



COST OF SERVICE STUDY

Bristol, Indiana Municipal Sewage Works

January 26, 2023



MUNICIPAL ADVISORS

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January 26, 2023

Town Council
Town of Bristol
303 E. Vistula St.
Bristol, Indiana 46507

Re: Bristol (Indiana) Municipal Sewage Works – Cost of Service Study

ACCOUNTANTS' RATE STUDY REPORT

In connection with the proposed adjustment to the Sewage Works' schedule of rates and charges, we have, at your request, compiled this special purpose rate study report.

This special purpose rate study report has been prepared for the purpose of requesting approval of a new schedule of sewer rates and charges and should not be used for any other purpose.

Further, the pro forma financial information in this report which has not been compiled, reviewed or audited by us, is based upon unaudited financial information for the twelve months ended June 30, 2021, which was compiled by us and assumptions provided by management and their consulting engineers or obtained from other sources. This pro forma financial information is prepared for the purpose of showing the estimated financial effects on the utility's revenue and revenue requirements of an increase in rates and charges for service and other changes that may be reasonably fixed, known or measured. The actual results achieved may vary from the pro forma information and the variations may be material. We have no responsibility to update this report for events and circumstances occurring after the date of this report.

Baker Tilly Municipal Advisors, LLC

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COST OF SERVICE STUDY







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BRISTOL (INDIANA) MUNICIPAL SEWAGE WORKS

EXECUTIVE SUMMARY

BRISTOL (INDIANA) MUNICIPAL SEWAGE WORKS

KEY PERFORMANCE INDICATORS

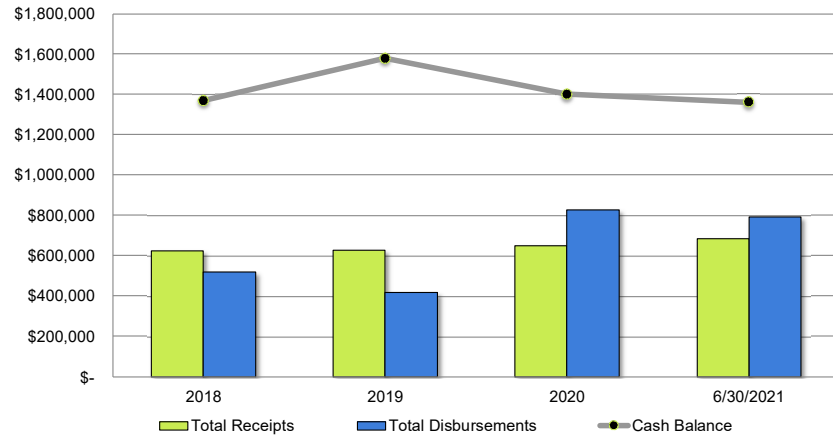
	2018	2019	2020	12 Months Ended 6/30/2021	Trend
Cash and Cash Equivalents Balances:					
Total Unrestricted	\$1,369,194	\$1,579,623	\$1,401,774	\$1,361,307	
Total Change in Cash and Cash Equivalents	\$105,421	\$210,429	(\$177,849)	(\$40,467)	
Receipts and Disbursements:					
Operating Receipts	\$610,414	\$615,028	\$632,195	\$665,960	
Operating Disbursements	338,840	339,707	451,827	468,891	
Net Operating Receipts	\$271,574	\$275,321	\$180,368	\$197,069	
Days Cash on Hand (1)	1,475	1,697	1,132	1,060	

(1) Days Cash on Hand is calculated by taking the total Cash and Cash Equivalents Balance in the given year divided by the daily average of operating disbursements (yearly disbursements divided by 365). This calculation gives the number of days that a Utility can continue to pay its operating disbursements provided the amount of cash currently available.

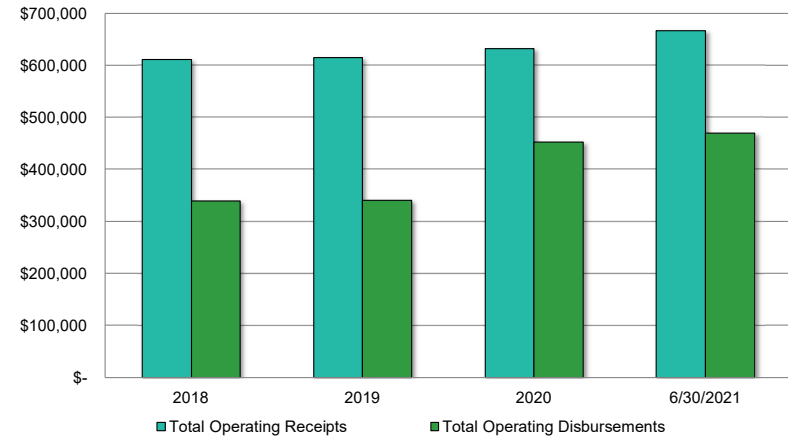
(Subject to the attached letter dated January 26, 2023)
(Preliminary - Subject to Change)
(Internal Use Only)

BRISTOL (INDIANA) MUNICIPAL SEWAGE WORKS

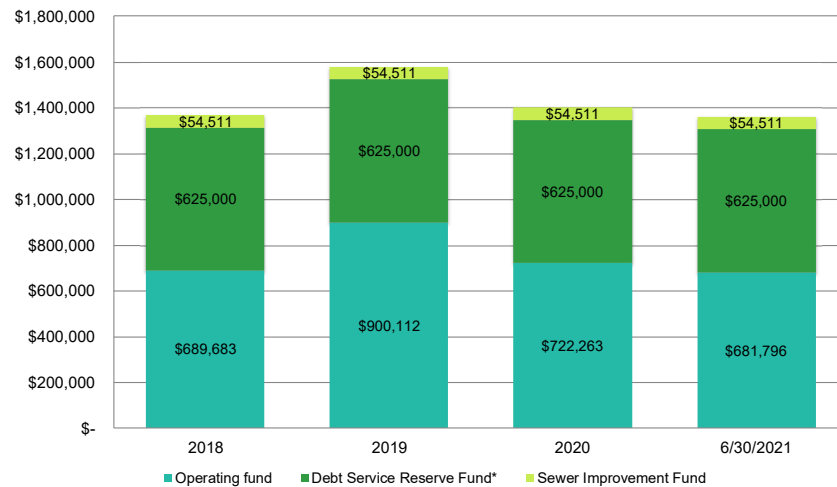
Historical Total Receipts, Disbursements and Cash Balance Trends



Historical Operating Receipts and Disbursements

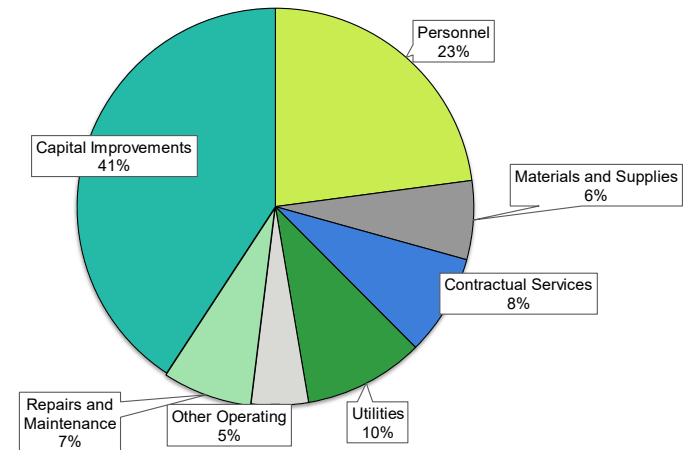


Cash Balances and Investments by Fund



* The monies in debt service reserve fund may be transferred to the operating fund as the Utility has no bonds currently outstanding

Disbursement Analysis: Twelve Months Ended 6/30/2021



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BRISTOL (INDIANA) MUNICIPAL SEWAGE WORKS

SUPPLEMENTAL DATA

BRISTOL (INDIANA) MUNICIPAL SEWAGE WORKS

COMPARISON OF ACCOUNT BALANCES WITH MINIMUM BALANCES RECOMMENDED

<u>Cash and Investments:</u>	<u>Account Balances at 6/30/2021</u>	<u>Minimum Balance Recommended</u>	<u>Variance</u>
Operating fund (1)	\$681,796	\$87,639	\$594,157
Debt Service Reserve Fund (2)	625,000	-	625,000
Sewer Improvement Fund (3)	54,511	25,000	29,511
Totals	<u>\$1,361,307</u>	<u>\$112,639</u>	<u>\$1,248,668</u>

- (1) **Operating and Maintenance Fund:** The balance maintained in the operation and maintenance fund should be sufficient to pay the expenses of operation, repair, and maintenance of the utility for the next succeeding two (2) calendar months.

Pro forma operation and maintenance expense (page 7)	\$525,726
Times factor for 2 months	<u>16.67%</u>
Reserve Recommended	<u>\$87,639</u>

- (2) **Debt Service Reserve Fund:** No minimum balance required. The utility currently has no outstanding debt. This money can be transferred to the improvement fund.

Reserve Recommended	<u>\$ -</u>
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- (3) **Sewer Improvement Fund:** No minimum balance required. However, as a general rule an amount equal to one year's budgeted capital expenditures is typically maintained in this account to provide a funding source for ongoing capital improvements.

Reserve Recommended (page 6)	<u>\$25,000</u>
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BRISTOL (INDIANA) MUNICIPAL SEWAGE WORKS

ESTIMATED PROJECT COSTS AND FUNDING

(Per Consulting Engineer)

ESTIMATED PROJECT COSTS

Construction Costs:	
Construction costs (includes engineering)	\$7,814,400
10% Contingency	<u>781,440</u>
Total Construction Costs:	8,595,840
Non-Construction Costs:	<u>2,149,160</u>
Total Estimated Project Costs	<u><u>\$10,745,000</u></u>

ESTIMATED PROJECT FUNDING

Proposed 2022 Revenue Bonds	<u><u>\$10,745,000</u></u>
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BRISTOL (INDIANA) MUNICIPAL SEWAGE WORKS

UTILITY CAPITAL IMPROVEMENT PLAN
(Provided by Utility Management)

	Estimated Project Year					Totals
	2022	2023	2024	2025	2026	
<u>Capital Improvements</u>						
Allowance for improvements	<u>\$25,000</u>	<u>\$25,000</u>	<u>\$25,000</u>	<u>\$25,000</u>	<u>\$25,000</u>	<u>\$125,000</u>
Totals	<u>\$25,000</u>	<u>\$25,000</u>	<u>\$25,000</u>	<u>\$25,000</u>	<u>\$25,000</u>	<u>\$125,000</u>
Average Annual Capital Improvements (5 years)						<u>\$25,000</u>

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BRISTOL (INDIANA) MUNICIPAL SEWAGE WORKS

PRO FORMA ANNUAL CASH OPERATING DISBURSEMENTS

(See Explanation of Adjustments 8 - 10)

	12 Months Ended 6/30/2021	Adjustment	Ref.	Pro Forma
Annual Operating Disbursement:				
Salaries and wages	121,544	\$35,507	(1)	\$157,051
Employee benefits	59,442	27,372	(2a)(2b)	86,814
Insurance	15,984	-		15,984
Chemicals	12,439	1,833	(3)	14,272
Materials and supplies	38,487	(11,376)	(4)	27,111
Purchased power	77,534	777	(5)	78,311
Contractual services	65,132	3,592	(6a)(6b)	68,724
Repairs and maintenance	57,504	(24,538)	(7)	32,966
Transportation	1,407	-		1,407
Telephone	6,311	-		6,311
Miscellaneous expenses	13,107	8,356	(8)	21,463
Subtotal:	<u>\$468,891</u>	<u>\$41,523</u>		510,414
Unforeseen contingencies and inflation (3%)				<u>15,312</u>
Pro Forma Annual Cash Operating Disbursements				<u><u>\$525,726</u></u>

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BRISTOL (INDIANA) MUNICIPAL SEWAGE WORKS**(Cont'd)****PRO FORMA ANNUAL CASH OPERATING DISBURSEMENTS**
(Explanation of Adjustments)Adjustment (1) - Salaries and Wages

To adjust Test Year salaries and wages to reflect management estimates of staffing levels and pay rates.

Pro forma salaries and wages	\$157,051
Less Test Year salaries and wages	<u>(121,544)</u>
Adjustment	<u><u>\$35,507</u></u>

Adjustment (2a) - Employee Benefits

To adjust Test Year FICA disbursements to reflect pro forma salaries and wages.

Pro forma salaries and wages	\$157,051
Times current FICA rate	<u>7.65%</u>
Total FICA	<u>12,014</u>
Less Test Year FICA disbursements	<u>(8,463)</u>
Adjustment	<u><u>\$3,551</u></u>

Adjustment (2b) - Employee Benefits

To adjust Test Year employee benefits to reflect pro forma health, life, dental, vision, and other benefits cost with the addition of a new employee.

Pro forma employee benefits	\$74,800
Less Test Year employee benefits	<u>(50,979)</u>
Adjustment	<u><u>\$23,821</u></u>

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BRISTOL (INDIANA) MUNICIPAL SEWAGE WORKS

(Cont'd)

PRO FORMA ANNUAL CASH OPERATING DISBURSEMENTS
(Explanation of Adjustments)

Adjustment (3) - Chemicals

To adjust Test Year chemicals based on a 3.5-year historical average.

Chemicals - 2018	\$16,798	
Chemicals - 2019	10,355	
Chemicals - 2020	22,315	
Chemicals - 6 months ended 6/30/2021	<u>483</u>	
Subtotal	49,951	
Divided by 3.5 years	<u>3.5</u>	
Pro forma chemicals		\$14,272
Less Test Year chemical disbursements		<u>(12,439)</u>
Adjustment		<u><u>\$1,833</u></u>

Adjustment (4) - Materials and Supplies

To adjust Test Year materials and supplies based on a 3.5-year historical average.

Materials and supplies - 2018	\$28,278	
Materials and supplies - 2019	15,187	
Materials and supplies - 2020	32,486	
Materials and supplies - 6 months ended 6/30/2021	<u>18,936</u>	
Subtotal	94,887	
Divided by 3.5 years	<u>3.5</u>	
Pro forma materials and supplies		\$27,111
Less Test Year material and supplies disbursements		<u>(38,487)</u>
Adjustment		<u><u>(\$11,376)</u></u>

Adjustment (5) - Purchased Power

To normalize Test Year electricity to include a full 12 months of payments.

Test Year NIPSCO bills at lift station	\$1,563	
Divided by: 8 bills	<u>8</u>	
Average NIPSCO bill at lift station	195	
Times: 12 bills per year	<u>12</u>	
Pro forma NIPSCO bills at lift station		\$2,340
Less Test Year NISPCO bills at lift station		<u>(1,563)</u>
Adjustment		<u><u>\$777</u></u>

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BRISTOL (INDIANA) MUNICIPAL SEWAGE WORKS

(Cont'd)

PRO FORMA ANNUAL CASH OPERATING DISBURSEMENTS
(Explanation of Adjustments)

Adjustment (6a) - Contractual Services (Audit)

To adjust contractual services to reflect State Board of Accounts audit.

Actual cost of 3 year SBoA audit in 2020	\$11,000	
Add: Inflation of 3%	1.03	
Subtotal	11,330.00	
Divide by: 3 (Town, Sewer, & Water)	3	
Subtotal	3,776.67	
Divide by: 3 years	3	
Adjustment		<u>\$1,259</u>

Adjustment (6b) - Contractual Services (Rate Study)

To adjust contractual services to reflect a rate study every three years.

Estimated cost of rate study	\$7,000	
Divide by: 3 years	3	
Adjustment		<u>\$2,333</u>

Adjustment (7) - Repairs and Maintenance

To adjust Test Year repairs and maintenance based on a 3.5-year historical average.

Repairs and maintenance - 2018	\$14,950	
Repairs and maintenance - 2019	33,506	
Repairs and maintenance - 2020	56,096	
Repairs and maintenance - 6 months ended 6/30/2021	10,830	
Subtotal	115,382	
Divided by 3.5 years	3.5	
Pro forma repairs and maintenance		\$32,966
Less Test Year repair and maintenance disbursements		<u>(57,504)</u>
Adjustment		<u>(\$24,538)</u>

Adjustment (8) - Miscellaneous Expenses

To adjust Test Year miscellaneous expenses based on a 3.5-year historical average.

Miscellaneous expenses - 2018	\$14,994	
Miscellaneous expenses - 2019	29,598	
Miscellaneous expenses - 2020	22,851	
Miscellaneous expenses - 6 months ended 6/30/2021	7,678	
Subtotal	75,121	
Divided by 3.5 years	3.5	
Pro forma miscellaneous expenses		\$21,463
Less Test Year miscellaneous expenses		<u>(13,107)</u>
Adjustment		<u>\$8,356</u>

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BRISTOL (INDIANA) MUNICIPAL SEWAGE WORKS**PRO FORMA ANNUAL REVENUE REQUIREMENTS**
AND ANNUAL OPERATING RECEIPTS
(Amounts rounded to the nearest \$100)

	<u>Current Operations</u>	<u>\$10,745,000 Project (3)</u>
Revenue Requirements:		
Operating disbursements (pages 7 - 10)	\$525,700	\$525,700
Debt Service:		
Proposed 2022 Revenue Bonds (1)	-	686,000
Debt Service Reserve Funding (2)	-	137,200
Replacements and improvements (page 6)	<u>25,000</u>	<u>68,600</u>
Total Annual Revenue Requirements	550,700	1,417,500
Less Test Year interest income	<u>(7,200)</u>	<u>(7,200)</u>
Net Annual Revenue Requirements	<u><u>\$543,500</u></u>	<u><u>\$1,410,300</u></u>
Annual Receipts:		
Test Year customer collections - residential	\$314,600	\$314,600
Test Year customer collections - industrial	160,700	160,700
Test Year customer collections - commercial	175,700	175,700
Test Year penalties	<u>14,900</u>	<u>14,900</u>
Total Available Receipts	<u><u>\$665,900</u></u>	<u><u>\$665,900</u></u>
Additional Receipts Available/(Required)	<u><u>\$122,400</u></u>	<u><u>(\$744,400)</u></u>
Approximate Across-The-Board Increase In Present Rates and Charges	<u><u>0.00%</u></u>	<u><u>111.80%</u></u>
Current Residential Bill (4,000 gallons)		<u><u>\$32.20</u></u>
Approximate Residential Monthly Bill for 4,000 Gallons (Across the Board Increase)		<u><u>\$68.20</u></u>
Approximate Residential Monthly Bill for 4,000 Gallons (Cost of Service increase):		<u><u>\$38.50</u></u>
Debt Service Coverage		<u><u>129%</u></u>

(1) Assumes a \$10,745,000 SRF Loan amortized over 20 years semi-annually at a 2.5% interest rate.

(2) Assumed to be funded over a period of 5 years.

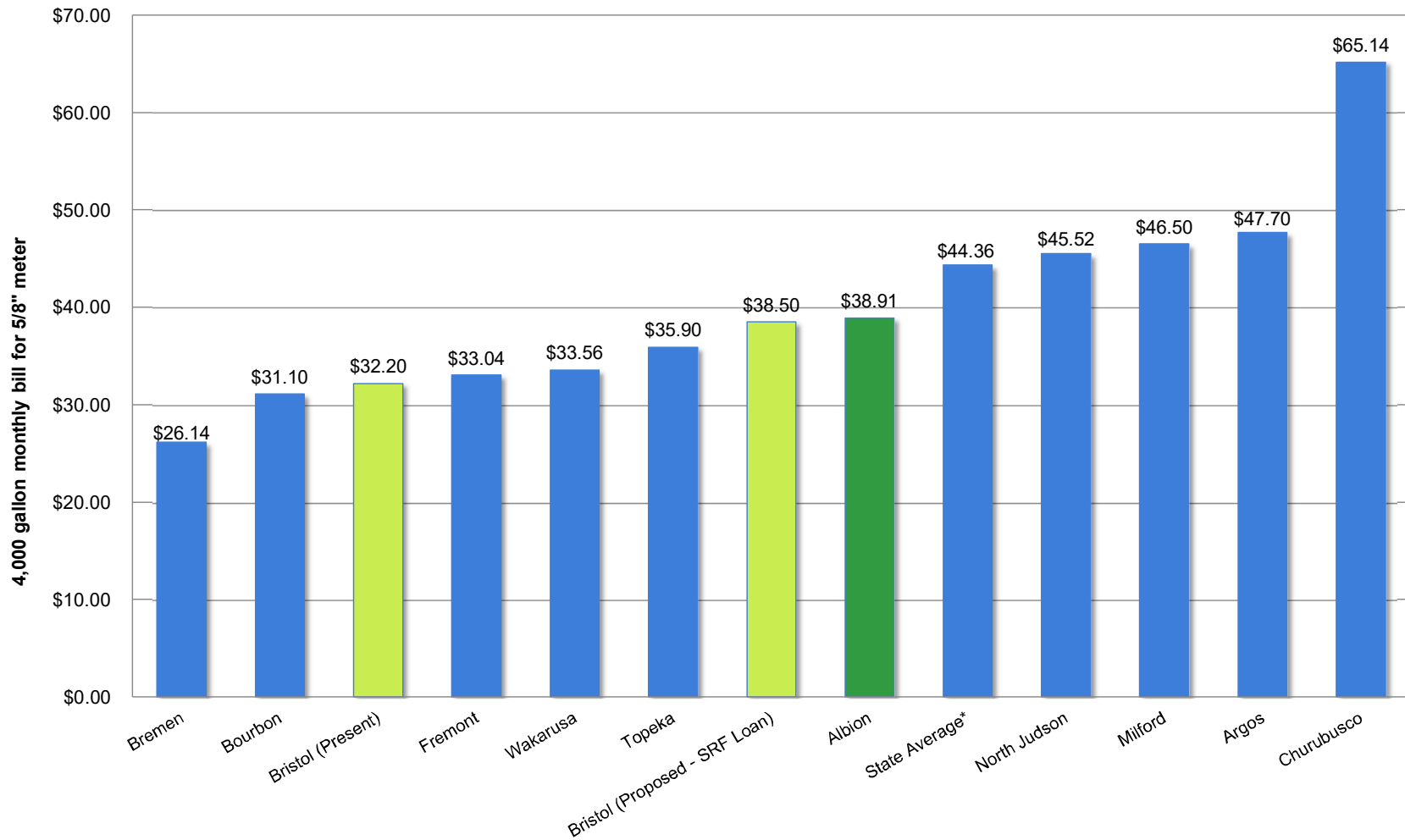
(3) Assumes no change in operation and maintenance expense resulting from the project.

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BRISTOL (INDIANA) MUNICIPAL SEWAGE WORKS

Comparison of Monthly Residential Bills with Other Indiana Communities



* For Cities/Towns with 1,000 to 3,000 population (125 in study) per the April 2022 Indiana Comparative Rate Study prepared by Baker Tilly Municipal Advisors, LLC.

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BRISTOL (INDIANA) MUNICIPAL SEWAGE WORKS

COST OF SERVICE STUDY

BRISTOL (INDIANA) MUNICIPAL SEWAGE WORKS
SUMMARY OF CONSUMER STUDY
(For Test Year Ended June 30, 2021)

	Billed Flow	Number of Annual Bills	Rate (Per month)	Calculated Revenues
<u>Minimum Charges:</u>				
5/8 - 3/4 inch meter	1,545,056	1,525	\$17.40	\$26,535
1 inch meter	4,476,228	1,871	34.80	65,111
1 1/4 inch meter	-	-	43.50	-
1 1/2 inch meter	96,431	46	72.50	3,335
2 inch meter	944,520	181	116.00	20,996
3 inch meter	309,189	21	203.00	4,263
4 inch meter	217,667	9	348.00	3,132
6 inch meter	-	-	797.50	0
Sub-totals	<u>7,589,092</u>	<u>3,653</u>		<u>123,372</u>

	Billed Flow	Rate (per 1,000 gallons)	Calculated Revenues
<u>Flow Charges:</u>			
0 - 2,000 Gallons	8,302,000	\$8.70	\$72,227
2,001 - 15,000 Gallons	15,229,083	7.40	112,695
15,001 - 60,000 Gallons	9,429,697	6.10	57,521
60,001 - 120,000 Gallons	5,793,454	4.78	27,693
Over 120,000 Gallons	<u>66,356,418</u>	3.48	<u>230,920</u>
Sub-totals	<u>105,110,652</u>		<u>501,056</u>

Unmetered Sewer Customers:

	<u>4,084,843</u>	<u>31,918</u>
<u>Total Billed Flow</u>	<u><u>116,784,586</u></u>	

Test Year Totals	<u><u>\$656,346</u></u>
Control	<u><u>651,039</u></u>
Variance	<u><u>\$5,307</u></u>
Percent Variance	<u><u>0.82%</u></u>

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BRISTOL (INDIANA) MUNICIPAL SEWAGE WORKS
SCHEDULE OF PRO FORMA EQUIVALENT BILLS

	<u>Annual Bills (1)</u>	<u>Equivalency Factor (2)</u>	<u>Pro Forma Equivalent Bills</u>
<u>Meters:</u>			
5/8 - 3/4 inch meter	4,592	1.0	4,592
1 inch meter	2,835	2.5	7,088
1 1/4 inch meter	-	4.0	-
1 1/2 inch meter	57	5.8	331
2 inch meter	249	10.0	2,490
3 inch meter	36	23.0	828
4 inch meter	12	40.0	480
6 inch meter	<u>23</u>	91.0	<u>2,093</u>
Totals	<u><u>7,804</u></u>		<u><u>17,902</u></u>

(1) Based on information detailed on page 13.

(2) Based on diameter of line calculation:

$$\text{Area} = \text{radius}^2 \times \pi$$

$$\text{Area for } 5/8" \text{ meter} = .31$$

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BRISTOL (INDIANA) MUNICIPAL SEWAGE WORKS
TEST YEAR TREATMENT PLANT FLOWS AND LOADINGS
(Unaudited)

Month	Days per Month	Flow		CBOD		SS		Ammonia		Phosphorus	
		Average (MGD)	Total (MG)	Average (mg/l)	Total (lbs.)	Average (mg/l)	Total (lbs.)	Average (mg/l)	Total (lbs.)	Average (mg/l)	Total (lbs.)
July, 2020	31	0.35977	11.153	258.000	11,175.203	221.000	9,525.516	18.930	1,759.907	3.831	356.165
August	31	0.37216	11.537	170.000	7,928.466	205.000	9,553.102	22.840	2,196.526	3.823	367.658
September	30	0.34257	10.277	236.000	10,226.706	196.000	8,435.196	26.950	2,308.726	5.529	473.653
October	31	0.33442	10.367	204.000	8,192.015	295.000	10,805.724	27.160	2,347.092	5.500	475.295
November	30	0.30157	9.047	168.000	5,720.544	180.000	6,577.727	25.850	1,949.451	5.362	404.370
December	31	0.31135	9.652	165.000	6,739.950	196.000	7,600.670	24.790	1,994.533	4.707	378.712
January, 2021	31	0.32490	10.072	231.000	8,882.760	265.000	10,127.040	22.380	1,878.984	5.100	428.187
February	28	0.33850	9.478	226.000	8,329.560	263.000	9,590.280	22.360	1,766.590	6.083	480.598
March	31	0.35280	10.937	195.000	8,942.500	202.000	9,301.880	23.390	2,132.435	4.721	430.407
April	30	0.33460	10.038	169.000	6,995.430	212.000	8,819.590	22.400	1,874.315	3.838	321.144
May	31	0.33180	10.286	172.000	6,720.600	197.000	7,707.600	21.900	1,877.751	3.642	312.273
June	30	0.38080	11.424	221.000	10,106.600	221.000	11,672.250	23.020	2,192.153	4.593	437.383
	365		124.268		99,960.334		109,716.575		24,278.463		4,865.845
			10.355667 MG		96 mg/l		106 mg/l		23 mg/l		5 mg/l

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BRISTOL (INDIANA) MUNICIPAL SEWAGE WORKS

PRO FORMA ANNUAL NET USER CHARGE

ALLOCATED TO FUNCTION

(See Explanation of References on the Following Page)

	Pro		Allocation		
	Forma	Treatment	Collection	Administrative	Ref
		and Flow	System		
<u>User Charge Requirements:</u>					
Operating Expenses:					
Chemicals	\$14,700	\$14,700			(1)
Materials and Supplies	27,924	13,962	\$12,566	\$1,396	(2)
Purchased Power	80,660	2,420	78,240		(3)
Repairs and Maintenance	33,955	16,978	16,977		(4)
Transportation	1,449		1,449		(5)
Salaries and Wages	161,763	145,587	16,176		(6)
Employee Pension and Benefits	89,418	80,476	8,942		(7)
Telephone	6,500			6,500	(8)
Contractual Services	70,786	14,157	46,011	10,618	(9)
Insurance	16,464			16,464	(8)
Miscellaneous	22,107			22,107	(8)
Subtotals	525,726	288,280	180,361	57,085	
Pro rata administrative expense	-	35,115	21,970	(57,085)	(10)
Total Operating Expense	525,726	323,395	202,331	\$ -	
Replacements and Improvements	68,600	52,822	15,778		(11)
Subtotals	594,326	376,217	218,109		
<u>Non-Rate Revenues</u>					
Less interest income	(7,200)	(4,429)	(2,771)		(10)
Less Pro forma Excessive Strength Surcharges	(2,690)	(2,690)			(1)
Less penalties	(14,900)	(9,166)	(5,734)		(10)
Total user charge requirements	569,536	359,932	209,604		
<u>Debt Service Requirements:</u>					
Debt Service	686,000	603,680	82,320		(12)
Debt Service Reserve	137,200	120,736	16,464		(12)
Subtotals	823,200	724,416	98,784		
Total requirements	\$1,392,736	\$1,084,348	\$308,388		

(Continued on next page)

(Subject to the attached letter dated January 26, 2023)

(Preliminary - Subject to Change)

(Internal Use Only)

BRISTOL (INDIANA) MUNICIPAL SEWAGE WORKS

(Cont'd)

PRO FORMA ANNUAL NET USER CHARGE

ALLOCATED TO FUNCTION

(Explanation of References)

- (1) Direct allocation to Treatment and Flow.
- (2) Allocated 50% to Treatment and Flow, 45% to Collection System, and 5% to Administrative per historical disbursements.
- (3) Allocated 3% to Treatment and Flow and 97% to Collection System per historical disbursements.
- (4) Allocated 50% to Treatment and Flow and 50% to Collection System per historical disbursements.
- (5) Direct allocation to Collection System.
- (6) Allocated 90% to Treatment and Flow and 10% to Collection System per Management.
- (7) Allocated pro rata based on salaries and wages.
- (8) Direct allocation to Administrative.
- (9) Allocated 20% to Treatment and Flow, 65% to Collection System, and 15% Administrative per historical disbursements.
- (10) Allocated pro rata.
- (11) Allocated 77% to Treatment and Flow and 23% to Collection System based on engineer's short-lived asset reserve.
- (12) Allocated 88% to Treatment and Flow and 12% to collection system based on engineer's estimate of project cost.

(Subject to the attached letter dated January 26, 2023)
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BRISTOL (INDIANA) MUNICIPAL SEWAGE WORKS

CALCULATION OF COST OF SERVICE RATES AND CHARGES

METERED USERS

<u>Monthly Base Charge:</u>	<u>Equivalency Factor</u>	<u>Collection OM & R</u>	<u>Collection Debt Service</u>	<u>Base Charge</u>
	(1)	(1)	(2)	
Meter Size:				
5/8 - 3/4 inch meter	1.0	\$11.75	\$5.55	\$17.30
1 inch meter	2.5	29.40	13.90	43.30
1 1/4 inch meter	4.0	47.00	22.20	69.20
1 1/2 inch meter	5.8	68.15	32.20	100.35
2 inch meter	10.0	117.50	55.50	173.00
3 inch meter	23.0	270.25	127.65	397.90
4 inch meter	40.0	470.00	222.00	692.00
6 inch meter	91.0	1,069.25	505.05	1,574.30
		Treatment O, M and R	Treatment Debt Service	Total Flow Charge
<u>Flow Charge (per 1,000 gallons)</u>		(3)	(4)	
All Users		\$3.50	\$7.10	\$10.60

UNMETERED USERS

Single family residence/unit (Assuming 4,100 gallons per month)	\$43.46	\$17.30	\$60.76
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<u>Explanation of References</u>	<u>Pro Forma Annual Requirements</u>	<u>Pro Forma Annual Billing Determinants</u>	<u>Rate Per Equivalent</u>	<u>Rounded Use</u>
(1) Collection O, M and R	\$209,604	17,902 equivalent bills	\$11.71	\$11.75
(2) Collection debt service	98,784	17,902 equivalent bills	5.52	5.55
(3) Treatment O, M and R	359,932	102,065.04 / 1,000 gallons	** 3.53	3.50
(4) Treatment debt service	724,416	102,065.04 / 1,000 gallons	** 7.10	7.10
Total	<u>\$1,392,736</u>			

**Excludes 2,000 gallons included in the proposed base charge.

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BRISTOL (INDIANA) MUNICIPAL SEWAGE WORKS

COMPARISON OF PRESENT AND PROPOSED RATES

		Flow Allowed at Present Min. Charges	Present	Proposed Base Charge
		(Gallons)		(Includes 2,000 gallons of flow)
<u>Minimum Charges</u>				
5/8 - 3/4	inch meter	2,000	\$17.40	\$17.30
1	inch meter	4,351	34.80	43.30
1 1/4	inch meter	5,527	43.50	69.20
1 1/2	inch meter	9,446	72.50	100.35
2	inch meter	15,393	116.00	173.00
3	inch meter	29,656	203.00	397.90
4	inch meter	53,426	348.00	692.00
6	inch meter	155,230	797.50	1,574.30

Monthly Metered Flow Rates

			Per 1,000 Gallons	
0	to	2,000 gallons	\$8.70	\$ -
2,001	to	15,000 gallons	7.40	-
15,001	to	60,000 gallons	6.10	-
60,001	to	120,000 gallons	4.78	-
120,001	and	over	3.48	-
All Gallons				\$10.60

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BRISTOL (INDIANA) MUNICIPAL SEWAGE WORKS

COMPARISON OF SELECTED MONTHLY BILLS

5/8" Meter

Gallons	Adjusted Monthly Bill			
	Cost of Service	Present	Variance	%
0	\$17.30	\$17.40	(\$0.10)	-1%
2,000	17.30	17.40	(0.10)	-1%
4,000	38.50	32.20	6.30	20%
5,000	49.10	39.60	9.50	24%
10,000	102.10	76.60	25.50	33%
20,000	208.10	144.10	64.00	44%

1" Meter

Gallons	Adjusted Monthly Bill			
	Cost of Service	Present	Variance	%
5,000	\$75.10	\$39.60	35.50	90%
10,000	128.10	76.60	51.50	67%
20,000	234.10	144.10	90.00	62%
50,000	552.10	327.10	225.00	69%

2" Meter

Gallons	Adjusted Monthly Bill			
	Cost of Service	Present	Variance	%
50,000	\$681.80	\$327.10	\$354.70	108%
100,000	1,211.80	579.30	632.50	109%
250,000	2,801.80	1,127.30	1,674.50	149%

6" Meter

Gallons	Adjusted Monthly Bill			
	Cost of Service	Present	Variance	%
500,000	\$6,853.10	\$1,997.30	\$4,855.80	243%
1,000,000	12,153.10	3,737.30	8,415.80	225%
2,000,000	22,753.10	7,217.30	15,535.80	215%
3,000,000	33,353.10	10,697.30	22,655.80	212%

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BRISTOL (INDIANA) MUNICIPAL SEWAGE WORKS

CALCULATION OF ESTIMATED SEWAGE SERVICE BILLINGS

	Estimated Annual Bills	Flows (1,000 Gallons)	Revised Rates	Estimated Annual Billings
<u>Base Charge</u>				
Meter Size				
5/8 inch	4,592		\$ 17.30	\$79,442
1 inch	2,835		\$ 43.30	122,756
1 1/4 inch	0		\$ 69.20	0
1 1/2 inch	57		\$ 100.35	5,720
2 inch	249		\$ 173.00	43,077
3 inch	36		\$ 397.90	14,324
4 inch	12		\$ 692.00	8,304
6 inch	23		\$ 1,574.30	36,209
<u>Flow Charge</u>				
All Gallons		102,065	10.60	1,081,889
Annual Estimated Billings	<u>7,804</u>	<u>102,065</u>		1,391,721
Less Pro Forma Net Revenue Requirements				<u>(1,392,736)</u>
Variance				<u>(\$1,015)</u>
Percentage				<u>-0.07%</u>

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BRISTOL (INDIANA) MUNICIPAL SEWAGE WORKS

CALCULATION OF EXCESSIVE STRENGTH SURCHARGES

	Total	Allocated (2)				
		Flow	BOD	SS	Ammonia	Phosphorus
Pro forma annual O&M treatment and flow (1)	\$288,280	\$63,421	\$60,539	\$57,656	\$57,656	\$49,008

Calculation of excessive strength surcharge:

	<u>Variable Costs</u> (above)	<u>Loadings (3)</u> (lbs.)	<u>Calculated Surcharge</u> (\$/lb.)		<u>Current Rate*</u> (\$/1,000 gallons)
BOD	\$60,539	99,960	\$0.61	in excess of 200 mg/l	\$0.02
SS	57,656	109,717	0.53	in excess of 200 mg/l	0.02
Ammonia	57,656	24,278	2.37	in excess of 20 mg/l	0.0118
Phosphorus	49,008	4,866	10.07	in excess of 10 mg/l	0.0118

(1) See page 20.

(2) Allocated 22%/21%/20%/20%/17% per utility management.

(3) See page 15.

*Current excess strength surcharges are charged per 1,000 gallons for each 10 mg/l of BOD and SS in excess of 200 mg/l, 1 mg/l of ammonia in excess of 20 mg/l per day, and 1 mg/l of phosphorous in excess of 10 mg/l per day.

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