



WORKSHOP MEETING BOARD OF TRUSTEES

225 Douglass Street, Portland, Maine
Jeff P. Nixon Training Center
6:30 p.m. on Monday, January 13, 2025

There will be a Workshop Meeting of the Board of Trustees of the Portland Water District on Monday, January 13, 2025. The meeting will begin at 6:30 p.m. in the Nixon Training Center at the general offices of the District located at 225 Douglass Street, Portland, Maine.

The Workshop will be preceded by meetings of the following Board Committees:

<u>Committee</u>	<u>Room / Location</u>	<u>Time</u>
Administration & Finance	Monie Room	5:30 p.m.
Operations	EOC 2 nd Floor	5:30 p.m.
Planning	Nixon Training Center	5:30 p.m.

AGENDA – WORKSHOP

- 1. Meter Project**
Peter Cutrone, Project Manager – Administration, will provide an update on the meter change-out project.
- 2. Executive Session**
Pursuant to 1 M.R.S. §405 (6)(D) labor negotiations, the Board will go into Executive Session to discuss and give guidance for labor union contract negotiations.
- 3. Other Business**
- 4. Adjourn**



MEMORANDUM PORTLAND WATER DISTRICT

TO: Administration and Finance Committee/Board of Trustees

FROM: David Kane, Executive Director of Administration
Emanuel Archibald, Director of Human Resources

DATE: January 7, 2025

RE: Administration and Finance Committee Meeting – January 13, 2025

A meeting of the Administration and Finance Committee of the Portland Water District Board of Trustees will be held on Monday, January 13, 2025, at 5:30 p.m., in the Monie Conference Room of the District, 225 Douglass Street, Portland, Maine.

AGENDA

1. **Meter Replacement Project**
Staff will present a motion authorizing a meter replacement project. (See attached memo)
2. **Intent to Borrow Motions**
Staff will present a motion expressing its intent to issue tax-exempt bond financing.
(See attached memos)
3. **2025 Committee Workplan**
The Committee will review the proposed 2025 Committee Workplan. (See attachment)
4. **Other Business**



ADMINISTRATION AND FINANCE COMMITTEE / AGENDA ITEM SUMMARY

Agenda Item: 1
Date of Meeting: January 13, 2025
Subject: Meter Replacement and Advanced Meter Infrastructure Project
Presented By: Peter Cutrone, Project Manager-Administration

RECOMMENDATION

The following proposed language is presented for Board of Trustee approval:

ORDERED, that the 2025 Capital Improvement Plan (*Meter Master Plan CIP 2025-3250*) is amended to include a project budget of \$33,600,000 and that the General Manager, and the Treasurer, each acting singly, are authorized to take such steps as may be necessary to accomplish the intent of the vote.

BACKGROUND ANALYSIS

In 2009, PWD completed a three-year project that changed out nearly all of its 50,000 plus meters with a drive-by radio read Automated Meter Reading (AMR) system; there was substantial impact to customers because the meters are located inside customers' homes and businesses. The replacement of meters and meter reading technology improved customer levels of service by reducing estimated bills, meter reading related adjustments, and the labor required to read meters every month, as well as providing the ability to recover lost revenue due to declining registration accuracy with respect to consumption.

The drive-by system includes both a meter and an attached battery powered endpoint receiver transmitter (ERT). The meters and batteries were expected to function without intervention for 20 years for the smaller diameter meters and less for the larger diameter meters. We are now at the end of life for both small meters and their radio batteries.

In November of 2023, The Board of Trustees authorized PWD (Order 23-044) to engage Diameter Consulting Services to assist PWD in the assessment of our meters and meter reading technologies, an evaluation of goals and objectives, and a business case analysis for the various opportunities that the new technologies offer. Diameter also helped craft a Request for Proposal (RFP) reflecting the District's strategic goals, needs and valuations as well as coordinated the procurement process of soliciting bids, evaluating the responses, vendor interviews and demonstrations, selection, and contract negotiations.

Key findings from the assessment that influenced the RFP were presented to the Board of Trustees at the May 2024 Workshop. These included the recommendations to go forward with non-mechanical meters and an Advanced Meter Infrastructure (AMI) system for reading. An AMI system uses a set of antennas and data collectors to communicate to the meter radios.

The RFP for the provision of an AMI system was published July 8, 2024 and six comprehensive turnkey solutions were received by August 29, 2024.

A six-person team representing Portland Water District Customer Service, Water Operations, Information Services and Engineering departments reviewed and scored the proposals. Proposers were required to answer specific questions in the RFP. The questions targeted technical categories including Project Goals and Business Drivers, Project Management, Water Meters, Installation Services, AMI Network & Radios and Software Implementation. The technical review had a maximum score of 600 points; a maximum cost score of 400 points was available for a total maximum score of 1000 points. The cost submittals were opened after all the technical reviews were completed.

Core & Main received the best overall score (866.74).

Staff recommends authorization of capital funds in the amount of \$32,000,000 with a project contingency of \$1,600,000 and a total project budget not to exceed \$33,600,000 for this AMI project.

FISCAL REVIEW/FUNDING

The project will be phased in over three years. The estimated annual operating impact after implementation is \$3,131,500. The original multi-year forecast included \$2,834,503. The higher costs should be partially offset by higher water/sewer revenue due to improved consumption registration.

PWD will fund the capital amount of the project by a 20-year bond. The expected bond amount is \$20,750,000 (See Equipment and Services, Contingency, Planning & Procurement in Table 1).

Table 1

	<u>Capital</u>	<u>Annual Operating Impact</u>
Equipment and Services	\$ 26,800,000	\$ 2,412,000
Software -20 year Value	\$ 5,200,000	\$ 449,000
Contingency	\$ 1,600,000	\$ 144,000
Network Maintenance		\$ 95,000
	\$ 33,600,000	\$ 3,100,000
Planning & Procurement Order 23-044	\$ 350,000	\$ 31,500
Grand Total	\$ 33,950,000	\$ 3,131,500
Ratepayers Impact		
Water		\$ 2,091,092
Wastewater		\$ 1,040,408
		\$ 3,131,500

LEGAL REVIEW

Corporate Counsel has reviewed the proposed order as to form.

ATTACHMENT(S)

A. Additional Background Information

Additional Background Information

The RFP was published on July 8, 2024. Thirty-six vendors downloaded the published RFP. These vendors ranged from meter manufacturers to AMI systems to installation companies. The design of the RFP required a turnkey solution with a single primary vendor to contract with. The primary contractor would partner with sub-contractors to present a comprehensive solution. A pre-bid meeting was held at Portland Water District and simultaneously online to discuss the RFP, how to prepare and submit a proposal and start the questions and answer period prior to due date. All questions received and their responses were shared with all parties. The question-and-answer period ended August 19, 2024. Bids were due on August 26, 2024. Six bids were received.

A proposal had to achieve a minimum technical score of 240 points to advance. Questions were grouped to address the key categories above and all questions were weighted for value. The point distribution by category and the consensus scoring of the review team for each proposal is shown in Table 2 below.

The proposal from Core & Main received the highest score (866.74). Their solution includes Sensus Meters and the Sensus FlexNet system (radios and AMI backbone and software) to read the meters along with SpryPoint for customer engagement. They sub-contract the installation services to VEPO, a company that specializes in water meter installations, has its own installation team and can scale to meet the project timeline.

Key factors that led to the recommendation of Core & Main include:

- They are our current meter distributor.
- PWD uses Sensus meters today and is confident of the quality and support.
- Sensus offers the best meter warranty.
- Sensus has the most AMI installations across the country representing 30% of the North American market share and strong experience in New England and cold climates. For example, Core & Main has 27 Sensus AMI deployments in New England, 400K+ Sensus iPerl meters and 360K+ Sensus SmartPoint radios in New England since 2014.
- AMI plan based on pre-existing PWD locations and requires the least number of antennas, boasts the strongest signal and greatest range.
- The remote connect/disconnect functionality is built into the Sensus ALLY meter and does not change lay-length or require additional plumbing.
- VEPO has an experienced installation work force with strong quality control software to ensure the correct associations are made for the meter and radio install with respect to the customer, both at the time of installation as well as post-review.
- SpryPoint customer engagement portal provides a higher quality of experience than our current offering and has an established relationship with our online bill present and payment vendor (Invoice Cloud) and with Sensus.
- Core & Main is able to provide both Software as a Service (SaaS) as well as Network as a Service (NaaS).
- Pricing was competitive. Implementation costs below include the meters, radios, AMI network, customer portal, software and installation.

The following table summarizes the results of the selection committee’s evaluation of each respondent.

Table 2

Evaluation Summary											
Technical Scoring Summary	Name of Proponent:	Aclara Technologies	Core & Main	EJ Prescott	Ferguson Waterworks	Itron	Neptune Technology Group				
	Meters - Badger		Meters - Sensus	Meters - Kamstrup	Meters - Master Meter	Meters - Diehl / Honeywell	Meters - Neptune				
	AMI - Aclara (FN)		AMI - Sensus FlexNet (FN)	AMI - Kamstrup (FN)	AMI - Master Meter (FN)	AMI - Itron (Cellular)	AMI - Neptune (FN)				
Solution Description:	Installation - Hydro Utilities	Installation - Vepo Solutions	Installation - Envocore	Installation - Vepo	Installation - Vepo	Installation -	Installation - Neptune				
Section 2: Project Goals and Business Drivers	75	34.09	59.09	0.00	34.55	30.23	45.00				
Section 3: Project Management	100	51.49	70.57	16.91	30.14	35.00	85.26				
Section 4: Water Meter	125	75.00	106.43	75.00	48.93	58.93	82.14				
Section 5: Installation Services	125	43.44	116.25	57.50	65.31	69.38	107.50				
Section 6: AMI Network & Radios Software Implementation	175	124.09	135.92	48.36	86.75	75.81	105.26				
Total Technical Points	600	328.10	496.26	197.77	265.68	269.34	448.25				
Cost Scoring Summary											
Implementation	\$	25,848,710	\$	23,764,100	dnq	\$	23,447,547	\$	30,402,589	\$	23,670,635
Life Cycle	\$	5,124,305	\$	6,039,967	dnq	\$	6,291,923	\$	7,057,948	\$	3,928,105
Total Solution	\$	31,173,015	\$	29,804,067	dnq	\$	29,739,470	\$	37,460,537	\$	27,604,740
Cost Points:	400	354.21	370.48		371.25	294.76	400.00				
Total Points	1000	682.31	866.74	dnq	636.96	564.10	848.25				
Final Rank		3	1		4	5	2				

Contracts have been written to cover the three-year implementation of changing out most of the meters and all of our radios as well as the ongoing 20 years of software and network support.

Key project efforts are shown below.

Area	Description	Date(s)
Contract Signing	Core & Main Sensus SpryPoint Diameter Cayenta	January 31, 2025
Start up	Build the interfaces, establish the local office for VEPO, acquire initial meter and radio supply, secure the permits for the antennas, construct the antennas, build the data integrations and interfaces, test and approve.	January 2025 – July 2025
Proof of Concept	Replace meters and radios in Gorham. Roughly 4,000 installations	August 2025 – November 2025
Implementation 25% Complete	Project ramps up from Proof of Concept	May 2026
Implementation 50% Complete	Project at maximum installations per week.	April 2027
Implementation 75% Complete	Project begins to reduce installations per week after this point. What remains are some of the more challenging installations along with the islands	November 2027
Implementation 100% Complete	Contract achieves targets and begin transition back to PWD to address what few remain	March 2028
Close out	PWD takes full ownership	May 2028



ADMINISTRATION AND FINANCE COMMITTEE / AGENDA ITEM SUMMARY

Agenda Item: 2A
Date of Meeting: January 13, 2025
Subject: Intent to Borrow
Presented By: David Kane, Executive Director of Administration

RECOMMENDATION

The following proposed language is presented for Board of Trustee approval:

RESOLVED, the Board of Trustees hereby declares its intent to issue debt to reimburse costs incurred by the Portland Water District for the Sludge Conveyance Project at the Westbrook Regional Wastewater Treatment facility. The full form of the resolution is attached hereto and incorporated herein by reference, and shall be part of the minutes of this meeting.

BACKGROUND

The 2025 Capital Improvement Plan includes a \$2 million sludge conveyance project with a scheduled year of 2027. Staff will begin preliminary work on the project in 2025. Since the project may be financed with a tax-exempt bond, an intent to borrow motion should be approved by the Board before expenditures are incurred. Before a bond is actually authorized or issued, a public hearing will be held. Subsequent to the hearing, the Board will consider authorizing the bond.

FISCAL REVIEW / FUNDING

Tax-exempt financing has a 20 to 40 percent lower interest cost than conventional taxable bonds. The estimated annual debt service of \$140,000 would be assessed to Westbrook (66.6%), Gorham (30.6%) and Windham (2.6%).

LEGAL REVIEW

Corporate Counsel reviewed the proposed motion and approved it as to form.

CONCLUSION(S)

Staff recommends the Board approve the proposed motion.

ATTACHMENT(S)

A. Full Form of the Motion

Resolution 25-0XX
DECLARATION OF OFFICIAL INTENT PURSUANT TO
TREASURY REGULATION §1.150-2

WHEREAS, the Portland Water District (the “Issuer”) intends to proceed with the projects described in Section 2 below (the “Projects”); and

WHEREAS, the Issuer intends to finance some or all of the costs of the Projects through the issuance of tax-exempt bonds or notes in anticipation thereof; and

WHEREAS, the Issuer may incur certain of the costs of the Projects prior to the issuance of such bonds or notes and the Issuer expects to be reimbursed from the proceeds thereof; and

WHEREAS, Treasury Regulation §1.150-2 requires that the Issuer declare its official intent to reimburse itself for such expenditures with the proceeds of such bonds or notes.

NOW, THEREFORE, the Issuer does hereby declare its official intent as follows:

1. **Declaration of Intent.** The Issuer reasonably expects to reimburse itself for expenditures made on the Projects with the proceeds of tax-exempt bonds or notes in anticipation thereof to be issued by the Issuer to finance the costs of the Projects in the maximum principal amount of \$2,000,000.
2. **General Description of Property to which Reimbursement Relates.** The following is a reasonably accurate general functional description of the type and use of the property with respect to which reimbursements will be made:

Westbrook, Gorham and Windham Wastewater Funds CIP Projects

 - Upgrade of the sludge conveyance system and related infrastructure at the Westbrook Regional Wastewater Treatment Facility.
3. **Public Availability of Official Intent.** This Declaration of Official Intent shall be maintained as a public record of the Issuer.
4. **Treasury Regulations** This is a declaration of official intent pursuant to the requirements of Treasury Regulations § 1.150-2.
5. **Authority for Declaration** This declaration is adopted pursuant to the following action of the Issuer: Resolution adopted by the Portland Water District Board of Trustees.



ADMINISTRATION AND FINANCE COMMITTEE / AGENDA ITEM SUMMARY

Agenda Item: 2B
Date of Meeting: January 13, 2025
Subject: Intent to Borrow
Presented By: David Kane, Executive Director of Administration

RECOMMENDATION

The following proposed language is presented for Board of Trustee approval:

RESOLVED, the Board of Trustees hereby declares its intent to issue debt to reimburse costs incurred by the Portland Water District for the Meter Replacement Project. The full form of the resolution is attached hereto and incorporated herein by reference, and shall be part of the minutes of this meeting.

BACKGROUND

At the January 2025 Board meeting, a motion authorizing project to replace water meters will be considered. If the project authorization motion is approved, a vote to express the intention to finance the project by issuing tax-exempt bond would be in order. Of the \$33,950,000 authorized budget, the intention is to finance \$28,750,000 with the issuance of a tax-exempt bond.

FISCAL REVIEW / FUNDING

Tax-exempt financing has a 20 to 40 percent lower interest cost than conventional taxable bonds. The estimated annual debt service of \$2,587,500 would be incurred by the water fund and allocated between water fund and wastewater funds at an estimated amount of \$1,720,000 and \$867,500, respectively.

LEGAL REVIEW

Corporate Counsel reviewed the proposed motion and approved it as to form.

CONCLUSION(S)

Staff recommends that the Board approve the proposed motion.

ATTACHMENT(S)

A. Full Form of the Motion

Resolution 25-0XX
DECLARATION OF OFFICIAL INTENT PURSUANT TO
TREASURY REGULATION §1.150-2

WHEREAS, the Portland Water District (the “Issuer”) intends to proceed with the projects described in Section 2 below (the “Projects”); and

WHEREAS, the Issuer intends to finance some or all of the costs of the Projects through the issuance of tax-exempt bonds or notes in anticipation thereof; and

WHEREAS, the Issuer may incur certain of the costs of the Projects prior to the issuance of such bonds or notes and the Issuer expects to be reimbursed from the proceeds thereof; and

WHEREAS, Treasury Regulation §1.150-2 requires that the Issuer declare its official intent to reimburse itself for such expenditures with the proceeds of such bonds or notes.

NOW, THEREFORE, the Issuer does hereby declare its official intent as follows:

1. **Declaration of Intent.** The Issuer reasonably expects to reimburse itself for expenditures made on the Projects with the proceeds of tax-exempt bonds or notes in anticipation thereof to be issued by the Issuer to finance the costs of the Projects in the maximum principal amount of \$28,750,000.
2. **General Description of Property to which Reimbursement Relates.** The following is a reasonably accurate general functional description of the type and use of the property with respect to which reimbursements will be made:

Water Fund

 - Replacement of water meter and related equipment and infrastructure.
3. **Public Availability of Official Intent.** This Declaration of Official Intent shall be maintained as a public record of the Issuer.
4. **Treasury Regulations.** This is a declaration of official intent pursuant to the requirements of Treasury Regulations § 1.150-2.
5. **Authority for Declaration.** This declaration is adopted pursuant to the following action of the Issuer: Resolution adopted by the Portland Water District Board of Trustees.

Admin Committee 2025 Work Plan Attachment 3.3		
2025		
Jan	Meter Project, Intent to Bond - No Windham Coveyance Project, Meter Project	BA
Feb	Annual review of Turnover statistics/Recruiting Strategy, Water/Wastewater Spring Bond Authorization, Green Bond motion(s), CyberSecurity Audit	BA
Mar	Annual Approve Water Surplus Disposition, Future Financial Goals, Billing System Update Report	BA
Apr	Election of Chair, Annual WW Surplus Disposition, Future Financial Goals - part 2, New Phone System - Customer Impact	BA
May	Audit report, Maine Paid Leave Update (MOO proposal)	BA
Jun	Budget Parameters, Pension Actuary Report Review, Safety Program and Training Programs update	
Jul	Water/Wastewater Fall Bond Authorization, Non-Union Comp Policy/Structure Change, Meter Project Update	BA
Aug	(assume at Lake with limited committee meeting.	
Sep	Water Rate Adjustment Recommendation, Annual SIA Policy Amendment/Designation, Leave Policy Update	BA
Oct	Annual Benefit Program Review, Terms&Conditions/Non-Tariff Review, Cybersecurity 2025 Update	BA
Nov	Budget Review	BA
Dec	Annual Non-Union Pay Scale Adjustment; Pensioners Increase; 457 Pension Plan Amendment – 2025 and beyond items due to Secure 2.0, Pension COLA, Home Serv Contract Renewal, Meter Project Update	BA



MEMORANDUM PORTLAND WATER DISTRICT

TO: Operations Committee/Board of Trustees

FROM: Scott Firmin, Director of Operations - Wastewater
James Wallace, Director of Operations - Water

DATE: January 7, 2025

RE: Operations Committee Meeting – January 13, 2025

A meeting of the Operations Committee of the Portland Water District Board of Trustees will be held on Monday, January 13, 2025, at 5:30 p.m., in the Emergency Operations Center (EOC) Room of the District, 225 Douglass Street, Portland, Maine.

AGENDA

1. North Windham Sewer Project – Project Budget Increase
Staff will provide a recommendation to amend the project scope and budget for the North Windham Sewer Project. (See attached memo)
2. Westbrook/Gorham Regional WWTF Sludge Conveyance Project
Staff will provide a recommendation to move the Sludge Conveyance project to the 2025 CIP. (See attached memo)
3. Other Business



OPERATIONS COMMITTEE / AGENDA ITEM SUMMARY

Agenda Item: 1
Date of Meeting: January 13, 2025
Subject: North Windham Sewer Project – Project Budget Increase
Presented By: Greg Pellerin, Engineering Services Manager

RECOMMENDATION

The following proposed language is presented for Board of Trustee approval:

ORDERED, that the North Windham Sewer Project (CIP 2022-182/3324) budget is hereby amended by increasing it by \$20,800,000, for a total of \$60,800,000; and that the General Manager and the Treasurer, each acting singly, are authorized to take such steps as may be necessary to accomplish the intent of the vote.

BACKGROUND ANALYSIS

PWD and the Town of Windham are moving into the next phases of design and construction for the North Windham Sewer project. Future phases will include the final phases of engineering and construction for the Wastewater Treatment Facility and collection system in North Windham. It will also include a task to build a Windham School Conveyance System, for conveyance of flows in the area of Windham Center Rd. to the new WWTF in North Windham.

It is expected that the total project budget for the NW WWTF and collection system will be \$47.8M, and the expected substantial completion for this system is Q1 2026. The remaining contracts include the final collection system contract (GMP4) and some remaining engineering and contractor support work for sewer services and hydrogeology support toward permitting.

For the Windham School Conveyance System, the Town has an approved budget of \$13M in order to construct the sewer, sewer pump stations, and sewer forcemains needed for the conveyance system. This task is entering preliminary design, and substantial completion is expected in Q2 2027.

Project #: 2025-Subprogram 182/ Project 3324

FISCAL REVIEW/FUNDING

PWD and the Town of Windham secured funding approval for a \$38.9M loan with \$4.25M in principal forgiveness from the Department of Environmental Protection (DEP) Clean Water State Revolving Loan Fund in April of 2022. The Board of Trustees approved an intent to borrow for the project \$38.9M in July of 2022; reflecting the amount approved by the Town Council.

The North Windham Sewer System, which will include GMP 1-4, has a total estimated project budget of \$47.8M, and the costs for the Engineering and CMAR will be funded from this budget. The Town will bond approximately \$35M of these costs, and the remainder will be funded using grants and SRF loan principal forgiveness. Future operating costs for the wastewater system will be funded through user fees and the debt service will be funded through the Town's tax incremental financing created for the commercial zone of North Windham.

The Windham School Conveyance project has an approved budget of \$13M, which was approved during the Town of Windham's Annual Meeting under Article 21 of the Warrant. This budget will be funded by the Town of Windham, in accordance with the overall project 2020 MOU, using a combination of bonding, SRF loan forgiveness, grants and other Town resources as needed.

The total proposed budget increase includes \$8.2M for the North Windham Sewer project task and \$13M for the Windham School Conveyance task, for a total of \$21.2M, increasing the budget to \$60.8M.

LEGAL REVIEW

Corporate Counsel has reviewed the proposed order as to form.

CONCLUSION(S)

Staff recommends increasing the project budget in the amount of \$21,200,000 and increasing the Project budget to \$60,800,000.

ATTACHMENT(S)

Supporting Information

SUPPORTING INFORMATION

Introduction and Project Organization

The Town of Windham and PWD are engaged in a collaborative effort to provide a new wastewater collection system, treatment plant, and effluent disposal system in the commercial area of North Windham along Rt. 302. This system is intended to meet the needs of existing and future commercial development in the area. The project is currently in the final phase of construction for the North Windham Sewer, and entering design phase for the Windham School Conveyance extension.

The budget was last increased in April of 2024 to a total of \$40M, by Order 24-016.

Schedule Summary: It is expected that the design will be completed during the Spring of 2024, and GMP2 construction will begin in Summer of 2024. The WWTF is expected to be started up during early 2026. The Windham School Conveyance System is expected to be started up during Spring of 2027.

Budget Summary (to date):

Project Phase	Firm	Phase	Price	
Preliminary Design	Tighe & Bond	Prelim Design	\$ 1,127,000	Previously Approved
Misc. Eng. Support	Multiple	Design	\$ 50,000	
30-60% Athletic Fields & Oakson System	Stantec	Design	\$ 60,000	
30-60% Full Project	Brown and Caldwell	Design	\$ 1,800,000	
Final Design Full Project	Brown and Caldwell	Design	\$ 1,287,000	
Survey Amendment	Brown and Caldwell	Design-Build	\$ 102,000	
Construction Phase Engineering (GMP 2-3)	Brown and Caldwell	Design-Build	\$ 1,912,000	
Total Project Expense	PWD	All	\$ 300,000	
CMAR Design Services	MWH	Prelim Design	\$ 600,000	
GMP 1	MWH	Construction	\$ 8,650,000	
GMP 2	MWH	Construction	\$ 21,000,000	Current
GMP 3	MWH	Construction	\$ 2,094,000	
GMP 4	MWH	Construction	\$ 6,188,000.00	Current
GMP 4 Collection System Design	Brown and Caldwell		\$ 320,000	
Low Pressure Sewer PS procurements	E1		\$ 300,000	Expected Future
Services Installation	Apprx Cost		\$ 1,810,000	
Owner Contingency	TBD		\$ 200,000	
Windham School Conveyance Extension	Stantec	Design	\$ 1,000,000	
Windham School Conveyance Extension	TBD	Design	\$ 12,000,000	
	Expected Costs:		\$ 60,800,000	

Design Phase Engineering costs are currently estimated to run about 14% of the future total project budget, which is within the industry standard range.



OPERATIONS COMMITTEE / AGENDA ITEM SUMMARY

Agenda Item: 2
Date of Meeting: January 13, 2025
Subject: Westbrook/Gorham Regional WWTF Sludge Conveyance Project
Presented By: Scott Firmin, Director of Wastewater Services

RECOMMENDATION

The following proposed language is presented for Board of Trustee approval:

ORDERED, that the 2025 Capital Improvement Plan (*Sludge Automation & Conveyance Upgrade CIP 2025 416/3256*) is amended to include a project budget of \$2,000,000 to begin in 2025 and that the General Manager, and the Treasurer, each acting singly, are authorized to take such steps as may be necessary to accomplish the intent of the vote; and

BE IT FURTHER ORDERED, the General Manager, or Treasurer, each acting singly, are authorized to execute a contract for a sum not to exceed \$900,000 with Troy Industrial to supply a sludge conveyance system.

BACKGROUND ANALYSIS

The treatment plant has a single dewatering press that discharges onto a single conveyor. This feeds a “pugmill” and a somewhat unique sludge cake pump. This then discharges into a 30 yd trailer for transportation of the sludge to landfill. The “pugmill” and cake pumps are relics from the past when lime was added to sludge as part of land application decades ago. Landfilling of sludge does not require lime addition and this equipment now only acts as a conveyance system. There is a single system with no redundancy, and it is more complex than PWD staff can maintain without support from the manufacturer.

The replacement of this system has been reviewed in the past. It is currently included in the 2027 CIP (3256/416) for \$2,000,000. The project would also add automation to allow for unattended processing of biosolids at the end of the day to eliminate the need to have operators work overtime to shut off the press when the sludge truck is fully loaded.

As reported monthly in the Wastewater Services Updates in the General Manager’s Report to the BOT since August 2024, the conveyance system has been unreliable and liquid sludge has been hauled from the treatment plant at significant expense. We have attempted to address the issues with the manufacturer. Unfortunately, several recommendations have failed to resolve the issues and since October the manufacturer has been largely non-responsive. To continue hauling liquid, which is our last option to maintain plant performance, we anticipate the cost in 2025 will exceed \$1,400,000.

Since the existing sludge conveyance system has no redundancy, is unnecessarily complex and unique, is expensive to maintain, and relies on direct support from the manufacturer the system should be replaced. Given the excessive cost and ongoing operational uncertainty of relying on liquid hauling, staff has investigated conveyor replacement options.

Staff engaged a local conveyance supplier that has provided similar equipment at other treatment plants for PWD. We have jointly developed a scope of supply and have received a quote from the supplier, Troy Industrial, for \$835,930 to complete this work. To account for possible contingency the recommended budget for this portion of the work is \$900,000. The scope includes a fully supported turn-key project that includes demolishing the existing system, modifying the facility structure to accommodate new screw conveyors, stainless steel screw conveyors with drive components and installing electrical and related automation systems. The new system will convey dewatered sludge, moving it from the screw press to removable trailers via a series of screw conveyors. It is anticipated that the system would be operational in 6 to 8 months, which would help avoid significant liquid hauling costs. Again, these costs are estimated to be \$117,000 per month.

These screw conveyors will be simpler and more cost effective to maintain in comparison to the complex and unique system currently in place. Additionally, the current system costs approximately \$100,000 every 12-18 months to service by replacing the wearable parts. These parts and the specialized labor needed to install these parts have become increasingly difficult. The only wearable parts on the proposed screw conveyors are plastic liners which has an insignificant cost in comparison. These screw conveyors will be similar to the sludge conveyance system at EEWTF which we are able to maintain with PWD staff.

Staff is recommending reprogramming the CIP Project (3256/416) to 2025 so this work can begin immediately.

FISCAL REVIEW/FUNDING

Tax-exempt financing would increase annual debt service by an estimated \$140,000. The expense would be assessed to Westbrook (66.6%), Gorham (30.6%), and Windham (2.6%) Wastewater Funds.

The additional monthly operational costs of \$117,000 per month will be avoided once the conveyance system is operational.

LEGAL REVIEW

Corporate Counsel has reviewed the proposed order as to form.

CONCLUSION(S)

Staff recommends the Board amend the 2025 CIP and approve the contract, allowing this project to go forward.

ATTACHMENT(S)

None



MEMORANDUM PORTLAND WATER DISTRICT

TO: Planning Committee/Board of Trustees

FROM: Paul Hunt, Environmental Manager

DATE: January 7, 2025

RE: Planning Committee Meeting – January 13, 2025

A meeting of the Planning Committee of the Portland Water District Board of Trustees will be held on Monday, January 13, 2025, at 5:30 p.m., in the Nixon Room of the District, 225 Douglass Street, Portland, Maine.

AGENDA

- 1. Board-directed Performance Appraisal Process**
Staff will begin discussions with the Committee to begin designing a process for the future performance evaluations of the General Manager and Corporate Counsel.
- 2. Other Business**
Possible discussion topics for 2025. (See attached)

Planning Committee Topics 2025

Lead Program next steps
TCR Program update (bacteria monitoring)
Source Water Quality Report (on Sebago Lake)
Election of Chair
RRA Vulnerability Assessment update
Master Planning progress report
Levels of Service Initiative
Water Distribution System Report
Sebago Lake Security Report
Lower Bay boat tour (August)
Watershed Land Conservation update
RCP (federal grant) update
Forest Management Activities for 2025
MEANS status report (main extension and new services)
AMAP Budget Review (November)
Proposed agenda items for 2026