

2018 ANNUAL REPORT OF THE KENNEBUNK SEWER DISTRICT

Introduction and Purpose

The Kennebunk Sewer District is a quasi-municipal entity that was incorporated by an act of the Maine State Legislature in 1955. Our mission is to provide reliable and cost-effective sewer related services to our ratepayers while protecting public health and promoting environmental stewardship for the benefit of the community.

Key Issues

Wastewater Treatment Facility Modifications

The most significant issues facing the District are the lack of biological capacity for removing nitrogen and the aging infrastructure at the treatment plant. To address these issues, the District has developed a multiphase strategy. This plan would:

1. Relocate the administrative offices and the maintenance garage to the property adjacent to the plant at 44 Water Street. This was completed in 2018.
2. Repurpose the vacated administrative space in the Control Building into a new laboratory and operator work area. This was completed in 2018.
3. Design and construct a new Headworks Facility that that will be capable of handling the peak flows into the plant. The project will include new influent pumps, screening, and grit removal. This phase will also address some deficiencies in disinfection and clarifier equipment. This phase is currently under design and is expected to be out to bid in the fourth quarter of 2019. This should be completed in 2021.
4. Design and construct the new biological treatment units. This phase will be done once the nitrogen limits are known. It is expected that the Maine Department of Environmental Protection will have nitrogen limits in the new discharge license expected in 2021. At that time, a design will be initiated to construct the biological units and systems capable of achieving those limits. This phase is expected to be completed in 2024 – 2026.



Lab Tech, Shelby Carver

An important consideration for the District is investing the right amount of financial resources into the existing systems to keep them functional until all of the upgrades are in place in the most cost effective



Rotating Biological Contactors

manner. Since much of the equipment and building components are reaching their life expectancies, the District staff will need to closely monitor and maintain the equipment until the new systems come on line. Our challenge is to keep the existing Rotating Biological Contactors (RBCs) functional until the new biological system is in place. It is possible that the need for significant expenditures on the RBCs would cause the District to advance the schedule for completing the new biological systems. This would need to be done with the concurrence of the Maine DEP.

Collection Systems

The collection system and pumping stations are also showing signs of age. The average life expectancy of the pumps and controls for a typical pump station is 20 years. Staff have completed preliminary condition assessments and criticality analysis to determine our most immediate needs. There are 28 District owned stations and we have been retrofitting or reconditioning one to two stations a year. Our strategy has been to use the Impact and Equity Buy-in fees to fund these projects. This may or may not be sufficient for future needs and is financially dependent on the growth in the District.

Human Resources

By the end of 2018, five out of twelve permanent employees are new to KSD and two more are in new positions within the District. We anticipate that we could have two or three more changes in the next five years due to retirement. There is a nationwide shortage of trained operators and the District has been hiring inexperienced personnel and training them to be operators. The training and knowledge acquisition for the inexperienced staff is approximately two years for a competent employee. KSD will need to invest more in in-house and formal training in the near term and provide a workplace that meets the needs of the employee to ensure employee retention.

Impact on the Rate Payers

Understanding the impact on our rate payers is of paramount concern. The District has developed long term projections on the rates based on our current understanding of the needs facing the District. These are subject to change based on growth, industrial contributions, and regulatory issues. Because of the limited size of our customer base at 3,250 accounts and our need to upgrade the treatment capabilities of the treatment plant, our rates are above average for the area. Staff plans to refine our cost estimates in the 10-year Capital Improvement Plan and adjust those based on cost of construction and cost of living indices. This will more accurately forecast our future rate projections. The graph in **Figure 1** projects estimated annual sewer rates for the average residential account.

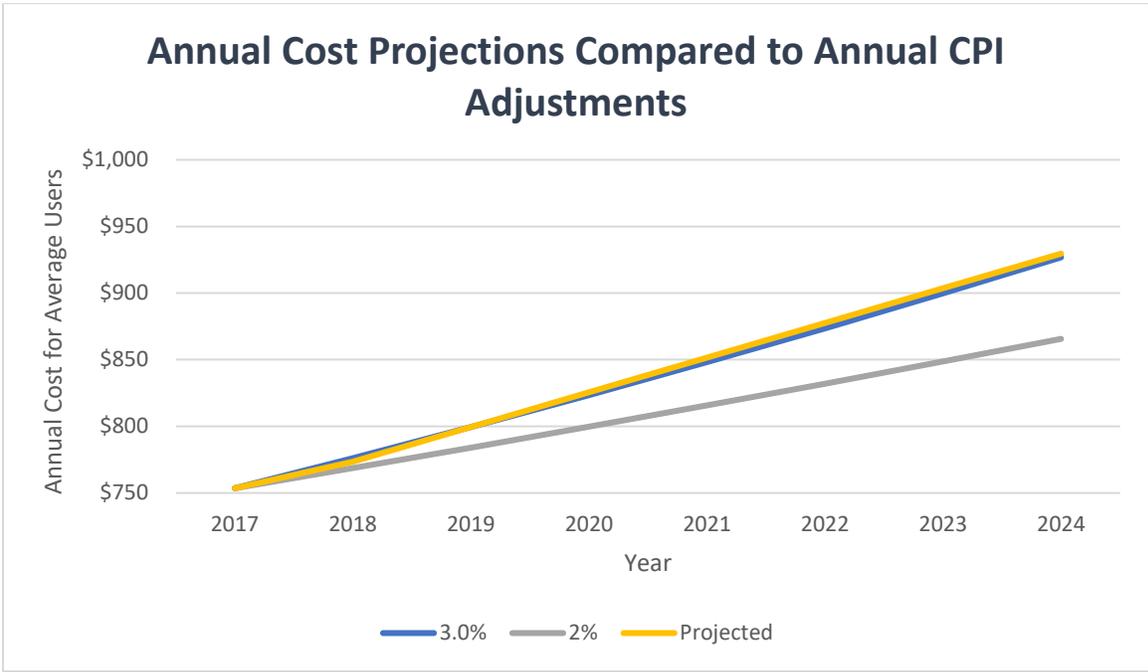


Figure 1

Statistical Information

Customers

The District currently serves 3,250 of the 6,895 (47%) total properties in Kennebunk. There were 38 new accounts added to the District in 2018. The graph in **Figure 2** below shows the growth in customers since 2005.

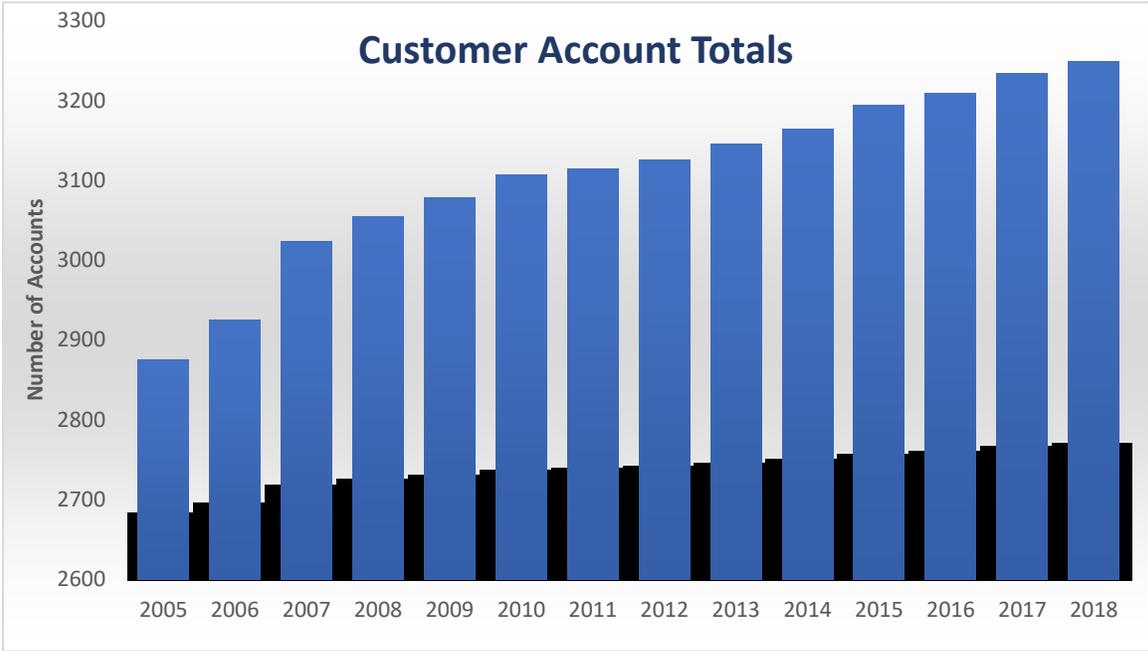


Figure 2

Personnel

The District staff consists of eleven full-time and one part-time employees. Personnel are responsible for the operation of the 1.31 million gallon per day wastewater treatment facility, 28 pumping stations, and 40 miles of sewer. The District experienced significant personnel changes in 2018. A list of the changes is presented below:

Departing

- Patrick Wiley, Assistant Manager accepted the Superintendent's position in Portsmouth after two years of service.
- Bruce Hilton, Collection Systems Manager, retired after 44 years of service.
- Maurice Bedard, Lab Technician, retired after 38 years of service.
- Cathy Reim, Office Manager, retired after 26 years of service

Arriving

- Alex King, Maintenance Tech
- Susan Richards, Office Manager
- Chris Gallant, Assistant Manager
- Dan LaFlamme, Chief Operator
- John Whitten, Maintenance Tech

Promotions

- Dan Boissonneault, promoted from Operator to Collection Systems Manager
- Jeff Hanscom, promoted from Operator to Mechanic
- Shelby Carver, promoted from Operator to Lab Tech

Annual Wastewater Treatment Statistics

The Wastewater Treatment Facility (WWTF) treated 273 million gallons of wastewater in 2018 at an average daily flow of 0.751 million gallons per day. The graph in **Figure 3** shows the annual average daily flow rates based on storm and ground water infiltration and metered water consumption components. The annual rainfall provides an indicator of extraneous water that enters the system. A comparison of 2017 and 2018 records show that the flow to the plant was essentially the same, but metered flow (dark blue) from users increased slightly and the extraneous flows from ground and stormwater decreased (light blue). Low groundwater levels were a factor in the diminished flow into leaking mains and services. These components will fluctuate year to year based on the effects of rainfall and groundwater conditions.

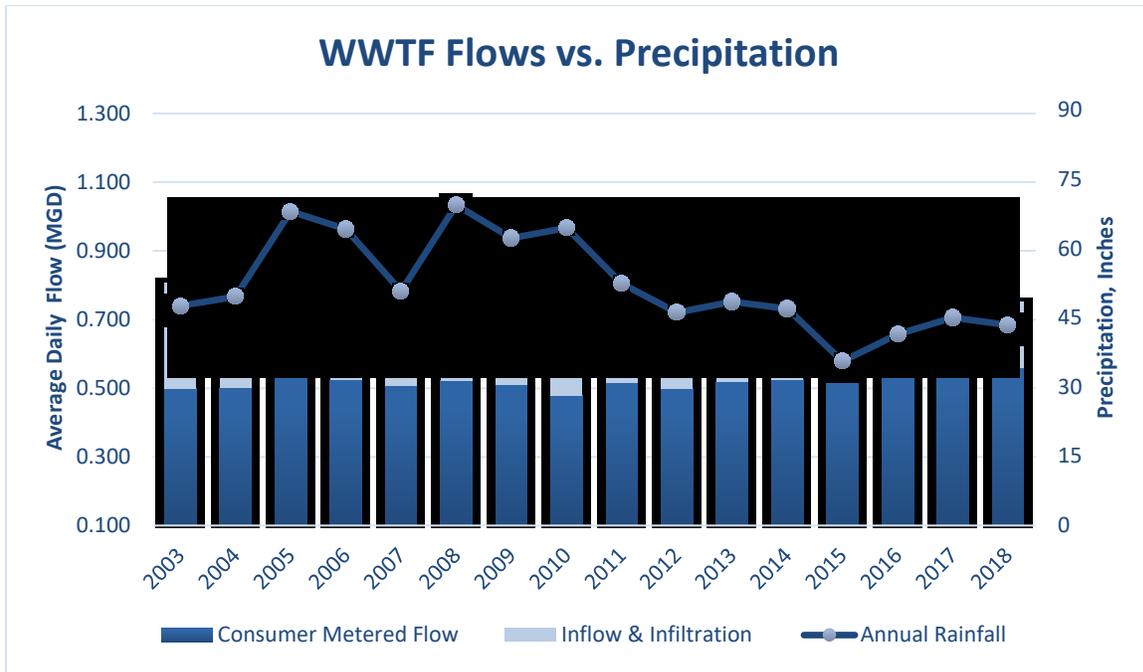


Figure 3

In 2018, the plant produced approximately 897 tons of biosolids. This is less than the previous year and about 4.0% lower than the 10-year average. The graph in **Figure 4** shows our historical annual biosolids tonnages.

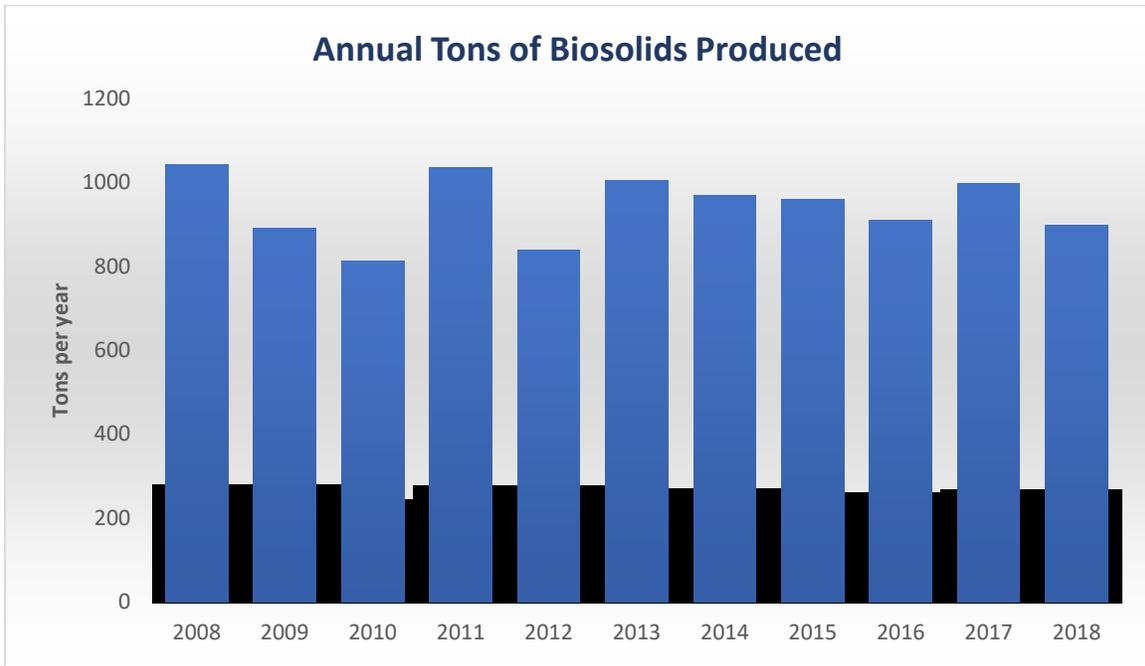


Figure 4

Financial

Operational Revenues and Expenses

The District’s operations and maintenance budget for 2018 was \$2,894,858. The actual amount spent was \$2,886,124 which is approximately 100.3% of the budgeted amount. Projected revenue for 2018 was \$2,895,000 and the actual billed revenues were \$ 3,147,644 at 109% of budgeted amount. The breakdown of budget to actual is present below in **Table 1**.

KSD Revenues and Expenses for 2018					
Item	Budget		Amount		Percentage
Revenues from Sewer User Fees	\$	2,894,858	\$	3,147,644	109%
EBIF and Impact Fees	\$	85,000	\$	179,765	211%
Operating Expenses	\$	2,894,858	\$	2,886,124	100%
Capital Improvement Plan	\$	3,390,943	\$	2,694,121	79%

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Table 1

Equity Buy-in Fees and Impact Fees

In 2018, 38 new accounts were connected to the District system. These added units produced \$179,867 in Equity Buy-in fees. The Equity Buy-In and Impact Fees pay for the portion of capacity that the new connection uses in the system. These fees help to offset the cost of adding additional capacity to our system and keeping sewer fees down. **Figure 6** compares the revenue generated and number of new accounts added between 2009 and 2018.

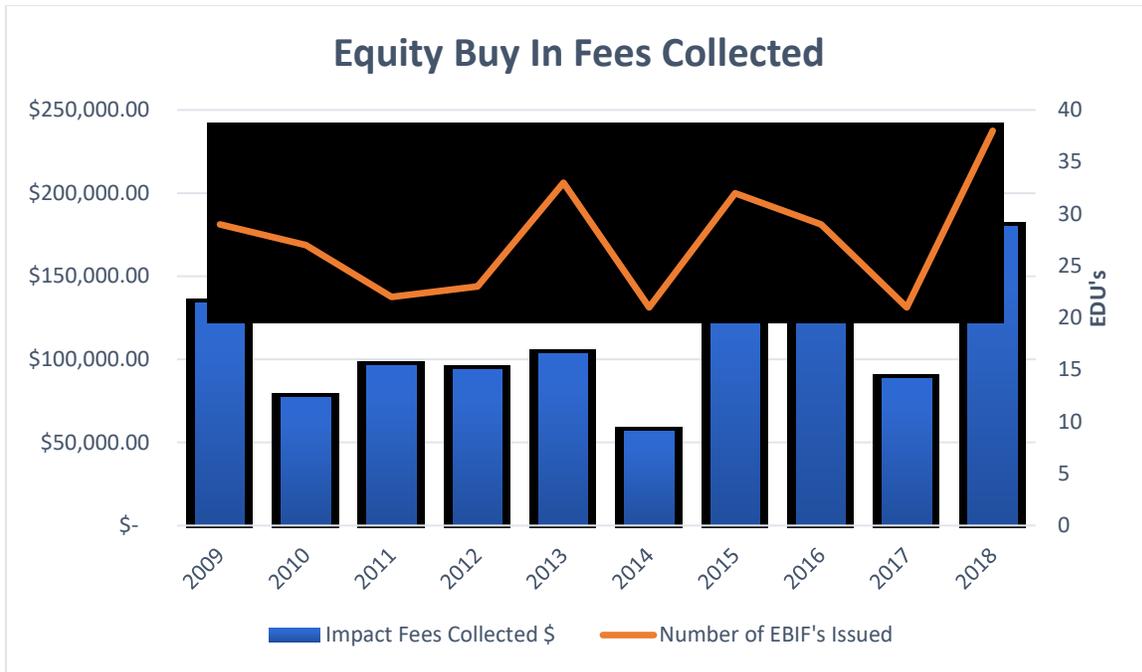


Figure 5

Capital Improvement Projects

In 2018, the Capital Improvement Project's budget totaled \$1,987,000 and is categorized in **Table 2**.

Major projects were:

- Control Building Modifications – Laboratory and office space retrofit (Phase 1A)
- Storer Street Sewer – Increase the size of the sewer for capacity reasons
- Engineering – Design of the new headworks (Phase 1B)
- New emergency generator at Cat Mousam Pump Station
- New Pump Station at Waterford Greene

Table 2 itemizes expenses for 2018. The percentage spent for each item is depicted graphically in **Figure 6**.

Costs by Category	Cost
Engineering Studies	\$ 743,000
Sewers	\$ 180,000
Pump Stations	\$ 251,000
Vehicles	\$ 45,000
WWTF	\$ 768,000
	\$ 1,987,000

Table 2

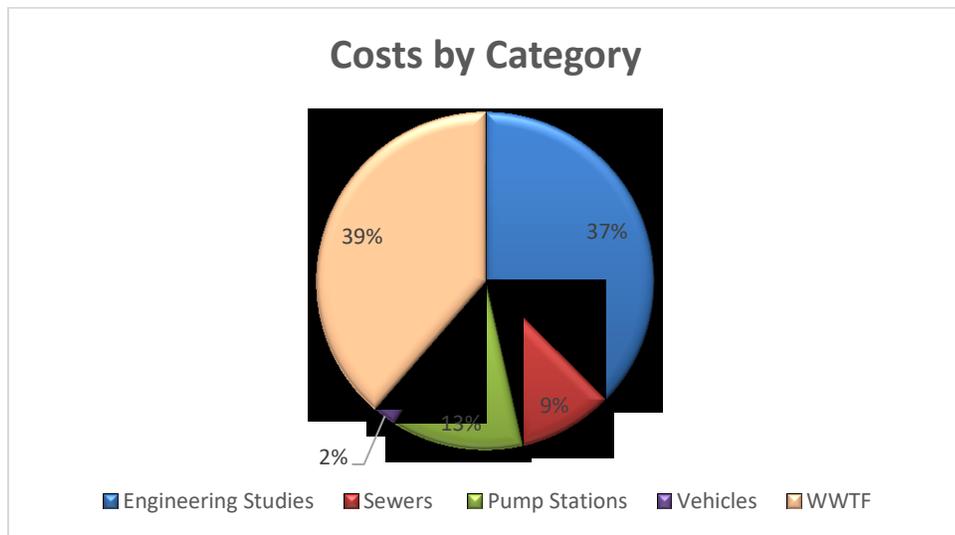


Figure 6

District Information

For more information on the District, please visit our website at www.ksdistrict.org. The Board of Trustees normally meets at 7:00 p.m. on the first Tuesday of each month at the District office located at 44 Water Street in Kennebunk. The District Office hours are 6:30 a.m. to 4:00 p.m. Monday through Thursday and 6:30 a.m. to 12:30 p.m. on Friday.

Board of Trustees of the Kennebunk Sewer District

John Price, Chair

Mark Allenwood, Vice Chair
Wayne Brockway, Treasurer
James Oppert, Clerk
Ed Sharood (moved out of the District November 2019)
Arni Reim (appointed to the remainder of Trustee Sharood's term)