



BRUNSWICK SEWER DISTRICT
2023 DRAFT BUDGET FOR ADOPTION
OCTOBER 2023



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Executive Summary

2022 presented unique challenges and opportunities for the Brunswick Sewer District (BSD) to examine all facets of operations and personnel management. The 2022 budget was based on assumptions of how the district operated in the past. With the retirement of the long-time general manager and collection & pumping division supervisor an opportunity for advancement and reorganization presented itself. The job openings left the district with excess funds in the personnel budget, but it presented a challenge to fill the vacancies that were created. A new general manager was hired in January. Along with that came changes for the majority of staff. The entire organizational structure was reexamined and modified to fit the needs of the BSD today and for the next decade.

Along with changes in staffing, management chose to change the entire budget process and start from scratch. The purpose was to make the process more efficient and economical, but also to make it more understandable for our stakeholders. The budget presented here represents our efforts to streamline the process but also provide all of the necessary information needed to make informed decisions regarding our rates and expenses. The budget was built with input from all department heads. They examined every line item in the budget and built their requests from the bottom up. This established the foundation for the finance manager, operations & compliance manager, and general manager to pull together the final product. The 2023 draft budget presented here is a good representation of the needs of the district for the upcoming year.

Revenue

Total anticipated revenue is budgeted at \$5,691,678, which is an increase of 8.2% or approximately \$467,000 over the 2022 budgeted revenue. \$128,000 is expected from an increase in user rates and septage revenue. \$123,000 more revenue from entrance charges is expected in 2023 versus 2022. This is due to the large number of homes currently proposed in Brunswick. Timing and market conditions are hard to predict, but \$123,000 is a reasonable and conservative estimate. Approximately \$205,000 is being requested from reserves, of which \$39,000 is from anticipated unspent 2022 funds and the remainder is from entrance charges that will be dedicated to capital expenditures. The remainder of the increased revenue projections are scattered throughout the individual line items as is shown in table 1.

Figure 1 illustrates continued increases in both residential and commercial revenue. This is consistent with the growth we have seen in Brunswick and the new permits we have issued. It also corresponds with the universal rate increase we have instituted since 2020. Total revenue from rates is expected to be nearly \$635,000 over 2020 actuals.

Figure 2 illustrates total revenue from all sources. There was a slight decrease in 2021 which was expected due to the COVID pandemic, but revenue rebounded in 2022. A significant increase, of more than \$460,000 is expected for 2023. More than one third of the increase is attributed to new accounting practices and policies that include entrance fees and reserves. Other reasons for the increased revenue include a projected rate increase and growth in the community.



Figure 1: Revenue from Rates: 2020 to 2023

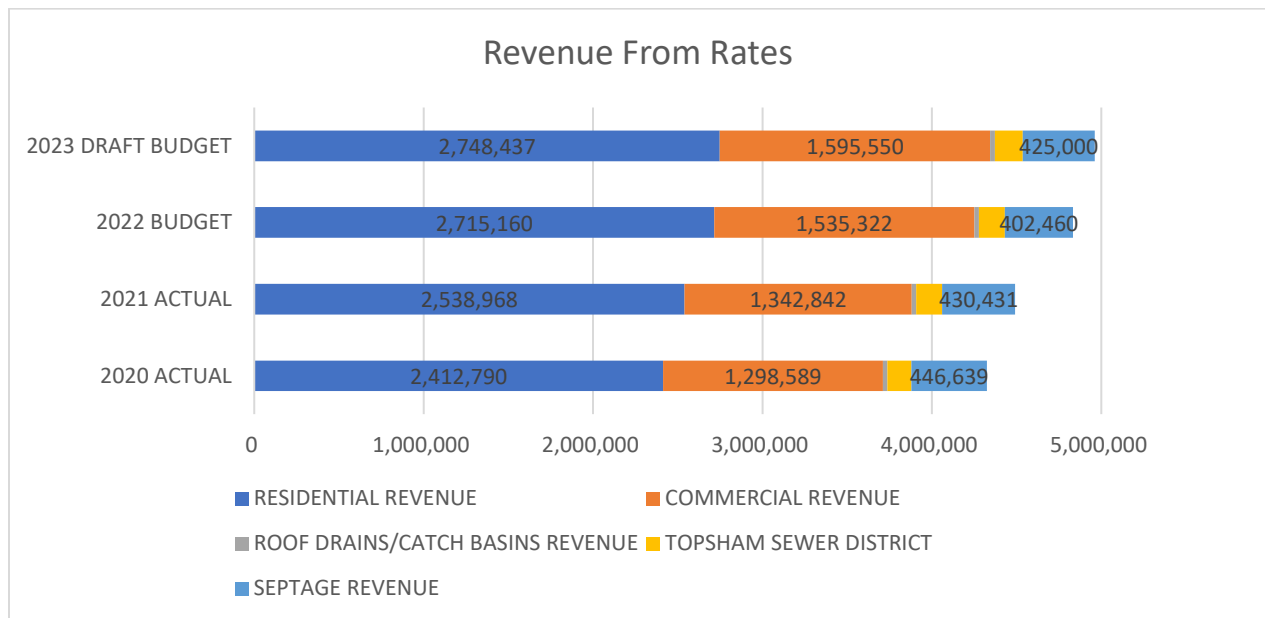
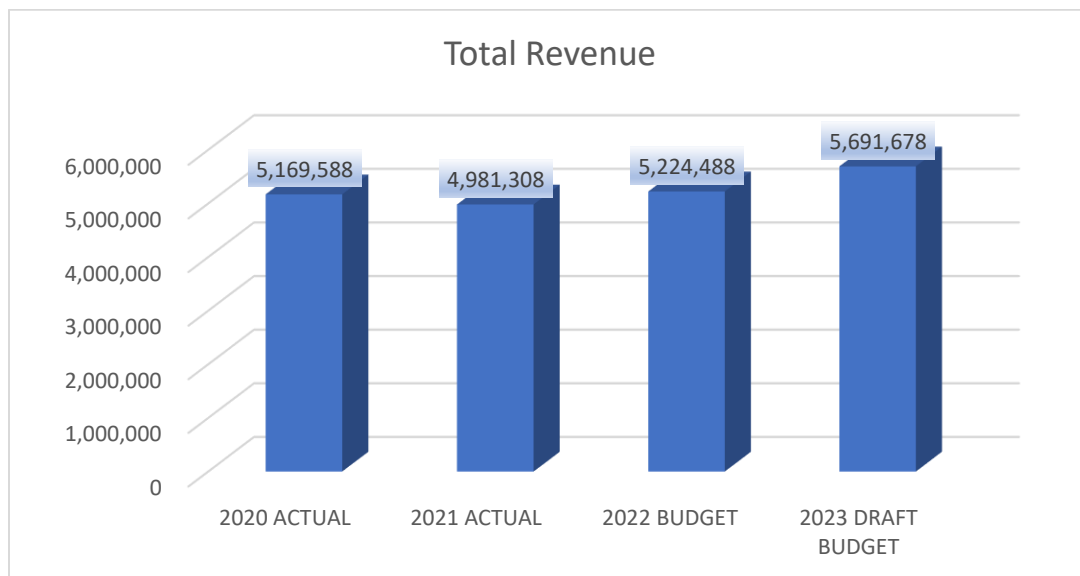


Figure 2: Total Revenue from all Sources



Revenue Highlights and Assumptions

- Revenue projections are based on a 3% increase in general rates.
- No increase in septage disposal rates was included.
- A 50% increase in catch basins and roof drain rates was incorporated into the budget. This increase is necessary due to the difficulty in treating stormwater runoff. Owners of catch basins and roof drains should work with the district to remove their discharges from the sanitary sewer system.



- \$73,900 in anticipated unspent funds is carried over from the 2022 budget. This is necessary to offset the increased cost of sludge disposal due to the passage of LD 1911 and to cover \$11,400 in anticipated bank fees.
- \$165,628 is requested from entrance charge reserves to fund capital expenditures. It is anticipated that more than \$165,000 in entrance fee revenue will be brought in in 2023.
- We expect to receive the Mariner and Woodland pump stations as donated capital assets in 2023. The value, 1.3 million, is noted in the budget and represents an increase in district assets, but it does not affect our operating budget or cash flow.

Table 1: Revenue Projections

BRUNSWICK SEWER DISTRICT Budgeted and Actual Revenue				
	<u>2020 ACTUAL</u>	<u>2021 ACTUAL</u>	<u>2022 BUDGET</u>	<u>2023 DRAFT BUDGET</u>
RESIDENTIAL REVENUE	2,412,790	2,538,968	2,715,160	2,748,437
COMMERCIAL REVENUE	1,298,589	1,342,842	1,535,322	1,595,550
ROOF DRAINS/CATCH BASINS REVENUE	25,638	25,990	27,551	28,649
TOPSHAM SEWER DISTRICT	141,417	152,927	151,800	162,900
SEPTAGE REVENUE	446,639	430,431	402,460	425,000
ENTRANCE FEE REVENUE	448,987	86,496	44,550	167,175
INCOME FROM JOBBING	109,002	125,619	74,300	74,300
INTEREST INCOME	45,622	36,371	25,200	25,984
NON-OPERATING INCOME (LT CHGS)	2,783	1,810	2,400	18,843
MISC (OTHER) INCOME	31,504	10,767	10,500	14,590
GAIN/LOSS SALE OF FIXED ASSET	0	13,103	40,000	30,000
TOPSHAM'S SHARE OF TPU CWSRF BOND	206,616	215,984	195,245	195,245
Sub-Total Operating Revenue	5,169,588	4,981,308	5,224,488	5,486,673
Entrance Fee Reserve(received in 2022)	0	0	0	165,628
Unspent 2022 Funds (Reserves)	0	0	0	39,377
Total Revenue	5,169,588	4,981,308	5,224,488	5,691,678
Donation of Capital Assets	34,200	0	1,430,000	1,200,000
Gross Income from all Sources	5,203,788	4,981,308	6,654,488	6,891,678

Expenses

Total anticipated expenses are expected to be \$5,691,678, which is an increase of 0% or approximately \$2,400 over the 2022 budgeted expenses. Increases and decreases are spread throughout the line items, but sludge disposal costs are expected to rise by \$55,500. Some line items, such as consulting fees and employee benefits showed significant decreases of \$24,300 and \$74,000 respectively. \$167,175, which is the projected revenue from entrance charges, is being shown as an expense that is added to reserves



in 2023. This is a necessary step to ensure that entrance charge funds are dedicated to reserves so they can be used as revenue for capital expenses in 2024. Table 2 shows the anticipate line-item expenses.

Table 2: Expense Projections

BRUNSWICK SEWER DISTRICT Budgeted and Actual Expenses						
DESCRIPTION	2020 ACTUAL EXPENSES	2021 ACTUAL EXPENSES	2022 ACTUAL BUDGET	2023 PRELIM BUDGET	% Dif 2023 vs 2022	\$ Change 2023 vs 2022
Salaries and wages	\$1,471,966	\$1,502,554	\$1,599,581	\$1,536,609	-3.9%	\$ (62,972)
Employee benefits	\$755,596	\$754,287	\$834,951	\$760,452	-8.9%	\$ (74,499)
Trustees' fees	\$4,688	\$6,488	\$6,750	\$16,800	148.9%	\$ 10,050
Heating	\$30,405	\$38,024	\$43,249	\$45,373	4.9%	\$ 2,124
Power	\$140,956	\$138,059	\$129,680	\$145,140	11.9%	\$ 15,460
Water	\$4,225	\$5,486	\$4,103	\$5,943	44.8%	\$ 1,840
Telecommunications	\$20,172	\$22,395	\$22,283	\$21,894	-1.7%	\$ (389)
Maintenance service contracts	\$91,730	\$120,156	\$127,010	\$147,962	16.5%	\$ 20,952
Maintenance of lines	\$13,165	\$4,503	\$3,400	\$7,993	135.1%	\$ 4,593
Maintenance of holes	\$13,262	\$4,963	\$10,572	\$11,410	7.9%	\$ 838
Maintenance of buildings	\$44,360	\$66,213	\$45,765	\$73,081	59.7%	\$ 27,316
Maintenance of equipment	\$62,934	\$86,554	\$77,041	\$91,890	19.3%	\$ 14,849
Maintenance of vehicles	\$35,034	\$14,424	\$23,030	\$23,827	3.5%	\$ 797
Vehicle fuel	\$19,354	\$27,001	\$31,233	\$41,472	32.8%	\$ 10,239
Travel	\$9,074	\$1,601	\$25,150	\$26,515	5.4%	\$ 1,365
Professional development	\$6,322	\$12,280	\$17,025	\$27,725	62.8%	\$ 10,700
Dues and subscriptions	\$5,513	\$3,469	\$4,025	\$3,832	-4.8%	\$ (193)
Supplies/ small tools	\$15,616	\$18,696	\$22,330	\$24,240	8.6%	\$ 1,910
Postage, freight and delivery	\$10,207	\$12,183	\$13,050	\$14,200	8.8%	\$ 1,150
Safety	\$14,678	\$12,165	\$17,163	\$23,369	36.2%	\$ 6,206
Uniforms	\$3,391	\$3,339	\$4,680	\$5,280	12.8%	\$ 600
Licenses	\$4,281	\$5,748	\$4,199	\$6,190	47.4%	\$ 1,991
Outside printing	\$15,831	\$13,244	\$13,410	\$14,160	5.6%	\$ 750
Advertising	\$2,478	\$6,431	\$4,300	\$6,753	57.0%	\$ 2,453
Consulting Fees	\$125,664	\$100,902	\$74,300	\$50,000	-32.7%	\$ (24,300)
Miscellaneous	\$6,175	\$4,969	\$7,350	\$8,200	11.6%	\$ 850
Sodium hypochlorite	\$9,430	\$8,985	\$12,430	\$11,580	-6.8%	\$ (850)
Polymer	\$6,429	\$13,685	\$10,961	\$14,780	34.8%	\$ 3,819
Sodium hydroxide	\$59,653	\$46,844	\$77,700	\$89,636	15.4%	\$ 11,936
Sodium Bisulfite	\$16,583	\$9,117	\$9,900	\$10,465	5.7%	\$ 565
Sludge disposal	\$125,267	\$128,303	\$172,000	\$227,500	32.3%	\$ 55,500
Laboratory expense	\$9,633	\$8,609	\$13,050	\$13,100	0.4%	\$ 50
Laboratory testing	\$4,199	\$11,944	\$6,300	\$13,124	108.3%	\$ 6,824



Instrumentation	\$505	\$0	\$7,025	\$15,969	127.3%	\$ 8,944
Bad debt	\$0	\$1,844	\$0	\$0	0.0%	\$ -
Sub-Total Operating Expenses	\$3,158,776	\$3,215,465	\$3,474,996	\$3,536,462	1.8%	\$ 61,466
Bank Fees (misc.)	\$19,329	\$12,542	\$8,400	\$8,000	-4.8%	\$ (400)
Insurance - General	\$68,224	\$66,483	\$68,500	\$74,902	9.3%	\$ 6,402
Meter Reading	\$99,740	\$98,860	\$98,380	\$106,850	8.6%	\$ 8,470
Bond Payments (Principal)	\$1,167,371	\$1,224,093	\$1,237,700	\$1,195,573	-3.4%	\$ (42,127)
Bond Payments (Interest)	\$275,910	\$265,854	\$252,277	\$238,716	-5.4%	\$ (13,561)
Total Expenses	\$4,789,350	\$4,883,298	\$5,140,253	\$5,160,503	0.4%	\$ 20,250
Ent. Fees to Reserves (Received 2023)	\$0	\$0	\$0	\$167,175	N/A	\$ 167,175
Capital Expenses	\$99,314	\$149,632	\$548,999	\$364,000	-33.7%	\$ (184,999)
Total Budget	\$4,888,664	\$5,032,930	\$5,689,252	\$5,691,678	0.0%	\$ 2,426
Depreciation	2,642,527	2,686,439	2,760,000	2,800,000	1.4%	\$ 40,000
Net Expense to Operate District	\$7,531,191	\$7,719,369	\$8,449,252	\$8,491,678	0.5%	\$ 42,426

Figure 3 compares the 2023 and 2022 budgets with actual expenses from 2021 and 2020. It's important to note that actual expenses for 2022 will not be known until January of 2023, spending has lagged behind the budget for the first three quarters of 2022, and we expect actual expenses to come in significantly below budget due to vacancies created through staff reorganization.

Figure 3: Total Budgeted Expenses

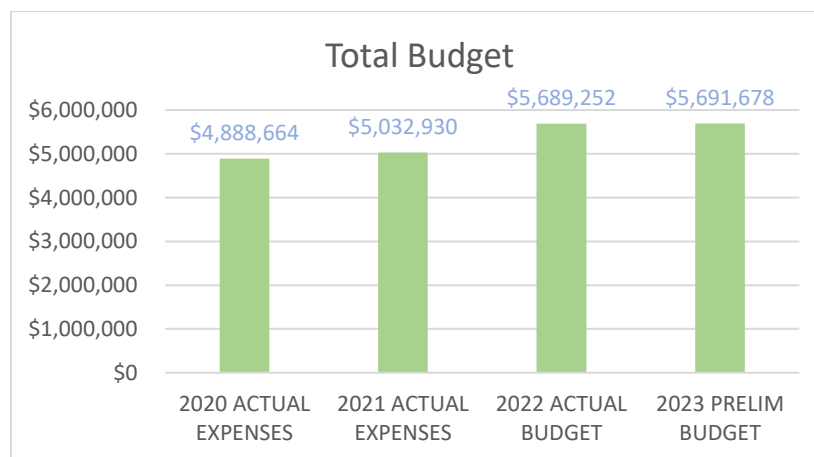


Figure 4 illustrates consistent growth in operating expenses. There were no significant changes from 2020 to 2021 but there were slight increases among all categories due to rising costs and salaries. The budget for 2022 shows an increase of nearly \$260,000, or 8% over 2021 actual expenses. Most of that is because of unknowns related to market conditions and staffing. As noted earlier, we expect final



expenses to come in under budget for 2022. 2023 shows an increase of 0%, \$2,400, over the 2022 budget. Large increases are attributable to rising chemical, energy, and sludge disposal costs as is shown in figures 5-7. Those increases are offset by savings in salaries, benefits, and consulting fees.

Figure 4: Operating Expenses 2022-2023

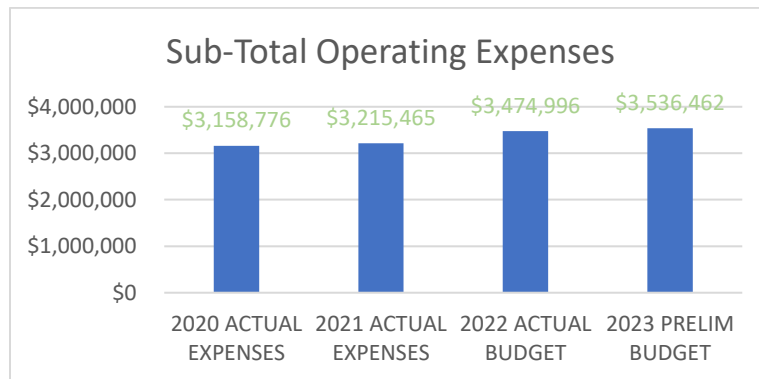


Figure 5: Sludge Disposal Costs

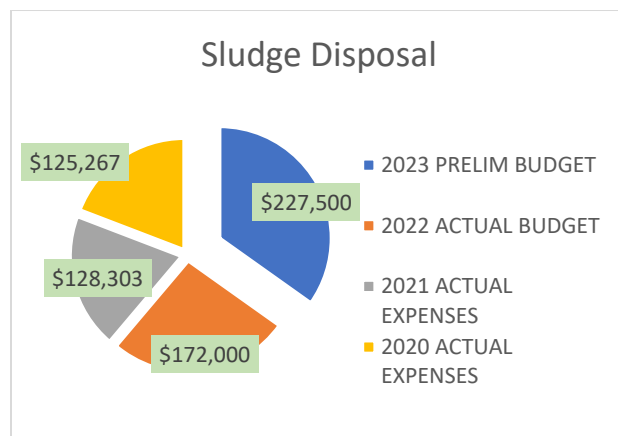


Figure 6: Energy and Utility Costs

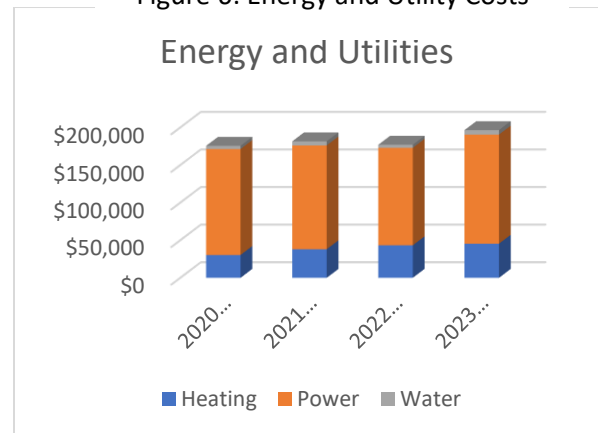
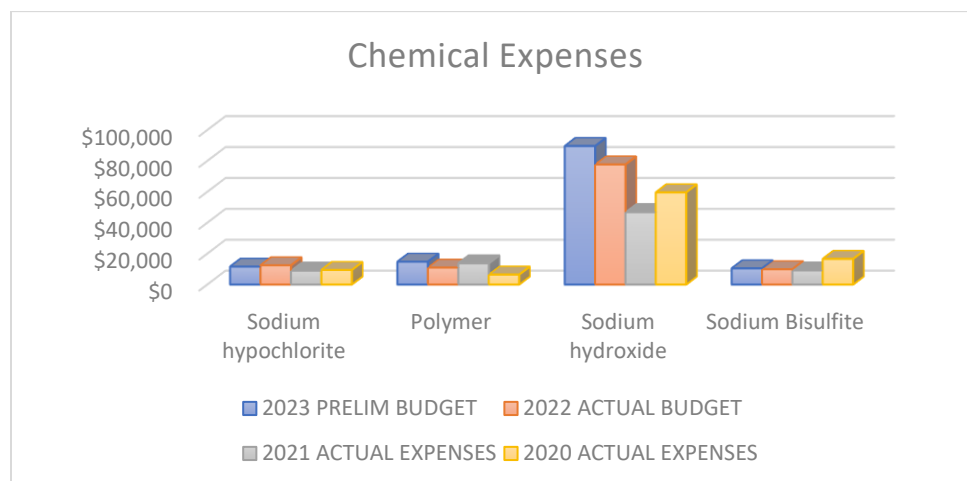


Figure 7: Chemical Expenses





Expense Highlights and Assumptions

- Insurance rates are anticipated to increase by 4%. We’ve seen years with no increase or increases as much as 12%. 4% is a reasonable assumption, but we will not have final numbers until later this fall.
- Employee wages are expected to increase by 10% for 2023. This is due to a large increase in the consumer price index (>8% currently), which our pay matrix and wages are based on. Increases of 10% may seem excessive, but large increases have become common in the past year due to inflation and labor market conditions. The BTWD increased wages by \$4/hr. across the board in spring of 2022. Bowdoin College, LL Bean, BIW, and other organizations in our labor market have significantly increased wages or paid large bonuses. It’s essential that we remain competitive. Even with the increases, due to the reorganization of staffing, the total anticipated wages for 2023 are less than 2022 budgeted wages.
- Anticipated sludge disposal costs increased by \$55,500 over 2022, to a total of \$227,500. This is due to LD1911 that eliminated all disposal options other than a landfill. The BSD is working with the Maine Water Environment Association and other facilities to look into regional disposal options. If the digester at Brunswick Landing upgrades are completed in 2023, we could see a reduction in costs for 2024.
- Depreciation of \$2.8 million is a guesstimate based on the past couple of years. It all depends on other assets we get from Brunswick Landing and assets that are fully depreciated this year. It is early to prepare a proforma fixed asset list. This number does not affect our operating budget or cash flow and will not change the bottom line, but it does reflect a change the BSD’s total valuation.

Capital Budget

Table 3 shows the total planned five-year capital expenses broken out by categories. Further details, including types of equipment, estimated costs, and reasons for the requests can be found in Appendix A: Five Year Capital Plan. The BSD has taken advantage of a 1:1 matching grant from the Maine DEP and entered into an agreement with Wright-Pierce to conduct a fiscal sustainability study of all of the district’s assets. This work should be completed in early 2023. At that time, we will be able to provide a more in-depth analysis of the district’s capital replacement needs.

Table 3: Five-Year Capital Costs

Brunswick Sewer District Capital Improvement Program						
Summary of Capital Projects	Year 1	Year 2	Year 3	Year 4	Year 5	5 Year Total
1- Pipe Projects	\$0	\$626,820	\$672,335	\$576,287	\$507,365	\$2,382,807
2- Pump Station Improvements	\$0	\$500,000	\$0	\$0	\$1,000,000	\$1,500,000
3- Treatment Plant	\$124,000	\$165,000	\$310,000	\$1,250,000	\$3,550,000	\$5,399,000
4-Vehicles and Equipment	\$240,000	\$105,000	\$135,000	\$223,000	\$230,000	\$933,000
5- Facilities (Non TP)	\$0	\$15,000	\$15,000	\$90,000	\$30,000	\$150,000
Total	\$364,000	\$1,411,820	\$1,132,335	\$2,139,287	\$5,317,365	\$10,364,807



Table 4 shows the proposed capital expenses for 2023. There are no proposed pump station, pipe replacement, or facility improvement projects. Some minor pump station upgrades will be funded through the operations budget. At this time, it does not appear there will be any town reconstruction projects that will require upgrades to our pipes, but that may change as the town adopts its fiscal year budget in early 2023.

Table 4: 2023 Capital Expenses

Category	Div	Description	Cost	Totals
1- Pipe Projects		None		\$0
2- Pump Stations		None		\$0
3- Treatment Plant	T	Upgrade/Replace Headworks Crane	\$80,000	
	T	Replace Boerger Sludge Pump with Penn Valley	\$32,000	
	T	Install sump pumps in chemical containment areas	\$12,000	\$124,000
4-Vehicles and Equipment	CP	New Service Truck (Trade in Existing 2012 F-350)	\$150,000	
	CP	18" Planer Skid Steer Attachment	\$20,000	
	CP	Replace 2017 Pickup with EV Truck	\$70,000	\$240,000
5- Facilities (Non-TP)		None		\$0
Total			\$364,000	\$364,000

Table 5 provides background information on each of the individual items noted in the capital expenses. Cost estimate information and alternatives considered are noted in the table.

Table 5: Capital Request Background Information

Headworks Crane	Replacement is based on wear, age, and mileage as currently used. Sludge disposal options may change, and trucking may be significantly reduced or increased as disposal options change. As replacement nears, we will reevaluate options. Estimate is based on historical knowledge. Replacement of cab and hook lift only. We will reuse existing 30CY cans. Cost is spread over two years to reduce impact to annual budget.
Sludge Pump	Replace one of the Boerger rotary lobe pumps with a Penn Valley positive displacement pump. Rotary lobe pumps are wearing excessively due to grit. We expect more life out of a PDS pump. We'll replace one of three and analyze the results.
Sump Pumps	Installation of sump pumps in the chemical containment area would eliminate the need to do manual cleanup when there are chemical spills. This is a safety improvement that should have been incorporated into the 2014 upgrade project. Alternatives would be to leave it as is, as spills are not common. Estimate is based on staff intelligence.
Service Truck	Replacement due to age and wear. The existing F-350 service truck is too light to handle the weight of the existing service body, plow, and equipment. The F-550 size. Pricing is based on conversations with local sales reps. There are few alternatives at this point in time.
Skid Steer Planer	Staff has requested a planer attachment for the skid steer to reduce the need for jackhammering pavement around manhole covers. This should fit on our existing skid steer, but we will need to consider an upgrade in 2024.



	Alternatives include more costly manhole cutters or continuing to use physical means to jackhammer manholes.
EV Truck	Replacement based on age or mileage. Pricing is based on historical knowledge and discussion with a salesman. EV aligns with BSD Goals on sustainability.

Capital Expenses Highlights

- The 2023 budget includes full funding of the proposed capital improvements through user rates. There are no planned bonds for 2022.
- The BSD maintains a five-year capital replacement schedule. A summary of estimated costs is shown in Table 4. There are no pipe or pump station projects planned for 2022. This is due in large part to increased costs, materials and labor shortages, and an all-around difficult construction market.
- Because the District has been proactive with our capital program over the past decade, we are in good position, and we can wait until market conditions become more favorable. The pipe and pump station projects proposed for year two may be pushed out another year depending on when the market turns around.
- Pushing out large construction projects for a couple of years will help balance the district’s debt service. We retire the admin building bond in 2023 and the street reconstruction bond in 2025. That will free up more than \$250,000 in annual bond payments.
- We will propose issuing another bond for around \$2.5M in 2024 or 2025 for sewer line reconstruction projects. This will allow us to use economies of scale to accomplish reconstruction of many of the lines on our replacement schedule all at once.

Discussion Topics

With the staff reorganization of 2022, I expect staffing levels to remain consistent for 2023. No additional positions are figured into the 2023 budget; however, we must consider that four to five of our employees are expected to retire in the next two to five years. We will need to consider bringing in new operators and office staff to train prior to the retirements. With a very competitive labor market it will be difficult to recruit and train new employees. I’d like to note that we brought a recent college graduate on in a summer internship position. She has proven to be a valuable asset to the district. Rather than struggle in this market to find suitable employees for our open positions, it’s wise to keep talented people on staff and find roles for them where their abilities shine. Besides staffing, other important items for discussion and consideration are:

- Discharge Permit. The BSD currently operates under terms of a discharge permit that expired three years ago. I expect the DEP to issue a new permit within the year. The recent classification change of the Androscoggin River could have a significant impact on our discharge limits, and out five-year capital plan.
- LD 1911, the law that bans all beneficial reuse of sludge and sludge derived products caused a rapid change in the market. We already know it will impact our operating costs by more than \$55,000 for 2023, but the long-term effects on the market are not yet known. We have also seen significant increases in transportation costs due to the longer distance travelled, time to



offload, and wear on our equipment. We need to be prepared for continuous and substantial increased in sludge disposal costs.

- Brunswick Landing Digester. If and when this facility is rebuilt so that it can meet discharge standards set by the BSD, it will have a significant impact on our income, treatment process, and sludge disposal costs.
- Development and Economic Conditions. We are currently in a booming economy, but most analysts are predicting years of increased costs, high inflation, and a slowdown in construction of new homes.
- The current proposal does not include an increase in septage disposal costs. The Board should consider market conditions and the rising costs of sludge disposal to determine if an increase is necessary.
- The budget was built on a 4% rate increase. Sludge disposal costs alone account for more than half of the increase. Stagflation is expected for the next few years. We will see significant increases in our capital expenditures for 2024 and beyond. 4% annual increases may not meet our needs. The Fiscal sustainability plan will help us outline a plan to address capital needs.

Conclusion

2022 presented unique challenges and opportunities for the Brunswick Sewer District (BSD) to examine all facets of operations and personnel management. Along with changes in staffing, management chose to change the entire budget process and start from scratch. The purpose was to make the process more efficient and economical, but also to make it more understandable for our stakeholders.

The budget presented here represents our efforts to streamline the process but also provide all of the necessary information needed to make informed decisions regarding our rates and expenses. The budget was built with input from all department heads. They examined every line item in the budget and built their requests from the bottom up. This established the foundation for the finance manager, operations & compliance manager, and general manager to pull together the final product.

We believe the 2023 draft budget presented here is a good representation of the needs of the district for the upcoming year. We look forward to discussing this budget and the recommendations within it and approving a budget for 2023 that our stakeholders can be proud of.



Appendix A – Five-Year Capital Budget

Brunswick Sewer District Capital Improvement Program						
Summary of Capital Projects	Year 1	Year 2	Year 3	Year 4	Year 5	5 Year Total
1- Pipe Projects	\$0	\$626,820	\$672,335	\$576,287	\$507,365	\$2,382,807
2- Pump Station Improvements	\$0	\$500,000	\$0	\$0	\$1,000,000	\$1,500,000
3- Treatment Plant	\$124,000	\$165,000	\$310,000	\$1,250,000	\$3,550,000	\$5,399,000
4-Vehicles and Equipment	\$240,000	\$105,000	\$135,000	\$223,000	\$230,000	\$933,000
5- Facilities (Non TP)	\$0	\$15,000	\$15,000	\$90,000	\$30,000	\$150,000
Total	\$364,000	\$1,411,820	\$1,132,335	\$2,139,287	\$5,317,365	\$10,364,807

1 - Pipe Replacement Projects				Year 1	Year 2	Year 3	Year 4	Year 5	5 Year Total
Street	Dia (in)	Type	Length (ft)						
Longfellow	6	VCP	587		\$107,615				\$107,615
Maine Street	8	VCP	58		\$8,880				\$8,880
Page Street	6	VCP	335		\$56,850				\$56,850
Town Hall Place	6	VCP	336		\$91,420				\$91,420
Spring Street	6	VCP	946		\$232,510				\$232,510
Weymouth Street	8	VCP	251		\$58,895				\$58,895
Columbia Avenue	8	VCP	415		\$70,650				\$70,650
Wheeler Park	15	ACP	851			\$182,170			\$182,170
Park Row	6	VCP	1392			\$231,840			\$231,840
Gurnet Road	8	VCP	400			\$63,000			\$63,000
Noble Street	6	VCP	985			\$195,325			\$195,325
Thomas Point	10	ACP	1944				\$314,932		\$314,932
Maine Street	8	VCP	1183				\$261,355		\$261,355
Curtis Street	8	VCP	300					\$45,500	\$45,500
Water Street	8	VCP	1803					\$346,435	\$346,435
Armory Street	6	VCP	303					\$43,330	\$43,330
Belmont Street	8	VCP	190					\$38,400	\$38,400
River Road	8	VCP	10					\$11,850	\$11,850
Pleasant Street	8	VCP	10					\$21,850	\$21,850
Annual Total				\$0	\$626,820	\$672,335	\$576,287	\$507,365	\$2,382,807



Costs are estimated by pipe length, depth, and diameter. Other factors such as ground water and soil type are not included. Quotes are obtained for current year projects. Pipe replacement is determined by condition assessments through CCTV inspection. Other factors including depth, location, and diameter are also considered. Replacement schedule may be adjusted to coincide with the town pavement replacement program.

2 - Pump Station Projects **Year 1** **Year 2** **Year 3** **Year 4** **Year 5** **5 Year Total**

Station	Description						
<i>Androscoggin</i>	Full upgrade with new wetwell and valve pit		\$500,000				\$500,000
<i>All Stations</i>	SCADA Upgrade with flow pacing					\$1,000,000	\$1,000,000
Annual Total		\$0	\$500,000	\$0	\$0	\$1,000,000	\$1,500,000
<i>Androscoggin</i>	This station needs a new wetwell, valve pit and controls upgrade, similar to River Roads 1 and 2. Determination is based on run times and wetwell condition. Staff will review in-house repairs, such as wetwell coating, in 2022 to see if costs can be reduced and the life extended.						
<i>SCADA Upgrade</i>	This project is to upgrade all stations (or at least the 5 major stations) to have full SCADA capability. This would tie the communications into the plant SCADA systems. Technological advances may impact this future funding request. This will allow for flow pacing to keep flow to plant consistent. The need for this will be monitored as flow rates increase or decrease over the next few years.						

3 - Treatment Plant Projects **Year 1** **Year 2** **Year 3** **Year 4** **Year 5** **5 Year Total**

Item	Description						
<i>Headworks Crane</i>	Replace unit - Crane is showing wear. Parts no longer available.	\$80,000	\$70,000				\$80,000
<i>Odor Control</i>	Possible replacement of carbon odor control		\$30,000				\$30,000
<i>Sump Pumps</i>	Install sump pumps in chemical containment areas	\$12,000					\$12,000
<i>PEP Phase 1</i>	Install mag meter on 36" outfall to allow better Pump control		\$25,000	\$250,000			\$25,000
<i>PEP Phase 2</i>	Controls and automation to control weir gate		\$40,000				\$30,000
<i>Septic Pump</i>	Replace ODS Pump with more appropriate Penn Valley Pump			\$40,000			\$20,000
<i>Sludge</i>	Replace Boerger Sludge Pump with Penn Valley Pump	\$32,000					\$32,000
<i>Trickling Filter</i>	Install clutch or breakaway on trickling filter arms			\$20,000			\$20,000
<i>Nutrient Removal</i>	New process to treat nitrogen and phosphorus				\$500,000		\$500,000



<i>Outfall</i>	Extension and diffuser on outfall pipe. Regulation dependent.					\$750,000	\$750,000				
<i>River Classification</i>	Meet new regulations of Androscoggin River Reclassification					\$3,500,000	\$3,500,000				
<i>Contact Tank</i>	Replace Troughs to fix scum removal					\$50,000	\$50,000				
Annual Total						\$124,000	\$165,000	\$310,000	\$1,250,000	\$3,550,000	\$5,399,000
<i>Headworks Crane</i>	Replacement is based on wear, age, and mileage as currently used. Sludge disposal options may change, and trucking may be significantly reduced or increased as disposal options change. As replacement nears, we will reevaluate options. Estimate is based on historical knowledge. Replacement of cab and hook lift only. We will reuse existing 30CY cans. Cost is spread over two years to reduce impact to annual budget.										
<i>Odor Control</i>	Carbon systems last anywhere from 5 to 10 years depending on the air flow and use. We are approaching year five, so the system will need an evaluation to determine remaining life and it may require a change of the carbon before the end of the year. Cost estimate is based on engineering estimate when the system was designed. There are no alternatives.										
<i>Sump Pumps</i>	Installation of sump pumps in the chemical containment area would eliminate the need to do manual cleanup when there are chemical spills. This is a safety improvement that should have been incorporated into the 2014 upgrade project. Alternatives would be to leave it as is, as spills are not common. Estimate is based on staff intelligence.										
<i>PEP Phase 1 and 2</i>	This project includes installing an outfall meter, new controls, and automation. This will allow for better control of chemical dosing and will reduce wear and tear on the Primary Effluent Pumps. The alternative is to leave things as they are. Treatment is currently doing very well. The downside is, we don't know exactly how much wear and tear will be reduced, or how much can be saved on chemicals. A break-even analysis is very difficult. Pricing is based on verbal quotes from ICS, our system controls vendor. Phase 2 costs could rise significantly due to bypass pumping, so much so that the project may be scrapped completely. We've left a placeholder for now.										
<i>Sludge Pumps</i>	Replace one of the Boerger rotary lobe pumps with a Penn Valley positive displacement pump. Rotary lobe pumps are wearing excessively due to grit. We expect more life out of a PDS pump. We'll replace one of three and analyze the results.										
<i>Septic Pump</i>	The ODS and Boerger pumps that transfer septic and sludge between tanks show significant wear due to grit. The pumps work, but they require a high level of maintenance and repair. Repair parts are expensive. Staff believes we can realize significant savings by utilizing Penn Valley pumps.										
<i>Trickling Filter</i>	Installation of a clutch on the trickling filter would allow the BSD to decouple the motor from the distribution arms. This would allow the arms to swing freely, when needed and when it's beneficial for treatment, depending on the flow from the primary effluent pumps. This was how the trickler operated prior to the upgrade in 2014. The clutch would allow for better process control and would provide a backup system for rotation if a motor burns out.										
<i>Nutrient Removal, Outfall, River Classification</i>	These items are dependent on permit requirements. Our current discharge permit is more than one year expired, and we are awaiting a new permit, with associated condition, for the next five years. Depending on the limits set by the DEP, and the result of any river reclassification, we need to be prepared for significant changes in our process.										
<i>Contact Tank</i>	This is a wear item. Sidewalls of the troughs are becoming scoured. The scoured surface creates surface area for scum to build up, creating more maintenance and it can affect effluent quality. This repair would reduce scum buildup and make removal easier.										



4 - Vehicle and Equipment Replacement **Year 1** **Year 2** **Year 3** **Year 4** **Year 5** **5 Year Total**

Item	Div	Description						
<i>Service Truck</i>	CP	New Service Truck (Trade in Existing 2012 F-350)	\$150,000					\$150,000
<i>Pickup</i>	CP	Replace 2017 Pickup with EV Truck	\$70,000					\$70,000
<i>Skid Steer</i>	CP	Replace 2014 JCB with Bobcat T770		\$65,000				\$65,000
<i>Planer</i>	CP	18" Planer skid steer attachment	\$20,000					\$20,000
<i>Lawn Mower</i>	CP	New Walker Bagger Mower to Replace 2004 Kubota		\$20,000				\$20,000
<i>Sludge Truck</i>	T	New Sludge Truck (Cab and Hook Only)			\$85,000	\$85,000		\$170,000
<i>Lawn Mower</i>	T	Replace 2015 Kubota Mower				\$18,000		\$18,000
<i>Pickup</i>	A	Replace 2019 GMC Pickup			\$50,000			\$50,000
<i>Forklift</i>	T	Replace 2006 Yale Forklift with Similar				\$40,000		\$40,000
<i>Truck</i>	T	Replace 2016 One-Ton with Lift Gate					\$70,000	\$70,000
<i>Truck</i>	CP	Replace 2016 One- Ton Dump					\$80,000	\$80,000
<i>Pipe Lining</i>	CP	New Full Length Pipe Lining Equipment				\$80,000	\$80,000	\$160,000
Annual Total			\$240,000	\$85,000	\$135,000	\$223,000	\$230,000	\$913,000
<i>Service Truck</i>	Replacement due to age and wear. The existing F-350 service truck is too light to handle the weight of the existing service body, plow, and equipment. The F-550 size. Pricing is based on conversations with local sales reps. There are few alternatives at this point in time.							
<i>Skid Steer and Planer</i>	Staff has requested a planer attachment for the skid steer to reduce the need for jackhammering pavement around manhole covers. This should fit on our existing skid steer, but we will need to consider an upgrade in 2024. Alternatives include more costly manhole cutters or continuing to use physical means to jackhammer manholes.							
<i>Pickups</i>	Replacement based on age or mileage. Pricing is based on historical knowledge and discussion with a salesman. EV aligns with BSD Goals on sustainability.							
<i>Lawn Mowers</i>	Replacement based on age. Pricing is based on purchase price of existing machine adjusted for inflation.							
<i>Sludge Truck</i>	Replacement is based on wear, age, and mileage as currently used. Sludge disposal options may change, and trucking may be significantly reduced or increased as disposal options change. As replacement nears, we will reevaluate options. Estimate is based on historical knowledge. Replacement of cab and hook lift only. We will reuse existing 30CY cans. Cost is spread over two years to reduce impact to annual budget.							
<i>Forklift</i>	Replace 2006 Forklift due to wear and tear and age. Will explore a uni-loader or other similar units with dual purposes.							



Pipe Lining | Purchase of this equipment would allow staff to conduct our own full length pipe lining. This would allow us to avoid, or delay, sewer replacement projects that involve digging up the street. We currently hire this out. Purchase of the equipment could pay for itself in as little as 5,000' of lining. This equipment would require us to reevaluate staffing levels. Pricing is from a verbal quote provided by a supplier. Cost is spread over two years to reduce impact to annual budget.

5 - Facilities Year 1 Year 2 Year 3 Year 4 Year 5 5 Year Total

Item	Div	Description						
<i>Fence line</i>	ALL	Fence line and landscape cleanup. Fix damaged fence.	\$0					Done in 2022
<i>General Repairs</i>	A	Admin Bldg. heating upgrades, paint, carpets	\$0					Done in 2022
<i>Technology</i>	A	Conference Room Equipment, Copiers, Misc. Equip.		\$15,000				\$15,000
<i>Floors</i>	T	Replace/Rehab Flooring in Office Spaces					\$15,000	\$15,000
<i>Floors</i>	CP	Replace/Rehab Flooring in Office Spaces			\$15,000			\$15,000
<i>Site Paving</i>	ALL	Surface Paving/Sealcoating				\$90,000		\$90,000
<i>Alarms</i>	ALL	Alarm System Upgrades and Maintenance					\$15,000	\$15,000
Annual Total			\$0	\$15,000	\$15,000	\$90,000	\$30,000	\$150,000
<i>Fence line</i>		These repairs include the removal of 10 large pine trees that have started to rot on the inside. One tree fell in 2021, causing damage to the fence. Entire fence must be removed and replaced. New bushes or trees should be placed along the fence. Estimate based on staff historical knowledge. Extent of repairs is TBD. Will be completed in 2022						
<i>General Repairs</i>		Standard wear items. Allowance is based on historical costs. Heating improvements include addition of NG radiators to augment the heat pump system which is cold and unreliable. More extensive repairs to the heat pumps may be needed. Discussions with vendors indicate there are no other viable, cost-effective alternatives.						
<i>Technology</i>		Replacement of outdated PC's, cameras, screens etc. Allowance based on historic costs and will vary depending on changes in technology and extend of the upgrades.						
<i>Floors</i>		Allowance based on square footage to replace/redo floors at 10 years of age.						
<i>Site Paving</i>		Surface coat all paved areas to extend the life of pavement. Estimate 70,000 SF of pavement area at 1" thick, equals 450 tons. Figure \$200 per ton for paving, including site preparation.						