	\$1,382.26
8	Group II - Commercial (Low Strength) Beauty Parlor	1000 SF	\$3,871.49
9	Group II - Commercial (Low Strength) Car Wash (1)	1000 SF	\$45,757.47
10	Group II - Commercial (Low Strength) Church	per fixed seat	\$54.60
11	Group II - Commercial (Low Strength) Commercial Use	1000 SF	\$1,105.80
12	Group II - Commercial (Low Strength) Dental Office/Clinic	1000 SF	\$3,203.58
13	Group II - Commercial (Low Strength) Department and Retail Store	1000 SF	\$1,382.26
14	Group II - Commercial (Low Strength) Film Processing (1 hour)	1000 SF	\$1,382.26
15	Group II - Commercial (Low Strength) Health Club/Spa	1000 SF	\$11,059.24
16	Group II - Commercial (Low Strength) Hospitals	bed	\$1,293.98
17	Group II - Commercial (Low Strength) Indoor Theatre	1000 SF	\$7,472.33
18	Group II - Commercial (Low Strength) Laundromats	1000 SF	\$61,529.17
19	Group II - Commercial (Low Strength) Laundromats	per machine	\$2,274.34
20	Group II - Commercial (Low Strength) Library: Public Area	1000 SF	\$1,105.80
21	Group II - Commercial (Low Strength) Lumber Yard	1000 SF	\$493.66
22	Group II - Commercial (Low Strength) Membership Organizations	1000 SF	\$2,563.57
23	Group II - Commercial (Low Strength) Motion Pictures (Studios)	1000 SF	\$320.60
24	Group II - Commercial (Low Strength) Professional Offices	1000 SF	\$2,563.57
25	Group II - Commercial (Low Strength) Social Services	1000 SF	\$2,563.57
26	Group II - Commercial (Low Strength) Softwater Service	1000 SF	\$2,222.08
27	Group II - Commercial (Low Strength) Theater (Cinema)	seat	\$54.60
28	Group II - Commercial (Low Strength) Warehouse	1000 SF	\$276.46
29	Group III - Commercial (Medium Strength) Gas Station - 4 Bays Max	per station	\$6,716.16
30	Group III - Commercial (Medium Strength) Manufacturing (domestic)	1000 SF	\$1,105.80
31	Group III - Commercial (Medium Strength) Hotels-Motels (w/o restaurants)	room	\$1,986.27
32	Group III - Commercial (Medium Strength) Manufacturing	1000 SF	\$3,942.35
33	Group III - Commercial (Medium Strength) Repair and Service stations	1000 SF	\$1,562.30
34	Group IV - Commercial (High Strength) Bakeries (wholesale) Doughnut Shop	1000 SF	\$7,950.91
35	Group IV - Commercial (High Strength) Banquet Room/Ball Room	1000 SF	\$22,715.53
36	Group IV - Commercial (High Strength) Cafeteria	seat	\$851.42
37	Group IV - Commercial (High Strength) Doughnut Shop	1000 SF	\$7,950.91
38	Group IV - Commercial (High Strength) Hotels/Motels (w restaurants) (2)	1000 SF	
39	Group IV - Commercial (High Strength) Mortuary - Embalming Area	7 SF	\$141.70
40	Group IV - Commercial (High Strength) Restaurant - Take-out	1000 SF	\$8,518.90
41	Group IV - Commercial (High Strength) Restaurant - Drive-thru/Fast Food	per seat	\$569.16
42	Group IV - Commercial (High Strength) Restaurant - Fast food/Outdoor seat	per seat	\$340.34
43	Group IV - Commercial (High Strength) Restaurant - Full service/Indoor seat	per seat	\$851.42
44	Group IV - Commercial (High Strength) Restaurant - Full service/Outdoor seat	per seat	\$511.08
45	Group IV - Commercial (High Strength) Supermarkets	1000 SF	\$2,840.03
46	Group V - Institutional Uses -Church School Day Care/Elementary	occupant	\$104.54
47	Group V - Institutional Uses - Church School One Day Use per 1000 sf	1000 SF	\$2,607.71
48	Group V - Institutional Uses - Schools - Elementary/Junior	per student	\$102.22
49	Group V - Institutional Uses - Schools - High per student	per student	\$156.81
50			

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Step 2. Summarize Cost Basis. Allocated into Flow, BOD, and TSS Components

	Flow, Collection System, > 12" Diameter	Flow @WWTP	BOD	TSS	Indirect @WWTP (1)	Total
Trended OCLD (2)	\$30,280,344	\$24,261,137	\$16,027,204	\$15,055,072	\$4,816,497	\$90,440,254
Less Contributed						
Grant	(\$26,068)	(\$947,076)			(\$89,315)	(\$1,062,458)
Developer	(\$5,559,102)					(\$5,559,102)
City/RDA	(\$656,920)		(\$1,857,365)	(\$1,857,365)		(\$4,371,649)
Subtotal	\$24,038,254	\$23,314,061	\$14,169,839	\$13,197,708	\$4,727,183	\$79,447,045
Allocation of Indirect @ WWTP Assets (1)		\$2,174,553	\$1,321,651	\$1,230,979	(\$4,727,183)	\$0
Less Debt Service (3) (4)		(\$3,251,029)	(\$3,251,029)	(\$3,251,029)		(\$9,753,087)
Plus Repaid Portion of FIP (3) (5)	\$1,071,055					\$1,071,055
Plus Repaid Portion of CWIP (6)	\$53,897					\$53,897
Plus DIF Fees Held by RUA (7)	\$1,403,992	\$1,240,756	\$682,962	\$623,662	\$0	\$3,951,372
Plus RUA Reserves (7) (8)	\$4,469,472	\$3,949,825	\$2,174,143	\$1,985,368	\$0	\$12,578,808
Plus Repaid Portion of Reserves in Trust (7) (8)	\$151,549.58	\$133,930	\$73,720	\$67,319	\$0	\$426,519
Total Cost Basis	\$31,188,220	\$27,562,095	\$15,171,286	\$13,854,007	\$0	\$87,775,608
as Percent of Total	35.5%	31.4%	17.3%	15.8%		100.0%

Step 3. Calculate Unit Costs of Capacity

	Flow (9)	BOD	TSS
Cost Basis	\$58,750,315	\$15,171,286	\$13,854,007
Capacity (10)	11,700,000	15,044	12,259
Units of Capacity	gallons per day	lb/day	lb/day
Unit Cost of Capacity	\$5.02	\$1,008.46	\$1,130.11

Step 4. Calculate Proposed DIF Schedule

		Unit of Measure	Use of Capacity				Proposed DIF Treatment Calculation				
86	Customer Class		Flow, gpd	BOD, mg/L	TSS mg/L	BOD, lb/day	TSS, lb/day	Flow	BOD	TSS	Total
87	Single-Family Residential	SF DU	220	220	220	0.404	0.404	\$1,104.71	\$407.42	\$456.56	\$1,968.69
88	Multi-Family Residential	MF DU	187	220	220	0.343	0.343	\$939.00	\$345.90	\$387.63	\$1,672.53
89	Barber Shop/Beauty Parlor	per station	30	150	250	0.038	0.063	\$150.64	\$38.32	\$71.20	\$260.16
90	Car Wash	1000 sf	2,700	20	150	0.451	3.379	\$13,557.76	\$454.82	\$3,818.64	\$17,831.22
91	Church	1000 sf	50	130	100	0.054	0.042	\$251.07	\$54.46	\$47.46	\$352.99
92	General Commercial	1000 sf	100	150	150	0.125	0.125	\$502.14	\$126.06	\$141.26	\$769.46
93	Department and Retail Store	1000 sf	100	150	150	0.125	0.125	\$502.14	\$126.06	\$141.26	\$769.46
94	Health Club/Spa	1000 sf	600	250	250	1.252	1.252	\$3,012.84	\$1,262.59	\$1,414.90	\$5,690.33
95	Hospitals, Dental Office, Clinic	1000 sf	300	250	100	0.626	0.250	\$1,506.42	\$631.30	\$282.53	\$2,420.24
96	Indoor Theatre	1000 sf	125	300	240	0.313	0.250	\$627.67	\$315.65	\$282.53	\$1,225.85
97	Laundromats	1000 sf	3,825	150	110	4.788	3.511	\$19,206.83	\$4,828.51	\$3,967.81	\$28,003.16
98	Lumber Yard	1000 sf	25	400	430	0.083	0.090	\$125.53	\$83.70	\$101.71	\$310.95
99	Professional Offices	1000 sf	200	130	80	0.217	0.134	\$1,004.28	\$218.84	\$151.43	\$1,374.55
100	Warehouse/Manufacturing (domestic)	1000 sf	25	150	150	0.031	0.031	\$125.53	\$31.26	\$35.03	\$191.83
101	Hotels/Motels (11)	room	125	310	120	0.323	0.125	\$627.67	\$325.73	\$141.26	\$1,094.67
102	Manufacturing (12)					0.000	0.000	\$0.00	\$0.00	\$0.00	\$0.00
103	Repair and Service Stations, Gas Station	1000 sf	100	180	280	0.150	0.234	\$502.14	\$151.27	\$264.45	\$917.85
104	Bakeries (wholesale) Doughnut Shop	1000 sf	280	1,000	600	2.336	1.402	\$1,405.99	\$2,355.76	\$1,584.41	\$5,346.17
105	Banquet Room/Ball Room	1000 sf	800	1,000	600	6.675	4.005	\$4,017.12	\$6,731.48	\$4,526.09	\$15,274.68
106	Mortuary - Embalming Area	1000 sf	100	800	800	0.668	0.668	\$502.14	\$673.65	\$754.91	\$1,930.70
107	Restaurant/Full Service and Cafeteria	seat	25	1,000	600	0.209	0.125	\$125.53	\$210.77	\$141.26	\$477.57
108	Restaurant/Fast Food	seat	15	1,000	600	0.125	0.075	\$75.32	\$126.06	\$84.76	\$286.14

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109	Restaurant, Take Out	1000 sf	300	1,000	600	2.503	1.502	\$1,506.42	\$2,524.18	\$1,697.42	\$5,728.02
110	Supermarkets	1000 sf	150	800	800	1.001	1.001	\$753.21	\$1,009.47	\$1,131.24	\$2,893.92
111	Schools - Elementary/Junior/Day Care	per student	10	130	100	0.011	0.008	\$50.21	\$11.09	\$9.04	\$70.35
112	Schools - High School/College	per student	20	130	100	0.022	0.017	\$100.43	\$22.19	\$19.21	\$141.83

114 Step 5. Document Source of Flow, BOD, and TSS Data

116	Unit of Measure	Sources of Use of Capacity Data (See notes to right)			
117 Customer Class		Flow, gpd	BOD, mg/L	TSS mg/L	
118 Single-Family Residential	SF Dwelling Unit	1	2	2	
119 Multi-Family Residential	MF Dwelling Unit	3	2	2	
120 Barber Shop/Beauty Parlor	per station	8	2	2	
121 Car Wash	1000 sf	4	2, 4	2, 4	
122 Church	1000 sf	4	2	2	
123 General Commercial	1000 sf	4	4, 5	4, 5	
124 Department and Retail Store	1000 sf	4	2, 5	2, 5	
125 Health Club/Spa	1000 sf	4, 9	7, 9	7, 9	
126 Hospitals, Dental Office, Clinic	1000 sf	4	2, 5	2, 5	
127 Indoor Theatre	1000 sf	4	2	2	
128 Laundromats	1000 sf	4	2, 5	2, 5	
129 Lumber Yard	1000 sf	4	2	2	
130 Professional Offices	1000 sf	4	5	5	
131 Warehouse/Manufacturing (domestic)	1000 sf	4	2	2	
132 Hotels/Motels	room	4	2, 5	2, 5	
133 Manufacturing		6	6	6	
134 Repair and Service Stations, Gas Station	1000 sf	4	2, 5	2, 5	
135 Bakeries (wholesale) Doughnut Shop	1000 sf	10	2, 5	2, 5	
136 Banquet Room/Ball Room	1000 sf	10	5	5	
137 Mortuary - Embalming Area	1000 sf	4	5	5	
138 Restaurant/Full Service and Cafeteria	per seat	7	5	5	
139 Restaurant/Fast Food	per seat	7	5	5	
140 Restaurant/Take Out	1000 sf	10	5	5	
141 Supermarkets	1000 sf	4	2, 5	2, 5	
142 Schools - Elementary/Junior/Day Care	per student	5	2	2, 5	
143 Schools - High School/College	per student	5	2	2, 5	

Sources of data for flow, BOD and TSS standards:

- (1) 55 gallons per day per capita (State Water Resources Control Board planning standard for indoor water use), applied to an average household size of 4 (approximate average household size per 2010 Census).
- (2) San Diego County Sanitation District, Wastewater Cost of Service Charge Study
- (3) Multi-family residential flow standard, per multi-family unit, is 85% of single-family residential flow standard. This is an approximate composite average of the practice in other local jurisdictions, including Riverside (90%) and San Diego County (80%). Confirmed, with City staff via June 2018 teleconference.
- (4) Los Angeles County Sanitation District No. 1
- (5) California State Water Resources Control Board, Revenue Program Guidelines (1998 Version), Appendix G
- (6) Same flow, BOD, and TSS standard as warehouse for domestic wastewater with additional DIF calculated by formula (see note 12 below).
- (7) City of Colton and San Bernardino Municipal Water Department
- (8) City of Colton
- (9) Flow standard is LA County, for health club/spas with showers.
- (10) Equals the standard embedded in Rialto's existing DIF.

Notes:

- (1) Some assets in City records support all WWTP activities (such as electrical and plumbing) and will be allocated based proportional to the distribution of WWTP flow, BOD, and TSS asset values.
- (2) OCLD = Original Cost Less Deprecation. Depreciation expense modified by FG Solutions by recognizing that some assets, particularly collection system mains, have longer asset lives than what is used in City records for depreciation purposes. Refer to other sections of this report for a description of assets where asset lives have been modified for the purposes of this DIF.
- (3) RWS issued debt in 2012 for a variety of purposes. As of 6/30/17, approximately 3.825% of the RWS-issued principal amount has been repaid.
- (4) Part of the RWS-issued debt was to refinance the debt that RUA issued for Plant 5 in 2000. Plant 5 debt is allocated 1/3 to flow, 1/3 BOD, and 1/3 TSS based on how State Water Resources Control Board publications allocate various components of wastewater treatment plants. The value of Plant 5 assets (and the debt that paid for them) is not specifically disaggregated into treatment plant components in City records. 96.175% of the refinanced principal is deducted from the Cost Basis, corresponding to the percentage of RWS-issued debt that hasn't been repaid.
- (5) Part of RWS debt issuance was to complete the FIP. 3.825% of the cost of the FIP is included, corresponding to the percentage of RWS-issued debt that has been repaid as of 6/30/17. Sewer FIP completed to date is assumed to be collection system and therefore flow-allocable.
- (6) Construction work in progress is identified in the City's data but is not specified whether it is water or sewer. This DIF calculation assumes 50% water and 50% sewer. Sewer CWIP is assumed to be collection system. CWIP projects are included in the FIP but not yet completed.
- (7) Reserves and accumulated/unspent DIF Fees are functionalized proportionately to flow, BOD, and TSS subtotals from preceding lines.

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- (8) Refer to Step 2 above for use of RUA reserves and reserves held in trust. RUA reserves are divided among treatment and collection based on respective trended OCLD less contributed asset value.
- (9) Collection system > 12" diameter and treatment plant flow are combined in this step.
- (10) Capacity is the projected annual average raw wastewater design flows that the City's S1 project is being designed for, per Table 3-2 of the Basis of Design Report (AECOM/W.M. Lyles, July 2017).
- (11) For hotels with restaurants, the DIF for the hotel and the restaurant are calculated separately then added together.
- (12) For industry and heavy manufacturing, the DIF for an equivalent warehouse is calculated, and added to the DIF calculated for non-domestic sewer flow according to the formula: $DIF = \text{flow (gpd)} * \$5.02 + \text{BOD (lb/day)} * \$1,007.38 + \text{TSS (lb/day)} * \$1,128.90$.

Wastewater Collection

Wastewater Collection, Existing Facilities

Line No.			
1	<u>Step 1. Cost Basis</u>		
2	Trended OCLD (1)	\$16,735,763	
3			
4	Less Contributed		
5	Grant	(9,676)	
6	Developer (2)	(\$2,709,635)	
7	Subtotal	\$14,016,452	
8			
9	Plus RUA Reserves (3)	\$2,219,217	
10	Plus RWS Reserves Used for Projects S3, S4 (4)	\$964,730	
11	Plus Future Facilities (5)	\$26,900	
12	Total Cost Basis	\$17,227,299	
13			
14	<u>Step 2. Calculate Unit Cost of Capacity</u>		
15			
16	Cost Basis	\$17,227,299	
17	Capacity (6)	1,032,406	
18	Units of Capacity	Lineal Front Foot	
19	Unit Cost of Capacity (7)	\$8.34	
20			
21	<u>Step 3. Calculate Proposed DIF Schedule</u>		
22			
23	Customer Class	Unit of Measure	Proposed Collection DIF
24	All Single-Family Residential (8)	Dwelling Unit	\$834.00
25	Multi-Family and Mobile Homes (9)	Dwelling Unit	\$708.90
26	All Non-Residential (10)	Lineal Front Foot	\$8.34

Notes:

- (1) OCLD = Original Cost Less Deprecation. Depreciation expense modified by FG Solutions by recognizing that some assets, particularly collection system mains, have longer asset lives than what is used in City records for depreciation purposes. Additional asset detail included in Appendix A.
- (2) Note that approximately 16.1 percent of the Trended OCLD value was developer funded.
- (3) Refer to Step 2 above for use of RUA reserves and reserves held in trust. RUA reserves are divided among treatment and collection based on respective trended OCLD less contributed asset value.
- (4) Projects S3 and S4 are upsizing of sewer mains with 12" diameter mains, and the amount shown was funded from RWS restricted reserves which were accumulated from past Development Impact Fees.
- (5) Includes 269 LF of 10-inch main needed to serve Phase 1 of the Lytle Creek development (Source: 12/14/17 memo from West Yost Associates to City of Rialto). Placeholder cost estimate of \$100/LF
- (6) Capacity is the existing length of sewer mains 12" in diameter or less, per Table 2-1 of the City's 2012 Sewer Master Plan. Capacity is adjusted to remove estimated developer-funded sewer mains. The length of developer funded sewer mains is not explicitly stated in City records, and is estimated according to the approximately 16% of Trended OCLD value of sewer collection assets that are developer funded.
- (7) Unit cost is the cost basis divided by the capacity, divided by 2. Division by 2 recognizes that there is typically development on both sides of the street.

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- (8) Based on 100 foot frontage per dwelling unit and houses on two sides of the street.
 (9) Equals 85% of Single-Family Residential DIF, based on consistency with Wastewater Treatment DIF
 (10) Assumes that on a corner lot, the longer of the two front footages is used.

Water

Water Holding and Distribution DIF

Line No.		
1	<u>Step 1. Existing Fees</u>	
2		Existing
3	Water Meter Size	Rialto
4	5/8 - 3/4" Displacement	\$8,421.34
5	1" Displacement	\$13,938.76
6	1½ " Displacement	\$27,877.51
7	2" Displacement	\$44,139.40
8	3" Displacement	\$84,213.33
9	3" Displacement Compound	\$89,440.37
10	3" Class I & II Turbine	\$98,152.09
11	4" Displacement Compound	\$139,387.60
12	4" Class I Turbine	\$168,426.68
13	4" Class II Turbine	\$174,234.48
14	6" Displacement Compound	\$278,775.18
15	6" Class I Turbine	\$348,468.99
16	6" Class II Turbine	\$383,315.87
17	8" Displacement Compound	\$441,394.03
18	8" Class I Turbine	\$505,280.02
19	8" Class II Turbine	\$667,898.87
20		
21	<u>Step 2. Determine Cost Basis</u>	
22		Amount
23	Trended OCLD (1)	
24	Source	\$8,591,128
25	Storage	\$14,590,178
26	Distribution	\$28,791,008
27	General/SCADA	\$184,611
28	Fire Hydrants	\$218,597
29	Subtotal	\$52,375,522
30		
31	Less Contributed (2)	
32	City/RDA	(\$257,615)
33	Developer	
34	Subtotal	(\$257,615)
35		
36	Less Debt Service (3) (4)	(\$3,194,927)
37		
38	Plus Repaid Portion of FIP (3) (5)	\$420,771
39	Plus Repaid Portion of CWIP (3) (6)	\$53,897
40	Plus Repaid Portion of Reserves in Trust (3) (7)	\$233,872
41	Plus Payments to SBVMWD (8)	\$864,617
42	Plus Capacity Increasing Capital (9)	\$800,000
43		
44	Total Cost Basis	\$51,296,139
45		
46	<u>Step 3. Unit Cost of Capacity</u>	
47		
48	Total Cost Basis	\$51,296,139

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49		
50	System Capacity, mgd (10)	10.67
51		
52	Unit Cost of Capacity, \$/gpd (11)	\$4.81
53		

55 Step 4. Calculate Proposed DIF Schedule

56		Meter	Meter	Use of System	Proposed
57		Capacity,	Equivalent	Capacity (13)	Water
58	Water Meter Size	gpm (12)	Ratio (12)		DIF (14)
59	5/8" x 3/4" Displacement	30	1.00	645.96	\$3,107.07
60	1" Displacement	50	1.67	1,078.75	\$5,188.79
61	1 1/2" Displacement	100	3.33	2,151.05	\$10,346.55
62	2" Displacement	160	5.33	3,442.97	\$16,560.69
63	3" Displacement	320	10.67	6,892.39	\$33,152.40
64	3" Displacement Compound	320	10.67	6,892.39	\$33,152.40
65	3" Class I & II Turbine	350	11.67	7,538.35	\$36,259.46
66	4" Displacement Compound	500	16.67	10,768.15	\$51,794.80
67	4" Class I Turbine	630	21.00	13,565.16	\$65,248.42
68	4" Class II Turbine	630	21.00	13,565.16	\$65,248.42
69	6" Displacement Compound	1,000	33.33	21,529.85	\$103,558.58
70	6" Class I Turbine	1,300	43.33	27,989.45	\$134,629.25
71	6" Class II Turbine	1,300	43.33	27,989.45	\$134,629.25
72	8" Displacement Compound	1,600	53.33	34,449.05	\$165,699.93
73	8" Class I Turbine	2,800	93.33	60,287.45	\$289,982.63
74	8" Class II Turbine	2,800	93.33	60,287.45	\$289,982.63

Notes:

- (1) OCLD = Original Cost Less Deprecation. Depreciation expense modified by FG Solutions by recognizing that some assets, particularly distribution system pipes and storage, have longer asset lives than what is used in City records for depreciation purposes. Refer to other sections of this report for a description of assets where asset lives have been modified for the purposes of this DIF. Meters and service connections are not included because these items are typically provided by new development.
- (2) The only contributed assets identified in the City's records are noted as "City/RDA". No developer funded facilities are identified, and no conclusively identified grant funded facilities are identified. City assets labelled "maybe grant" funded are not considered grant funded for the purposes of this calculation.
- (3) RWS issued debt in 2012 for a variety of purposes. As of 6/30/17, approximately 3.825% of the RWS-issued principal amount has been repaid.
- (4) Part of the RWS-issued debt was to refinance a previous ABAG loan. ABAG debt is issued by the Association of Bay Area Governments through the ABAG Finance Authority, which provides conduit financing. 96.175% of the refinanced principal is deducted from the Cost Basis, corresponding to the percentage of RWS-issued debt that hasn't been repaid.
- (5) Part of RWS debt issuance was to complete the FIP. 3.825% of the cost of the FIP is included, corresponding to the percentage of RWS-issued debt that has been repaid as of 6/30/17. The entire cost of the FIP is included, except for water meter costs in the FIP. The total FIP cost included in this calculation is estimated to be \$11M.
- (6) Construction work in progress is identified in the City's data but is not specified whether it is water or sewer. This DIF calculation assumes 50% water and 50% sewer. CWIP projects are included in the FIP but not yet completed.
- (7) Refer to Step 2 for use of RUA reserves and reserves held in trust.
- (8) Per City staff (March 2018 phone call), \$14,410.28 per month since July 2012 to San Bernardino Valley Municipal Water District for Baseline Feeder Well Replacement
- (9) Estimated cost of a new ____ [insert name] pump station needed to serve anticipated future development.
- (10) System capacity is defined as the 2040 average day demand in the 2012 Water System Plan (Table 3-7, page 3-7). This projected demand is based on water consumption data between 2005 and 2009 [check years].
- (11) Unit cost of capacity is the cost basis divided by the system capacity.
- (12) AWWA M1 Manual, Table VII.2-5 (Seventh Edition). The meter capacity is noted in this AWWA document as the "maximum-rated safe operating flow". The AWWA document does not contain data for Class II turbine meters. For the purposes of this calculation, the meter capacity for Class I turbine meters is used for Class II turbine meters. Rounded to nearest 0.01.

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- (13) Equals 645.96 gpd per meter equivalent times the meter equivalent ratio. The value of 645.96 gpd per meter equivalent is based on the City's 2009 consumption records. 2009 data is used because it matches the time period of the water demand projection contained in the 2012 Water Master Plan. Rounded to nearest 0.01.
- (14) The DIF equals the use of system capacity multiplied by the unit cost of capacity. Rounded to nearest \$0.01.

BENCHMARKING

Water		Existing	Proposed	San			West Valley
Line No.	Water Meter Size	Rialto	Rialto	Bernardino	Colton	Riverside	Water District
1	5/8" Meter only			\$5,410.00			
2	5/8 - 3/4" Displacement	\$8,421.34	\$3,107.07	\$8,130.00	N/A	\$2,250.00	\$7,009.00
3	1" Displacement	\$13,938.76	\$5,188.79	\$10,790.00	\$2,900.00	\$5,060.00	\$11,915.00
4	1½ " Displacement	\$27,877.51	\$10,346.55	\$26,950.00	\$5,200.00	\$9,560.00	\$23,130.00
5	2" Displacement	\$44,139.40	\$16,560.69	\$48,470.00	\$7,900.00	\$14,400.00	\$37,150.00
6	3" Displacement	\$84,213.33	\$33,152.40	\$70,000.00	N/A	\$25,300.00	\$82,005.00
7	3" Displacement Compound	\$89,440.37	\$33,152.40	\$70,000.00	N/A	\$25,300.00	\$82,005.00
8	3" Class I & II Turbine	\$98,152.09	\$36,259.46	\$70,000.00	N/A	\$25,300.00	\$82,005.00
9	4" Displacement Compound	\$139,387.60	\$51,794.80	TBD	\$22,000.00	\$39,380.00	\$140,180.00
10	4" Class I Turbine	\$168,426.68	\$65,248.42	TBD	\$22,000.00	\$39,380.00	\$140,180.00
11	4" Class II Turbine	\$174,234.48	\$65,248.42	TBD	\$22,000.00	\$39,380.00	\$140,180.00
12	6" Displacement Compound	\$278,775.18	\$103,558.58	TBD	\$40,500.00	\$73,130.00	\$292,275.00
13	6" Class I Turbine	\$348,468.99	\$134,629.25	TBD	\$40,500.00	\$73,130.00	\$292,275.00
14	6" Class II Turbine	\$383,315.87	\$134,629.25	TBD	\$40,500.00	\$73,130.00	\$292,275.00
15	8" Displacement Compound	\$441,394.03	\$165,699.93	TBD	\$60,200.00	\$108,000.00	\$420,540.00
16	8" Class I Turbine	\$505,280.02	\$289,982.63	TBD	\$60,200.00	\$108,000.00	\$420,540.00
17	8" Class II Turbine	\$667,898.87	\$289,982.63	TBD	\$60,200.00	\$108,000.00	\$420,540.00
18	10" Meter	N/A	N/A	N/A	N/A	\$135,000.00	N/A

- 19
- 20 Note: SBMWD Multi-family water DIF per unit is 50 % of that of a 3/4" meter
- 21 Note: In the City of Colton, in addition to the meter charge, there is an additional Frontage Fee of \$21.60/LFF for Residential, and \$32.50/LFF for Commercial and Industrial customers.
- 22
- 23

Wastewater

City of Rialto, Treatment

Customer Type	Units of Measurement	Existing Rialto, Treatment			Units of Measurement	Proposed Rialto, Treatment		
		Units of Service	Unit Cost	Existing DIF		Units of Service	Unit Cost	Proposed DIF
28 Single-Family Residence	SFR DU	1	\$3,577.61	\$3,577.61	SFR DU	1	\$1,968.69	\$1,968.69
29 Multi-Family Unit	MFR DU	1	\$2,785.43	\$2,785.43	MFR DU	1	\$1,672.53	\$1,672.53
30 Restaurant, Fast Food	Per Seat	50	\$569.16	\$28,458.00	Per Seat	50	\$286.14	\$14,306.84
31 Restaurant, Full Service	Per Seat	50	\$851.42	\$42,571.00	Per Seat	50	\$477.57	\$23,878.34
32 Hotel	room	100	\$1,986.27	\$198,627.00	room	100	\$1,094.67	\$109,467.08
33 Warehouse	1000 sf	600	\$276.46	\$165,876.00	1,000 SF	600	\$191.83	\$115,098.32
34 Industry, Light	1000 sf	20	\$1,105.80	\$22,116.00	1,000 SF	20	\$191.83	\$180,058.31
35 Industry, Heavy	1000 sf		\$3,942.35		1,000 SF			

- 36
- 37 Note: proposed Rialto wastewater treatment DIF = equivalent warehouse + process water component using the following formula:
- 38 DIF for process water = flow (gpd) * \$5.03 + BOD (lb/day) * \$1,013.94 + TSS (lb/day) * \$1,136.42
- 39

City of Rialto, Collection

Customer Type	Units of Measurement	Existing Rialto, Collection			Units of Measurement	Proposed Rialto, Collection		
		Units of Service	Unit Cost	Existing DIF		Units of Service	Unit Cost	Proposed DIF
43 Single-Family Residence	SFR DU	1	\$1,974.65	\$1,974.65	SFR DU	1	\$834.00	\$834.00
44 Multi-Family Unit	MFR DU	1	\$1,974.65	\$1,974.65	MFR DU	1	\$708.90	\$708.90
45 Restaurant, Fast Food	Per LFF	100	\$78.99	\$7,899.00	Lineal Foot	100	\$8.34	\$834.00
46 Restaurant, Full Service	Per LFF	100	\$78.99	\$7,899.00	Lineal Foot	100	\$8.34	\$834.00

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47	Hotel	Per LFF	475	\$78.99	\$37,520.25	Lineal Foot	475	\$8.34	\$3,961.50
48	Warehouse	Per LFF	1100	\$78.99	\$86,889.00	Lineal Foot	1100	\$8.34	\$9,174.00
49	Industry, Light	Per LFF	200	\$78.99	\$15,798.00	Lineal Foot	200	\$8.34	\$1,668.00
50	Industry, Heavy	Per LFF		\$78.99		Lineal Foot			

City of Colton

Customer Type	Use of Capacity		DIF Calculation			
	Units of Measurement	Units of Service	DIF Unit of Measurement	Units of Service	Unit Cost	DIF
56 Single-Family Residence	N/A	N/A	Dwelling Unit	1	\$2,800.00	\$2,800.00
57 Multi-Family Unit	N/A	N/A	Dwelling Unit	1	\$2,800.00	\$2,800.00
58 Restaurant, Fast Food	max occupancy	75	15 gpd/person (occupancy)	1,125	\$12.00	\$13,500.00
59 Restaurant, Full Service	max occupancy	75	25 gpd/person (occupancy)	1,875	\$12.00	\$22,500.00
60 Hotel	per room	100	gpd	15,000	\$12.00	\$180,000.00
61 Warehouse	sf	600,000	gpd	15,000	\$12.00	\$180,000.00
62 Industry, Light	sf	20,000	gpd	1,000	\$12.00	\$12,000.00
63 Industry, Heavy						

San Bernardino, Treatment

Customer Type	Use of Capacity		DIF Calculation			
	Units of Measurement	Units of Service	DIF Unit of Measurement	Units of Service	Unit Cost	DIF
69 Single-Family Residence	N/A	N/A	EDU	1	\$3,500.00	\$3,500.00
70 Multi-Family Unit	N/A	N/A	EDU	0.75	\$3,500.00	\$2,625.00
71 Restaurant, Fast Food	per seat	50	per seat, 15 gpd/seat	750.00	\$12.45	\$9,337.50
72 Restaurant, Full Service	per seat	50	per seat, 25 gpd/seat	1,250.00	\$12.45	\$15,562.50
73 Hotel	per room	100	100 gpd per room	10,000.00	\$12.45	\$124,500.00
74 Warehouse, 600,000 sf						
75 Warehouse (first 100,000 sf) excluding office	SF	100,000	0.01 gpd/SF	1,000.00	\$12.45	\$12,450.00
76 Warehouse (addl sf between 100k and 500k sf)	SF	400,000	0.005 gpd/SF	2,000.00	\$12.45	\$24,900.00
77 Warehouse (Remaining sf over 500k sf)	SF	100,000	0.001 gpd/SF	100.00	\$12.45	\$1,245.00
78 Total Warehouse						\$38,595.00
79 Industry, Light	SF	20,000	0.05 gpd/SF	1,000.00	\$12.45	\$12,450.00
80 Industry, Heavy						

San Bernardino, Collection

Customer Type	Use of Capacity		DIF Calculation			
	Units of Measurement	Units of Service	DIF Unit of Measurement	Units of Service	Unit Cost	DIF
86 Single-Family Residence			bedroom	3.0	\$419.72	\$1,259.16
87 Multi-Family Unit			bedroom	2.0	\$419.72	\$839.44
88 Restaurant, Fast Food			3000 sf	1.0	\$335.02	\$335.02
89 Restaurant, Full Service			3000 sf	1.0	\$335.02	\$335.02
90 Hotel			DU	100.0	\$167.50	\$16,750.00
91 Warehouse			3000 sf	200.0	\$335.02	\$67,004.00
92 Industry, Light			3000 sf	6.67	\$335.02	\$2,233.47
93 Industry, Heavy			3000 sf		\$335.02	

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96						
97	City of Riverside					
98		Use of Capacity		DIF Calculation		
99	Customer Type	Units of Measurement	Units of Service	DIF Unit of Measurement	Units of Service	Unit Cost
100	Single-Family Residence			Dwelling Unit	1.00	\$4,143.00
101	Multi-Family Unit			Dwelling Unit	1.00	\$3,741.00
102	Restaurant, Fast Food			1000 sf	3.00	\$10,026.00
103	Restaurant, Full Service			1000 sf	3.00	\$10,026.00
104	Hotel			unit	100.00	\$1,518.00
105	Warehouse			1000 sf	600.00	\$116.00
106	Industry, Light					per Riverside formula
107	Industry, Heavy					per Riverside formula
108						
109	Single Family Residence					
110	Per Single-Family Residential Dwelling Unit					
111	Most common residential water meter size (5/8x3/4-Inch, except 5/8-Inch in San Bernardino and 1" in Colton)					
112	3 Bedrooms					
113	100 Lineal Front Footage (required to calculate City of Colton's Water Frontage Fee)					
114			Wastewater	Wastewater	Total	Water +
115		Water	Collection	Treatment	Wastewater	Wastewater
116	Rialto Water Service Area					
117	Existing Rialto DIF	\$8,421.34	\$1,974.65	\$3,577.61	\$5,552.26	\$13,973.60
118	Proposed Rialto DIF	\$3,107.07	\$834.00	\$1,968.69	\$2,802.69	\$5,909.76
119	West Valley Water District Service Area					
120	Existing Rialto Wastewater, WVWD Water DIF	\$7,009.00	\$1,974.65	\$3,577.61	\$5,552.26	\$12,561.26
121	Proposed Rialto Wastewater DIF, Existing WVWD DIF	\$7,009.00	\$834.00	\$1,968.69	\$2,802.69	\$9,811.69
122	Colton	\$5,060.00	N/A	N/A	\$2,800.00	\$7,860.00
123	Riverside	\$2,250.00	N/A	N/A	\$4,143.00	\$6,393.00
124	San Bernardino	\$5,410.00	\$1,259.16	\$3,500.00	\$1,259.16	\$6,669.16
125						
126	Multi-Family Residence					
127	Per Multi-Family Residential Dwelling Unit					
128	20-Unit Building with a 2-Inch Meter (DIF per unit = 1/20 of total)					
129	2 bedroom apartment					
130	250 Lineal Front Footage (required to calculate City of Colton's Water Frontage Fee)					
131			Wastewater	Wastewater	Total	Water +
132		Water	Collection	Treatment	Wastewater	Wastewater
133	Rialto Water Service Area					
134	Existing Rialto DIF	\$2,206.97	\$1,974.65	\$2,785.43	\$4,760.08	\$6,967.05
135	Proposed Rialto DIF	\$828.03	\$708.90	\$1,672.53	\$2,381.43	\$3,209.46
136	West Valley Water District Service Area					
137	Existing Rialto Wastewater, WVWD Water DIF	\$1,857.50	\$1,974.65	\$2,785.43	\$4,760.08	\$6,617.58
138	Proposed Rialto Wastewater DIF, Existing WVWD DIF	\$1,857.50	\$708.90	\$1,672.53	\$2,381.43	\$4,238.93
139	Colton	\$665.00	N/A	N/A	\$2,800.00	\$3,465.00
140	Riverside	\$720.00	N/A	N/A	\$3,741.00	\$4,461.00
141	San Bernardino	\$2,423.50	\$839.44	\$2,625.00	\$3,464.44	\$5,887.94
142						
143	Fast Food Restaurant					
144	1-Inch Water Meter					
145	50 Seats	8 booths 4 seats each plus 8 tables of 2, round up to 50				
146	75 Max Occupancy	occupancy = seats + people standing + staff. Placeholder.				
147	3,000 Square Foot					
148	100 Lineal Front Footage (required to calculate City of Colton's Water Frontage Fee)					

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149			Wastewater	Wastewater	Total	Water +
150		Water	Collection	Treatment	Wastewater	Wastewater
151	Rialto Water Service Area					
152	Existing Rialto DIF	\$13,938.76	\$7,899.00	\$28,458.00	\$36,357.00	\$50,295.76
153	Proposed Rialto DIF	\$5,188.79	\$834.00	\$14,306.84	\$15,140.84	\$20,329.63
154	West Valley Water District Service Area					
155	Existing Rialto Wastewater, WVWD Water DIF	\$11,915.00	\$7,899.00	\$28,458.00	\$36,357.00	\$48,272.00
156	Proposed Rialto Wastewater DIF, Existing WVWD DIF	\$11,915.00	\$834.00	\$14,306.84	\$15,140.84	\$27,055.84
157	Colton	\$6,150.00	N/A	N/A	\$13,500.00	\$19,650.00
158	Riverside	\$5,060.00	N/A	N/A	\$30,078.00	\$35,138.00
159	San Bernardino	\$10,790.00	\$335.02	\$9,337.50	\$9,672.52	\$20,462.52
160						
161	Full Service Restaurant					
162	1-Inch Water Meter					
163	50 Seats	8 booths 4 seats each plus 8 tables of 2, round up to 50 occupancy = seats + people standing + staff. Placeholder.				
164	75 Max Occupancy					
165	3,000 Square Foot					
166	100 Lineal Front Footage					
167			Wastewater	Wastewater	Total	Water +
168		Water	Collection	Treatment	Wastewater	Wastewater
169	Rialto Water Service Area					
170	Existing Rialto DIF	\$13,938.76	\$7,899.00	\$42,571.00	\$50,470.00	\$64,408.76
171	Proposed Rialto DIF	\$5,188.79	\$834.00	\$23,878.34	\$24,712.34	\$29,901.13
172	West Valley Water District Service Area					
173	Existing Rialto Wastewater, WVWD Water DIF	\$11,915.00	\$7,899.00	\$42,571.00	\$50,470.00	\$62,385.00
174	Proposed Rialto Wastewater DIF, Existing WVWD DIF	\$11,915.00	\$834.00	\$23,878.34	\$24,712.34	\$36,627.34
175	Colton	\$6,150.00	N/A	N/A	\$22,500.00	\$28,650.00
176	Riverside	\$5,060.00	N/A	N/A	\$30,078.00	\$35,138.00
177	San Bernardino	\$10,790.00	\$335.02	\$15,562.50	\$15,897.52	\$26,687.52
178						
179						
180	Hotel					
181	3-Inch Water Meter					
182	100 Rooms					
183	Example property, Days Inn by Wyndham, 475 W Valley Blvd Rialto CA					
184	475 Lineal Front Footage					
185						
186			Wastewater	Wastewater	Total	Water +
187		Water	Collection	Treatment	Wastewater	Wastewater
188	Rialto Water Service Area					
189	Existing Rialto DIF	\$84,213.33	\$37,520.25	\$198,627.00	\$236,147.25	\$320,360.58
190	Proposed Rialto DIF	\$33,152.40	\$3,961.50	\$109,467.08	\$113,428.58	\$146,580.98
191	West Valley Water District Service Area					
192	Existing Rialto Wastewater, WVWD Water DIF	\$82,005.00	\$37,520.25	\$198,627.00	\$236,147.25	\$318,152.25
193	Proposed Rialto Wastewater DIF, Existing WVWD DIF	\$82,005.00	\$3,961.50	\$109,467.08	\$113,428.58	\$195,433.58
194	Colton	\$37,437.50	N/A	N/A	\$180,000.00	\$217,437.50
195	Riverside	\$25,300.00	N/A	N/A	\$151,800.00	\$177,100.00
196	San Bernardino	\$70,000.00	\$16,750.00	\$124,500.00	\$141,250.00	\$211,250.00
197						
198						
199	Light Industry					
200	3-Inch Water Meter (Except 4-in Colton, who doesn't have rate for 3-inch meters)					
201	20,000 sf facility					
202	200 Lineal Front Footage					
203	Domestic Wastewater Characteristics					
204	25 gpd per 1000 sf (Rialto Warehouse Standard)					
205	.031 lbs/day BOD, per 1000 sf (Rialto Warehouse Standard)					
206	.031 lbs/day TSS per 1000 sf (Rialto Warehouse Standard)					

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207	.062 lbs/day COD per 1000 sf (COD to BOD ratio = 2)				
208	Domestic WW Flow	500 gpd	0.67 ccf/day		
209	Domestic WW BOD	0.62 lbs/day BOD			
210	Domestic WW TSS	0.62 lbs/day TSS			
211	Domestic WW COD	1.24 lbs/day COD			
212					
213	Process Wastewater Characteristics				
214	1000 gpd per 1000 sf, equivalent to:	20,000 gpd	26.74 ccf/day		
215	200 mg/L BOD, equivalent to:	33.38 lbs/day BOD			
216	200 mg/L TSS, equivalent to:	33.38 lbs/day TSS			
217	400 mg/L COD, equivalent to:	66.75 lbs/day COD			
218					
219	Total Wastewater Characteristics				
220		20,500 gpd			
221		27.41 ccf/day			
222		34.00 lbs/day BOD			
223		34.00 lbs/day TSS			
224		67.99 lbs/day COD			
225					
226	Existing Rialto Treatment DIF Customer Class = medium strength manufacturing (domestic)				
227					
228		Water	Wastewater Collection	Wastewater Treatment	Total Wastewater
229					Water + Wastewater
230	Rialto Water Service Area				
231	Existing Rialto DIF	\$84,213.33	\$15,798.00	\$22,116.00	\$37,914.00
232	Proposed Rialto DIF	\$33,152.40	\$1,668.00	\$180,058.31	\$181,726.31
233	West Valley Water District Service Area				
234	Existing Rialto Wastewater, WVWD Water DIF	\$82,005.00	\$15,798.00	\$22,116.00	\$37,914.00
235	Proposed Rialto Wastewater DIF, Existing WVWD DIF	\$82,005.00	\$1,668.00	\$180,058.31	\$181,726.31
236	Colton	\$28,500.00	N/A	N/A	\$12,000.00
237	Riverside	\$25,300.00	N/A	N/A	\$360,784.12
238	San Bernardino	\$70,000.00	\$2,233.47	\$12,450.00	\$14,683.47
239					
240					
241	Warehouse				
242	3-Inch Water Meter (Except 4-in Colton, who doesn't have rate for 3-inch meters)				
243	600,000 SF				
244	1,100 Lineal Front Footage	Example property: Target Foods Distribution Center 2245 W Renaissance Pkwy, Rialto, CA 92376 1100 LFF			
245					
246		Water	Wastewater Collection	Wastewater Treatment	Total Wastewater
247					Water + Wastewater
248	Rialto Water Service Area				
249	Existing Rialto DIF	\$84,213.33	\$86,889.00	\$165,876.00	\$252,765.00
250	Proposed Rialto DIF	\$33,152.40	\$9,174.00	\$115,098.32	\$124,272.32
251	West Valley Water District Service Area				
252	Existing Rialto Wastewater, WVWD Water DIF	\$82,005.00	\$86,889.00	\$165,876.00	\$252,765.00
253	Proposed Rialto Wastewater DIF, Existing WVWD DIF	\$82,005.00	\$9,174.00	\$115,098.32	\$124,272.32
254	Colton	\$57,750.00	N/A	N/A	\$180,000.00
255	Riverside	\$25,300.00	N/A	N/A	\$69,600.00
256	San Bernardino	\$70,000.00	\$67,004.00	\$38,595.00	\$105,599.00