



# Post Point Resource Recovery

Turning our waste into valuable resources





Project update - Jan. 2019

*The Post Point Resource Recovery project is a defining opportunity for Bellingham to fundamentally change how wastewater solids are handled—transforming Post Point into a resource recovery facility, and supporting climate action goals.*

## Why is the project needed?




The Post Point Resource Recovery project is proactively addressing the current wastewater solids treatment system that incinerates, rather than recovers, this reusable resource.

The current incineration process is:

-  **At end of useful life**
-  **Expensive to repair**
-  **Poses a reliability and redundancy risk**
-  **Incinerates, rather than recovers, resources**

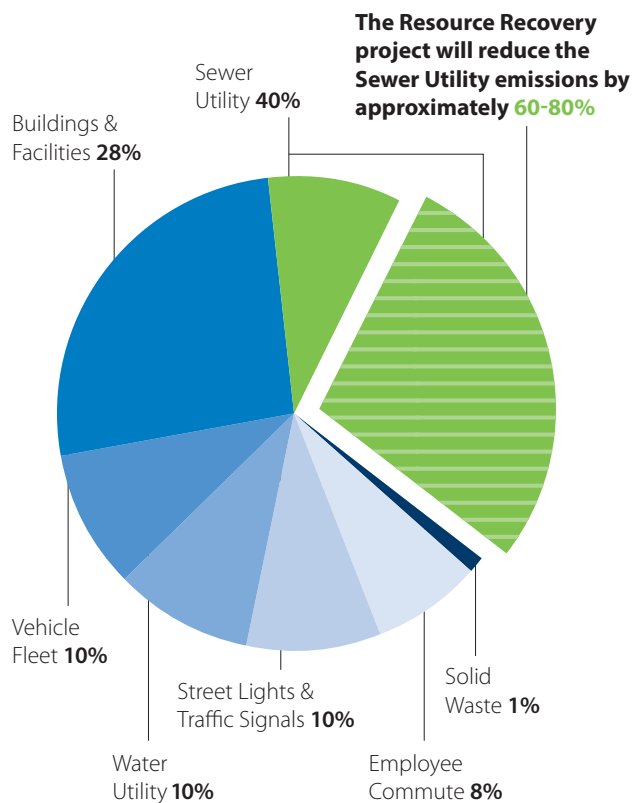
This Resource Recovery project is also an important element of implementing the City's Climate Action Plan (CAP) and supporting the City's commitment to pursue climate reduction targets.

There are three main strategies that link directly to accomplishing the objectives of the CAP:

-  **Produce renewable energy**
-  **Reduce greenhouse gas emissions (CO<sub>2</sub>)**
-  **Recover resources**

**To address these needs and opportunities, a significant biosolids upgrade is required – there isn't a "do nothing" option.** Just as a major upgrade was required for the liquids stream process to address capacity and aging infrastructure concerns, a major upgrade for the biosolids stream (components of which have been in operation now for 45 years) is now needed. The question is "what is the best investment that aligns with our City's values?"

The single largest opportunity for City CO<sub>2</sub> reduction is within the **Sewer Utility, which represents up to 40% of all CO<sub>2</sub> reduction opportunities** that the City has identified. Substantial Sewer Utility CO<sub>2</sub> reduction opportunities exist at Post Point through biosolids management.



City of Bellingham CO<sub>2</sub>e emissions by category

## Proposed solution replaces entire solids treatment process

This project would provide a complete replacement of the entire solids treatment system at Post Point, not simply a change in a portion of the process. A biosolids planning study was recently conducted to identify a biosolids management approach that best met City's Legacies and Strategic Commitment goals, including specific criteria established in the CAP. A major component of this study was to conduct public outreach workshops to present the project and gather input.

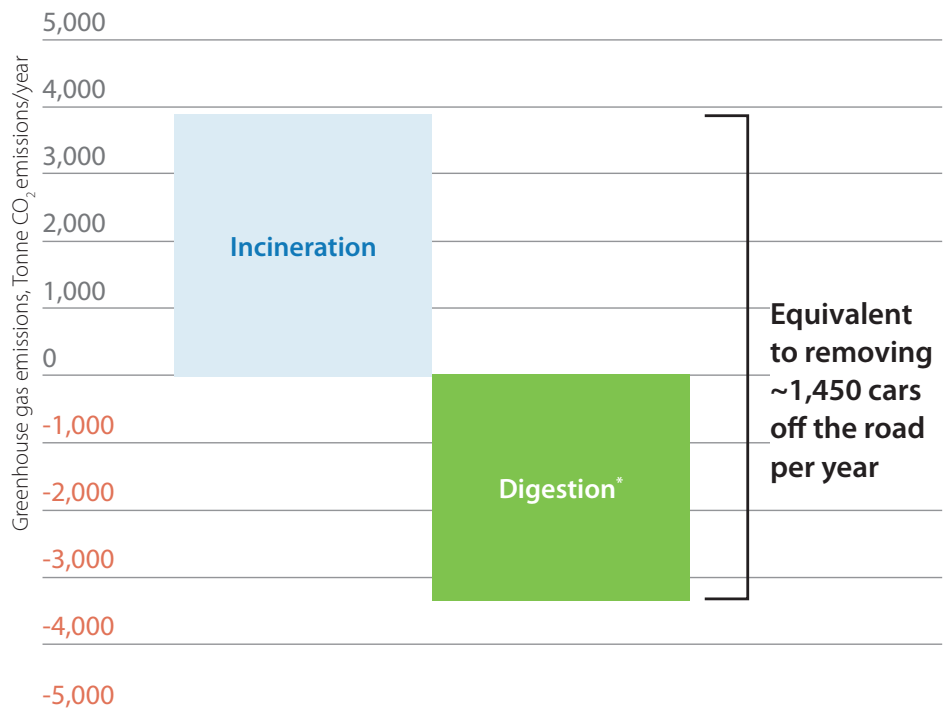


Through stakeholder workshops, there was significant support demonstrated by the public for moving away from incineration.

The project team considered public input and evaluated the "world" of solids alternatives through a triple bottom line evaluation to select the option that best aligned with the City's goals. This effort concluded that a digestion-based alternative achieved the City's criteria and identified options for reusing the biogas and biosolids resources recovered during the process. This project significantly contributes to accomplishing the City's CAP.

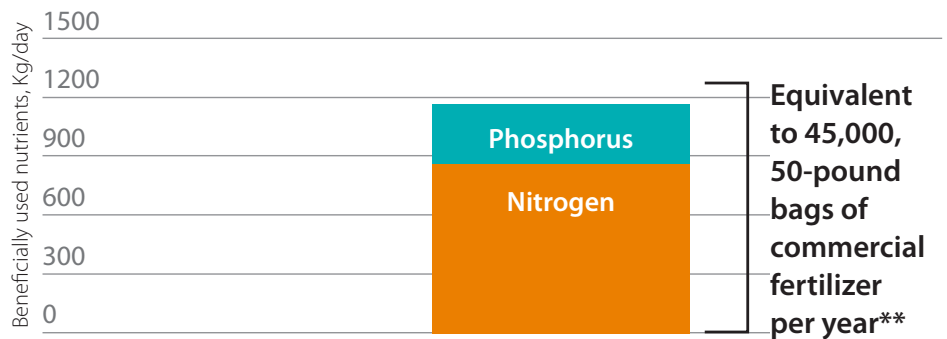
## Digestion-based biosolids solution supports Climate Action Plan goals by:

### Reducing greenhouse gas emissions



\* Digestion based on two-phased anaerobic digestion and pipeline injection.

### Fertilizer recovery



\*\* Based on 30-10-10 (N-P-K)



At LOTT Alliance in Olympia, a hands-on children's museum gives children a chance to learn about natural and built water cycles. Meeting spaces are also available for reservation. Photo source: LOTT Alliance.

## Integrating with other City functions

In addition to a new solids treatment process, this project is an opportunity for Bellingham to integrate another City initiative, consolidating Natural Resources and Sewer Utility staff to a single building as part of a new maintenance/administration building. Therefore, this project would offset the costs planned for a new Natural Resources building. This new facility would be the “face” of Post Point and City environmental stewardship goals, providing a venue for community education and outreach (see LOTT Alliance example in Olympia, WA). This facility would be a central element of the established Bellingham Water School Program, water and wastewater treatment plant tours.

## Biosolids at work



In 2018, a demonstration garden using biosolids for planting was placed at the entrance to Post Point. Since wastewater solids have substantial energy-producing value when anaerobically digested, and (when appropriately treated) become useful “nutrient laden biosolids”, the City is exploring using Post Point biosolids for municipal use and as a marketable resource.

## What will upgrades cost the City and ratepayers?

The project cost estimate is \$196 million (year 2023 dollars). A rate study has not been conducted yet; if the entirety of the upgrade is paid for via City revenue, this would be in range of \$24-\$30/ERU/month (exact rate schedule to be developed in a later phase of the project).

## Next steps

The next steps of this project will be confirmed by council actions and budget allocations. City elected decision-making and transparency will be key for a project of this magnitude. The following timeline is anticipated for the project:

### 2019 - 2020

#### Facility Plan and Predesign

- Council authorization to continue development of the project (Fall 2018)
- The Facility Plan (required by Ecology) would address:
  - Funding, Rate Study
  - Environmental/Permitting
  - Procurement methods (e.g., private-public-partnerships for off-site biosolids processing)
  - Off-site processing site assessments/land procurement (if applicable)
  - Continued public involvement
- Predesign
  - Develop planning level concepts to a 30% level of completion to facilitate refinement of the cost estimate

### 2021 - 2022

#### Design

- Develop design and ready construction documents, following Council adoption of the Facility Plan
- Continued public involvement
- Biosolids market development

### 2023 - 2025

#### Construction

- Council authorization to approve construction contract(s)
- Construction and start-up
- Continued public involvement/information
- Biosolids market development



## Contact

**Robert Johnson, Project Manager**

rjohnson@cob.org | (360) 778-7735

[www.cob.org/services/utilities/pages/waste-water-treatment.aspx](http://www.cob.org/services/utilities/pages/waste-water-treatment.aspx)

