

# Fort Pierce Utilities Authority and St. Lucie County Utilities

---

## Wastewater Plant Relocation Conceptual Analysis

*Evaluation of Preliminary Incremental Operating and Debt Service Costs*

Draft 3 - Prepared on December 16, 2020



# Study Tasks

- Identify the conceptual project schedule to design and construct the proposed 8.0 MGD Mainland Water Reclamation Facility (MWRF) at the Treasure Coast Energy Center (TCEC) location
- Estimate the preliminary capital costs over the project schedule, including an allowance for construction cost inflation
- Work with the County's Financial Advisor to develop a projection of future debt service payments
- Evaluate the existing operating and maintenance costs for FPUA and SLCU and estimate the preliminary operating expenses of the proposed MWRF



## Study Tasks (cont.)

- Develop a preliminary allocation of projected operating expenses and debt service costs between FPUA and SLCU
- Develop a preliminary estimate of the revenue need during the first year of operation (FY2027 or the “Test Year”) to fund the estimated incremental expenditures



# Agreed Upon Assumptions

- The analysis estimates the results of a cost-sharing arrangement to allocate the direct treatment-related expenditures
- The projected capital and associated debt service costs are assumed to be allocated based on a 70%/30% split or approximately 5.6 MGD for FPUA and 2.4 MGD for SLCU
- The analysis is limited to the estimated incremental increase in direct operating expenses of wastewater treatment needs plus the project-related debt service payments for the Test Year
  - > Excludes any analysis of operating expenses associated with operating and maintaining the collection system for each utility or any other non-wastewater treatment related expenditures
  - > Excludes any costs of governance and other administrative costs associated with any cost-sharing agreement



## Agreed Upon Assumptions (cont.)

- Effluent disposal is assumed to be by deep injection well; no potential reclaimed water costs or any associated future revenues were considered
- Incremental revenue from future customer growth was not considered since timing and amount of new customers and the associated infrastructure needs are not known
- Analysis limited to estimating incremental change in proposed MWRf wastewater treatment-related operating and debt service costs when compared to Like-kind Costs recovered in existing retail wastewater revenues
- Analysis did not evaluate the adequacy of either utility's existing water and/or wastewater rates to meet the retail customer expenditure and funding requirements (i.e., non-wastewater treatment costs)



# Summary of Estimated Capital Costs

Projected MWRP Capital Costs	
Description	Amount (Millions)
Total Project Costs – Current Dollars <sup>[1]</sup>	\$131.5
Conceptual Project Schedule <sup>[2]</sup>	
FY21 – Develop Interlocal Agreement	N/A
FY22 – Planning and Design (10%)	\$13.9
FY23 – Planning and Design (10%)	\$14.5
FY24 – Construction (30%)	\$44.5
FY25 – Construction (30%)	\$45.7
FY26 – Construction (20%)	<u>\$31.4</u>
Total Project Costs – Future Dollars <sup>[2]</sup>	\$150.0
<p><sup>[1]</sup> Amount reflects the estimated costs (in today's dollars) as provided in the May 2020 (Draft) Engineering Report prepared by Hazen and Sawyer, which includes the plant and collection system related capital costs of the MWRP and the additional costs to decommission the existing plants.</p> <p><sup>[2]</sup> Conceptual project schedule provided by FPUA and SLCU staff, and the project costs were allocated over the period and increased by a 3% annual allowance for construction inflation based on the historical annual average increase in the Engineering News Construction (ENR) Index.</p>	



# Estimated Financing Assumptions

- The County's Financial Advisor, PFM Financial Advisors, LLC (PFM), developed a conceptual financing scenario
- Plan included combining low interest rate loans from the Florida State Revolving Fund (SRF) Loan Program and the Water Infrastructure Finance and Innovation Act (WIFIA) Program
  - > Projected loan payments are assumed begin FY2027 (the "Test Year") once construction completed
  - > Capitalized interest costs during the construction are estimated at \$6.0 million which increased the total principal amount of project to \$156 million
  - > The annual interest rate for the Financing was assumed to be 1.5% per year
    - The SRF Loan (51% of project) is assumed to be repaid over 20-years
    - The WIFIA Loan (49% of project) is assumed to be strategically negotiated to structure the principal and interest payments around the projected SRF Loan to provide level annual payments through Fiscal Year 2061 (over 35-years)

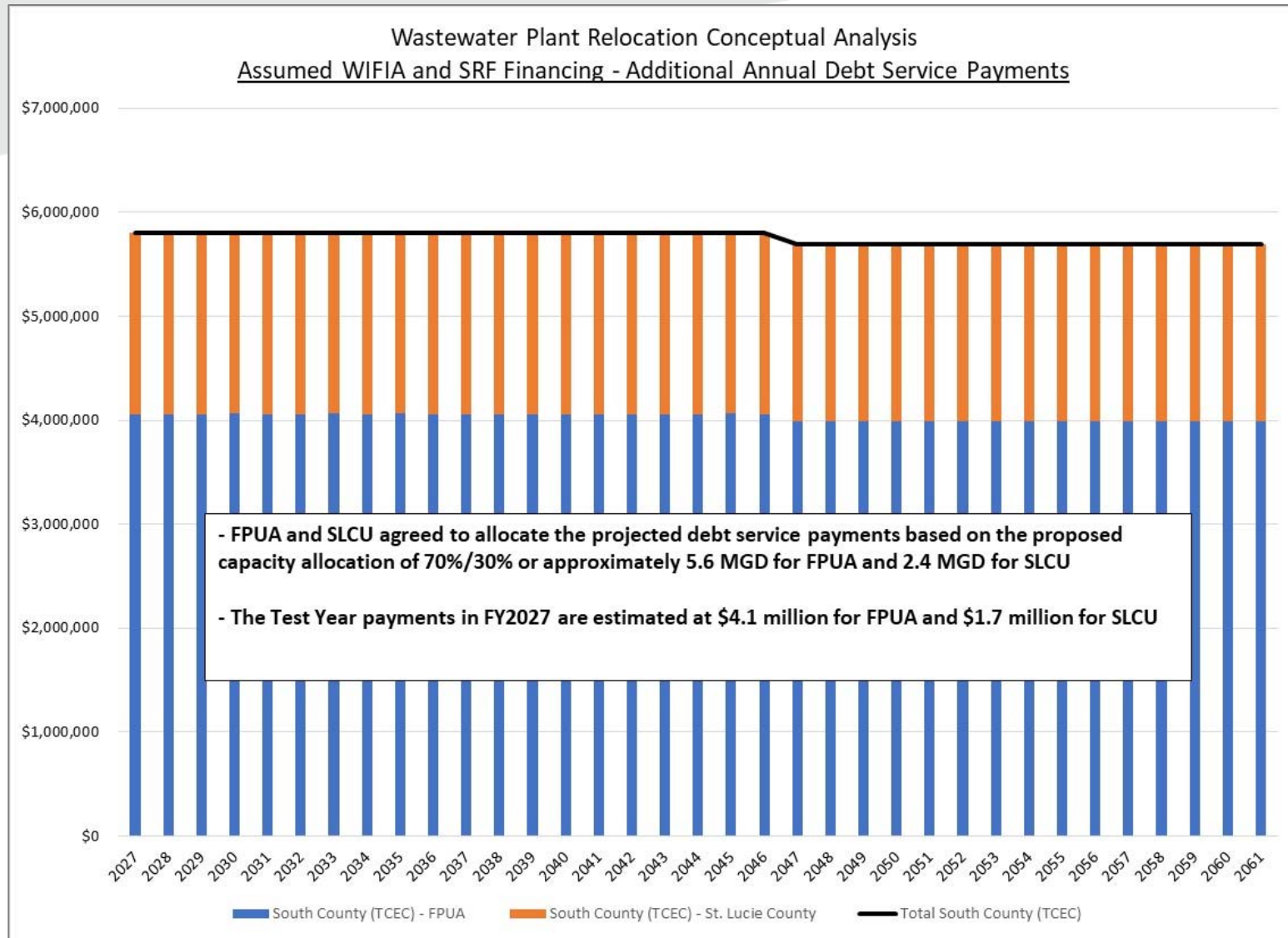


## Estimated Financing Assumptions (cont.)

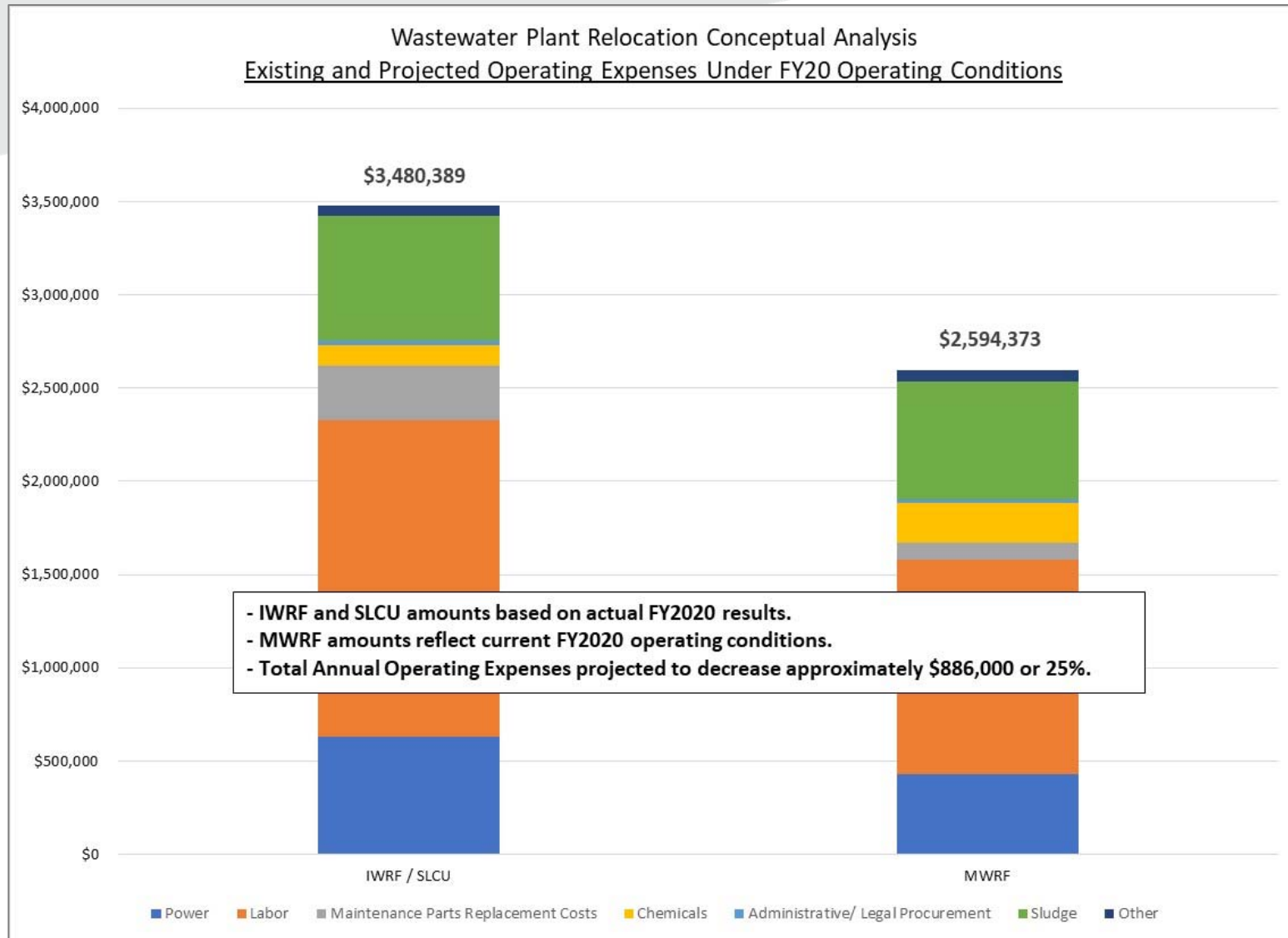
- PFM and Raftelis provide no assurances that the proposed project will be eligible for WIFIA/SRF funding or that the amount of funding will be available during the project schedule
  - > For comparative purposes, PFM also provided an additional financing scenario based on revenue bonds
  - > Resulted in increased debt service payments of 70% or approximately \$4.0 million more per year when compared to the WIFIA/SRF alternative



# Projected Debt Service Payments



# Existing and Projected Operating Expenses

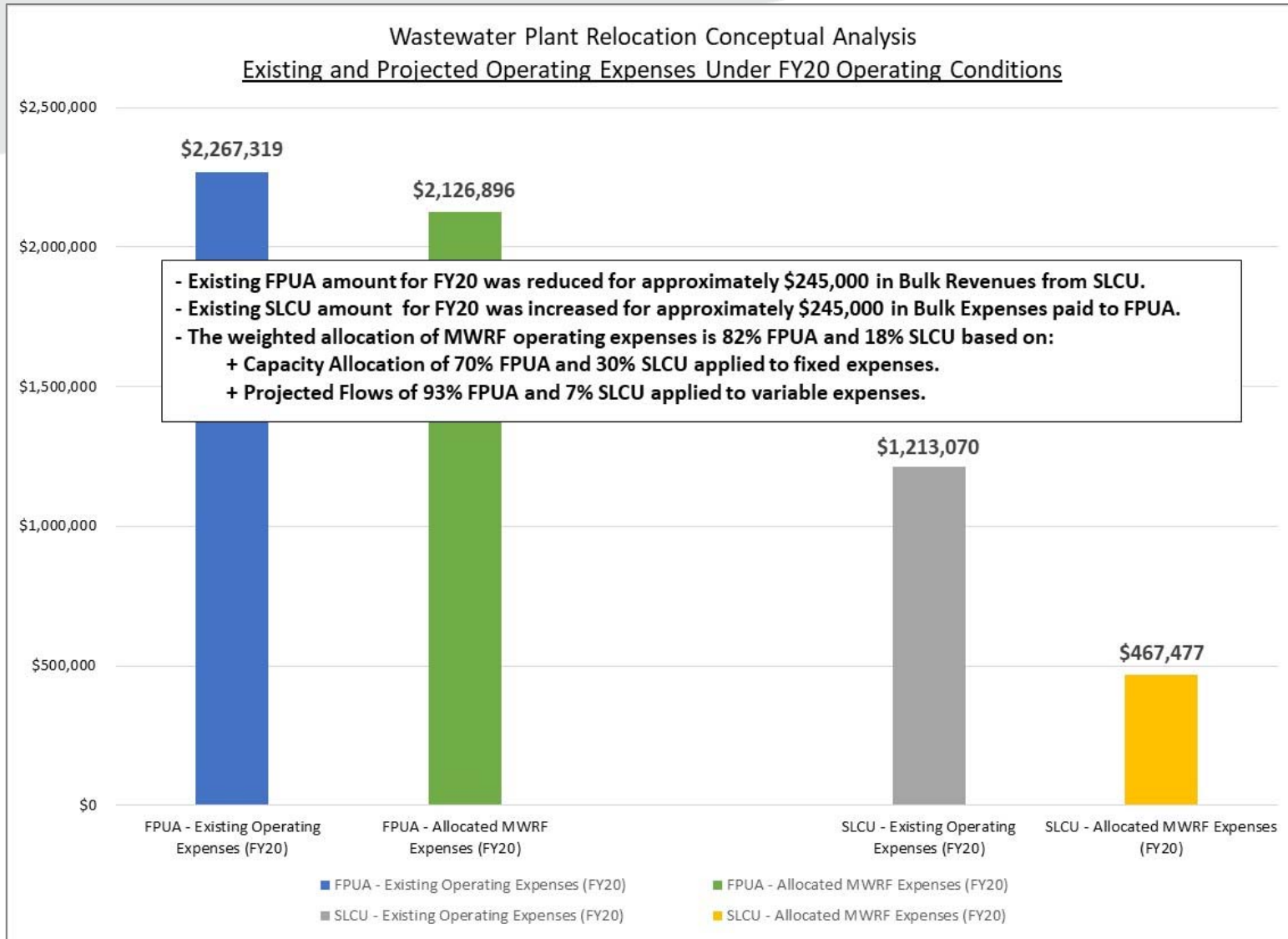


# Allocation of Operating Expenses

- Based on a review of the direct wastewater treatment expenses under the proposed MWRf operation:
  - > The fixed operating expenses associated with labor & benefits and repairs & maintenance costs were apportioned based on the proposed capacity allocation or 70% FPUA and 30% SLCU
  - > The remaining variable expenses were apportioned based on the projected annual average wastewater flows contributed by each party or approximately 93% FPUA and 7% SLCU
    - Wastewater flows for each entity were adjusted to account for the SLCU bulk wastewater flows currently treated at the IWRf
    - Flow relationships will change based on new development, any inflow / infiltration reduction programs, conservation, and other factors
  - > The weighted average allocation of total operating expenses resulted in the following apportionment:
    - 82% FPUA / 18% SLCU



# Allocation of Operating Expenses



# Summary of Test Year Adjustments

- The first year of plant operation was assumed to be FY2027
- Operating expenses were projected from FY2020 levels to FY2027 based on each major treatment expense category, which resulted in an annual average increase of approximately 2.8% per year
- Based on the additional debt service payments allocated between the parties, a 35% debt service coverage allowance was added to the projected annual costs to meet minimum debt service coverage requirements, capital re-investment, and to provide working capital
- Adjustments were made to account for the elimination of the existing bulk wastewater service between FPUA and SLCU and to reapportion miscellaneous treatment plant income between the parties



## Summary of Test Year Adjustments (cont.)

- Miscellaneous treatment plant income at the proposed MWRF was apportioned based on the proposed capacity allocation of 70% FPUA and 30% SLCU and was assumed to include:
  - > FMPA Cooling Tower Revenues - \$1.1 million (new)
  - > Leachate Revenues - \$600,000 (up from \$125,000)
  - > Strong Waste Charges & Industrial Permits - \$80,000 (existing)
  - > Septage Hauling Revenues - \$40,000 (existing)



# Incremental Impact Statement - FPUA

Description	Projected Increase in Wastewater Treatment Costs		
	<u>Existing FY20</u>	<u>Proposed MWRF FY27</u>	<u>Net Increase (Decrease)</u>
<b>FPUA Allocated Costs</b>			
Existing IWRF Expenses	\$2,513,172	\$0	(\$2,513,172)
Proposed MWRF Expenses	0	2,570,402	2,570,402
Proposed MWRF Debt Service	0	4,060,000	4,060,000
Debt Service Coverage Allowance	0	1,421,000	1,421,000
Adjustment – Bulk Sales to SLCU	(245,853)	0	245,853
Adjustment – Treatment Plant Income	<u>(204,842)</u>	<u>(1,267,257)</u>	<u>(1,062,415)</u>
<b>Total Annual Cost</b>	<b>\$2,062,477</b>	<b>\$6,784,145</b>	<b>\$4,721,668</b>
Existing Wastewater Retail Revenues			\$12,489,070
Projected Cumulative Wastewater Revenue Need			37.8%
Projected Annual Wastewater Revenue Increase FY22-27			5.5%
Existing Water and Wastewater Retail Revenues			\$29,059,410
Projected Cumulative Water and Wastewater Revenue Need			16.2%
Projected Annual Water and Wastewater Revenue Increase FY22-27			2.5%
<small>[*] For identification of major study assumptions and disclosures, please refer to Rafielis' presentation dated December 16, 2020.</small>			



# Incremental Impact Statement - SLCU

Description	Projected Increase in Wastewater Treatment Costs		
	<u>Existing FY20</u>	<u>Proposed MWRF FY27</u>	<u>Net Increase (Decrease)</u>
<b>SLCU Allocated Costs</b>			
Existing WWTP Expenses	\$967,217	\$0	(\$967,217)
Proposed MWRF Expenses	0	571,519	571,519
Proposed MWRF Debt Service	0	1,740,000	1,740,000
Debt Service Coverage Allowance	0	609,000	609,000
Adjustment – Bulk Expenses to FPUA	245,853	0	(245,853)
Adjustment – Treatment Plant Income	<u>(37,250)</u>	<u>(543,110)</u>	<u>(505,860)</u>
Total Annual Cost	\$1,175,820	\$2,377,409	\$1,201,589
Existing Wastewater Retail Revenues			\$5,307,240
Projected Cumulative Wastewater Revenue Need			22.6%
Projected Annual Wastewater Revenue Increase FY22-27			3.5%
Existing Water and Wastewater Retail Revenues			\$8,982,214
Projected Cumulative Water and Wastewater Revenue Need			13.4%
Projected Annual Water and Wastewater Revenue Increase FY22-27			2.1%
<small>[*] For identification of major study assumptions and disclosures, please refer to Rafelis' presentation dated December 16, 2020.</small>			



**Conceptual Analysis**  
**Phase-in of Projected Revenue Needs and  
Resulting Estimated MWRF Escrow Balance**



## Summary of Major Assumptions / Amounts Available for Escrow

- The cost analysis is limited to the estimated incremental increase in direct operating expenses of wastewater treatment needs plus the project-related debt service payments for the Test Year
  - › Excludes any analysis of operating expenses associated with operating and maintaining the collection system for each utility or any other non-wastewater treatment related expenditures
  - › Excludes any costs of governance and other administrative costs associated with any cost-sharing agreement
- Analysis estimates a cumulative annual cost increase of \$4.7 million for FPUA and \$1.2 million for SLCU by FY2027 to only meet the estimated operating and debt service costs of the MWRF
  - › Projected cost increases may be phased in based on annual revenue adjustments applied to either the wastewater revenues or the combined water and wastewater revenues at the option of the parties



## Summary of Major Assumptions / Amounts Available for Escrow (cont.)

- The projected revenue needs were assumed to be phased in from FY2022 to FY2027
  - > FPUA:
    - Applied Wastewater Revenues Only: 5.5% per year for a combined increase of \$16.93 for the existing residential customer (based on 5,000 monthly gallons) or an average monthly increase of \$2.82 per month per year
    - Applied Water and Wastewater Revenues: 2.5% per year for a combined increase of \$12.76 for the existing residential customer (based on 5,000 monthly gallons) or an average monthly increase of \$2.13 per month per year
  - > SLCU:
    - Applied Wastewater Revenues Only: 3.5% per year for a combined increase of \$14.60 for the existing residential customer (based on 5,000 monthly gallons) or an average monthly increase of \$2.43 per month per year
    - Applied Water and Wastewater Revenues: 2.1% per year for a combined increase of \$14.52 for the existing residential customer (based on 5,000 monthly gallons) or an average monthly increase of \$2.42 per month per year
  - > Either cost recovery approach achieves similar financial results, but customer bills will vary based on the utility services being received and each customer's actual water use billed

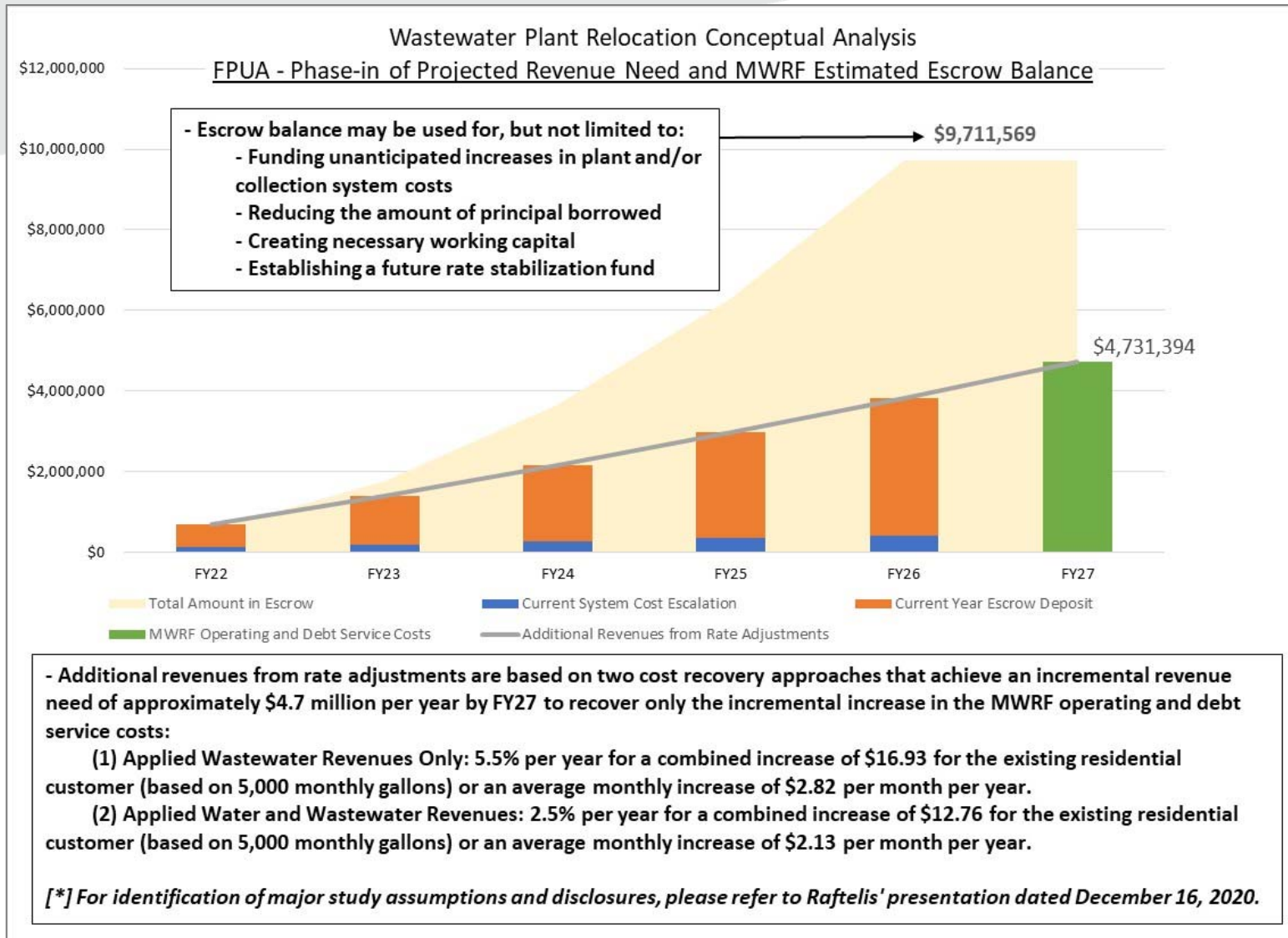


## Summary of Major Assumptions / Amounts Available for Escrow (cont.)

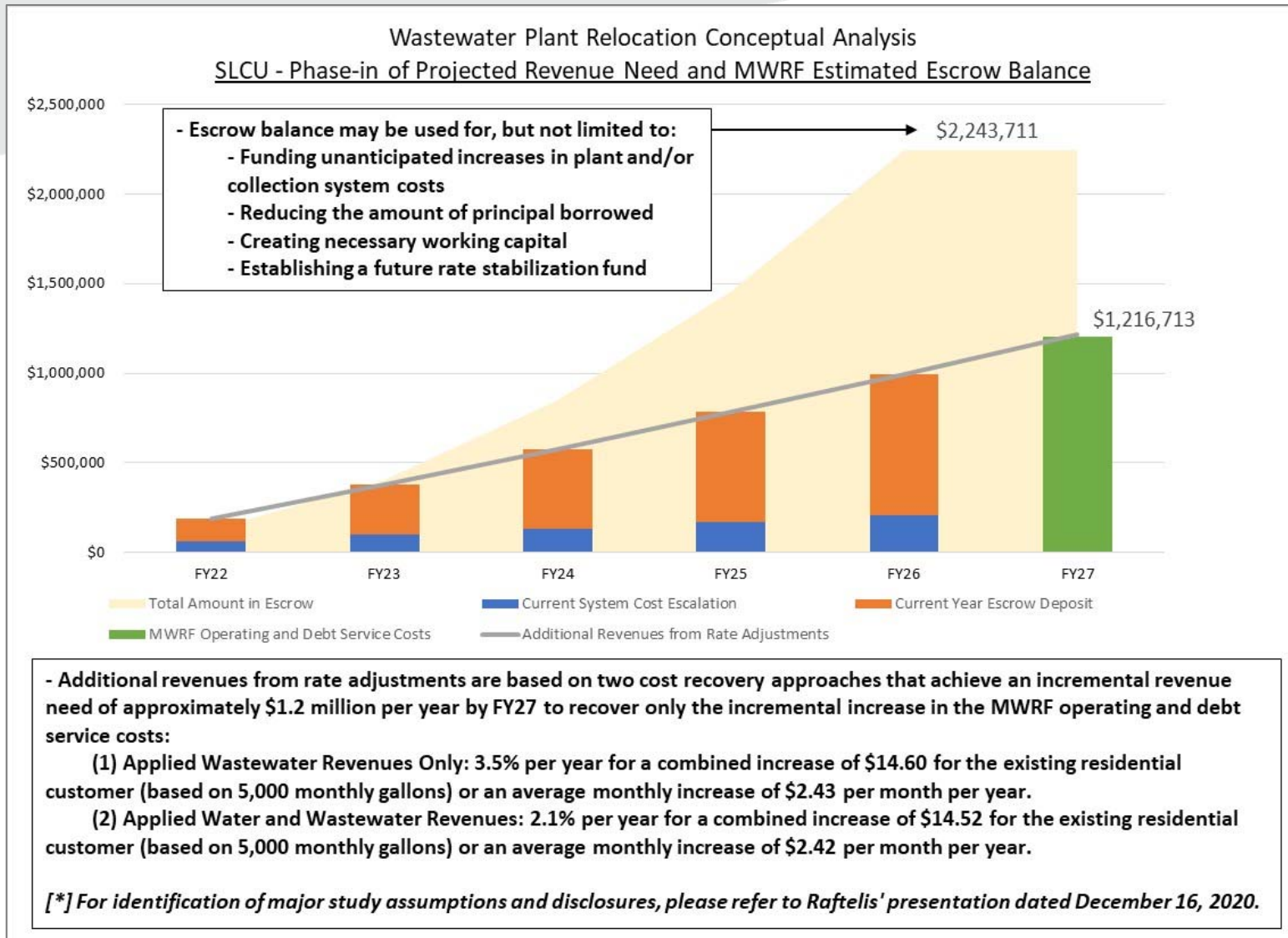
- The additional revenues derived from projected revenue adjustments were first allocated to projected increases in existing wastewater treatment-related operating expenses associated with FPUA's IWRP and SLCU's mainland wastewater plants
- The amount of additional revenues above the current system projected wastewater treatment operating expenses was assumed to be available for escrow
  - › The estimated escrow balances may be used for, but not limited to:
    - Funding unanticipated increases in plant and/or collection system capital costs
    - Reducing the amount of principal borrowed
    - Creating necessary working capital
    - Establishing a future rate stabilization fund
- FPUA and SLCU should consider initiating a comprehensive water and wastewater rate study to identify any additional utility rate adjustments that may be necessary to meet the needs of the wastewater collection system and any other non-wastewater treatment-related expenditure over the projection period (through FY2027)



# Projected Phase-in of FPUA Revenue Needs



# Projected Phase-in of SLCU Revenue Needs



# Summary of Observations and Conclusions

- FPUA and SLCU propose designing and constructing an 8.0 MGD Mainland Water Reclamation Facility that will replace the existing IWRF and three mainland County plants
- The parties have developed an initial project schedule that places the proposed MWRF into operation in FY2027
- The conceptual project cost of \$131.5 million may require financing of up to \$156 million after providing an allowance for construction inflation and estimated capitalized interest costs over the construction period
  - › The project-related debt service costs and any other capacity-related operating expenses and/or revenues are proposed to be allocated 70% FPUA and 30% SLCU
- When considering the preliminary operating expenses of the MWRF, the weighted average allocation of operating expenses were 82% FPUA and 18% SLCU



## Summary of Observations and Conclusions (cont.)

- The preliminary incremental increase in wastewater treatment-related operating expenses and debt service costs by FY2027 are approximately \$4.7 million (FPUA) and \$1.2 million (SLCU)
  - Each party has flexibility in addressing a cost recovery strategy that meets the needs of each system
    - FPUA’s projected revenue needs may be met by increasing water and wastewater revenues by approximately 2.5% per year from FY2022-2027 above any other system-wide revenue requirements
    - SLCU’s projected revenue needs may be met by increasing water and wastewater revenues by approximately 2.1% per year from FY2022-2027 above any other system-wide revenue requirements
- The projected MWRF operating expenses and debt service costs do not include any collection system operating expenses, or any costs of governance or administrative costs associated with any service agreement



## Summary of Observations and Conclusions (cont.)

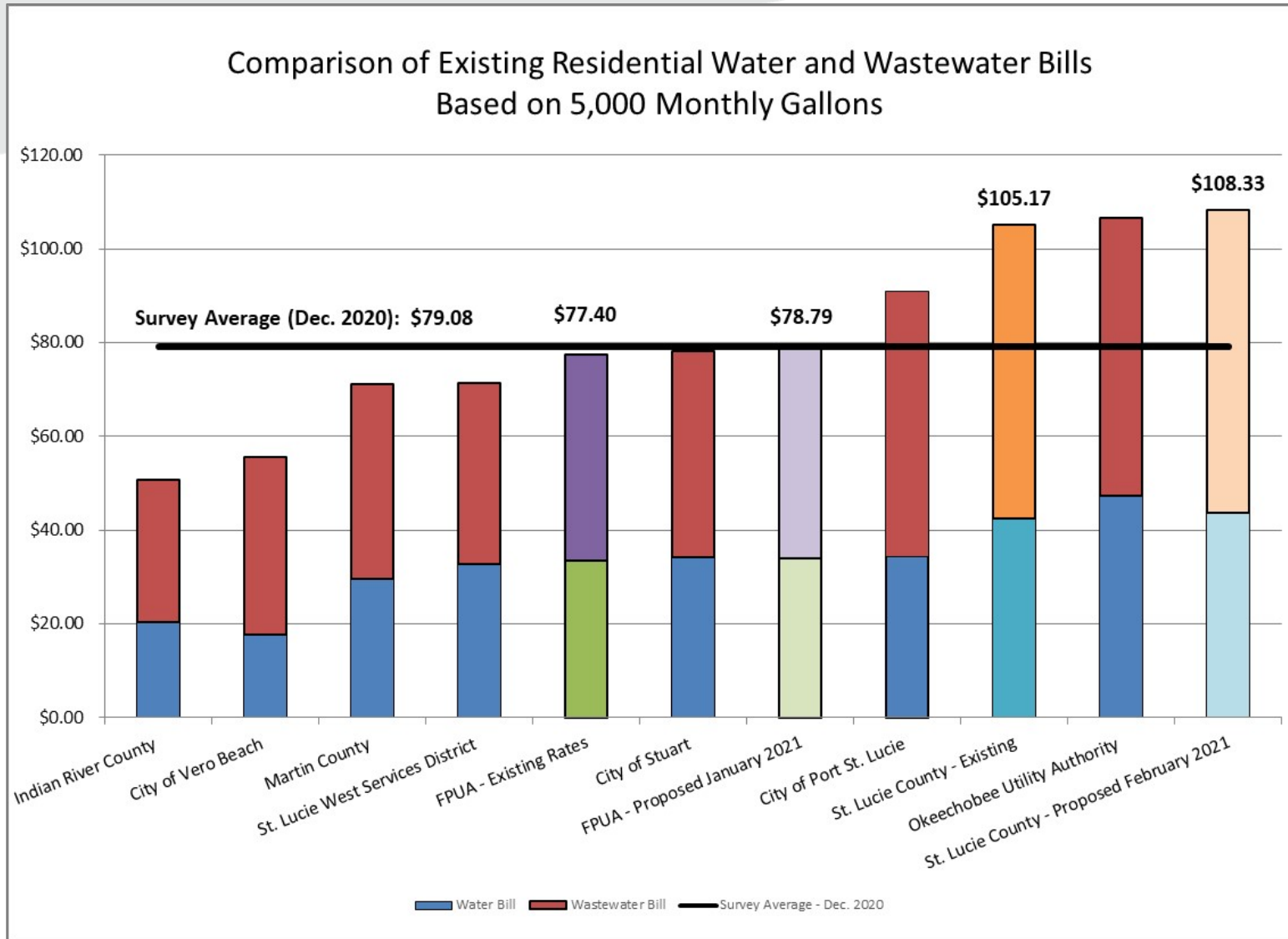
- The next steps in the planning process may include:
  - Developing an interlocal agreement between the parties
  - Initiating a comprehensive wastewater master planning project to update the conceptual project costs
    - This should include a hydraulic analysis of the combined collection systems and proposed transmission routes
  - Preparing a comprehensive water and wastewater rate and impact fee study to evaluate the adequacy of rates and charges system-wide and to begin phasing in projected cost increases
    - Phasing in the projected rate adjustments over time may help to minimize cost increases to customers while providing the ability to escrow funds to:
      - Fund unanticipated increases in plant and/or collection system capital costs
      - Reduce the amount of principal borrowed
      - Create necessary working capital
      - Establish a future rate stabilization fund



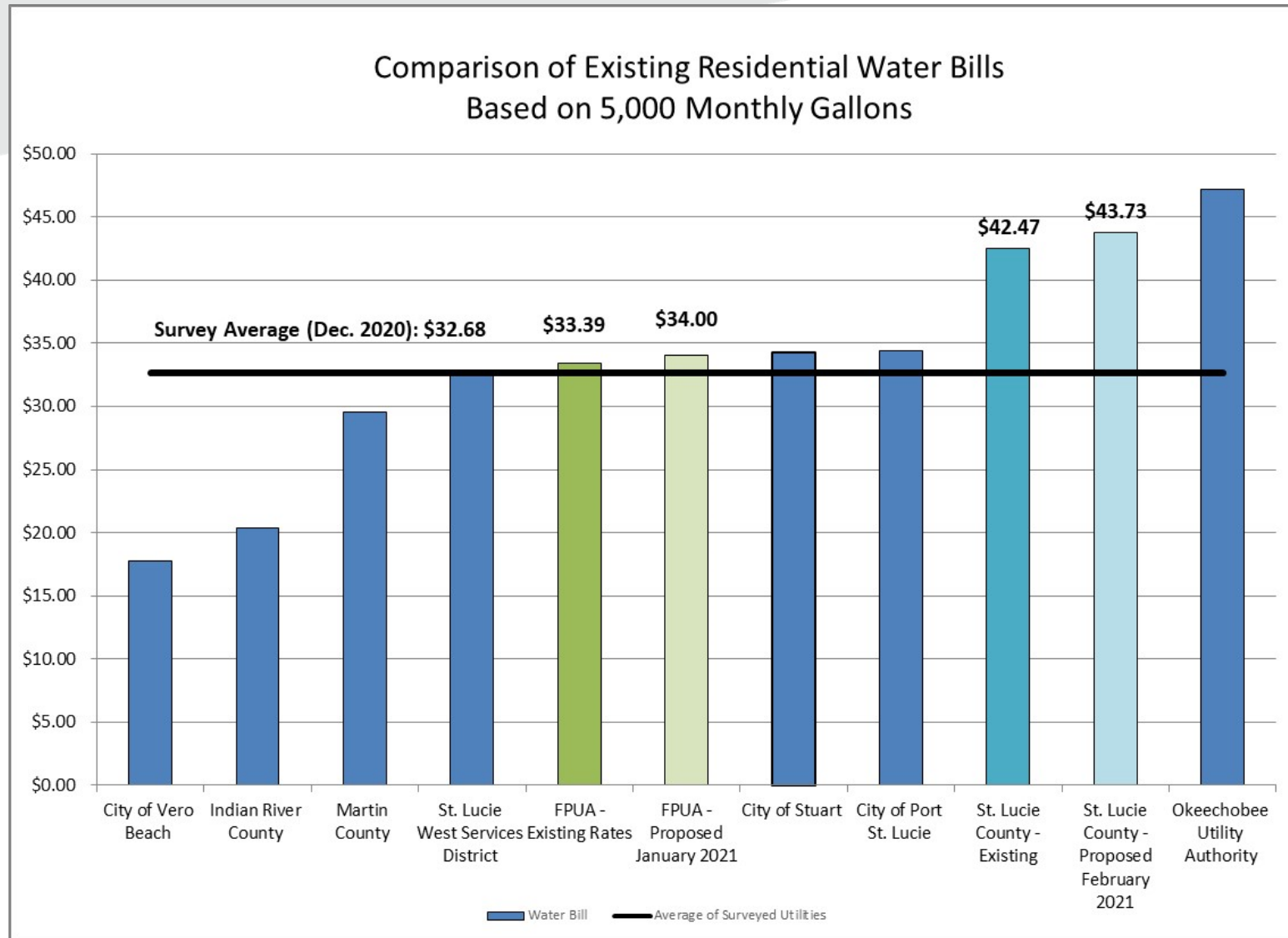
# Supplemental Slides



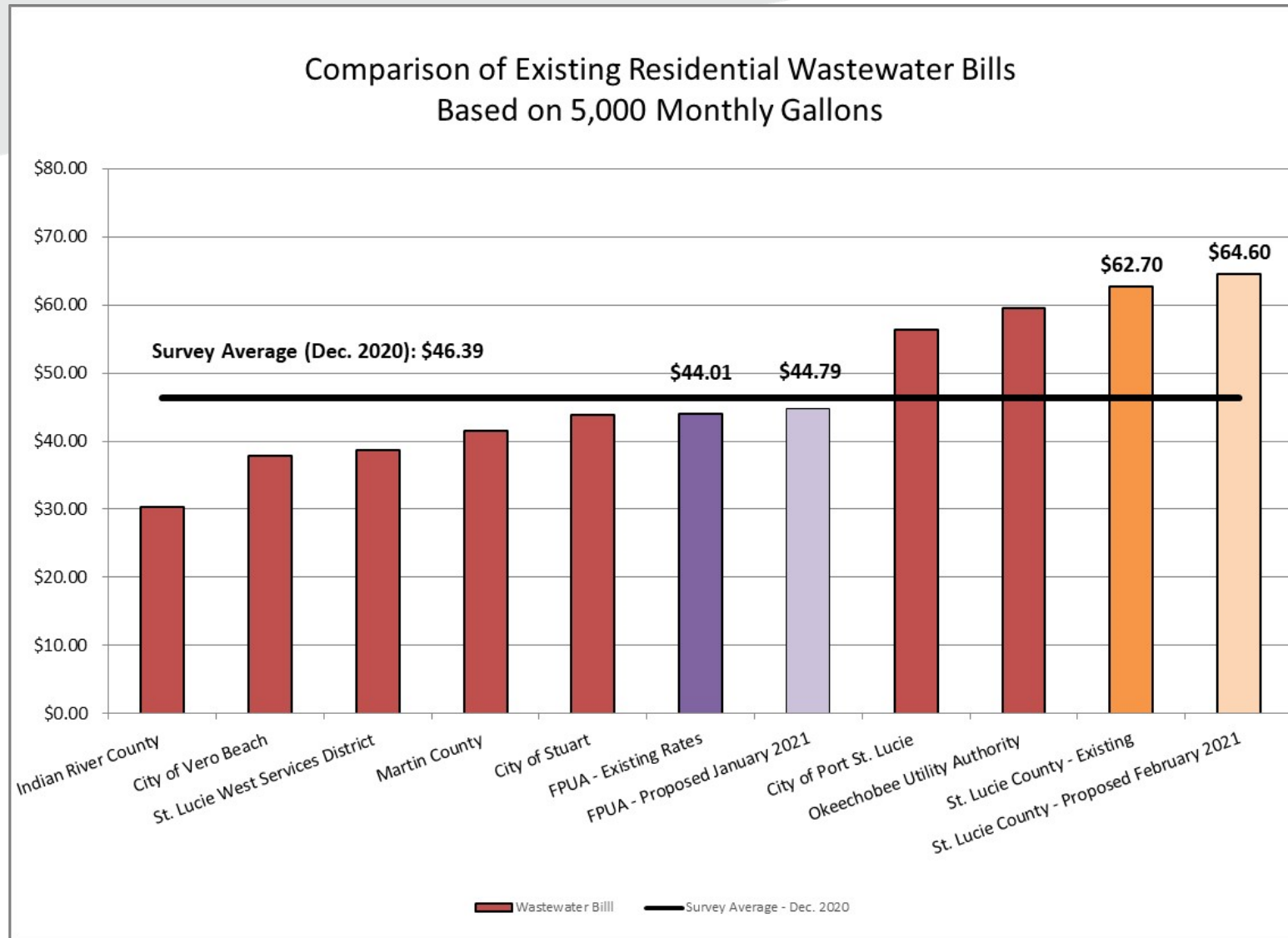
# Comparison of Existing Water and Wastewater Bills



# Comparison of Existing Water Bills



# Comparison of Existing Wastewater Bills



# Supporting Study Tables



**Wastewater Plant Relocation Conceptual Analysis**  
*Evaluation of Incremental Operating and Debt Service Costs*

**List of Tables and Charts**

Table No.	Description
1	Summary of Capacity Costs - Current Values (FY20)
2	Summary of Estimated Project Schedule - Future Value of Capacity Costs
3	Summary of Estimated Debt Service Payments - Option 1 (Assumed Bond Financing)
4	Summary of Estimated Debt Service Payments - Option 2 (Assumed WIFIA / SRF Financing)
5	Summary of Financing Options - Allocated Debt Service Payments (Options #1 and #2)
6	Summary of Actual Wastewater Treatment Operating Expenses
7	Comparison of Existing and Projected Operating Expenses Under Current Operating Conditions
8	Summary of Projected Wastewater Treatment Operating Expenses
9	Summary of Projected Escalation Factors
10	Summary of Projected Test Year Analysis - Option #1 (Assumed Bond Financing)
11	Summary of Projected Test Year Analysis - Option #2 (Assumed WIFIA / SRF Financing)

**Table 1**  
**Wastewater Plant Relocation Conceptual Analysis**  
**Summary of Capacity Costs - Current Values (FY20)**

Line No.	Description	Basis	South County / FPUA (Treasure Coast Energy Center)
<b>Summary of Project Costs [1]</b>			
Cost of New Facilities			
1	MWRF Construction Costs		\$104,620,000
2	Collection System / Routing		22,746,000
3	Total Cost of New Facilities		\$127,366,000
Decommission Costs			
4	Decommission IWRP Site		\$2,382,000
5	Decommission 3 St. Lucie County Plants		1,733,000
6	Total Decommission Costs		\$4,115,000
7	Total Project Cost - Current Dollars		\$131,481,000
Less Grants and Other Funding Sources			
8	Grants (If any)		\$0
9	Other Funding Sources		0
10	Total Grants and Other Funding Sources		\$0
11	Total Project Costs to be Financed - Current Dollars		\$131,481,000
<b>Summary of Capacity Allocation [2]</b>			
12	FPUA - MGD	70.0%	5.600
13	SLCU - MGD	30.0%	2.400
14	Total	100.0%	8.000
<b>Allocation of Project Costs</b>			
FPUA			
15	Direct Assign - Decommission Costs [3]	Input	\$2,382,000
16	Direct Assign - Collection System Costs [4]	Input	0
17	Allocation of Sunk Costs [4]	Input	0
18	Capacity Allocation	70.0%	89,156,200
19	Total Allocated to FPUA - \$		\$91,538,200
20	Total Allocated to FPUA - %		70.0%
SLCU			
21	Direct Assign - Decommission Costs [3]	Input	\$1,733,000
22	Direct Assign - Collection System Costs [4]	Input	0
23	Allocation of Sunk Costs [4]	Input	0
24	Capacity Allocation	30.0%	38,209,800
25	Total Allocated to County - \$		\$39,942,800
26	Total Allocated to County - %		30.0%
27	Total Costs - %		\$131,481,000
28	Total Costs - \$		100.0%

**Footnotes:**

- [1] Amounts reflect estimated costs (in today's dollars) as provided in the draft study report prepared May 2020.
- [2] Capacity allocations based on discussions between FPUA and County staff.
- [3] Amount reflects directly assigned decommission costs to each party.
- [4] No adjustments were made for directly assignable collection system costs (if any) or existing "sunk" costs. Sunk costs could include the costs of existing assets and facilities that may serve the proposed joint project.

**Table 2**  
**Wastewater Plant Relocation Conceptual Analysis**

**Summary of Estimated Project Schedule - Future Value of Capacity Costs**

Line No.	Description	Basis	South County / FPUA (Treasure Coast Energy Center)
<b>Summary of Project Schedule</b>			
1	Total Project Cost - Current Dollars [1]		\$131,481,000
2	FY21 - Develop Interlocal Agreement		
3	FY22 - Planning / Design	10%	\$13,148,100
4	FY23 - Planning / Design	10%	\$13,148,100
5	FY24 - Construction	30%	\$39,444,300
6	FY25 - Construction	30%	\$39,444,300
7	FY26 - Construction	20%	\$26,296,200
8	FY21	1.03	
9	FY22	1.03	\$13,948,819
10	FY23	1.03	\$14,367,284
11	FY24	1.03	\$44,394,907
12	FY25	1.03	\$45,726,754
13	FY26	1.03	\$31,399,038
14	Total Project Cost - Future Dollars		\$149,836,803
15	Total Project Cost - Future Dollars (Rounded)		\$150,000,000
16	Weighted Average Factor [2]		1.140

**Footnotes:**

[1] Amounts reflect estimated costs (in today's dollars) as provided in the draft study report prepared May 2020.

[2] Cumulative inflation adjustment estimated at 3% per year based on the historical annual average increase in the Engineering News Record (ENR) Index as follows:

5 - Year	2.70%
10 - Year	2.67%
20 - Year	3.12%

**Table 3  
Wastewater Plant Relocation Conceptual Analysis**

**Summary of Estimated Debt Service Payments - Option 1 (Assumed Bond Financing)**

Traditional Public Bonds [1]

Amount 150,000,000  
Assumed Rate 3.50%  
Issuance Date 1/1/2021  
Term 35 Years

Assumes Capitalized Interest for 5 Years [2]

Traditional Public Bonds				Estimated Allocation of Bond Payments			
Period Ending	Principal	Interest	Debt Service	Period Ending	FPUA	SLCU	Total Debt Service
1/1/2022	-	-	-		70%	30%	100%
1/1/2023	-	-	-				
1/1/2024	-	-	-				
1/1/2025	-	-	-				
1/1/2026	-	-	-				
1/1/2027	\$2,270,000	\$7,536,500	\$9,806,500	\$46,388	\$6,864,550	\$2,941,950	\$9,806,500
1/1/2028	2,385,000	7,423,000	9,808,000	1/1/2028	6,865,600	2,942,400	9,808,000
1/1/2029	2,500,000	7,303,750	9,803,750	1/1/2029	6,862,625	2,941,125	9,803,750
1/1/2030	2,625,000	7,178,750	9,803,750	1/1/2030	6,862,625	2,941,125	9,803,750
1/1/2031	2,760,000	7,047,500	9,807,500	1/1/2031	6,865,250	2,942,250	9,807,500
1/1/2032	2,895,000	6,909,500	9,804,500	1/1/2032	6,863,150	2,941,350	9,804,500
1/1/2033	3,040,000	6,764,750	9,804,750	1/1/2033	6,863,325	2,941,425	9,804,750
1/1/2034	3,195,000	6,612,750	9,807,750	1/1/2034	6,865,425	2,942,325	9,807,750
1/1/2035	3,350,000	6,453,000	9,803,000	1/1/2035	6,862,100	2,940,900	9,803,000
1/1/2036	3,520,000	6,285,500	9,805,500	1/1/2036	6,863,850	2,941,650	9,805,500
1/1/2037	3,695,000	6,109,500	9,804,500	1/1/2037	6,863,150	2,941,350	9,804,500
1/1/2038	3,880,000	5,924,750	9,804,750	1/1/2038	6,863,325	2,941,425	9,804,750
1/1/2039	4,075,000	5,730,750	9,805,750	1/1/2039	6,864,025	2,941,725	9,805,750
1/1/2040	4,280,000	5,527,000	9,807,000	1/1/2040	6,864,900	2,942,100	9,807,000
1/1/2041	4,490,000	5,313,000	9,803,000	1/1/2041	6,862,100	2,940,900	9,803,000
1/1/2042	4,715,000	5,088,500	9,803,500	1/1/2042	6,862,450	2,941,050	9,803,500
1/1/2043	4,950,000	4,852,750	9,802,750	1/1/2043	6,861,925	2,940,825	9,802,750
1/1/2044	5,200,000	4,605,250	9,805,250	1/1/2044	6,863,675	2,941,575	9,805,250
1/1/2045	5,460,000	4,345,250	9,805,250	1/1/2045	6,863,675	2,941,575	9,805,250
1/1/2046	5,735,000	4,072,250	9,807,250	1/1/2046	6,865,075	2,942,175	9,807,250
1/1/2047	6,020,000	3,785,500	9,805,500	1/1/2047	6,863,850	2,941,650	9,805,500
1/1/2048	6,320,000	3,484,500	9,804,500	1/1/2048	6,863,150	2,941,350	9,804,500
1/1/2049	6,635,000	3,168,500	9,803,500	1/1/2049	6,862,450	2,941,050	9,803,500
1/1/2050	6,970,000	2,836,750	9,806,750	1/1/2050	6,864,725	2,942,025	9,806,750
1/1/2051	7,315,000	2,488,250	9,803,250	1/1/2051	6,862,275	2,940,975	9,803,250
1/1/2052	7,680,000	2,122,500	9,802,500	1/1/2052	6,861,750	2,940,750	9,802,500
1/1/2053	8,065,000	1,738,500	9,803,500	1/1/2053	6,862,450	2,941,050	9,803,500
1/1/2054	8,470,000	1,335,250	9,805,250	1/1/2054	6,863,675	2,941,575	9,805,250
1/1/2055	8,895,000	911,750	9,806,750	1/1/2055	6,864,725	2,942,025	9,806,750
1/1/2056	9,340,000	467,000	9,807,000	1/1/2056	6,864,900	2,942,100	9,807,000
	<u>\$150,730,000</u>	<u>\$143,422,500</u>	<u>\$294,152,500</u>		<u>\$205,906,750</u>	<u>\$88,245,750</u>	<u>\$294,152,500</u>

Footnotes:

[1] Estimated amounts provided by PFM on November 6, 2020 as requested by Raftelis. Terms and conditions subject to change.

[2] Based on information provided by PFM, the assumed capitalized interest for five years adds approximately \$36 million to the bond sizing. Bond premium also assumed to be \$36 million, resulting in total principal of \$150.73 million..

\$114,730,000

**Table 4  
Wastewater Plant Relocation Conceptual Analysis**

**Summary of Estimated Debt Service Payments - Option 2 (Assumed WIFIA / SRF Financing)**

WIFIA Loan [1] [2]  
 Amount 76,000,000 (Includes Capitalized Interest)  
 Assumed Rate 1.50%  
 Issuance Date 1/1/2021  
 Term 35 Years  
 Assumes No Payment for 5 years and wrap around SRF Loan

SRF Loan [1] [2]  
 Amount 80,000,000 (Includes Capitalized Interest)  
 Assumed Rate 1.50%  
 Issuance Date 1/1/2021  
 Term 20 Years  
 Assumes No Payment for 5 years

WIFIA Loan				SRF Loan				Aggregate Payments				Estimated Allocation of Bond Payments			
Period Ending	Principal	Interest	Debt Service	Period Ending	Principal	Interest	Debt Service	Period Ending	Principal	Interest	Debt Service	Period Ending	FPUA	SLCU	Total Debt Service
1/1/2022	-	-	-	1/1/2022	-	-	-	1/1/2022	-	-	-	1/1/2022	70%	30%	100%
1/1/2023	-	-	-	1/1/2023	-	-	-	1/1/2023	-	-	-	1/1/2023			
1/1/2024	-	-	-	1/1/2024	-	-	-	1/1/2024	-	-	-	1/1/2024			
1/1/2025	-	-	-	1/1/2025	-	-	-	1/1/2025	-	-	-	1/1/2025			
1/1/2026	-	-	-	1/1/2026	-	-	-	1/1/2026	-	-	-	1/1/2026			
1/1/2027	-	\$1,140,000	\$1,140,000	1/1/2027	\$3,460,000	\$1,200,000	\$4,660,000	1/1/2027	\$3,460,000	\$2,340,000	\$5,800,000	1/1/2027	\$4,060,000	\$1,740,000	\$5,800,000
1/1/2028	-	1,140,000	1,140,000	1/1/2028	3,510,000	1,148,100	4,658,100	1/1/2028	3,510,000	2,288,100	5,798,100	1/1/2028	4,058,670	1,739,430	5,798,100
1/1/2029	-	1,140,000	1,140,000	1/1/2029	3,565,000	1,095,450	4,660,450	1/1/2029	3,565,000	2,235,450	5,800,450	1/1/2029	4,060,315	1,740,135	5,800,450
1/1/2030	-	1,140,000	1,140,000	1/1/2030	3,620,000	1,041,975	4,661,975	1/1/2030	3,620,000	2,181,975	5,801,975	1/1/2030	4,061,383	1,740,592	5,801,975
1/1/2031	-	1,140,000	1,140,000	1/1/2031	3,670,000	987,675	4,657,675	1/1/2031	3,670,000	2,127,675	5,797,675	1/1/2031	4,058,373	1,739,302	5,797,675
1/1/2032	-	1,140,000	1,140,000	1/1/2032	3,725,000	932,625	4,657,625	1/1/2032	3,725,000	2,072,625	5,797,625	1/1/2032	4,058,338	1,739,287	5,797,625
1/1/2033	-	1,140,000	1,140,000	1/1/2033	3,785,000	876,750	4,661,750	1/1/2033	3,785,000	2,016,750	5,801,750	1/1/2033	4,061,225	1,740,525	5,801,750
1/1/2034	-	1,140,000	1,140,000	1/1/2034	3,840,000	819,975	4,659,975	1/1/2034	3,840,000	1,959,975	5,799,975	1/1/2034	4,059,983	1,739,992	5,799,975
1/1/2035	-	1,140,000	1,140,000	1/1/2035	3,900,000	762,375	4,662,375	1/1/2035	3,900,000	1,902,375	5,802,375	1/1/2035	4,061,663	1,740,712	5,802,375
1/1/2036	-	1,140,000	1,140,000	1/1/2036	3,955,000	703,875	4,658,875	1/1/2036	3,955,000	1,843,875	5,798,875	1/1/2036	4,059,213	1,739,662	5,798,875
1/1/2037	-	1,140,000	1,140,000	1/1/2037	4,015,000	644,550	4,659,550	1/1/2037	4,015,000	1,784,550	5,799,550	1/1/2037	4,059,685	1,739,865	5,799,550
1/1/2038	-	1,140,000	1,140,000	1/1/2038	4,075,000	584,325	4,659,325	1/1/2038	4,075,000	1,724,325	5,799,325	1/1/2038	4,059,528	1,739,797	5,799,325
1/1/2039	-	1,140,000	1,140,000	1/1/2039	4,135,000	523,200	4,658,200	1/1/2039	4,135,000	1,663,200	5,798,200	1/1/2039	4,058,740	1,739,460	5,798,200
1/1/2040	-	1,140,000	1,140,000	1/1/2040	4,200,000	461,175	4,661,175	1/1/2040	4,200,000	1,601,175	5,801,175	1/1/2040	4,060,823	1,740,352	5,801,175
1/1/2041	-	1,140,000	1,140,000	1/1/2041	4,260,000	398,175	4,658,175	1/1/2041	4,260,000	1,538,175	5,798,175	1/1/2041	4,058,723	1,739,452	5,798,175
1/1/2042	-	1,140,000	1,140,000	1/1/2042	4,325,000	334,275	4,659,275	1/1/2042	4,325,000	1,474,275	5,799,275	1/1/2042	4,059,493	1,739,782	5,799,275
1/1/2043	-	1,140,000	1,140,000	1/1/2043	4,390,000	269,400	4,659,400	1/1/2043	4,390,000	1,409,400	5,799,400	1/1/2043	4,059,580	1,739,820	5,799,400
1/1/2044	-	1,140,000	1,140,000	1/1/2044	4,455,000	203,550	4,658,550	1/1/2044	4,455,000	1,343,550	5,798,550	1/1/2044	4,058,985	1,739,565	5,798,550
1/1/2045	-	1,140,000	1,140,000	1/1/2045	4,525,000	136,725	4,661,725	1/1/2045	4,525,000	1,276,725	5,801,725	1/1/2045	4,061,208	1,740,517	5,801,725
1/1/2046	-	1,140,000	1,140,000	1/1/2046	4,590,000	68,850	4,658,850	1/1/2046	4,590,000	1,208,850	5,798,850	1/1/2046	4,059,195	1,739,655	5,798,850
1/1/2047	4,555,000	1,140,000	5,695,000	1/1/2047				1/1/2047	4,555,000	1,140,000	5,695,000	1/1/2047	3,986,500	1,708,500	5,695,000
1/1/2048	4,625,000	1,071,675	5,696,675	1/1/2048				1/1/2048	4,625,000	1,071,675	5,696,675	1/1/2048	3,987,673	1,709,002	5,696,675
1/1/2049	4,695,000	1,002,300	5,697,300	1/1/2049				1/1/2049	4,695,000	1,002,300	5,697,300	1/1/2049	3,988,110	1,709,190	5,697,300
1/1/2050	4,765,000	931,875	5,696,875	1/1/2050				1/1/2050	4,765,000	931,875	5,696,875	1/1/2050	3,987,813	1,709,062	5,696,875
1/1/2051	4,835,000	860,400	5,695,400	1/1/2051				1/1/2051	4,835,000	860,400	5,695,400	1/1/2051	3,986,780	1,708,620	5,695,400
1/1/2052	4,910,000	787,875	5,697,875	1/1/2052				1/1/2052	4,910,000	787,875	5,697,875	1/1/2052	3,988,513	1,709,362	5,697,875
1/1/2053	4,980,000	714,225	5,694,225	1/1/2053				1/1/2053	4,980,000	714,225	5,694,225	1/1/2053	3,985,958	1,708,267	5,694,225
1/1/2054	5,055,000	639,525	5,694,525	1/1/2054				1/1/2054	5,055,000	639,525	5,694,525	1/1/2054	3,986,168	1,708,357	5,694,525
1/1/2055	5,130,000	563,700	5,693,700	1/1/2055				1/1/2055	5,130,000	563,700	5,693,700	1/1/2055	3,985,590	1,708,110	5,693,700
1/1/2056	5,210,000	486,750	5,696,750	1/1/2056				1/1/2056	5,210,000	486,750	5,696,750	1/1/2056	3,987,725	1,709,025	5,696,750
1/1/2057	5,290,000	408,600	5,698,600	1/1/2057				1/1/2057	5,290,000	408,600	5,698,600	1/1/2057	3,989,020	1,709,580	5,698,600
1/1/2058	5,365,000	329,250	5,694,250	1/1/2058				1/1/2058	5,365,000	329,250	5,694,250	1/1/2058	3,985,975	1,708,275	5,694,250
1/1/2059	5,445,000	248,775	5,693,775	1/1/2059				1/1/2059	5,445,000	248,775	5,693,775	1/1/2059	3,985,643	1,708,132	5,693,775
1/1/2060	5,530,000	167,100	5,697,100	1/1/2060				1/1/2060	5,530,000	167,100	5,697,100	1/1/2060	3,987,970	1,709,130	5,697,100
1/1/2061	5,610,000	84,150	5,694,150	1/1/2061				1/1/2061	5,610,000	84,150	5,694,150	1/1/2061	3,985,905	1,708,245	5,694,150
	<b>\$76,000,000</b>	<b>\$32,236,200</b>	<b>\$108,236,200</b>		<b>\$80,000,000</b>	<b>\$13,193,025</b>	<b>\$93,193,025</b>		<b>\$156,000,000</b>	<b>\$45,429,225</b>	<b>\$201,429,225</b>		<b>\$141,000,466</b>	<b>\$60,428,759</b>	<b>\$201,429,225</b>

**Footnotes:**

[1] Estimated amounts provided by PFM on November 24, 2020 as requested by Raftelis. Principal amounts include \$6.0 million in estimated capitalized interest costs from FY22-26. Terms and conditions subject to change.

[2] Based on discussions with PFM, amounts prepared to demonstrate the benefit of a financing strategy that may combine WIFIA and SRF Funding. PFM and Raftelis provide no assurances that the proposed project will be eligible for funding or that any amount of funding will be available at the time the project is constructed.

**Table 5  
Wastewater Plant Relocation Conceptual Analysis**

**Summary of Financing Options - Allocated Debt Service Payments (Options #1 and #2)**

Line No.	Description Allocation	Period	Option 1 (Assumed Bond Financing) [1]			Option 2 (Assumed WIFIA / SRF Financing) [1] [2]		
			FPUA	St. Lucie County	Total	FPUA	St. Lucie County	Total
			70.0%	30.0%	100.0%	70.0%	30.0%	100.0%
1	Yr.1	2027	\$6,864,550	\$2,941,950	\$9,806,500	\$4,060,000	\$1,740,000	\$5,800,000
2	Yr.2	2028	6,865,600	2,942,400	9,808,000	4,058,670	1,739,430	5,798,100
3	Yr.3	2029	6,862,625	2,941,125	9,803,750	4,060,315	1,740,135	5,800,450
4	Yr.4	2030	6,862,625	2,941,125	9,803,750	4,061,383	1,740,592	5,801,975
5	Yr.5	2031	6,865,250	2,942,250	9,807,500	4,058,373	1,739,302	5,797,675
6	Yr.6	2032	6,863,150	2,941,350	9,804,500	4,058,338	1,739,287	5,797,625
7	Yr.7	2033	6,863,325	2,941,425	9,804,750	4,061,225	1,740,525	5,801,750
8	Yr.8	2034	6,865,425	2,942,325	9,807,750	4,059,983	1,739,992	5,799,975
9	Yr.9	2035	6,862,100	2,940,900	9,803,000	4,061,663	1,740,712	5,802,375
10	Yr.10	2036	6,863,850	2,941,650	9,805,500	4,059,213	1,739,662	5,798,875
11	Yr.11	2037	6,863,150	2,941,350	9,804,500	4,059,685	1,739,865	5,799,550
12	Yr.12	2038	6,863,325	2,941,425	9,804,750	4,059,528	1,739,797	5,799,325
13	Yr.13	2039	6,864,025	2,941,725	9,805,750	4,058,740	1,739,460	5,798,200
14	Yr.14	2040	6,864,900	2,942,100	9,807,000	4,060,823	1,740,352	5,801,175
15	Yr.15	2041	6,862,100	2,940,900	9,803,000	4,058,723	1,739,452	5,798,175
16	Yr.16	2042	6,862,450	2,941,050	9,803,500	4,059,493	1,739,782	5,799,275
17	Yr.17	2043	6,861,925	2,940,825	9,802,750	4,059,580	1,739,820	5,799,400
18	Yr.18	2044	6,863,675	2,941,575	9,805,250	4,058,985	1,739,565	5,798,550
19	Yr.19	2045	6,863,675	2,941,575	9,805,250	4,061,208	1,740,517	5,801,725
20	Yr.20	2046	6,865,075	2,942,175	9,807,250	4,059,195	1,739,655	5,798,850
21	Yr.21	2047	6,863,850	2,941,650	9,805,500	3,986,500	1,708,500	5,695,000
22	Yr.22	2048	6,863,150	2,941,350	9,804,500	3,987,673	1,709,002	5,696,675
23	Yr.23	2049	6,862,450	2,941,050	9,803,500	3,988,110	1,709,190	5,697,300
24	Yr.24	2050	6,864,725	2,942,025	9,806,750	3,987,813	1,709,062	5,696,875
25	Yr.25	2051	6,862,275	2,940,975	9,803,250	3,986,780	1,708,620	5,695,400
26	Yr.26	2052	6,861,750	2,940,750	9,802,500	3,988,513	1,709,362	5,697,875
27	Yr.27	2053	6,862,450	2,941,050	9,803,500	3,985,958	1,708,267	5,694,225
28	Yr.28	2054	6,863,675	2,941,575	9,805,250	3,986,168	1,708,357	5,694,525
29	Yr.29	2055	6,864,725	2,942,025	9,806,750	3,985,590	1,708,110	5,693,700
30	Yr.30	2056	6,864,900	2,942,100	9,807,000	3,987,725	1,709,025	5,696,750
31	Yr.31	2057				3,989,020	1,709,580	5,698,600
32	Yr.32	2058				3,985,975	1,708,275	5,694,250
33	Yr.33	2059				3,985,643	1,708,132	5,693,775
34	Yr.34	2060				3,987,970	1,709,130	5,697,100
35	Yr.35	2061				3,985,905	1,708,245	5,694,150
36			\$205,906,750	\$88,245,750	\$294,152,500	\$141,000,466	\$60,428,759	\$201,429,225

**Footnotes:**

- [1] Amounts derived from Tables 3 and 4 based on information provided by PFM. Terms and conditions subject to change.
- [2] Based on discussions with PFM, amounts prepared to demonstrate the benefit of a financing strategy that may combine WIFIA and SRF Funding. PFM and Raftelis provide no assurances that the proposed project will be eligible for funding or that any amount of funding will be available at the time the project is constructed.

**Table 6**  
**Wastewater Plant Relocation Conceptual Analysis**

**Summary of Actual Wastewater Treatment Operating Expenses**

Line No.	Description	Actual Operating Expenses - FY20 [1]				Total
		IWRP	Fairwinds Golf Course WWTF	Lakewood Park WWTF	Holiday Pines WWTF	
1	Power [2]	\$455,779	\$19,036	\$13,811	\$141,215	\$629,841
2	Labor [3]	1,155,316	37,182	57,310	450,671	1,700,480
3	Maintenance Parts Replacement Costs	109,279	19,218	9,534	154,423	292,453
4	Chemicals	106,009	-	-	-	106,009
5	Administrative/ Legal Procurement	23,605	-	-	-	23,605
6	Sludge	605,626	3,787	3,080	57,950	670,443
7	Other	57,557	-	-	-	57,557
8	Total Annual Cost	\$2,513,172	\$79,223	\$83,735	\$804,259	\$3,480,389
9	Permitted Capacity, MGD	10.00	0.02	0.02	0.21	10.25
10	Treated Flow, MGD	4.86	0.03	0.02	0.18	5.09
11	Treated Flow, MGY	1,774	11	7	66	1,858
12	Cost, \$/ MG Treated	\$1,417	\$7,235	\$11,471	\$12,241	\$1,873

Footnotes:

[1] Amounts provided by FPUA and SLCU staff.

[2] Power costs for the SLCU plants estimated based on the original budget.

[3] Labor costs for SLCU includes estimated contract operations provided by Severn Trent.

**Table 7  
Wastewater Plant Relocation Conceptual Analysis**

**Comparison of Existing and Projected Operating Expenses Under Current Operating Conditions**

Line No.	Description	IWRF Only [1] Actual Costs - FY20	Combined [2] Actual Costs - FY20	MWRF [3] Projected Costs - FY20	Basis for MWRF Projections
	Permitted Capacity				
1	MGD	10.00	10.25	8.00	Based on Design Criteria (May 2020 Report)
2	MGY	3,650	3,742	2,920	
	Treated Flow				
3	MGD	4.86	5.09	5.09	Existing Operating Conditions
4	MGY	1,774	1,858	1,858	
	Power				
5	Annual Cost	\$455,779	\$629,841	\$427,306	Engineering 10% decrease of current IWRF based on more efficient equipment (May 2020 Report)
6	Cost/MG (treated)	\$257	\$339	\$230	
	Labor				
7	Annual Cost	\$1,155,316	\$1,700,480	\$1,155,316	Current IWRF costs
8	Cost/MG (capacity)	\$317	\$454	\$396	
	Maintenance Parts Replacement Costs				
9	Annual Cost	\$109,279	\$292,453	\$87,600	Current IWRF costs
10	Cost/MG (capacity)	\$30	\$78	\$30	
	Chemicals				
11	Annual Cost	\$106,009	\$106,009	\$213,653	Engineering estimate to provide high-level disinfection (May 2020 Report)
12	Cost/MG (treated)	\$60	\$57	\$115	
	Administrative/ Legal Procurement				
13	Annual Cost	\$23,605	\$23,605	\$17,520	Current IWRF costs
14	Cost/MG (capacity)	\$6	\$6	\$6	
	Sludge				
15	Annual Cost	\$605,626	\$670,443	\$633,527	Current IWRF costs
16	Cost/MG (treated)	\$341	\$361	\$341	
	Other				
17	Annual Cost	\$57,557	\$57,557	\$59,451	Current IWRF costs
18	Cost/MG (treated)	\$32	\$31	\$32	
	Total, \$				
19	Annual Cost	\$2,513,172	\$3,480,389	\$2,594,373	
20	Cost/MG (treated)	\$1,417	\$1,873	\$1,396	
21	Projected Increase (Decrease) Combined Costs - \$			<u><u>(\$886,016)</u></u>	
22	Projected Increase (Decrease) Combined Costs - %			<u><u>(25.5%)</u></u>	

**Footnotes:**

[1] Amounts derived from Table 6 and reflect the actual operating expenses for the IWRF only.

[2] Amounts derived from Table 6 and reflect the actual operating expenses for the IWRF and the County's three mainland plants.

[3] Amounts reflect the estimated MWRF operating expenses under the actual FY20 operating conditions.

**Table 8**  
**Wastewater Plant Relocation Conceptual Analysis**

**Summary of Projected Wastewater Treatment Operating Expenses**

Line No.	Description	IWRP / SLCU Existing Costs - FY20 [1]	MWRP Projected Costs - FY20 [1]	Escalation Reference [2]	Projected Fiscal Year Ending September 30, [1]						
					2021	2022	2023	2024	2025	2026	2027
<b><u>Summary of Combined MWRP Operating Expenses</u></b>											
1	Power	\$629,841	\$427,306	Power	\$440,125	\$453,329	\$466,929	\$480,937	\$495,365	\$510,226	\$525,533
2	Labor	1,700,480	1,155,316	Labor	1,189,975	1,225,674	1,262,444	1,300,317	1,339,327	1,379,507	1,420,892
3	Maintenance Parts Replacement Costs	292,453	87,600	Repairs	90,228	92,935	95,723	98,595	101,553	104,600	107,738
4	Chemicals	106,009	213,653	Chemicals	218,994	224,469	230,081	235,833	241,729	247,772	253,966
5	Administrative/ Legal Procurement	23,605	17,520	Inflation	17,678	17,979	18,357	18,761	19,193	19,615	20,047
6	Sludge	670,443	633,527	Sludge	644,297	658,472	674,934	691,807	709,794	727,539	745,727
7	Other	57,557	59,451	Inflation	59,986	61,006	62,287	63,657	65,121	66,554	68,018
8	Total Annual Cost	<u>\$3,480,389</u>	<u>\$2,594,373</u>		<u>\$2,661,283</u>	<u>\$2,733,864</u>	<u>\$2,810,755</u>	<u>\$2,889,907</u>	<u>\$2,972,082</u>	<u>\$3,055,813</u>	<u>\$3,141,921</u>
9	Annual Increase - %		(25.5%)		2.6%	2.7%	2.8%	2.8%	2.8%	2.8%	2.8%
<b><u>Allocation of Combined MWRP Operating Expenses</u></b>											
<b><u>Summary of Allocation References</u></b>											
10	FPUA Allocation	N/A	70%	FPUA-Capacity	70%	70%	70%	70%	70%	70%	70%
11	SLCUU Allocation	N/A	30%	SLCU-Capacity	30%	30%	30%	30%	30%	30%	30%
12	FPUA Allocation	N/A	93%	FPUA-Flows	93%	93%	93%	93%	93%	93%	93%
13	SLCUU Allocation	N/A	7%	SLCU-Flows	7%	7%	7%	7%	7%	7%	7%
<b><u>FPUA Allocated Expenses</u></b>											
14	Power	\$455,779	\$397,395	FPUA-Flows	\$409,316	\$421,596	\$434,244	\$447,271	\$460,689	\$474,510	\$488,746
15	Labor	1,155,316	808,721	FPUA-Capacity	832,983	857,972	883,711	910,222	937,529	965,655	994,624
16	Maintenance Parts Replacement Costs	109,279	61,320	FPUA-Capacity	63,160	65,055	67,006	69,017	71,087	73,220	75,417
17	Chemicals	106,009	198,697	FPUA-Flows	203,664	208,756	213,975	219,325	224,808	230,428	236,188
18	Administrative/ Legal Procurement	23,605	16,294	FPUA-Flows	16,441	16,720	17,072	17,448	17,849	18,242	18,644
19	Sludge	605,626	589,180	FPUA-Flows	599,196	612,379	627,689	643,381	660,108	676,611	693,526
20	Other	57,557	55,289	FPUA-Flows	55,787	56,736	57,927	59,201	60,563	61,895	63,257
	<i>Adjustment for Bulk Sales to SLCU</i>	<i>(245,853)</i>									
21	Total Annual Cost	<u>\$2,267,319</u>	<u>\$2,126,896</u>		<u>\$2,180,547</u>	<u>\$2,239,213</u>	<u>\$2,301,624</u>	<u>\$2,365,864</u>	<u>\$2,432,634</u>	<u>\$2,500,561</u>	<u>\$2,570,402</u>
21	Amount Allocated - %	65%	82%		82%	82%	82%	82%	82%	82%	82%
22	Annual Increase - %		(6.2%)		2.5%	2.7%	2.8%	2.8%	2.8%	2.8%	2.8%
<b><u>SLCU Allocated Expenses</u></b>											
23	Power	\$174,062	\$29,911	SLCU-Flows	\$30,809	\$31,733	\$32,685	\$33,666	\$34,676	\$35,716	\$36,787
24	Labor	545,164	346,595	SLCU-Capacity	356,993	367,702	378,733	390,095	401,798	413,852	426,268
25	Maintenance Parts Replacement Costs	183,174	26,280	SLCU-Capacity	27,068	27,881	28,717	29,579	30,466	31,380	32,321
26	Chemicals	0	14,956	SLCU-Flows	15,330	15,713	16,106	16,508	16,921	17,344	17,778
27	Administrative/ Legal Procurement	0	1,226	SLCU-Flows	1,237	1,259	1,285	1,313	1,344	1,373	1,403
28	Sludge	64,817	44,347	SLCU-Flows	45,101	46,093	47,245	48,426	49,686	50,928	52,201
29	Other	0	4,162	SLCU-Flows	4,199	4,270	4,360	4,456	4,558	4,659	4,761
	<i>Adjustment for Bulk Sales to SLCU</i>	<i>245,853</i>									
30	Total Annual Cost	<u>\$1,213,070</u>	<u>\$467,477</u>		<u>\$480,737</u>	<u>\$494,651</u>	<u>\$509,131</u>	<u>\$524,043</u>	<u>\$539,448</u>	<u>\$555,252</u>	<u>\$571,519</u>
30	Amount Allocated - %	35%	18%		18%	18%	18%	18%	18%	18%	18%
31	Annual Increase - %		(61.5%)		2.8%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%
32	Grand Total Annual Cost	<u>\$3,480,389</u>	<u>\$2,594,373</u>		<u>\$2,661,283</u>	<u>\$2,733,864</u>	<u>\$2,810,755</u>	<u>\$2,889,907</u>	<u>\$2,972,082</u>	<u>\$3,055,813</u>	<u>\$3,141,921</u>
33	Annual Increase - %		(25.5%)		2.6%	2.7%	2.8%	2.8%	2.8%	2.8%	2.8%

**Footnotes:**

- [1] Amounts derived from Table 7 based on the actual operating expenses and the proposed MWRP under existing operating conditions.
- [2] Escalation references and factors are derived from Table 9.

**Table 9**  
**Wastewater Plant Relocation Conceptual Analysis**

**Summary of Projected Escalation Factors**

Line No.	Description	Reference	Projected Fiscal Year Ending September 30, [1]						
			2021	2022	2023	2024	2025	2026	2027
1	Labor and Benefits [2]	Labor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
2	Repairs and Maintenance [3]	Repairs	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
3	Consumer Price Index - CPI-U [4]	Inflation	1.0090	1.0170	1.0210	1.0220	1.0230	1.0220	1.0220
4	GDP Price Deflator Index - 1-yr. Lag [4]	FPSC Index	1.0179	1.0060	1.0150	1.0190	1.0200	1.0210	1.0210
5	Marginal Change	Marginal	1.0050	1.0050	1.0050	1.0050	1.0050	1.0050	1.0050
6	Eliminate	Eliminate	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
7	Growth in Treated Flows	Flows	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
8	Fuel	Fuel	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
9	Power - Base	Power - Base	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
10	Power + System Growth	Power	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
11	Chemicals - Base	Chemicals - Base	1.0250	1.0250	1.0250	1.0250	1.0250	1.0250	1.0250
12	Chemicals + System Growth	Chemicals	1.0250	1.0250	1.0250	1.0250	1.0250	1.0250	1.0250
13	Sludge - Base	Sludge - Base	1.0170	1.0220	1.0250	1.0250	1.0260	1.0250	1.0250
14	Sludge + System Growth	Sludge	1.0170	1.0220	1.0250	1.0250	1.0260	1.0250	1.0250
15	Other Categories	Other1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
16	Other Categories	Other2	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Footnotes:

- [1] Amounts estimated for the study period as shown below.
- [2] Amounts estimated based on FPUA's most recently completed rate study completed in June 2020.
- [3] Amounts based on the actual annual average increase in the Engineering News Record (ENR) Index.
- [4] Amount based on estimates provided by the Congressional Budget Office (CBO), July 2020.

**Table 10**  
**Wastewater Plant Relocation Conceptual Analysis**

**Summary of Projected Test Year Analysis - Option #1 (Assumed Bond Financing)**

Line No.	Description	Existing Costs - FY20	MWRF Test Year Projected Costs - FY27	Net Increase (Decrease) in Costs
<b><u>Comparison of Existing and Proposed System Costs</u></b>				
<b><u>FPUA Allocated Costs</u></b>				
1	Existing IWRP Operating Expenses [1]	\$2,513,172	\$0	(\$2,513,172)
2	Proposed MWRF Allocated Operating Expenses [2]	0	2,570,402	2,570,402
3	Proposed MWRF Allocated Debt Service Costs [3]	0	6,864,550	6,864,550
4	Proposed Allowance for Debt Service Coverage (35%) [4]	35%	2,402,593	2,402,593
5	Adjustment for Bulk Sales to SLCU [5]	(245,853)	0	245,853
6	Adjustment for Leachate Revenues [5]	70%	(125,718)	(294,282)
7	Adjustment for FMPA Cooling Tower Revs. (Reclaimed Sales) [5]	70%	0	(765,795)
8	Adjustment for Septage Hauling Revenues [5]	70%	0	(26,075)
9	Adjustment for Strong Waste and Industrial Permits [5]	70%	(79,124)	23,737
10	Adjustment for Annual FPSC Index (If any)	No	0	0
11	Other	0	0	0
12	Total Annual Cost	<u>\$2,062,477</u>	<u>\$10,570,288</u>	<u>\$8,507,811</u>
13	Projected Wastewater Retail Revenues Under Existing Retail Rates [6]			\$12,489,070
14	Projected Cumulative Revenue Need			68.1%
15	Projected Annual Wastewater Retail Revenue Increase FY22-27			<u>9.0%</u>
16	Projected Water and Wastewater Retail Revenues Under Existing Retail Rates [6]			\$29,059,410
17	Projected Cumulative Revenue Need			29.3%
18	Projected Annual Water and Wastewater Retail Revenue Increase FY22-27			<u>4.4%</u>
<b><u>SLCU Allocated Costs</u></b>				
19	Existing WWTP Operating Expenses [1]	\$967,217	\$0	(\$967,217)
20	Proposed MWRF Allocated Operating Expenses [2]	0	571,519	571,519
21	Proposed MWRF Allocated Debt Service Costs [3]	0	2,941,950	2,941,950
22	Proposed Allowance for Debt Service Coverage (25%) [4]	35%	1,029,683	1,029,683
23	Adjustment for Bulk Purchases from FPUA [5]	245,853	0	(245,853)
24	Adjustment for Leachate Revenues [5]	30%	(180,000)	(180,000)
25	Adjustment for FMPA Cooling Tower Revs. (Reclaimed Sales) [5]	30%	0	(328,198)
26	Adjustment for Septage Hauling Revenues [5]	30%	(37,250)	26,075
27	Adjustment for Strong Waste and Industrial Permits [5]	30%	0	(23,737)
28	Adjustment for Annual FPSC Index (If any)	No	0	0
29	Other	0	0	0
30	Total Annual Cost	<u>\$1,175,820</u>	<u>\$4,000,042</u>	<u>\$2,824,222</u>
31	Projected Wastewater Retail Revenues Under Existing Retail Rates [6]			\$5,307,240
32	Projected Cumulative Revenue Need			53.2%
33	Projected Annual Wastewater Retail Revenue Increase FY22-27			<u>6.3%</u>
34	Projected Water and Wastewater Retail Revenues Under Existing Retail Rates [6]			\$8,982,214
35	Projected Cumulative Revenue Need			31.4%
36	Projected Annual Water and Wastewater Retail Revenue Increase FY22-27			<u>4.7%</u>

**Footnotes:**

- [1] Amounts derived from Table 6 based on actual operating expenses provided by FPUA and SLCU.
- [2] Amounts derived from Table 8 based on the projected operating expenses of the proposed MWRF for Fiscal Year 2027, which represents the first year the plant may be in service.
- [3] Amounts derived from Table 3 based on estimated bond financing assumptions provided by PFM.
- [4] Based on discussions with PFM, the parties should establish rates that will provide at least a 35% margin above the annual principal and interest payments on the projected debt to meet minimum debt service coverage requirements, capital re-investment and provide
- [5] Existing and proposed amounts provided by FPUA and SLCU staff. As shown, FPUA will loose any existing bulk wastewater revenues under the proposed plan since such costs to SLCU are included in the total allocated expenses. In addition, any revenue offset to expenses was assumed to be allocated based on the established capacity allocation.
- [6] Existing revenues provided by FPUA and SLCU staff.

**Table 11**  
**Wastewater Plant Relocation Conceptual Analysis**

**Summary of Projected Test Year Analysis - Option #2 (Assumed WIFIA / SRF Financing)**

Line No.	Description	Existing Costs - FY20	MWRF Test Year Projected Costs - FY27	Net Increase (Decrease) in Costs
<b><u>Comparison of Existing and Proposed System Costs</u></b>				
<b><u>FPUA Allocated Costs</u></b>				
1	Existing IWRP Operating Expenses [1]	\$2,513,172	\$0	(\$2,513,172)
2	Proposed MWRF Allocated Operating Expenses [2]	0	2,570,402	2,570,402
3	Proposed MWRF Allocated Debt Service Costs [3]	0	4,060,000	4,060,000
4	Proposed Allowance for Debt Service Coverage (35%) [4]	35%	1,421,000	1,421,000
5	Adjustment for Bulk Sales to SLCU [5]	(245,853)	0	245,853
6	Adjustment for Leachate Revenues [5]	70%	(420,000)	(294,282)
7	Adjustment for FMPA Cooling Tower Revs. (Reclaimed Sales) [5]	70%	(765,795)	(765,795)
8	Adjustment for Septage Hauling Revenues [5]	70%	(26,075)	(26,075)
9	Adjustment for Strong Waste and Industrial Permits [5]	70%	(55,387)	23,737
10	Adjustment for Annual FPSC Index (If any)	No	0	0
11	Other	0	0	0
12	Total Annual Cost	<u>\$2,062,477</u>	<u>\$6,784,145</u>	<u>\$4,721,668</u>
13	Projected Wastewater Retail Revenues Under Existing Retail Rates [6]			\$12,489,070
14	Projected Cumulative Revenue Need			<u>37.8%</u>
15	Projected Annual Wastewater Retail Revenue Increase FY22-27			<u>5.5%</u>
16	Projected Water and Wastewater Retail Revenues Under Existing Retail Rates [6]			\$29,059,410
17	Projected Cumulative Revenue Need			<u>16.2%</u>
18	Projected Annual Water and Wastewater Retail Revenue Increase FY22-27			<u>2.5%</u>
<b><u>SLCU Allocated Costs</u></b>				
19	Existing WWTP Operating Expenses [1]	\$967,217	\$0	(\$967,217)
20	Proposed MWRF Allocated Operating Expenses [2]	0	571,519	571,519
21	Proposed MWRF Allocated Debt Service Costs [3]	0	1,740,000	1,740,000
22	Proposed Allowance for Debt Service Coverage (35%) [4]	35%	609,000	609,000
23	Adjustment for Bulk Purchases from FPUA [5]	245,853	0	(245,853)
24	Adjustment for Leachate Revenues [5]	30%	(180,000)	(180,000)
25	Adjustment for FMPA Cooling Tower Revs. (Reclaimed Sales) [5]	30%	(328,198)	(328,198)
26	Adjustment for Septage Hauling Revenues [5]	30%	(11,175)	26,075
27	Adjustment for Strong Waste and Industrial Permits [5]	30%	(23,737)	(23,737)
28	Adjustment for Annual FPSC Index (If any)	No	0	0
29	Other	0	0	0
30	Total Annual Cost	<u>\$1,175,820</u>	<u>\$2,377,409</u>	<u>\$1,201,589</u>
31	Projected Wastewater Retail Revenues Under Existing Retail Rates [6]			\$5,307,240
32	Projected Cumulative Revenue Need			<u>22.6%</u>
33	Projected Annual Wastewater Retail Revenue Increase FY22-27			<u>3.5%</u>
34	Projected Water and Wastewater Retail Revenues Under Existing Retail Rates [6]			\$8,982,214
35	Projected Cumulative Revenue Need			<u>13.4%</u>
36	Projected Annual Water and Wastewater Retail Revenue Increase FY22-27			<u>2.1%</u>

**Footnotes:**

- [1] Amounts derived from Table 6 based on actual operating expenses provided by FPUA and SLCU.
- [2] Amounts derived from Table 8 based on the projected operating expenses of the proposed MWRF for Fiscal Year 2027, which represents the first year the plant may be in service.
- [3] Amounts derived from Table 4 based on estimated WIFIA / SRF financing assumptions provided by PFM.
- [4] Based on discussions with PFM, the parties should establish rates that will provide at least a 35% margin above the annual principal and interest payments on the projected debt to meet minimum debt service coverage requirements, capital re-investment and provide
- [5] Existing and proposed amounts provided by FPUA and SLCU staff. As shown, FPUA will lose any existing bulk wastewater revenues under the proposed plan since such costs to SLCU are included in the total allocated expenses. In addition, any revenue offset to expenses was assumed to be allocated based on the established capacity allocation.
- [6] Existing revenues provided by FPUA and SLCU staff.