

AGENDA
PORTLAND WATER DISTRICT
225 Douglass Street, Portland, Maine
Jeff P. Nixon Training Center
6:00 p.m., Monday, April 22, 2019

1. Convene Meeting with Pledge of Allegiance and moment of silence. President Cote
2. Roll Call Clerk
3. Acceptance of Minutes of Regular Meeting of March 25, 2019, Special Meeting of April 8, 2019 and the Workshop Meeting of April 8, 2019. President Cote
4. Invitation for Public Comment President Cote
5. Reports:
 - Operations Committee Reports Trustee Siviski
 - Planning Committee Reports Trustee Lunt
 - Administration & Finance Committee Reports Trustee Garrison
 - General Manager's Report General Manager
6. New Business
 - A. **Resolution 19-007** awarding the Joseph A. DiPietro Scholarship. President Cote
 - B. **Order 19-018** authorizing a professional services contract with Hazen & Sawyer for the Westbrook-Gorham-Windham Regional WWTF Aeration and Secondary Clarifier Upgrade. Operations Committee
 - C. **Order 19-019** authorizing a professional services contract with Hoyle, Tanner & Associates, Inc. for the Baxter Boulevard Pump Station Upgrade. Operations Committee
 - D. **Order 19-020** authorizing a transfer from the Cape Elizabeth WWTF capital fund. Operations Committee
 - E. **Order 19-004A** tabling Order 19-004, authorizing the General Manager to execute a deed to Silver Street Development Corp., indefinitely. Planning Committee
7. Executive Session. A motion may be made to go into Executive Session at any time during the meeting to discuss, pursuant to 1 M.R.S. §405(6)(A) personnel, 1 M.R.S. §405(6)(C) real estate, 1 M.R.S. §405 (6)(D) labor negotiations, or 1 M.R.S. §405(6)(E) legal matters. President Cote
8. Other Business. An item may be added to this agenda provided seven trustees vote to waive the rule regarding agendas. President Cote
9. Second Invitation for Public Comment. President Cote

10. Trustee Comments.

President Cote

11. Adjournment.

President Cote

Donna M. Katsiaficas
Clerk

Portland Water District
Board of Trustees Regular Meeting

April 22, 2019

New Business

Agenda Items 6A-6E



RESOLUTION
PORTLAND WATER DISTRICT
BOARD OF TRUSTEES



WHEREAS the Board of Trustees has established the Joseph A. DiPietro Scholarship in memory of Mr. DiPietro's fifteen years of dedicated service representing the city of Portland as a Trustee of the District, and

WHEREAS Keith Nelson, a resident of South Portland, is pursuing a degree in HVAC at Southern Maine Community College, and

WHEREAS Mr. Nelson has demonstrated need for the scholarship, and

WHEREAS Mr. Nelson is the first in his family to attend college, and

WHEREAS the Board of Trustees' Scholarship Committee unanimously recommends Mr. Nelson to be the recipient of the 2019 Joseph A. DiPietro Scholarship,

NOW THEREFORE BE IT RESOLVED that the Board of Trustees recognizes the accomplishments and needs of Mr. Nelson and supports his academic endeavors by awarding him the \$1,500 scholarship for 2019 established in tribute to Joseph A. DiPietro.

Adopted this 22nd day of April 2019.

Attest:
Donna M. Katsiaficas
Clerk

Guy Cote, President
Board of Trustees





Portland Water District
From Sebago Lake To Casco Bay

BOARD OF TRUSTEES / AGENDA ITEM SUMMARY

Agenda Item: 6B Order 19-018
Date of Meeting: April 22, 2019
Subject: Aeration and Secondary Clarifier Upgrade Design (Westbrook-Gorham-Windham Regional WWTF) - Professional Services Contract - Selection
Presented By: Gordon Johnson, Engineering Services Manager

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

RECOMMENDATION

ORDERED, the General Manager is authorized to execute a professional services contract with Hazen and Sawyer in the amount of \$749,173 for design phase engineering services for the Westbrook-Gorham-Windham Regional WWTF Aeration and Secondary Clarifier Upgrade (CIP 2019-416/3022); 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

The existing aeration and secondary clarification systems at Westbrook are comprised mostly of equipment dating back to the original construction of the facility which began operation in 1978. As the loading to the plant has steadily increased in recent years the activated sludge system has struggled to maintain consistent settleability, and the lack of oxygen delivery capacity and control has led to outbreaks of filamentous bacteria. The secondary clarifier sludge withdrawal mechanisms are original equipment and near the end of their useful life.

During the 2015-2016 timeframe, assessments of aeration, secondary clarification, and power distribution systems were completed. These assessments considered various aeration options and conducted life cycle costing to establish a recommended approach to upgrading these systems to meet the objectives of improved settleability, equipment reliability, and increased aeration capacity.

Staff reviewed and scored three proposals from qualified teams that provided proposed methods for achieving the project goals. Based on the outcome of the review and ranking, Hazen and Sawyer received the best overall score (107). Staff therefore recommends award to Hazen and Sawyer for an amount of \$749,173, which includes design phase services from preliminary design through project bidding. Future recommendations will include construction phase engineering based on the project scope developed during the design phase.

This project includes design phase engineering services, including preliminary design, detailed design and bidding. As approved by Board Order 18-040 on December 17, 2018 the comprehensive method for procuring engineering services will be used for this project, meaning that it is anticipated that the same firm will be utilized for detailed design as well as construction services. An amendment to this agreement with Hazen and Sawyer is therefore anticipated to cover construction phase services once the final design is complete and the required scope can be refined.

Project #: 2019-Subprogram 416/ Project 3022

FISCAL REVIEW/FUNDING

This project includes comprehensive engineering services for the Westbrook-Gorham-Windham Regional WWTF Aeration and Secondary Clarifier Upgrade Design. It is anticipated this effort will lead to a recommendation of future upgrades that are expected to total \$10,500,000 and would be completed by 2022. The anticipated operating fund impact (assuming a 1.5% rate from the CWSRF program) would be: Westbrook \$440,000, Gorham \$210,000 and Windham \$30,000. The project has been submitted for consideration for the CWSRF project list for funding through MMBB.

LEGAL REVIEW

Corporate Counsel has reviewed the proposed order as to form.

CONCLUSION(S)

Staff recommends awarding the contract for design engineering services for the Westbrook-Gorham-Windham Regional WWTF Aeration and Secondary Clarifier Upgrade Design to Hazen and Sawyer. The Committee voted 2-0 to forward to the full Board for their consideration.

ATTACHMENT(S)

SUPPORTING INFORMATION

SUPPORTING INFORMATION

The existing aeration and secondary clarification systems at Westbrook are comprised mostly of equipment dating back to the original construction of the facility which began operation in 1978. As the loading to the plant has steadily increased in recent years the activated sludge system has struggled to maintain consistent settleability, and the lack of oxygen delivery capacity and control has led to outbreaks of filamentous bacteria. The secondary clarifier sludge withdrawal mechanisms are original equipment and near the end of their useful life.

During the 2015-2016 timeframe, assessments of aeration, secondary clarification, and power distribution were completed. The aeration system assessment considered various aeration options and conducted life cycle costing to establish the basis for recommended equipment. The secondary clarification evaluation focused on condition assessments of the equipment, tanks, and covers. During this effort a concept level evaluation of clarifier mechanisms was completed and the extent of structural repair needs were estimated. The electrical master plan considered current and projected future electrical loads and established various recommendations for upgrading the power distribution system at the plant.

This project includes design phase engineering services, including preliminary design, detailed design and bidding. This effort will include establishing a design basis report outlining the components of the preliminary design and associated cost breakdown, followed by development of the plans and specifications with intermediate milestones to confirm scope objectives and project cost. The detailed design also includes development of control system documentation including detailed functional narratives, instrumentation diagrams, control panel modifications and new operator interface screens to monitor and control the new equipment. The scope of the construction phase engineering services will be refined based on work sequencing and other project requirements developed during design.

Four qualified engineering firms were invited to respond to the RFP: Hazen and Sawyer, Hoyle Tanner & Associates, Tighe & Bond, and Woodard & Curran. Three proposals were received, including a combined team effort from Hazen and Sawyer and Woodard & Curran. A selection team of five PWD staff including representation from Wastewater Operations and AMaP was assembled to review each firm's proposal. The selection committee conducted a review of the proposals and held three interviews, one with each of the firms.

Each selection team member then ranked the proposals based on the two non-fee categories identified in the RFP; Methods & Approach (35%) and Qualifications & Experience (35%) and a final review meeting was held. Each proposal was ranked for each category using a 1-3 scale where a #1 ranking represented the proposal that best met the requirements. The rankings for each firm were averaged for the entire review team. The lump sum fee information for each proposal was opened and added to the overall ranking of the proposals (at 30%). Therefore a total of 100 represents a perfect score and the lowest fee.

The firms developed proposals that highlighted the proposed methods of addressing the challenges anticipated to achieve success. Based on the outcome of the review and ranking, the Hazen/W&C team received the best overall score (107).

Key factors that led to recommendation of the Hazen and Sawyer/Woodard & Curran team include the following:

- An approach focused on configuring this upgrade to leverage the most cost effective preliminary treatment alternatives available;
- Focused effort on critical control system and power distribution upgrade needs;
- Demonstrated grasp of the key drivers for project success being improved settleability and secondary treatment system process reliability, with considerations for configuring these upgrades to support future goals and potential future regulatory requirements;

The following table summarizes the results of the selection committee’s evaluation of each respondent, including a scoring breakdown:

Criteria	Hazen and Sawyer	Hoyle, Tanner & Associates	Tighe & Bond
1. Methods & Approach			
Weight - 35% (Best Score = 35)			
Methods Score	35	77	98
2. Qualifications & Experience			
Weight - 35% (Best Score = 35)			
Qualifications Score	35	91	84
3. Fee			
Weight - 30% (Best Score = 30)			
Lump Sum Fee (through Final Design and Bidding)	\$779,173	\$715,419	\$698,600
Fee Score	36.9	31.4	30
Total Score	107	199	212
Rank	1	2	3

Hazen and Sawyer identified two proposed scope items that are considered additional services beyond the minimum requirements established in the RFP. Computational fluid dynamic modeling of the clarifier (\$25,000) and temporary enhanced primary treatment during construction (\$5,000). Staff recommends award to Hazen and Sawyer for an amount of \$749,173 for completion of the Westbrook-Gorham-Windham Regional WWTF Aeration and Secondary Clarifier Upgrade Design based on the ranking shown above, excluding the additional services identified. Once the design has been completed, a recommendation will be made to amend the contract to include construction phase services.

As approved by Board Order 18-040 on December 17, 2018 the comprehensive method for procuring engineering services will be used for this project, meaning that it is anticipated that the same firm will be utilized for preliminary and final design as well as construction services.



Portland Water District
From Sebago Lake To Casco Bay

BOARD OF TRUSTEES / AGENDA ITEM SUMMARY

Agenda Item: 6C Order 19-019
Date of Meeting: April 22, 2019
Subject: Baxter Boulevard Pump Station Upgrades Project –
Professional Services Contract Selection
Presented By: Gordon Johnson, Engineering Services Manager

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

RECOMMENDATION

ORDERED, the General Manager is authorized to execute a professional services contract with Hoyle, Tanner & Associates, Inc. in the amount of \$203,518 for design phase engineering services for the Baxter Boulevard Pump Station Upgrade (CIP 2019-70/3144); 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

The proposed assessment and design will enhance resiliency at the Baxter Boulevard Pump Station to provide long term reliability of the station. The station was built in the late 1970's and is a flooded suction duplex-style station with two redundant 2,600 gpm centrifugal pumps. The design will rehabilitate or replace pumps, process piping and valves, power distribution, controls, and HVAC equipment that has reached the end of its useful life.

Staff reviewed and scored two proposals from qualified teams that proposed methods for design development based on alternatives evaluation. Hoyle Tanner received the best overall score (129) as a result of the review and ranking. Staff therefore recommends award to Hoyle Tanner for an amount of \$203,518.

As approved by Board Order 18-039 on December 17, 2018, the comprehensive method for procuring engineering services will be used for this project, meaning that it is anticipated that the same firm will be utilized for preliminary and final design as well as construction services.

Project #: 2019 CIP, Subprogram 70 project #3144 (Baxter Boulevard Upgrades Design).

FISCAL REVIEW/FUNDING

This project includes comprehensive engineering services for the Baxter Boulevard Pump Station Upgrades Project and will not impact the operating fund. The design will lead to the construction of an approximately \$2,200,000 project with an estimated operating fund impact of approximately \$220,000 in debt service. The project has been submitted for consideration for the CWSRF project list for funding through MMBB.

LEGAL REVIEW

Corporate Counsel has reviewed the proposed order as to form.

CONCLUSION(S)

Staff recommends awarding the contract for engineering design services for the Baxter Boulevard Pump Station Upgrades Project to Hoyle Tanner. The Committee voted 2-0 to forward to the full Board for their consideration.

ATTACHMENT(S)

SUPPORTING INFORMATION

SUPPORTING INFORMATION

The proposed design effort will provide an upgrade to the Baxter Boulevard Pump Station located at 600 Baxter Boulevard in Portland. The pump station was built in the late 1970's and is a flooded suction duplex-style station with two, fully redundant 2,600 gpm centrifugal pumps, designed to pump against 32 feet of total dynamic head. The station is configured to house a third pump; however, a third pump does not currently exist. Flow enters the station through a 24-inch diameter RC pipe, splits into two wet wells, and is pumped from the wet wells to a 12-inch diameter ductile iron force main. The station is powered by an underground 3-phase electrical service that feeds the station's MCC. The emergency power system consists of an active 140 kW Cummins standby generator, underground diesel fuel tank, and automatic transfer switch.

Critical components of the pump station have become obsolete and/or reached the end of their useful design life and require rehabilitation or replacement. The design will rehabilitate or replace pumps, process piping and valves, power distribution, controls, and HVAC equipment that has reached the end of its useful life. The project will consider natural disaster resiliency, removal of an underground diesel fuel tank, replacement of the emergency generator, and installation of a bypass connection. The project will produce a design that accomplishes PWD's primary goals: (1) Reliable pump station operation (2) Operational optimization (3) Operational flexibility (4) Maximum design life (5) High value, reasonable cost solutions.

This project includes design phase engineering services, including preliminary design, detailed design and bidding. This effort will include establishing a design basis report outlining the components of the preliminary design and associated cost breakdown, followed by development of the plans and specifications with intermediate milestones to confirm scope objectives and project cost. The detailed design also includes control system documentation including detailed functional narratives, instrumentation diagrams, control panel modifications and new operator interface screens to monitor and control the new equipment. The scope of the construction phase engineering services will be refined based on work sequencing and other project requirements developed during design.

Four qualified engineering firms were invited to respond to the RFP: Hazen, Tighe & Bond, Woodard & Curran, and Hoyle Tanner. As this project is anticipated to be funded through a federally supported SRF loan, the federal procurement guidelines were followed and the request for proposals was advertised on the PWD website.

Two firms responded: Hoyle Tanner and Tighe & Bond. A selection team of six PWD staff including representation from Wastewater Pump Station Operations and AMaP was assembled to review the proposal and interviews. The selection committee reviewed the proposal, held meetings to discuss the proposal, and interviewed each of the proposers.

Each selection team member reviewed the proposals and interviews based on the two non-fee categories identified in the RFP; Methods & Approach (35%) and Qualifications & Experience (35%). The two proposals were ranked for each category, where a 1 ranking represented the team that best met the requirements. The rankings for each firm were averaged for the entire review team.

Following the team review, the lump sum fee was opened. It was added to the overall ranking of the proposals (at 30%). The fee was reviewed to ensure it did not exceed the project budget of \$250,000. A total of 100 represents a perfect score and the lowest fee. Based on the outcome of the review and ranking, Hoyle Tanner received the best overall score (129).

Key factors that led to recommendation of the Hoyle Tanner team include the following:

- Various examples were presented and discussed for each project area demonstrating an understanding of the project;
- Strong emphasis on the need for developing a design that fits PWD goals and budget expectations;
- Team make-up that leverages experience on similar pump station upgrades of similar size and scope;

The following table summarizes the results of the selection committee’s evaluation of each respondent, including a scoring breakdown:

Criteria	Hoyle Tanner	Tighe & Bond
1. Methods & Approach		
Weight - 35% (Best Score = 35)		
Methods Score	46	58
2. Qualifications & Experience		
Weight - 35% (Best Score = 35)		
Qualifications Score	53	53
3. Fee		
Weight - 30% (Best Score = 30)		
Lump Sum Fee (through Final Design and Bidding)	\$203,518	\$248,600
Fee Score	30	43
Total Score	129	154
Rank	1	2

As a result of the review, the team recommends award to Hoyle Tanner for an amount of \$203,518 for completion of the Baxter Boulevard Pump Station Upgrades Project design. As approved by Board Order 18-039 on December 17, 2018, the comprehensive method for procuring engineering services will be used for this project, meaning that it is anticipated that the same firm will be utilized for preliminary and final design as well as construction services.



Portland Water District
From Sebago Lake To Casco Bay

BOARD OF TRUSTEES / AGENDA ITEM SUMMARY

Agenda Item: 6D Order 19-020
Date of Meeting: April 22, 2019
Subject: Ottawa Rd Pump Station – Generator Replacement
Presented By: Scott Firmin, Director of WW Services

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

RECOMMENDATION

ORDERED, that \$50,000 will be transferred from the Cape Elizabeth WWTF capital fund (CIP 2019-424/3028) to the Cape Elizabeth Pump Stations – R&R (CIP 2019-52/3130), to facilitate the replacement of the Ottawa Rd. Pump Station generator; 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

The Ottawa Rd. Pump Station, located in Cape Elizabeth, has a stand-by generator. The generator failed and the pump station has been served by a portable generator that is placed at the station before storm events, or when needed.

The upgrade of the pump station has been delayed, in part, by efforts to remove extraneous inflow and infiltration into the collection system. Both the Town of Cape Elizabeth and the City of South Portland have completed significant projects to remove sump pumps, foundation drains, and other sources of private and public sources of infiltration and inflow. These efforts have been part of the requirements of the joint permit issued by DEP for the Ottawa Rd. CSO.

This permit now requires PWD to upgrade the pump station. We do hope to be able to measure the anticipated reductions in flow the pump station will be required to handle during wet weather as part of a full upgrade. The recently renewed permit requires that PWD upgrade the pump station in 2019.

The current focus of the upgrade would be reliability and pump capacity to allow monitoring of actual flows the pump station receives. Part of this focus on reliability involves the installation of a dedicated stand-by generator at the site. The project budget includes:

Generator: \$26,000
Installation: \$15,000
Contingency: \$5,000
Total \$46,000

The current permit was renewed at the end of 2018, so the pump station upgrade was not included in the Capital Improvements Plan. Review of the plan at that time showed that the Cape Elizabeth Treatment Plant included a \$50,000 project to replace RAS piping (CIP 2019-424/3028). This project can be delayed, with the \$50,000 transferred to allow for the replacement of the generator (CIP 2019-52/3130).

Project #:

See above.

FISCAL REVIEW/FUNDING

This transfer will have no impact on the overall budget and capital plan. There will be no net change in the R&R balance, which is estimated to be \$308,000.

LEGAL REVIEW

Corporate Counsel has reviewed the proposed order as to form.

CONCLUSION(S)

Staff recommends the transfer of \$50,000 from the Cape Elizabeth WWTF CIP Fund to the Cape Elizabeth Pump Stations – R&R CIP account for the replacement of the Ottawa Rd. Pump Station generator. The Committee voted 2-0 to forward to the full Board for their consideration.

ATTACHMENT(S)

None



Portland Water District
From Sebago Lake To Casco Bay

BOARD OF TRUSTEES / AGENDA ITEM SUMMARY

Agenda Item: 6E Order 19-004A
Date of Meeting: April 22, 2019
Subject: Sale of Walnut Street Property and Underground Reservoir
Presented By: Donna Katsiaficas, Corporate Counsel

BACKGROUND

At its meeting of January 28, 2019 the Board voted to table until the business meeting in April, 2019, Order 19-004 related to the sale of Walnut Street Property and Underground Reservoir. The matter was discussed at the Planning Committee at its meetings in February, March and April. At its meeting on April 8, the Planning Committee agreed that the matter should be tabled indefinitely to allow staff the opportunity to pursue alternatives for the property and to report back to the Planning Committee.

RECOMMENDATION

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

ORDERED, that Order 19-004 – Sale of Walnut Street Property and Underground Reservoir is hereby tabled indefinitely.