



# City of Bellingham

## Committee Of The Whole Agenda

April 8, 2024, 1:45 PM

Mayor: Kimberley Lund  
Council Members: Hannah Stone, Hollie Huthman,  
Daniel Hammill, Edwin H. "Skip" Williams, Lisa Anderson,  
Michael Lilliquist and Jace Cotton  
Legislative Assistant: Jackie Lassiter

Contact: (360) 778-8100, [mayorsoffice@cob.org](mailto:mayorsoffice@cob.org)  
Contact: (360) 778-8200, [cmail@cob.org](mailto:cmail@cob.org)  
<https://cob.org/council>

The City Council meeting will be conducted in a hybrid setting: both in-person and remote access will be available.

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- (253) 215-8782 • (346) 248-7799 • (669) 900-6833 • (301) 715-8592 • (312) 626-6799

Meeting ID: **859 4278 3098**

Password: **9**

### *Call to Order*

### *Council Standing Committee Meetings:*

Open to the public to attend. Note: there is generally no public comment period for Committee sessions. Standing Committee Members receive reports and information, ask questions and, when appropriate, vote on a recommended action for consideration by the full Council at the Regular Meeting. The notice of Committee Meetings identified below also serves as notice of Special Meetings of the City Council at the times identified as Council Members who are not members of the committee routinely attend and participate in the Committee Meetings. Committee Chairs give a report of the Committee Meeting at the Regular Meeting in the evening prior to deliberation and formal vote in the order shown below:

### *Committee Of The Whole*

Daniel Hammill, Chair

Hannah Stone, Hollie Huthman, Edwin H. "Skip" Williams, Lisa Anderson, Michael Lilliquist, Jace Cotton

Please be advised that if the City Council is ahead of schedule, they may start with old/new business before the official Committee of the Whole meeting time.

- |              |           |   |             |
|--------------|-----------|---|-------------|
| <b>24074</b> | <b>1.</b> | <b>Expectations of City Advisory Groups</b>           | <b>p. 3</b> |
| <b>24075</b> | <b>2.</b> | <b>Post Point and Biosolids Emerging Technologies</b> | <b>p. 7</b> |
|              | <b>3.</b> | <b>Old/New Business</b>                               |             |

### *Adjournment*

## Agenda Information

Council Committee and Regular Meeting agendas and agenda packets, which contain the supporting documentation for agenda items, are available to the public Wednesday afternoon prior to the meeting. They are posted at <https://cob.org/meetings>. Meetings are streamed live at <https://cob.org/btv> on the internet as they occur

## Accessibility

The Council Chambers is fully accessible. Elevator access to the second floor is available at City Hall's west entrance. Hearing assistance is available, and a receiver may be checked out through the Deputy City Clerk prior to the evening session. For additional accommodations, contact the Legislative Assistant at 778-8200 in advance of the meeting. Thank you.

**Next City Council Committee Meetings: Monday, April 15, 2024**

**Deadline to submit material for any public hearing for inclusion in the published agenda packet is 10:00 a.m. on Wednesday prior to the meeting.**



# City Council Agenda Bill

24074

Bill Number

Subject: **Expectations of City Advisory Groups**

Summary Statement: The Mayor’s Office has initiated steps to manage advisory groups more consistently across the City, create clear expectations about this important work, and enhance the overall experience of volunteering for advisory committees. A first step is to establish and communicate clear expectations of all City advisory groups and their individual members, especially regarding key expectations established by City Charter and state law. This is the intended focus of today’s item for information and discussion.

Previous Council Action: **N/A**

Fiscal Impact: **None**

Funding Source: **None**

- Attachments:
- 1. STAFF MEMO
  - 2. EXPECTATIONS FOR ADVISORY GROUPS

Meeting Activity	Meeting Date	Recommendation	Presented By	Time
Committee Briefing - Information Only	04/08/2024	Information/Discussion	Janice Keller, Interim Deputy Administrator	10 minutes

**Recommended Motion:**

**Council Committee:**  
Committee Of The Whole

**Agenda Bill Contact:**  
Janice Keller, Interim Deputy Administrator

Reviewed By	Department	Date
<i>Janice L. Keller</i>	Executive	03/19/2024
<i>Alan A. Marriner</i>	Legal	03/19/2024
<i>Kimberley J. Lund</i>	Executive	04/03/2024

**Council Action:**



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**MEMORANDUM**

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**TO: BELLINGHAM CITY COUNCIL**  
**FROM: JANICE KELLER, INTERIM DEPUTY ADMINISTRATOR**  
**CC: MAYOR KIM LUND**  
**CITY ATTORNEY ALAN MARRINER**  
**RE: EXPECTATIONS OF ADVISORY GROUPS**  
**DATE: APRIL 8, 2024**

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The Mayor's Office has initiated steps to manage advisory groups more consistently across the City, create clear expectations about this important work, and enhance the overall experience of volunteering for advisory groups.

A first step is to establish and communicate clear expectations, especially regarding those established by City Charter and state law. This is the intended focus of today's Council item and the corresponding draft document: "*Expectations of Advisory Groups.*"

Section 7.01 of the Bellingham City Charter states:

*The Council may, by ordinance, establish advisory boards with such functions and number of members as it may determine. The members of such boards shall be appointed and removed by the Mayor. No elected City official, or City officer, or City employee, or citizen having a conflict of interest shall be eligible for appointment to such boards. No compensation will be paid to members of advisory boards, except as provided by ordinance.*

*Unless otherwise provided in this Charter, or by state law, all boards, commissions, committees or other such bodies (herein referred to as "Boards") shall be advisory only and shall be for the purpose of assisting the Mayor or Council in the performance of their duties.*

In addition, the City operates within a legal framework established by state laws that promote public accountability and transparency. As they are enabled by City government, our advisory groups are subject to many of the requirements of the state Open Public Meetings Act (RCW 42.30) and Public Records Act (RCW 42.56).

Please contact me if you have questions in advance of the Council meeting.

## Expectations of Advisory Group Members

An important way we partner with our community to better understand and address its diverse needs is through City advisory boards, commissions, committees and task forces. Volunteer members of these groups bring varied perspectives and lived experiences for City leaders to consider while making decisions.

Serving the public's interest is a top priority for all our advisory groups. Membership is an honor and an important responsibility, requiring commitment of time, energy, expertise, commitment to comply with laws, and interest in promoting public trust and accountability.

These are the City's expectations of advisory group members to facilitate a successful volunteer experience:

- Unless otherwise provided in the City Charter or state law, boards and commissions “ ... shall be advisory only and shall be for the purpose of assisting the Mayor or City Council in the performance of their duties.” (*Section 7.01, Bellingham City Charter*)
- Advisory group work must pertain to City business, addressing matters over which the City has jurisdiction and where its leaders can shape policy to meet City needs.
- Advisory groups issue recommendations, not decisions. They should not provide direction to staff or create or administer policies, programs or services.
- All advisory group meetings must be conducted in public session, and notice of meetings must be given in accordance with state law.
- A quorum of members may not discuss advisory group work and related issues via email, telephone, text, or in unnoticed meetings, as these actions may be in violation of open meeting laws.
- Individual advisory group members and the group as a whole should strive to be impartial, professional and respectful when working alongside the public, staff and each other.
- Members must be respectful of differing opinions, committed to working effectively in the group setting.
- Members may not use their positions to secure special privileges or exemptions for themselves or others.
- Members may not give or receive any compensation or gifts from entities or individuals engaged in items of business under consideration before the group, and must avoid conflicts of interest.
- Members may not represent an advisory group unless given express direction to do so by a majority vote of the group.

- Members may not act as representatives of the City unless expressly commissioned to do so by the Mayor or by formal action of the City Council.
- Members must attend meetings regularly and may not designate proxies to serve in their place unless allowed by the establishing documents.
- Members should remain up to date on processes and issues affecting their groups, be well prepared for meetings, and participate in orientations and trainings.
- Appointment decisions are made by the identified appointing authority. Members do not have a vested right to appointment or reappointment to a position.

These are the expectations of the City to facilitate a successful volunteer experience:

- Provide leadership, direction and administrative support to help each advisory group achieve its established purpose.
- Provide members a designated staff contact within the City for questions or concerns.
- Work with group leaders to set and publish timely agendas, work plans and meeting minutes.
- Provide meeting space and logistical support.
- Address needs for ADA accommodations, language access, and consider other requests to support member participation.
- Organize orientation and training sessions including completing training on the state Open Public Meetings and Public Records acts.
- Be impartial, professional and respectful, demonstrating the City's adopted Public Services Competencies of service orientation, results orientation, teamwork and cooperation.

We value the perspectives and services provided by advisory group members who contribute to our leadership, and we thank them all for their dedication to our community.

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Mayor Kim Lund

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Dan Hammill, City Council President



# City Council Agenda Bill

24075

Bill Number

Subject: **Post Point and Biosolids Emerging Technologies**

Summary Statement: On September 12, 2022 the City Council affirmed the Mayor's decision by motion "to halt further work on bio-digestion for waste solids handling at the Post Point sewage treatment Plant." The recommendation of the Mayor was based on affordability concerns, greater protection of the Salish Sea, and focusing climate ambitions on achieving community-wide carbon reductions. During the August 29, 2022 and September 12, 2022 meetings preceding this decision, staff shared that efforts would be refocused to rehabilitating existing facilities and improving air emission controls. Staff also committed to consideration of emerging technologies and the potential for onsite pilot projects. Staff issued a request for proposals late summer 2023 and will report on current status and next steps related to potential emerging solids handling technologies.

Previous Council Action: Council affirmation stopping the Project on 9/26/22, Mayor statement on 8/29/22, 7/11/22, 5/9/22, 4/25/22, 4/11/22, 12/6/21, 7/26/21, 3/8/21, 7/27/20, 9/9/19, 1/28/19, 7/24/17, and 2018 Climate Action Plan

Fiscal Impact: Costs for the proposals range from \$570k to \$8.9M to the vendors plus additional City costs

Funding Source: **Sewer Fund (420)**

- Attachments:
1. STAFF REPORT
  2. COB PLANTS PROJECTS
  3. PILOT TEST POWERPOINT

Meeting Activity	Meeting Date	Recommendation	Presented By	Time
Committee Briefing - Information Only	04/08/2024	Information/Discussion	Eric Johnston, Public Works Director	45 minutes

**Recommended Motion:**

**Council Committee:**  
Committee Of The Whole

**Agenda Bill Contact:**  
Mike Olinger, Assistant Director Public Works Operations

Reviewed By	Department	Date
<i>Eric C. Johnston</i>	Public Works	04/01/2024
<i>Matthew T. Stamps</i>	Legal	04/02/2024
<i>Kimberley J. Lund</i>	Executive	04/02/2024

**Council Action:**



City of Bellingham  
210 Lottie Street  
Bellingham, WA 98225

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## STAFF REPORT

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**TO:** CITY COUNCIL  
**FROM:** ERIC JOHNSTON, PUBLIC WORKS DIRECTOR  
MICHAEL OLINGER, ASSISTANT PUBLIC WORKS DIRECTOR OPERATIONS  
**CC:** MAYOR KIM LUND  
**SUBJECT:** POST POINT RESOURCE RECOVERY PLANT – ON-SITE PILOT TEST  
**DATE:** APRIL 8, 2024

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### **BACKGROUND:**

The Post Point Resource Recovery Plant (the Plant) has been in operation at the Post Point site since the early 1970's. The Plant includes two basic processes, Liquid and Solids treatment. Liquids are treated, disinfected, and discharged to Bellingham Bay. Solids are diverted to two sewage sludge incinerator units, where this material is reduced to ash, which is then trucked to a landfill.

The City has implemented various treatment process revisions via major plant-wide projects in 1992 (Secondary Treatment) and 2012 (Expansion). Recently (2016-2022) the City explored [options](#) for conversion of the Solids Handling process by removal of the incineration via conversion to biosolids digestion & land application. The project was referred to as the [Post Point Resource Recovery Project \(the Project\)](#). As originally envisioned the project would have replaced the entirety of the solids handling system. The preferred option, based on a Triple Bottom Line + analysis, selected by the Council involved the construction of digesters, composting, energy production and land application of Class A biosolids. Concerns related to heavy metals and per-fluorinated compounds (PFAS) being reintroduced into the environment were raised. High cost and impacts to rate payers resulted in additional concerns. The PPRR Project was [brought to close in the fall of 2022](#). In lieu of a new solids-handling system, attention was directed to correct the high volume of deferred maintenance, including the air quality and emissions controls. A summary of the numerous projects and evaluations now underway is attached to this memo.

During the numerous council meetings leading to the stopping of “the Project” there was significant input that digesters were no longer an option worth considering. Biosolids digesters were seen as mechanism concentrating contaminants. Instead, discussion focused on emerging technologies capable of removing or destroying PFAS and other



contaminants of emerging concern. When “the Project” was brought to a close, a commitment was made to continue exploring and considering emerging technologies capable of removing or destroying PFAS. On-site pilot testing of emerging technologies is one possible option to exploring options and emerging technologies not involving digesters for a future project to replace the incineration-based solids handling process.

**SUMMARY:**

On August 3<sup>rd</sup> 2023, the city released an RFP for on-site pilot testing of emerging technologies. Four submittals were received on November 2, 2023. (note: there was some local media coverage of the responses in December of 2023) In Feb 2024 the staff review team completed the evaluation process.

A copy of the RFP and the submittals are available at this link:

[Post Point Solids Pilot Program - City of Bellingham \(cob.org\)](https://cob.org/Post-Point-Solids-Pilot-Program)

Responses to the RFP are summarized in the table below.

Respondant	Technology Type	PFAS destruction potential
374 Water	Dewatering and Supercritical Water Oxidation	High
Bioforce Tech	Drying and pyrolysis	High
Connel Soil Farms	Trucking, lagoons and biomass production	None
Sedron Technologies	Dryer and land application	None

The staff scoring worksheet is shown below:

WRITTEN QUALIFICATION EVALUATION SUMMARY SHEET FOR:										Number of Evaluators	
Solids Handling Pilot Program										4	
Invitation # RFP 76B-2023										Date	
										1/9/24	
										Ranking 4 firms	
Firm Name	SOQ Eval-1		SOQ Eval-2		SOQ Eval-3		SOQ Eval-4		Rank Based on Evaluator Ranking		
	Mike O		Steve B		Steve D		Shayla F		Ranking		
	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Avg. Rank	Final Rank	
Sedron Technologies, LLC	59.1	3	57.1	3	68.0	2	61.4	3	2.75	3	
Connell Soil Farm LLC	20.9	4	12.1	4	48.1	4	20.0	4	4	4	
Bioforcetech Corporation	62.8	2	63.0	2	49.9	3	64.9	2	2.25	2	
374Water Systems Inc.	92.8	1	85.8	1	81.8	1	86.8	1	1	1	

Revised: 09 Jan 2024 SMD

These results are intended to equalize off balance scoring (one reviewers propensity to score consistently high or low compared to other reviewers) by making each reviewer equal by turning scores into firm rankings. Final Rankings are determined by averaging the ranks calculated from each reviewers scores.

Based on the criteria in contained in the RFP and the staff evaluation, further consideration will be given to 374 Water and Bioforce Tech as both of their process are purported to eliminated PFA compounds. Proposals that did not demonstrate the ability to remove or destroy PFAS or those that reintroduce said contaminates into the environment will not be considered for future use. Future considerations for on site pilots will be the cost, conflicts with ongoing projects, coordination with the regulators and the need for new onsite facilities.

In addition to the RFP, staff are continuing to explore other processes with potential for application in Bellingham. Several vendors, who did not submit during the RFP process, have reached out with a wide range of possibilities. Some asked if the City would consider issuing a new RFP as they did not have time to submit during the previous call. Several have proposed (Bioforce tech included) that we visit their facilities rather than attempting onsite pilots in Bellingham. Staff are also closely monitoring and learning more about several waste water treatment facilities who have installed and are attempting to operate biosolids gasifiers and pyrolysis in both the United States and abroad.

Staff are also continuing to participate in regional and national conferences and seminars (such as the [Water Environment Federation Innovations in Treatment Technology Conference 2024](#)) to keep abreast of the industry trends.

**RECOMMENDATION ACTION:**

This item is for information only. No Council action is required.

Staff recommendation is to continue to explore options capable of removing PFAS by both onsite pilots and remote site visits.



**Public Works Department**  
City of Bellingham

**Plants Division - Current/Active/Planned Projects**

**Post Point Resource Recovery Plant (Wastewater/Sewer Treatment Plant)**

	Project Name	Notes
1.	<b>Solids Processing Pilot Testing Program RFP (76B-2023)</b>	<ul style="list-style-type: none"> <li>• RFP issued to conduct onsite pilot test of emerging technology to research possible technology to replace incineration in the future.</li> <li>• (4) Proposals were submitted.</li> </ul> <p>2023 - Complete RFQ review. 2024 – Provide RFQ scoring to Water Resource Advisory Board (WRAB). 2024 – Present to Council status of RFQ submittals and WRAB recommendations.</p>
2.	<b>Sludge Tank Replacement (#C2300809)</b>	<ul style="list-style-type: none"> <li>• Existing Sludge tank is at end-of-life.</li> <li>• This tank was scheduled for removal with the PPRR Biosolids Project (process change).</li> <li>• Tank function is for temporary sludge storage in wet-weather events.</li> <li>• New tank at different location in plant. Existing tank must remain online.</li> </ul> <p>2023-2024 - Design 2024/2025 - Construction Cost- ~\$15M</p>
3.	<b>Incinerator Emissions Control Upgrades Study</b>	<ul style="list-style-type: none"> <li>• Capital Planning/Regulatory Project - Current emission system complies with applicable permit requirements as issued for our plant.</li> <li>• Northwest Clean Air Agency is currently in the process of developing our Air Operating Permit. Additional compliance requirements are expected when the AOP is developed.</li> <li>• Project will evaluate existing emissions system components, and identify operational protocols, capital upgrades and/or replacements which would reduce emissions.</li> <li>• The existing emission system was previously scheduled for removal with the PPRR Biosolids Project (Incinerator removal).</li> <li>• Current emission system is aging/end-of-life; difficulty in sourcing direct replacement parts.</li> </ul> <p>2024 - RFQ 2024-2026 - Assessment/Design Capital Project/Upgrade Cost – TBD after study &amp; permit development.</p>

**Engineering**  
104 W. Magnolia Street, Suite 109  
Bellingham, WA 98225  
Phone: (360) 778-7900  
Fax: (360) 778-7901  
TTY: (360) 778-8382  
Email: pw@cob.org

**Natural Resources**  
104 W. Magnolia Street, Suite 109  
Bellingham, WA 98225  
Phone: (360) 778-7800  
Fax: (360) 778-7801  
Email: pw@cob.org

**Operations**  
2221 Pacific Street  
Bellingham, WA 98229  
Phone: (360) 778-7700  
Fax: (360) 778-7701  
Email: pw@cob.org

4.	<b>System-Wide Programmable Logic Controller (PLC) Replacement Project</b>	<ul style="list-style-type: none"> <li>• City-wide Plants Control System/PLC replacement.</li> <li>• Original scope provided for replacement at all sites, including Post Point, except Solids Handling PLC</li> <li>• On-going project, all off-site replacements nearing completion.</li> <li>• Multiple Phases (1-4) ongoing since 2015</li> </ul> <p>2023/2024 – Complete current replacement and integration scope  2024-2026 – Complete replacement of Post Point PLC's.  Cost - \$4.4M</p>
5.	<b>Solids Handling Programmable Logic Controller (PLC) Replacements</b>	<ul style="list-style-type: none"> <li>• Existing PLC control system for the Incinerators &amp; Emission &amp; Ash Systems is at end-of-life.</li> <li>• The PLC System for Solids Handling was scheduled for removal with the PRRR Biosolids Project (Incinerator Removal).</li> <li>• All other PLC control systems, both off-site (lift/pump stations) and at Post Point are currently being replaced (See Project “B” below).</li> </ul> <p>2023 - Issued Change Order to add Solids Handling PLC replacement to current PLC replacement.  2024/2025 – Continue &amp; complete all PLC replacement work.  Cost – \$2.5M</p>
6.	<b>Incinerator Feed Pump Replacement</b>	<ul style="list-style-type: none"> <li>• Project is under construction, pump and piping replacement between centrifuges and incinerators.</li> <li>• The project retains a critical function to reliably feed incinerators.</li> <li>• Planned to be implemented even without PRRR Biosolids cancellation.</li> </ul> <p>2023/2024 – complete construction  Cost - \$2M Construction contract.</p>
7.	<b>On-call Incinerator Repairs</b>	<ul style="list-style-type: none"> <li>• Regular Maintenance Project for on-going repair and upkeep of incinerators.</li> </ul> <p>2024 – Burner Replacement Project (\$250k)  Cost - \$500k/year</p>
8.	<b>Continuous Emissions Monitoring System (CEMS) Replacement</b>	<ul style="list-style-type: none"> <li>• Replace the Continuous Emission Monitoring System (CEMS). The CEMS is the system of sensors &amp; computerized equipment which measure and monitor our stack emissions.</li> <li>• The existing CEMS system is at end-of-life and in need of replacement with an in-kind system.</li> <li>• The CEMS was previously scheduled for removal with the PRRR Biosolids Project (incinerator removal).</li> <li>• Project will be coordinated with the Incinerator Emissions Control Upgrades Study.</li> </ul> <p>2024 – Begin procurement of replacement system  2025-2026 – Replace CEMS  Cost – \$1M</p>

9.	<b>Post Point Generator Replacement Project</b>	<ul style="list-style-type: none"> <li>• Project to replace existing emergency backup generators and control system/switchgear.</li> <li>• Existing generators (1991) at end-of-life.</li> <li>• Reliable backup power required for critical facility.</li> <li>• Planned to be implemented prior to PPRR Biosolids; project was paused for re-evaluation due to revisions of plant electrical loading.</li> <li>• Project design re-initiated shortly after PPRR Biosolids cancellation.</li> </ul> <p>2022 – Consultant selected.  2023 – Design  2024/2025 – Generator Procurement/Construction  Cost – \$7.5M</p>
10.	<b>Nutrient Removal and Optimization Project</b>	<ul style="list-style-type: none"> <li>• Capital Planning/Regulatory Project - On-going project related to Permit revisions (Puget Sound General Nutrient Permit).</li> <li>• Regulatory requirements will tighten in the future; current planning effort is guided by these regulatory requirements.</li> <li>• The City is working with consultant to identify methods to optimize nutrient removal without significant process revisions (tertiary treatment).</li> <li>• Further study and planning during optimization efforts required to stay ahead of increased nutrient regulation; other Puget Sound wastewater treatment facilities are in similar situations.</li> <li>• Regulation revisions occurred in parallel to PPRR Biosolids project, as the change in process (digestion) would affect the nutrient removal efficiency.</li> <li>• Some permit support was provided through the PPRR Biosolids design contract.</li> </ul> <p>2023 – RFQ for long-term nutrient removal permit support.  2023-2025 – Implement optimization testing  2024-2026 -Long term planning effort (See Project “I” below.)  Cost – TBD after scoping</p>
11.	<b>Headworks Condition Assessment</b>	<ul style="list-style-type: none"> <li>• Evaluate condition of Headworks facilities. (Upstream end of plant)</li> <li>• Identify maintenance/equipment replacement needs and bypass configurations for plant influent.</li> <li>• Portions of the existing headworks are unable to be bypassed.</li> </ul> <p>2023 – RFQ issued, consultant selected.  2024 – Construct temporary bypass, Complete condition assessment.  Cost- \$600k (Condition Assessment), \$1M (Temporary Bypass)</p>
12.	<b>210 McKenzie St Site Cleanup</b>	<ul style="list-style-type: none"> <li>• Contaminated Site remediation project.</li> <li>• Existing site has contaminated soils and groundwater, has had various studies and monitoring commissioned by the City since 2006.</li> <li>• Remove contaminated soils, replace with clean fill, remediate site to accommodate future plant expansion, continue monitoring of groundwater.</li> </ul> <p>2024 – Revise RIFS, begin remediation project design.  2024-2026 – Remediate site (Construction).  Cost- \$5M</p>

13.	<b>Plant-wide Roof Replacement/Maintenance Project</b>  <b>(Joint Project with Facilities group)</b>	<ul style="list-style-type: none"> <li>• Many roof assemblies at the WWTP are end-of-life.</li> <li>• Several roof systems were scheduled for repair/rehabilitation with the PRR Biosolids project, or facilities were to be moved into new buildings (Admin/Lab).</li> </ul> <p>2023-2025 – City-wide on-call contract for roof repair/replacement will include WWTP facility roofs. Cost - \$500k</p>
14.	<b>Administration HVAC Repair/Replacement Project</b>  <b>(Joint Project with Facilities group)</b>	<ul style="list-style-type: none"> <li>• HVAC system in WWTP Admin building at end-of-life.</li> <li>• Studies/preliminary design for system rehabilitation date back to 2011 or earlier.</li> <li>• Administration building was scheduled to be vacated with the PRR Biosolids project; operator control room and other uses were planned to move to new building.</li> </ul> <p>2023 – Interim HVAC maintenance work planned (supplemental units) 2024-2026 – RFQ, replacement system design and construction. Cost - \$1M (est)</p>
15.	<b>Post Point Master Plan Development &amp; Capacity Study</b>	<ul style="list-style-type: none"> <li>• Capital Planning Project – Develop a full master plan for future planning.</li> <li>• Examine capacity/growth, regulatory requirements, infrastructure age &amp; reliability.</li> <li>• Examine process revision needs, including: tertiary treatment (Nutrient removal), Solids handling process (Incineration alternatives).</li> <li>• Examine if regional growth will require a new/2<sup>nd</sup> treatment plant for our region.</li> <li>• Coordinate this project with update to Comprehensive Sewer Plan.</li> </ul> <p>2024 – RFQ. 2024-2026 Master planning process. Cost – TBD when scoping.</p>

**Whatcom Falls Water Treatment Plant**

	Project Name	Notes
16.	<b>Raw Water Intake Condition Assessment and Inter-tie Design</b>	<ul style="list-style-type: none"> <li>• Dive inspections of existing intakes, and condition assessment of other raw water infrastructure.</li> <li>• Installation of inter-tie connection between Old Mill Intake and existing raw water system to facilitate future repairs at Screenhouse.</li> </ul> <p>2023-2024 – Condition Assessment/Design 2024/2025 – Construction of Inter-tie Cost- ~\$15M</p>

17.	<b>Filter Media Replacement</b>	<ul style="list-style-type: none"> <li>• Filter media at end-of-life. Replace media, inspect air scour/underdrain system.</li> <li>• Replace backwash troughs, remove paint from filter gallery, improve filter maintenance access.</li> <li>• Only 1-2 filters (of 6) can be removed from service at a time. Project will require careful sequencing to keep the plant in operation.</li> </ul> <p>2024 – Design 2025/2026 – Construction Cost- \$5M</p>
18.	<b>Soda Ash Mechanical Replacement</b>	<ul style="list-style-type: none"> <li>• Soda Ash dosing system is end-of-life, and has frequent operational issues, and lacks redundancy.</li> <li>• Replace dosing system, incorporate crossover redundancy with project.</li> </ul> <p>2024 – Design 2025 – Procurement/Construction Cost- \$2M</p>
19.	<b>Iowa St storm water lift station (Joint project with Storm crew)</b>	<ul style="list-style-type: none"> <li>• Plants group (Water Plant) manages the Lake level by operating the Control Dam located at the head of Whatcom Creek.</li> <li>• At times of sustained heavy rain, water must be released from the lake to keep the level below court mandated level of 314.95 feet. This release of water can cause the storm water system on Iowa street to back up and flood the area.</li> <li>• Working with RH2 engineering to make system changes to ease the flooding and dewater if necessary.</li> </ul> <p>2023/24 – Design 2024 – Procurement/Construction (work being done by PW personnel) Cost- TBD after scoping</p>

# Post Point Solids Handling Pilot Program RFP update

April 8, 2024





# Outline

- History of Incineration and Biosolids at Post Point
- Solids Handling Pilot Program
- RFP Overview
- Submitter Overview
- RFP Scoring
- Next Steps



# History

1973 Primary treatment



1990-93 Added Secondary and Incinerator #2



2014 Secondary upgrade

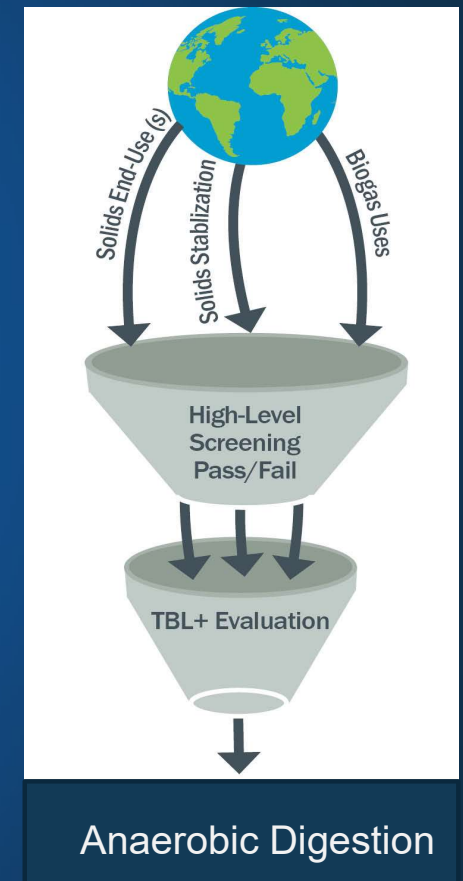


# Five years of planning decisions

**2017-January 2022**

- ✓ Replace incinerators
- ✓ Focus on resource recovery
- ✓ Support Climate Action Plan goals
- ✓ Advance an anaerobic digestion-based solution

***Then came major question, where will the biosolids ultimately go?***



# TBL+ criteria guided decision-making

## **Environmental** *(Healthy Environment)*

- E1** – Minimize Carbon Footprint
- E2** – Protect Air Quality
- E3** – Maximize Resource Recovery
- E4** – Minimize Energy Usage
- E5** – Protect Local Habitat

## **Financial** *(Quality, Responsive Services, Vibrant Sustainable Economy)*

- F1** – Optimize System Value
- F2** – Maintain Affordability
- F3** – Minimize Market Sensitivity

## **Social** *(Sense of place, Safe and Prepared Community)*

- S1** – Minimize Noise
- S2** – Minimize Odor
- S3** – Minimize Truck Traffic
- S4** – Minimize Visual Impacts
- S5** – Minimize Toxin Exposure

## **Technical** *(Quality, Responsive City Services)*

- T1** – Proven Reliability
- T2** – Minimize Post Point Impacts
- T3** – Maintain Flexibility
- T4** – Minimize Complexity

# Affordability

- \$1.1 billion program over ~15 years
- Highly uncertain economic outlook
- Uncontrolled inflation
  - CPI at 8+%??
  - Construction 12%-20%+??
- Community concerns regarding PFAs, Heavy Metals, Microplastics \$\$???
- Supply chain issues



# Salish Sea Protection- Nutrient Reduction



- Changing regulatory environment
- Digester processes increases nutrients
  - \$200 million with incinerators
  - \$400+ million with digesters

# PFAS = Per- and Polyfluoroalkyl Substances

Why do we care?

- Over 5000 compounds
- Persistent and difficult to destroy
- Pervasive
- Evidence of human health and environmental effects



# Cost comparison

			Resource Recovery	Maintenance of Incinerators
1	WIFIA Loan application (\$429.5m)	Incinerator Functionality	\$ 5,000,000	\$ 100,000,000
2		End use	\$ 10,000,000	\$ -
3		Cost of property	\$ 10,000,000	\$ -
4		Resource Recovery	\$ 218,000,000	\$ -
5		Escalation/Inflation	\$ 101,000,000	\$ 50,000,000
6		Plant Wide Generators	\$ 21,000,000	\$ 21,000,000
7		Design	\$ 41,000,000	\$ -
8		Planning	\$ 8,000,000	\$ -
9		Other Capital	\$ 15,000,000	\$ -
10		Financing Fee	\$ 500,000	\$ -
11	Nutrients low (incineration)		\$ 200,000,000	\$ 200,000,000
12	Nutrients High (digesters)		\$ 200,000,000	\$ -
13	Additional O&M Expenses nutrient requiriements		\$ 57,200,000	\$ 30,000,000
14	Additional O&M expenses for biosolids/digesters		\$ 8,580,000	\$ -
15	Annual Capital/Reserve		\$ 140,000,000	\$ 140,000,000
16	<b>Total</b>		<b>\$ 1,035,280,000</b>	<b>\$ 541,000,000</b>



# Pathway Forward

- Catch up and correct deferred maintenance needs
- Consider new fluidized bed incinerator vs rehab of existing multi-hearth incinerators (ref. CDM 2010)
- Replace gravity belts, centrifuges, emissions, storage tank(s), controls, pumps, emergency generators, electrical components, building rehabilitation, etc.
- Maintenance projects using existing revenue to be included in Mayor's proposed 2023-2024 budget
- Plan for future expansion of solids and handling capacity and explore options for small scale pilots of new, emerging technologies



# Solids Handling Pilot Program

- The purpose of this RFP was to obtain information from potential system technology providers interested in pilot testing their solids processing system at Post Point.
- These pilot tests will help provide valuable information as the city continues planning for future solids handling upgrades.

RFP specifically asked for information on the following:

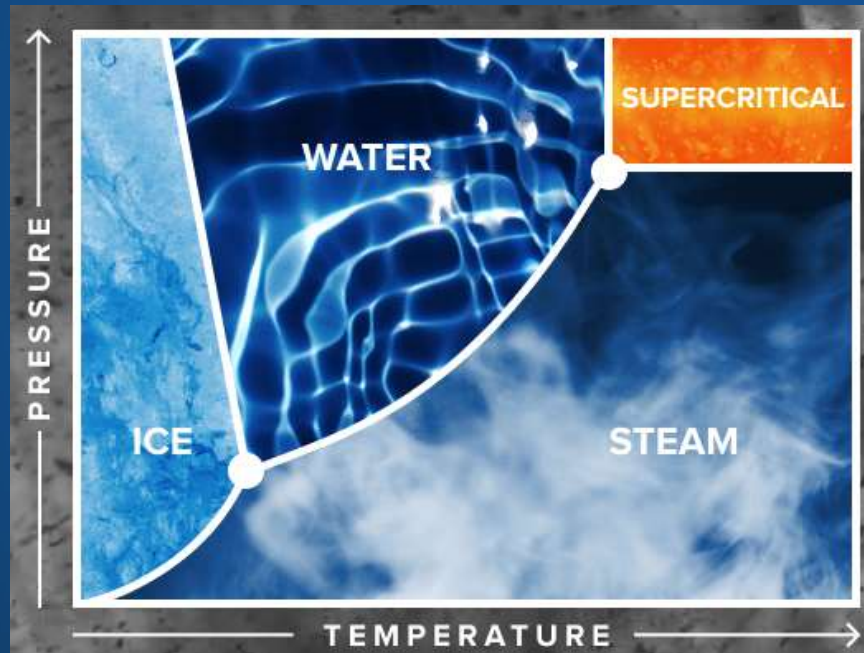
- The types of solids handling processing and technology proposed (i.e. gasification, pyrolysis, drying/dewatering, etc.)
- The ability of the proposer to pilot test their system at Post Point.
- The types of renewable / beneficial uses / products to be generated from the process (end products)
- Financial cost to the city to pilot test proposer's system.

# Received 4 submissions

- 374°Water
- BioForce Tech
- Connell Soil Farm
- Sedron Technologies

# 374°Water

- Supercritical Water Oxidation (SCWO)



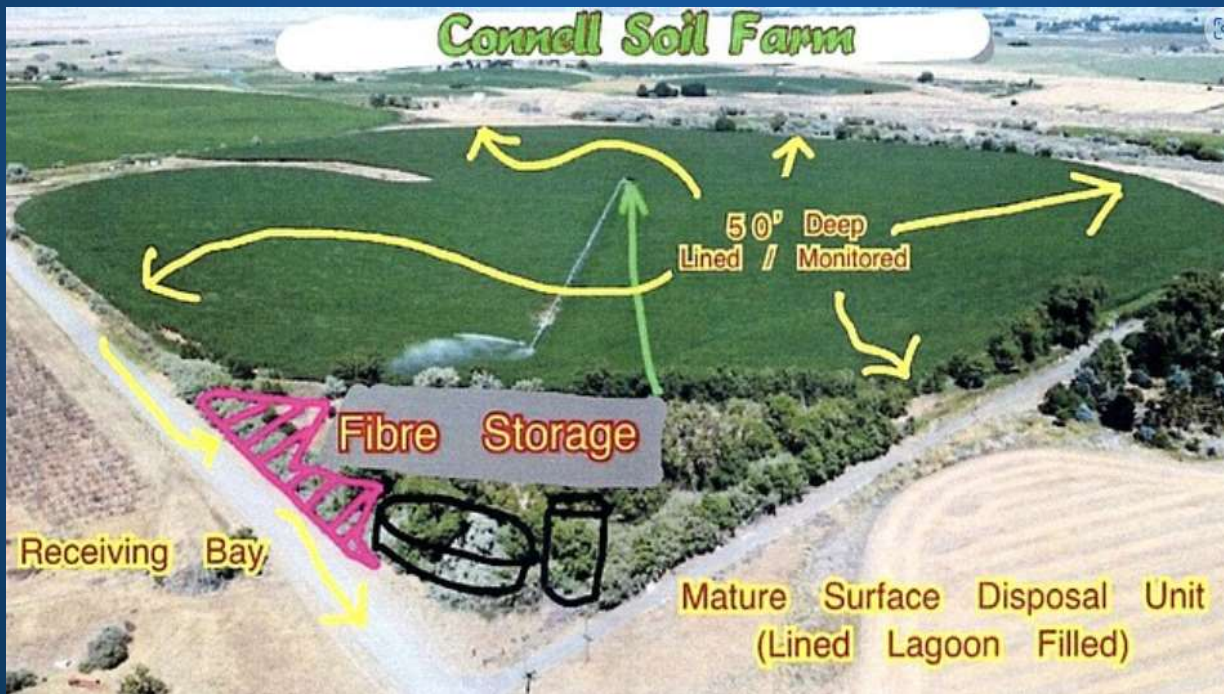
# BioForceTech

- Pyrolysis



# Connell Soil Farm

- Lined Lagoon



# Sedron Technologies

- Varcor Waste Processing system





# Scoring of the submittals

WRITTEN QUALIFICATION EVALUATION SUMMARY SHEET FOR:										Number of Evaluators		4							
<i>Solids Handling Pilot Program</i>					Invitation # RFP 76B-2023					Date		1/9/24							
										Ranking		4 firms							
SOQ Eval-1										SOQ Eval-2		SOQ Eval-3		SOQ Eval-4		Rank Based on Evaluator Ranking			
Firm Name										Evaluator 1		Evaluator 2		Evaluator 3		Evaluator 4		Ranking	
										Score	Rank	Score	Rank	Score	Rank	Score	Rank	Avg. Rank	Final Rank
Sedron Technologies, LLC										59.1	3	57.1	3	68.0	2	61.4	3	2.75	3
Connell Soil Farm LLC										20.9	4	12.1	4	48.1	4	20.0	4	4	4
Bioforcetech Corporation										62.8	2	63.0	2	49.9	3	64.9	2	2.25	2
374Water Systems Inc.										92.8	1	85.8	1	81.8	1	86.8	1	1	1

Revised: 09 Jan 2024 SMD

# Scoring of the submittals (costs)

Cost Summary					RFP 76B-2023
<i>(Project Manager: Update this example to match your RFP cost information)</i>					
	Cost	Calculated Cost Score (1-10)	Rank	Comments	
<b>Maximum Weighted Points Possible (as listed in RFP)</b>	\$570,500.00	10			
<i>Firm Name</i>					
<b>Sedron Technologies, LLC</b>	\$ 1,295,000.00	4.4	2		
<b>Connell Soil Farm LLC</b>	\$ 2,858,047.05	2.0	3	\$525 per ton. Calculated to a 6 month test using 10% of average TWAS feed. See "Cost-CSF" Calculation worksheet.	
<b>Bioforcetech Corporation</b>	\$ 8,948,219.36	0.6	4	Did not include weekly operating costs in total cost value. See "Cost-BFT" Calculation worksheet.	
<b>374Water Systems Inc.</b>	\$ 570,500.00	10.0	1		

# Evaluating submittals

- These pilot tests will assist the city in making key decisions regarding future full scale solids handling upgrades.
- The City may choose to engage further and conduct pilot testing with all, some, or none of the proposers.

## Next Steps

- Plan funding in the 2025-2026 budget for pilot testing.
- Include the Water Resource Advisory Board in future discussions.
- Continue participation in state PFAs testing.

# Next Steps

- Engage in discussions with 374°Water for a 2026-2027 pilot test.
  - Lowest cost submitted that also eliminates PFAs
- Continue conversations with BioForce Tech on their submittal.
  - Quoted high costs, but also eliminates PFAs
- Planning team will continue investigating emerging technologies that proves to destroy PFAs.
  - Continue attending national level conferences and meeting with technology suppliers.
  - Conduct site visits to proven technologies that eliminates PFAs.

# Discussion and Questions

Presented by:  
Eric Johnston, Public Works Director

