

Water Pollution Control Facility

Outcomes:

- Maintain Effluent Compliance with MEPDES permit
- Keep CSOs to a minimum
- Maintain Stable Sewer Rates
- Maintain 4 Pump Stations and 4 Buildings at the Plant

Mandates:

- Inspect and Maintain the Sanitary Sewer System and Infrastructure
- Comply with OSHA and Bureau of Labor Standards requirements
- Comply with Environmental Protection Agency and Maine Department of Environmental Protection laws and rules
- State Law requires maintaining Town Owned Buildings and Equipment
- DEP is requiring WPCF to maintain cross country Right of Ways.

Methods:

- Update and follow the Collection System Maintenance Plan.
- Follow the preventive maintenance plans for plant equipment.
- Rehabilitate manholes
 - Monoform; Ring and Cover Resets; & Replacement
- Capital Investment in sewer line repair and replacement as well as plant equipment. Make use of sewer lining where possible to reduce costs and traffic problems. Work with Public Works to do projects together.

Resources:

Personnel

- Superintendent
- Lab Tech/Operator
- Operator/Mechanic
- 3 Operators
- Seasonal Laborer (April - September) (shared with Public Works)

Equipment and Fleet Vehicles

- 2014 Western Star Sludge Truck
- 2016 3500 Series GMC Dump Truck with Plow
- 2013 2500 Series GMC Pickup 4WD
- 2008 2500 Series GMC Pickup 2WD
- 2008 Sewer Flusher
- 2012 Dump Trailer
- 2007 Sewer Camera in a Trailer
- Le Roi Air Compressor
- 750 kW Caterpillar Diesel Generator

Facilities

- Headworks Building
- Operations Building
- Disinfection Building
- Maintenance Garage
- Penobscot St. Pump Station w/generator
- Union St. Pump Station w/ generator
- College Ave Pump Station w/ generator
- Stillwater Ave Pump Station w/generator
- 23 miles of Sanitary Sewer lines
- 500 Sanitary Sewer Manholes

Financial (FY19-20 Budget)

● Personnel:.....	\$ 510,830	
● Operating:.....	\$ 510,504	
● Debt Service:.....	\$ 581,519	
● Funding Reserves:.....	\$ 9,525	
● Capital Investment Projects:.....	\$ 160,000	
○ Plant wide outdoor lighting upgrade		\$14,746
○ Engineering for sewer replacement Westwood		\$35,000
○ Design Spencer Lane repairs		\$12,000
○ Replace 2 manholes and 320 ft. of 6" sewer Chapel		\$92,000
○ Miscellaneous Sewer Projects		\$ 20,000

Areas of Discussion

The Town has been following a plan to slowly phase in a rate increase to ensure financial stability and adequate infrastructure investment of the WPCF. This began with rate increases on Jan 1, 2017 and Jan 1, 2018 of \$0.06/100 cu ft and \$0.10/100 cu ft respectively. The plan had originally called for a \$0.10/100 cu ft increase on Jan 1, 2019; however, a sharp increase in the bond repayment principle in FY19 required an increase of \$0.25/100 cu ft on July 1st, 2018. This is a one time increase in the WPCF debt repayment; however, to adequately fund the WPCF should continue with slow annual rate increases that will bring Orono’s user fees more in line with the region and comparable systems. We are trying to repair areas identified in our CSO master plan as they come up with Public Works.

Areas of Concern:

- Where are State and Federal regulations headed?
- Proposed rate increase?
- Lack of funding into the reserves for FY21?
- DEP increasing the disinfection period by 2 months.

Opportunities for Reduced Service Level:

Given that WPCF operation’s are heavily regulated by the state and federal government - and, that increased operational service levels are aimed at employing best practices where feasible to reduce Town liability and sewer backups into customer properties, options are limited to reduce services. The Council could elect to scale back on capital projects which would in turn allow a reduction in the level of funding into the Sewer Infrastructure Reserve Account.

Town of Orono - Water Pollution Control Facility (WPCF)

Service Levels

Tier I:	Minimum service level required by law regardless of need
Tier II:	Minimum requirements to meet basic needs of the community
Tier III:	Meets or exceeds service level required by law, utilizes best practices and provides additional services to meet needs of the community
Tier IV:	Highest level of service available, meeting all needs and wants of the entire community

Current Level of Service Best approximation of current level of services provided

Service	Tier I:	Tier II:	Tier III:	Tier IV:
Maintain DEP compliance for licensed management responsibility Grade 4 or higher.	Contract with an Engineering firm for contract operations. Town has no staff at the WPCF. All lab work is done by a contract lab.	Engineering firm supplies management responsibility. Town staff does lab work and maintenance.	Minimum Grade 4 operator has management responsibility. Town staff does maintenance and lab work. Town Office supplies billing, clerical and finance support.	Staff with a Superintendent and a Chief Operator (each with at least a Grade 4 License). Employ engineering and administrative (billing, clerical, and finance) support in-house (at the WPCF).
Method of Treatment for Wastewater	Treat influent with conventional activated sludge process - no nitrate pumps and no mixers.	Use current treatment process, with mixers and nitrate pumps, but use sodium hypochlorite instead of ultraviolet disinfection.	Use 4 parts of the 5 part Bardenpho system built in the upgrade. Currently, the Town utilizes all but the selectors that would be needed to remove phosphorus. Since this is not a requirement of the Town's license, we do not use this process.	Use all 5 parts of the 5 part Bardenpho system built for the Orono WPCF
Maintain the Collection system	Flush and remove roots from collection system only when called to respond to a blockage or system problem. Allow paving to bury rings and covers and lift only when access to the manhole is needed.	Flush and remove roots from 1/3 of the collection system each year. Adjust Rings and covers to grade on a proactive basis to ensure efficient access to manholes.	Flush and remove roots from 2/3 of the accessible collection system each year. Adjust rings and covers to grade on a proactive basis. Replace covers as needed to keep the system as water tight as possible and reduce risk to the public associated with ill fitting covers. Manage the cross country rights of way on a priority basis.	Clean entire system and routine maintenance on all rights of way annually. Replace old style rings and covers with gasketed covers to reduce water inflow.
Disinfection	Disinfect with bleach	Disinfect with bleach and keep the chlorine residual down with Sodium Bisulfate.	Disinfect with ultraviolet light.	Disinfect with ultraviolet light and store water for reuse.

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Current Level of Service Best approximation of current level of services provided

Service	Tier I:	Tier II:	Tier III:	Tier IV:
Plant Maintenance	Repair equipment and systems when they breakdown.	Do breakdown maintenance and some preventive maintenance	Maintain the plant based upon a developed and updated proactive preventative maintenance plan. Update/upgrade equipment as needed to improve processes and ensure efficient operations.	Utilize computerized preventive maintenance plan that generates work orders and maintains easily accessible documentation of work accomplished.
CSO Compliance	File the report annually, update the CSO Master Plan every five years, and fix obvious areas of water infiltration and inflow. Manage CSO events without operational changes.	File the report annually, update the CSO Master Plan every five years, and fix and have a proactive plan for addressing known areas of water infiltration and inflow. Manage CSO events by changing operations during the event.	File the report annually, update the CSO Master Plan every five years, and fix and have a proactive plan for actively investigating collection system for potential problem areas; allocating \$100K plus per year for collection system upgrades. Proactively planning for and upgrading operations in anticipation of CSO events.	File the report annually, update the CSO Master Plan every five years, and fix and have a proactive plan for actively investigating collection system for potential problem areas; allocating \$250-350K plus per year for collection system upgrades. Construct containment infrastructure to hold excess water during CSO events.
Staff	3 people, grade 4 licensed operation. 24-hour response to calls, weekend testing and inspection	4 people, grade 4, weekend testing and inspection	5-6 people, grade 4, weekend, on-call, collection specialist, lab specialist, and mechanical specialist	According to EPA guidance, this level of service requires 8 people - including a Grade 4 licensed operator, specialists, weekend testing and inspection, and 24-hour response to calls.

TOWN OF ORONO
WPCF PROPOSED FY 2020 REVENUE BUDGET
July 1, 2019 - June 30, 2020

Account Description	Account Number	FY19 Budgeted Revenues	Proposed FY20	Variance by Dollar Amount	Variance by Percentage	Comments
78-78 WPCF Operating Revenues						
General Sewer Revenue	4100	\$ 100		\$ (100)	-100.00%	
Sewer Billings	4200	\$ 1,555,735	\$ 1,580,000	\$ 24,265	1.56%	
Sewer Connection Fees	4201	\$ 100	\$ 100	\$ -	0.00%	
Sewer Application & Inspection	4203	\$ 500	\$ 500	\$ -	0.00%	
Rental of Sewer Equipment	4204	\$ 350	\$ 350	\$ -	0.00%	
Earnings on Investments	4400	\$ 38,000	\$ 38,000	\$ -	0.00%	
Lien Costs & Deeds	4500	\$ 2,800	\$ 2,800	\$ -	0.00%	
Interest on Overdue Bills	4501	\$ 5,000	\$ 5,000	\$ -	0.00%	
78-78 WPCF Operating Revenues Subtotals:		\$ 1,602,585	\$ 1,626,750	\$ 24,165	1.51%	
78-79 WPCF Use of Funds						
Equipment Reserve		\$ -	\$ 14,746	\$ 14,746	N/A	
Capital Reserve		\$ 40,000	\$ 43,000	\$ 3,000	7.50%	
Sewer Infrastructure Reserve		\$ 120,000	\$ 181,000	\$ 61,000	50.83%	
78-79 WPCF Use of Funds Subtotals:		\$ 160,000	\$ 238,746	\$ 78,746	49.22%	

Town of Orono

FY 2020 - 2024 Capital Improvement Plan

WPCF Capital Revenue & Expenses

July 1, 2018 - June 30, 2019

Description	FY 2018-2019 Approved	FY 2019-2020 Projected	FY 2020-2021 Projected	FY 2021-2022 Projected	FY 2022-2023 Projected	FY 2023-2024 Projected	Comments:
Revenue							
WPCF Sewer Funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	This represents the amount of money that needs to be collected from sewer fees to support the capital budget. The WPCF Capital Plan is designed to have current year projects funded through capital reserve accounts and the sewer fees used to add funds to the reserve accounts each year.
Reserve - WPCF Capital Equipment	\$ -	\$ 43,000	\$ -	\$ -	\$ 45,000		
Reserve - WPCF Capital Reserve	\$ 40,000	\$ 14,746	\$ -	\$ -	\$ -		
Reserve - WPCF Sewer Replacement	\$ 120,000	\$ 181,000	\$ 537,000	\$ 245,000	\$ 316,000	\$ 450,000	
MDEP Planning Grant							
Impact Fees							
Non-Sewer-Fee Revenue	\$ 160,000	\$ 238,746	\$ 537,000	\$ 245,000	\$ 361,000	\$ 450,000	
Total Revenue Utilization	\$ 160,000	\$ 238,746	\$ 537,000	\$ 245,000	\$ 361,000	\$ 450,000	
Capital Projects							
4x4 Pick Up (Replacing 2008 2WD)		\$ 43,000					This a proposed replacement of a pickup truck used daily by the department.
4X4 Pick Up (Replacing 2013)					\$ 45,000		
Sewer Flusher (replacing 2008)						\$ 70,000	
Total Capital Equipment		\$ 43,000			\$ 45,000	\$ 70,000	
Capital Facilities							
Replace the shingled roof on the headworks building	\$ 40,000						The roofs of all the buildings at the WPCF were reshingled (or redone in the case of the flat roof) during the upgrade in 2008. All of the roofs look fine with the exception of the shingles on the headworks building which will need to be replaced.
Lighting upgrade plant wide		\$ 14,746					
Total Capital Facilities	\$ 40,000	\$ 14,746					

Town of Orono

FY 2020 - 2024 Capital Improvement Plan

WPCF Capital Revenue & Expenses

July 1, 2018 - June 30, 2019

Description	FY 2018-2019 Approved	FY 2019-2020 Projected	FY 2020-2021 Projected	FY 2021-2022 Projected	FY 2022-2023 Projected	FY 2023-2024 Projected	Comments:
Capital Infrastructure							
Kell Street Interceptor Design & Repair	\$ 30,000						Capital improvements to the collection system usually is aimed at repairing broken lines or reducing the water infiltration into the system. WPCF crew members are constantly working to identify problem areas in the system and prioritizing repair/rehabilitation projects. Broken or crumbling sewer mains allow dirt and roots into the system which can cause back-ups as well as creating an avenue for water to enter the system. Groundwater infiltration causes the plant to treat significantly more influent (which costs more money) and increases the risk of combined sewer overflow events (graywater sent directly to the river prior to treatment). \$25,000 was added to the capital plan for 2019-2020 to replace the manholes on North Main Street. This project in part of the rebuild and involves Public Works, Orono-Veazie Water and the WPCF.
Engineering for Bennoch Road upsize					\$ 36,000		
Line Margin St. Sewer	\$ 55,000						
Engineering for Chapel Road Project	\$ 15,000						
Increase pipe size in Bennoch Road Area						\$ 360,000	
Manhole Replacements of North Main Street		\$ 25,000					
Engineering for sewer replacement on Westwood Drive		\$ 38,000					
Design Spencer Lane repairs		\$ 6,000					
Replace 2 manholes and 320 ft. of 6" sewer on Chapel Rd.		\$ 92,000					
Increase pipe size on Hillside Street					\$ 260,000		
Sanitary sewer replacement on Westwood Dr.			\$ 375,000				
Spencer Lane Improvements			\$ 120,000				
Design Mahaney Subdivision Improvements			\$ 22,000				
Mahaney Subdivision Improvements				\$ 225,000			
Miscellaneous Sewer Repair	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	
Total Capital Infrastructure	\$ 120,000	\$ 181,000	\$ 537,000	\$ 245,000	\$ 316,000	\$ 380,000	
Total Capital Expenses	\$ 160,000	\$ 238,746	\$ 537,000	\$ 245,000	\$ 361,000	\$ 450,000	

* NOTE: Appropriations to reserves for the WPCF facility are calculated yearly during the development of the operating budget and will be added each year during that process.

Account Description	Account Number	FY19 Approved Budget	FY20 Proposed Budget	Difference \$	Difference %	Comments
78 - WPCF						
Full-Time Salaries	78-78-510-110	\$ 306,653	\$ 317,703	\$ 11,050	4%	See Payroll Sheet for detailed information. Increase reflects market review, merit increases, and additional licensure obtained.
Overtime	78-78-510-130	\$ 12,000	\$ 12,000	\$ -	0%	
On-Call Pay	78-78-510-141	\$ 5,840	\$ 5,840	\$ -	0%	System licensure requires monitoring and response 24/7. We accomplish this with technology and an assigned on-call response.
Health Insurance	78-78-520-210	\$ 106,881	\$ 100,390	\$ (6,491)	-6%	
MPERS Retirement	78-78-520-220	\$ 34,343	\$ 33,359	\$ (984)	-3%	
FICA/Medicare	78-78-520-230	\$ 23,459	\$ 24,304	\$ 845	4%	
Workers Compensation	78-78-520-250	\$ 8,160	\$ 6,845	\$ (1,315)	-16%	
Clothing Allowance	78-78-520-270	\$ 3,415	\$ 3,415	\$ -	0%	6.5 persons at \$525 per year
Travel	78-78-610-310	\$ 1,000	\$ 1,000	\$ -	0%	Milage for conventions
Training	78-78-610-311	\$ 2,900	\$ 2,900	\$ -	0%	Each license requires 18 hours every 2 years.
Membership Dues	78-78-620-320	\$ 1,830	\$ 700	\$ (1,130)	-62%	Dropped our membership in MRWA
Advertising	78-78-630-330	\$ 350	\$ 350	\$ -	0%	
Technology Supplies	78-78-640-412	\$ 2,500	\$ 2,500	\$ -	0%	This is for printers, computers, ink
Cell Phone Expense	78-78-640-413	\$ 700	\$ 700	\$ -	0%	
Telephone/Internet	78-78-640-414	\$ 2,160	\$ 2,160	\$ -	0%	
Internet	78-78-640-418			\$ -	N/A	
Pager	78-78-640-419	\$ 335	\$ 335	\$ -	0%	Pager for major plant alarms
Postage	78-78-650-432	\$ 3,650	\$ 3,650	\$ -	0%	For mailing of sewer bills
Cleaning Supplies	78-78-650-438	\$ 1,815	\$ 1,815	\$ -	0%	For the operations building and Maintenance garage
Chemicals	78-78-650-439	\$ 22,000	\$ 24,000	\$ 2,000	9%	Running short this year
Billing Supplies	78-78-650-451	\$ 2,060	\$ 2,060	\$ -	0%	
Building Supplies	78-78-650-453			\$ -	N/A	
Lab Supplies	78-78-650-462	\$ 5,835	\$ 12,685	\$ 6,850	117%	Spectrophotometer was purchased in 2001. Replace another controller
Maintenance	78-78-650-463	\$ 5,220	\$ 5,220	\$ -	0%	Maintenance and shop supplies
Minor Equipment	78-78-660-510	\$ 2,665	\$ 2,665	\$ -	0%	and tools
Equipment Rental	78-78-660-512	\$ 1,000	\$ 1,000	\$ -	0%	
Equipment Repair	78-78-660-513	\$ 7,500	\$ 7,500	\$ -	0%	6000 for electrical and 1500 for mechanical
Safety Equipment	78-78-660-518	\$ 8,445	\$ 6,200	\$ (2,245)	-27%	We bought some staging last year
Repair Parts	78-78-660-521	\$ 4,700	\$ 4,700	\$ -	0%	
Equipment Replacement	78-78-660-522	\$ 12,750	\$ 9,250	\$ (3,500)	-27%	Belts for press were last year

Account Description	Account Number	FY19 Approved Budget	FY20 Proposed Budget	Difference \$	Difference %	Comments
Penobscot Pump Station Repairs	78-78-660-533		\$ 1,000	\$ 1,000	N/A	These are new accounts to track expenses
Union Pump Station Repairs	78-78-660-534		\$ 500	\$ 500	N/A	
College Pump Station Repairs	78-78-660-535		\$ 1,000	\$ 1,000	N/A	
Stillwater Pump Station Repairs	78-78-660-536		\$ 1,000	\$ 1,000	N/A	
Heating Oil	78-78-670-530	\$ 12,600	\$ 14,700	\$ 2,100	17%	Had to buy oil for maintenance garage the last 2 years
LP Gas	78-78-670-531	\$ 2,750	\$ 2,750	\$ -	0%	
Electricity	78-78-670-533	\$ 110,000	\$ 118,000	\$ 8,000	7%	Running both aeration basins to handle the loading for 4 months has increased electric use
Electricity Pump Station	78-78-670-534	\$ 8,800	\$ 7,800	\$ (1,000)	-11%	Reduction based upon historical average use decline
Water	78-78-670-535	\$ 2,500	\$ 2,500	\$ -	0%	
Repairs/Maintenance to Building	78-78-670-537	\$ 5,000	\$ 5,000	\$ -	0%	
Sewer Line Repair/Maintenance	78-78-670-548	\$ 15,000	\$ 15,000	\$ -	0%	
Vehicle Repair/Maintenance	78-78-680-560	\$ 4,500	\$ 4,500	\$ -	0%	2 pickups a 1 ton /w plow Western Star Dump truck
Gasoline	78-78-680-561	\$ 2,500	\$ 2,600	\$ 100	4%	Our 1 ton is a gas powered instead of diesel
Diesel	78-78-680-562	\$ 3,600	\$ 2,800	\$ (800)	-22%	Western Star and the sewer flusher diesel use
Diesel for Generators	78-78-680-568		\$ 1,000	\$ 1,000	N/A	This is for the plant generator and 4 pump station generators
Medical Testing	78-78-690-611	\$ 500	\$ 500	\$ -	0%	Random Drug testing
Legal Services	78-78-690-612	\$ 2,500	\$ 2,500	\$ -	0%	
Audit Services	78-78-690-616	\$ 6,375	\$ 3,585	\$ (2,790)	-44%	
Liens and Deeds	78-78-690-617	\$ 2,500	\$ 2,500	\$ -	0%	
Licensing	78-78-690-620	\$ 2,200	\$ 3,000	\$ 800	36%	Increase represents a proposed 40% increase in the DEP license cost
Contractor Services	78-78-690-633	\$ 24,000	\$ 16,540	\$ (7,460)	-31%	I think this will be enough.
Reimbursement for Administrative Services	78-78-690-668	\$ 136,825	\$ 136,825	\$ -	0%	
Reimbursement for Facilities Services	78-78-690-670	\$ 2,000	\$ 2,000	\$ -	0%	Facilities cleans WPCF boilers
Sludge Disposal	78-78-690-671	\$ 48,000	\$ 52,700	\$ 4,700	10%	Sludge tonnage has increased
MMA Risk Management	78-78-690-683	\$ 24,385	\$ 15,000	\$ (9,385)	-38%	Premium for property and casualty insurance
CSO Planning and Repair	78-78-690-688	\$ 7,500	\$ 7,500	\$ -	0%	
WPCF Debt Principle Repayment	78-78-810-830	\$ 330,000	\$ 340,000	\$ 10,000	3%	
WPCF Debt Interest	78-78-810-840	\$ 251,569	\$ 241,519	\$ (10,050)	-4%	
Transfer to Capital Program Reserve	78-78-890-894	\$ -		\$ -	N/A	
Transfer to Sewer Replacement Reserve	78-78-890-895	\$ 5,925	\$ 17,397	\$ 11,472	194%	
Transfer to Capital Equipment Replacement	78-78-890-896	\$ -		\$ -	N/A	

Account Description	Account Number	FY19 Approved Budget	FY20 Proposed Budget	Difference \$	Difference %	Comments
Town Wellness	78-78-910-941	\$ 789	\$ 1,700	\$ 911	115%	Decreased last year due to budget constraints. Returning to previous year contribution to allow full participation.
78 - WPCF Totals		\$ 1,602,484	\$ 1,618,661	\$ 16,177	1%	

Position	FY 19 Wage	Step Increase	Projected FY 20 Wage	Hours/Week	Wages	MEPERS	FICA	Health Insurance	Total Cost
Laborer	\$15.42	\$15.42	\$15.74	20	\$16,373.57	\$1,719.23	\$1,252.58	\$1,500.00	\$20,845.38
Operator	\$22.81	\$22.81	\$23.29	40	\$48,441.14	\$5,086.32	\$3,705.75	\$19,177.92	\$76,411.13
Operator	\$17.45	\$18.34	\$18.73	40	\$38,948.29	\$4,089.57	\$2,979.54	\$3,000.00	\$49,017.41
Operator	\$19.23	\$19.71	\$20.12	40	\$41,857.73	\$4,395.06	\$3,202.12	\$19,177.92	\$68,632.83
Operator	\$15.26	\$17.02	\$17.38	40	\$36,145.03	\$3,795.23	\$2,765.10	\$19,177.92	\$61,883.28
Operator	\$23.96	\$25.15	\$25.68	40	\$53,410.55	\$5,608.11	\$4,085.91	\$19,177.92	\$82,282.49
Superintendent/Chief Ope	\$38.86	\$38.86	\$39.68	40	\$82,526.20	\$8,665.25	\$6,313.25	\$19,177.92	\$116,682.63
Totals & Averages	\$21.86	\$22.47	\$22.94	260	\$317,702.53	\$33,358.77	\$24,304.24	\$100,389.62	\$475,755.15

Position	Coverage	Annual Cost
Operator	Family	\$19,177.92
Operator	Buyout	\$3,000.00
Operator	Family	\$19,177.92
Operator	Family	\$19,177.92
Superintendent/Chief Ope	Family	\$19,177.92
Operator	Family	\$19,177.92
Laborer	Buyout	\$3,000.00