



City of Saco Wastewater Treatment Plant
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Mission Statement: The City of Saco Wastewater Treatment Plant will provide our customers with high quality wastewater services through responsible, sustainable, and creative stewardship of the resources and assets we manage. We will do this with a productive and talented work force, while always striving for excellence.

SCOPE OF OPERATIONS:

- Licensed to process up to 4.2 million gallons of wastewater per day (MGD).

In FY10, the plant had an actual average daily flow of approximately 2.49 million gallons of wastewater it treated, which was comprised of wastewater from residential and commercial sewers, from industrial sources, and from storm-water flow.

YEAR	FY05	FY06	FY07	FY08	FY09	FY10
AVE DAILY FLOW	2.6 MILLION GAL.	2.52 MILLION GAL.	2.29 MILLION GAL.	2.27 MILLION GAL.	2.49 MILLION GAL.	2.49 MILLION GAL.

- Maintain 31 pumping stations throughout the city (sewer lines are maintained by Public Works), as well as the workings at the Plant itself, including a computerized system for monitoring a continuous flow process of aeration, settling, and then finally the disinfection of the remaining solids (known as sludge), which is then composted for beneficial reuse.
- Billing of system users is done internally by Wastewater Treatment Staff, while revenues are collected by the Finance Department.

Use of Resources:

12.4 full time employees (*included in Public Works Department employee numbers*).

Nearby cities of similar size, Biddeford and Scarborough (with no Combined Sewer Overflow System), employ 15 and 13 staff at their Wastewater Treatment Plants, respectively. Biddeford has an average flow of approximately 3.5 MGD, and Scarborough has an average flow of approximately 1.8 MGD.

The Wastewater Treatment Plant does not utilize any tax base dollars to perform their duties. Rather, user fees adequately support operations of the facility.



The impact of the Wastewater Treatment Plant’s mission and three service delivery goals heavily influence on the city’s strategic goals of Meeting New Environmental Regulation



DEPARTMENT SERVICE DELIVERY GOALS AND PERFORMANCE DATA:

GOAL 1) To protect the waterways of Saco through the effective and reliable operation and maintenance of the wastewater collection and treatment systems. We will manage our resources and assets in an environmentally responsible manner, while maintaining regulatory requirements and mandates.



The operation of the Wastewater Treatment Plant is fundamental for ensuring the ongoing environmental health of the City of Saco, and its operations are subject to a variety of local, state and federal regulations. The following awards have been received by the Saco Wastewater Treatment Plant for their efforts: *US EPA 2000 National first place award for Combined Sewer Overflow (CSO) control program excellence *US EPA Region 1 2002 Operations and Maintenance Excellence Award; * State of Maine DEP 2008 Certificate of Achievement for energy efficiency efforts. * 2009 Water Environment George W. Burke Jr. Facility Safety Award.

PERFORMANCE DATA: To meet all Federal, State and Local environmental regulations, while minimizing inflow and infiltration into the combined wastewater collection system thus increasing capacity for growth. This can be measured by (a) the number of times there are CSO’s (Combined Sewer Overflows) into the Saco River and the severity of each occurrence; and (b) the number of monthly permit violations that occur within a year.. The chart following details permit violations and CSO events of the four last years.

>>>>Data that follows is from department records maintained for state and federal reporting.

(A) CSO occurs when the collection system for wastewater is overwhelmed with wastewater coming in, for instance during a significant rainstorm, such that overflow occurs and, instead of passing through the treatment system, wastewater passes directly into the Saco River. If the collection system is well maintained and has adequate capacity versus demand, these occurrences should be infrequent and minor in terms of volume passing untreated.

(B) A permit violation occurs when the quality of treated water as it leaves the system is substandard in any of several ways – the treated water has: a high level of total suspended solids (TSS), settleable solids (SS) or of biological oxygen demand (BOD); traces of fecal matter remaining; and/or improper PH levels (how acidic versus how alkaline it is).

TSS or SS remaining in treated water is harmful to other living creatures, and a high BOD means that the treated water does not have enough oxygen to support life. “Most cities that routinely report BOD and TSS removal indicate high percentages removed – often well above 90%.” (Ammons, p 454) Similarly, remaining fecal matter and improper PH levels of treated water essentially means output water is still polluted.

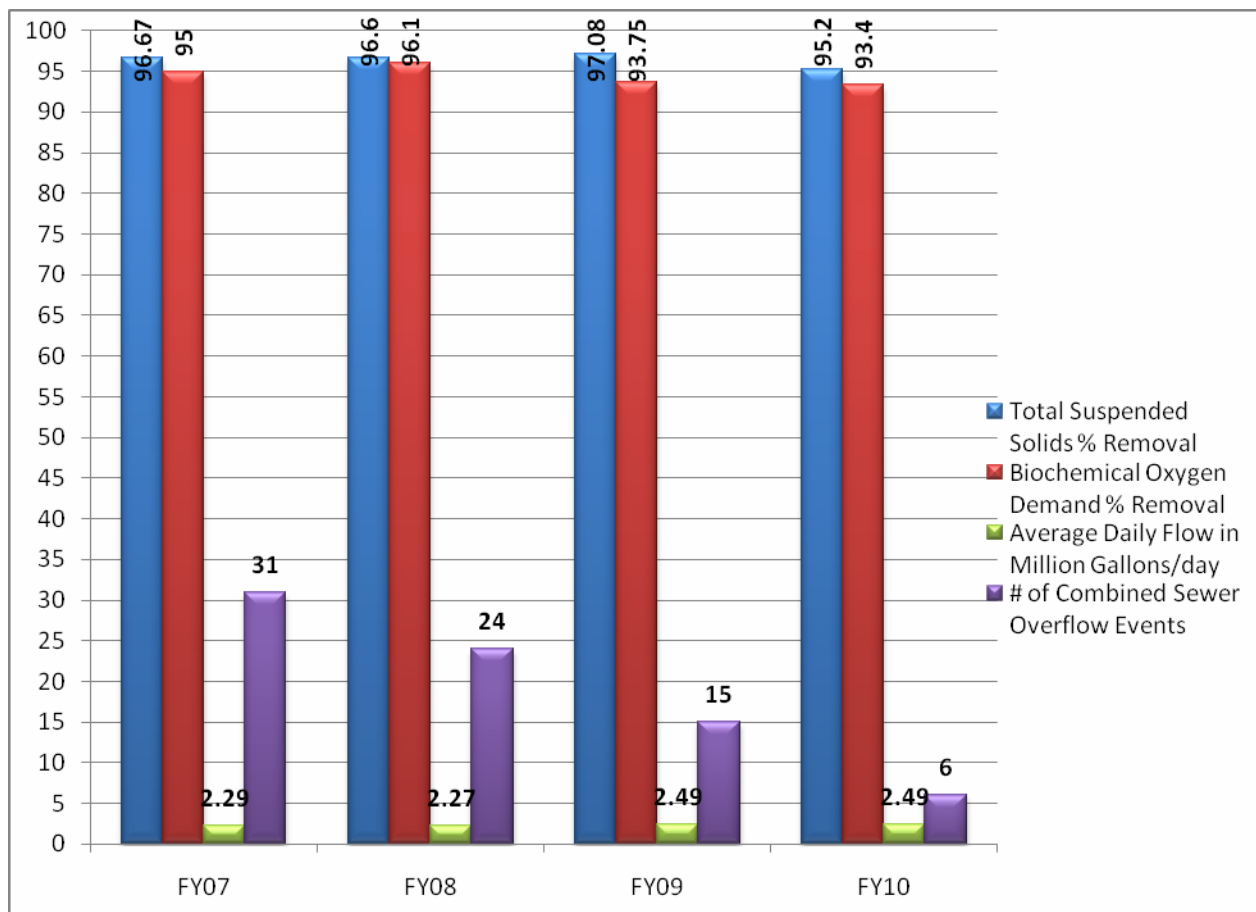
Ammons, D.N. (2001). Municipal Benchmarks: Assessing Local Performance and Establishing Community Standards (2nd ed.). Sage Publications.



SEVENTH ANNUAL PERFORMANCE REPORT ON DELIVERY OF CITY SERVICES FOR FY 2010


VIOLATION DATA BY YEAR			
Fiscal Year	Violation Month	Violation Qty	Violation Type
FY06	May	1	TSS
	May	1	SS
FY07	None	None	None
FY08	None	None	None
FY09	None	None	None
FY10	July	2	1 BOD 1 TSS
	February	3	2 BOD 1 TSS
	March	1	BOD

COMPARING AVERAGE DAILY FLOW WITH REMOVAL AND VIOLATIONS BY YEAR:



HOW ARE WE DOING?

The ongoing plan establishing fixed benchmarks for performance and setting targets for the future is to continue to balance cost effective improvements to the system alongside appropriate capacity upgrades with a goal of no permit violations, but no defined target for CSO events. Setting targets for CSO events, such as “no more than 3 per month” or “no more than 1 per month of reportable severity,” continues to be a challenge for the Wastewater Treatment Plant staff because such incidents are primarily weather driven and the system has an existing capacity that can be exceeded in unusual circumstances. It isn’t cost effective to upgrade the system to anticipate all such possibilities, and it also is possible to overbuild a system resulting in negative environmental consequences.

GOAL 2) We will perform all services in a financially sound and responsible manner with sufficient resources to properly operate and fully maintain the wastewater system. We will continue to be guided by cost-of-service principles with regards to our rates, fees and charges, as we rely on user fees for funding operations. We are committed to continuous improvements in all of our services and will provide high value to our customers. 

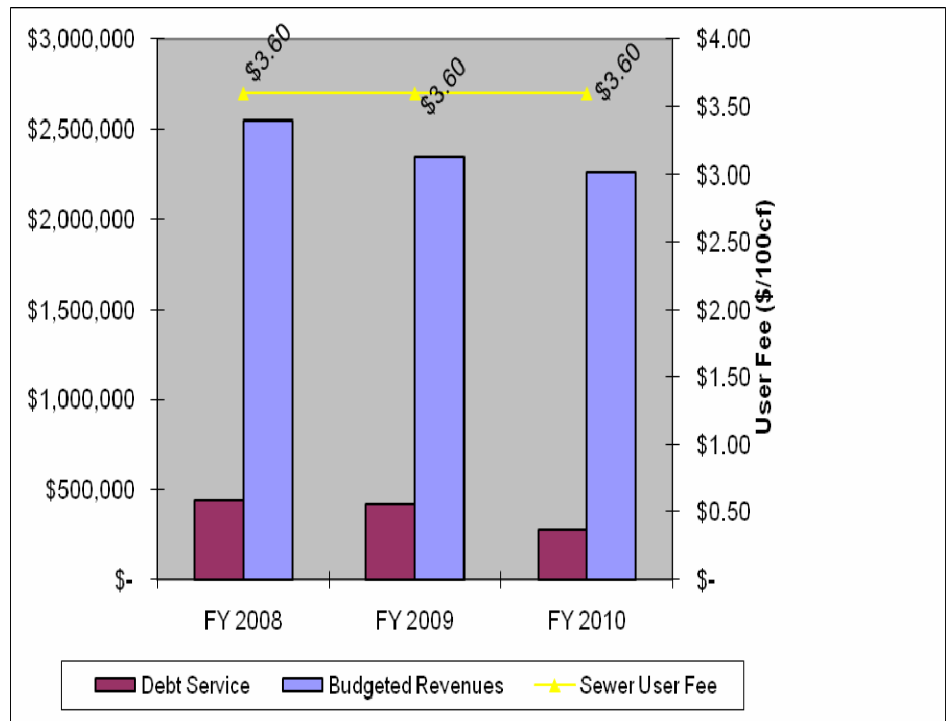
To maintain the system optimally and affordably, the staff must balance managing costs to users with providing the best possible service, keeping the system operational and efficient, and maintaining the infrastructure.

In FY10, staff signed a 5 year contract with Nestle Waters North America, Inc., to treat all of the Hollis facilities wash down water. This will add between \$50,000 and \$200,000 a year annually to the departments revenue stream without increasing staff time, helping to keep use rates low.

PERFORMANCE DATA:

To maintain a fair and stable fee structure while minimizing debt service and minimizing infrastructure deterioration. This is measured by managing user fees and debt service such that debt service does not exceed 25% of budgeted revenues (collections from user fees). The idea is to manage fees fairly for users, while also maintaining adequate investment in operations and the infrastructure of the plant to maintain the system for the long term.

>>>>*Data from Finance audited reports.*



A rate increase in FY04 for users for the first time in 7 years was then adjusted down for FY05, and then held for FY06, FY07, FY08, FY09, and FY10 with ongoing facility improvements.

HOW ARE WE DOING?



GOAL 3) We will seek innovation and creativity in accomplishing our mission and enhancing our services.



Through improvements in technology and processes, operation of the Wastewater Treatment Plant can be optimized in order to meet the growing demand from users.

The State of Maine Department of Environmental Protection Certificate of Achievement FY2008 award (a copy appears after this report as Appendix B) highlights the innovative efforts implemented by the Wastewater Treatment Plant staff at the facility, such as:

- Use of wind power;
- Use of solar power
- Installation of energy efficient equipment
- Plans for use of geothermal heating

The Waste Water Treatment Plant was awarded the 2009 Water Environment Association George W Burke Jr. Facility Safety National Award (a copy appears after this report in Appendix C) to encourage an active and effective safety program in municipal and industrial wastewater facilities and to stimulate the collecting and reporting of injury data.

PERFORMANCE DATA: Identification of new technologies and processes that will allow for better performance and to keep up with the growth within the city, while maintaining a stable and consistent workforce. This can be measured by tracking the number of users on the wastewater system versus the number of full time equivalent employees.

TRACKING WWTP SYSTEM USERS COMPARED TO STAFFING LEVELS						
YEAR	QUARTERLY USERS	MONTHLY USERS	SEASONAL USERS	FLAT RATE USERS	TOTAL USERS	FULL TIME EMPLOYEES *
FY05	3,820	229	148	141	4,338	12.4
FY06	4,014	232	148	145	4,539	12.4
FY07	4,029	233	147	146	4,555	12.4
FY08	4,118	236	145	151	4,650	12.4
FY09	4146	240	144	151	4681	12.4
FY10	4160	239	143	155	4697	12.4

>>>Data from department records.

* This number has been corrected for FY10 from 11 to 12.4 per actual budgeted employees.

CITIZEN INPUT/SURVEY: Citizens surveyed in prior years rated the Wastewater Treatment Plant as follows: On the scale of 1 to 5 where 1 means “very dissatisfied” and 5 means “very satisfied.”

YEAR	FY04	FY05	FY07	FY09
MEAN RATING	4.01	4.21	4.11	4.21

HOW ARE WE DOING?