



TECHNICAL MEMORANDUM

TO: Bob Walker/H2GO Executive Director
FROM: Gary Hartong
CC: Carl Scharfe
DATE: July 7, 2020
RE: Explanations for Calculation Revisions
System Development Fees (SDF)
TWC #3081-AJ

In response to comments during the public hearing on June 29, 2020, we reviewed our calculations for the System Development Fees. We offer three revised calculations. Note these calculations result in lower water and sewer SDFs, but generate higher annual revenues using a 5% annual customer growth rate instead of a 3.25% rate to be consistent with Stantec's rate models.

1. Sewer S03: Colon Mintz Regional Pump Station

The entire capital project is to serve future development.

The previous calculations applied the \$4.00 million to be paid by SAFFO against the \$5.39 M Total Cost of the project reducing the cost to \$1.39 M. This approach artificially lowered the Net Total Costs for the other developers. Additionally, the Incremental Additional Capacity was set at 0.21 MGD which was to reflect the initially projected available capacity after subtracting the SAFFO development customers usage. The calculated SDF for this project was \$4.95 per gallon.

The new calculation is based on the full cost of \$5.39 million and the full average daily flow (ADF) design capacity of 0.864 MGD. The \$4.00 M credit to be paid by SAFFO is reflected in a higher percentage development credit of 74.3% (equivalent to \$4.00 M) thereby reducing the calculated SDF for this project to \$1.60 per gallon which is shared across all future development. This revision better reflects the cost per gallon before any upfront payment by a third party is considered.

2. Sewer S05: Town Creek/NC 133 Regional Pump Station

The entire capital project is to serve future development.

The previous calculations applied the \$2.16 million in upfront cost sharing against the \$4.31 M Total Cost of the project reducing the cost to \$2.16 M. This approach artificially lowered the Net Total Costs for the other developers. Additionally, the Incremental Additional Capacity was set at 0.315 MGD which was to reflect the projected available capacity at 50%. The calculated SDF for this project was \$6.85 per gallon.

The new calculation is based on the full cost of \$4.32 million and the full average daily flow (ADF) design capacity of 0.634 MGD. The \$2.16 M credit to be paid by others is reflected in a higher percentage development credit of 50% (equivalent to \$ 2.16 M) thereby reducing the calculated SDF to \$3.40 per gallon. This revision better reflects the cost per gallon before any upfront payment by a third party is considered.

Summary: With these two proposed revisions, the overall sewer SDF is lowered from \$30.16 to \$25.08 per gallon.

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3. Water W14: New 4.0 MGD RO Water Treatment Plant

Fifty percent (50%) of the entire capital project is to serve future development; the remaining 50% is allocated to existing customers based on current maximum daily demand of 2.0 MGD.

The previous calculation applied \$24.957 million (50%) in Project Capacity Credit to new development which is correct. Based on 2.0 MGD remaining capacity for new development, the Net Total Cost per gallon remains at \$12.48. *(Regardless of whether this entire capacity is used during the SDF analysis period, the Net Total Cost per gallon is \$12.48 and will carry into the next SDF analysis period if remaining capacity remains available.)*

The new calculation applies credit of 33% to new development instead of 25%. This developer credit increase is based on applying 50% of the present worth value of the expected total debt service (eligible principal + interest) to be paid during the remaining 8 years of the analysis period. The present worth value of 50% of the total debt service (\$9.676 M) is \$8.331 M using a 3.0% interest rate. This approach is consistent with NCGA statute requirements. This adjustment lowers the Adjusted Incremental Cost from \$9.36 to \$8.31 per gallon.

Summary: With the proposed revision, the overall water SDF is lowered from \$21.12 to \$17.95 per gallon.

4. Amended SDF Schedule

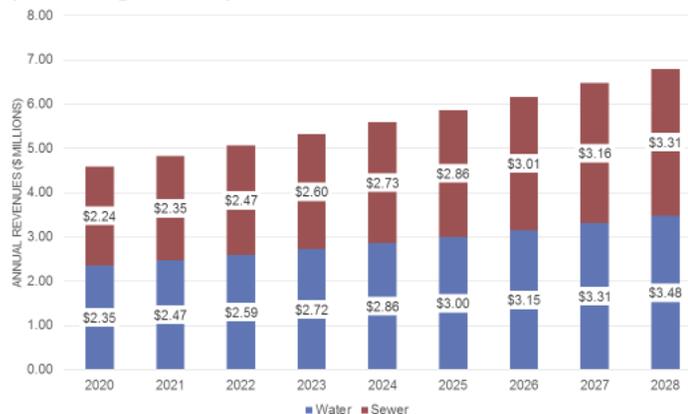
Based on these 3 calculation revisions, the water and sewer SDFs are amended using Water Meter Size and Equivalent Residential Connection as follows:

Meter Size	Equivalent Ratio	Water	Sewer	Total	Water	Sewer	Total
5/8 or 3/4 (210 GPD)	1.0	\$ 17.95	\$ 25.08	\$ 43.03	\$ 3,800	\$ 5,300	\$ 9,100
1	2.5	\$ 44.89	\$ 62.69	\$ 107.58	\$ 9,500	\$ 13,300	\$ 22,800
1-1/2	5.0	\$ 89.77	\$ 125.39	\$ 215.16	\$ 19,000	\$ 26,500	\$ 45,500
2	8.0	\$ 143.64	\$ 200.62	\$ 344.26	\$ 30,400	\$ 42,400	\$ 72,800
3	16.0	\$ 287.27	\$ 401.25	\$ 688.52	\$ 60,800	\$ 84,800	\$ 145,600
4	25.0	\$ 448.87	\$ 626.95	\$ 1,075.82	\$ 95,000	\$ 132,500	\$ 227,500
6	50.0	\$ 897.73	\$ 1,253.90	\$ 2,151.63	\$ 190,000	\$ 265,000	\$ 455,000
8	80.0	\$ 1,436.37	\$ 2,006.24	\$ 3,442.61	\$ 304,000	\$ 424,000	\$ 728,000
10	115.0	\$ 2,064.79	\$ 2,883.96	\$ 4,948.75	\$ 437,000	\$ 609,500	\$ 1,046,500
12	215.0	\$ 3,860.25	\$ 5,391.76	\$ 9,252.01	\$ 817,000	\$ 1,139,500	\$ 1,956,500

5. Amended SDF Revenue Projections

The maximum water and sewer SDFs projected for the analysis period, based on an annual 5% growth rate as discussed during the public hearing, are expected to generate a total of \$50.7 M.

**SDF Maximum Revenue Projections
(5.0% growth)**



ATTACHMENT 1

Updated SDF Table