



# City of Bellingham Resource Recovery Project Update

January 28, 2019



**Brown AND Caldwell**

**carollo**

# Solids Stream Project Drivers



At end of useful life



Expensive to repair



Poses a reliability and redundancy risk



Incinerates, rather than recovers, resources



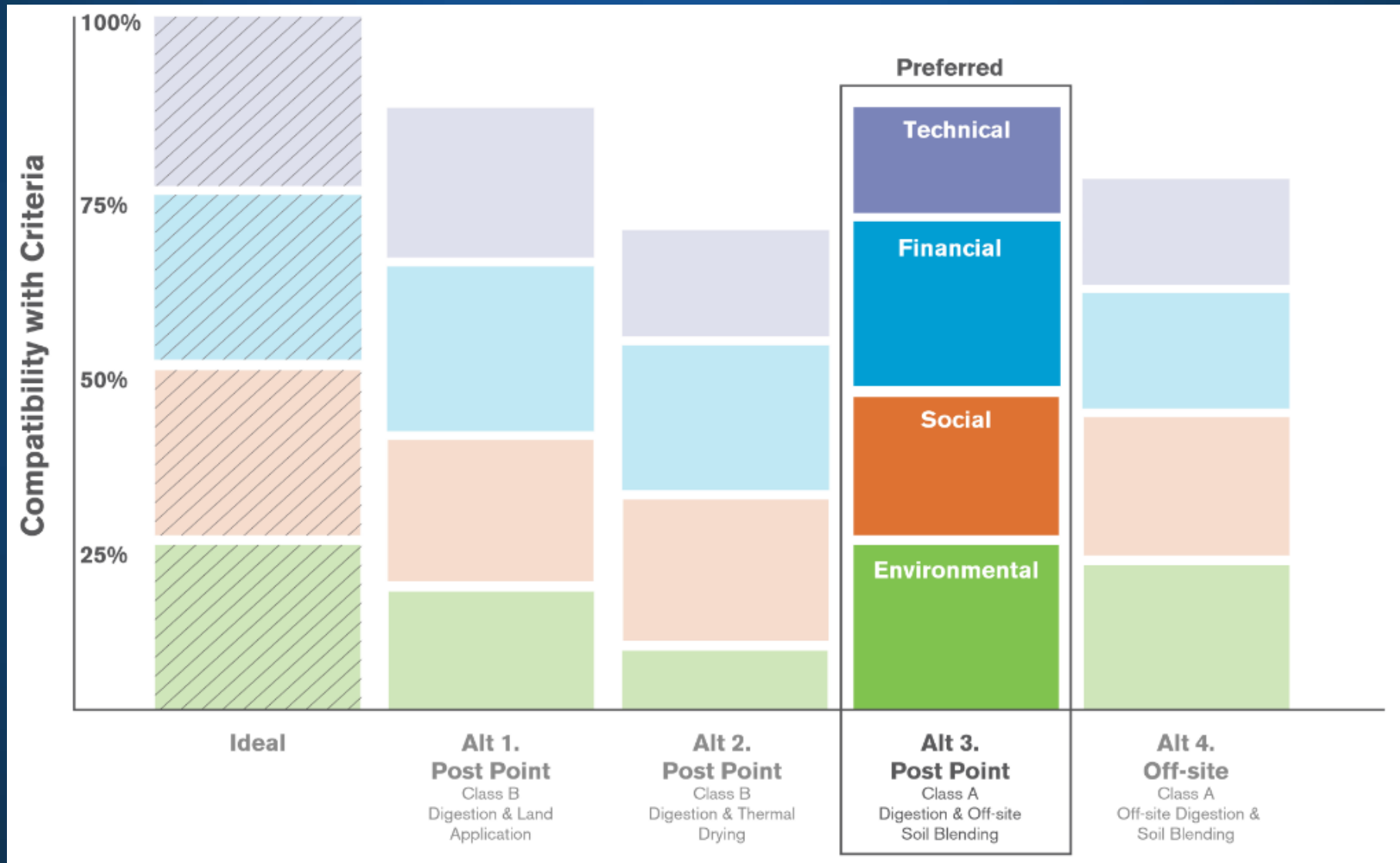
There isn't a "do nothing" option to address these needs.

# Public outreach demonstrated support for moving away from incineration

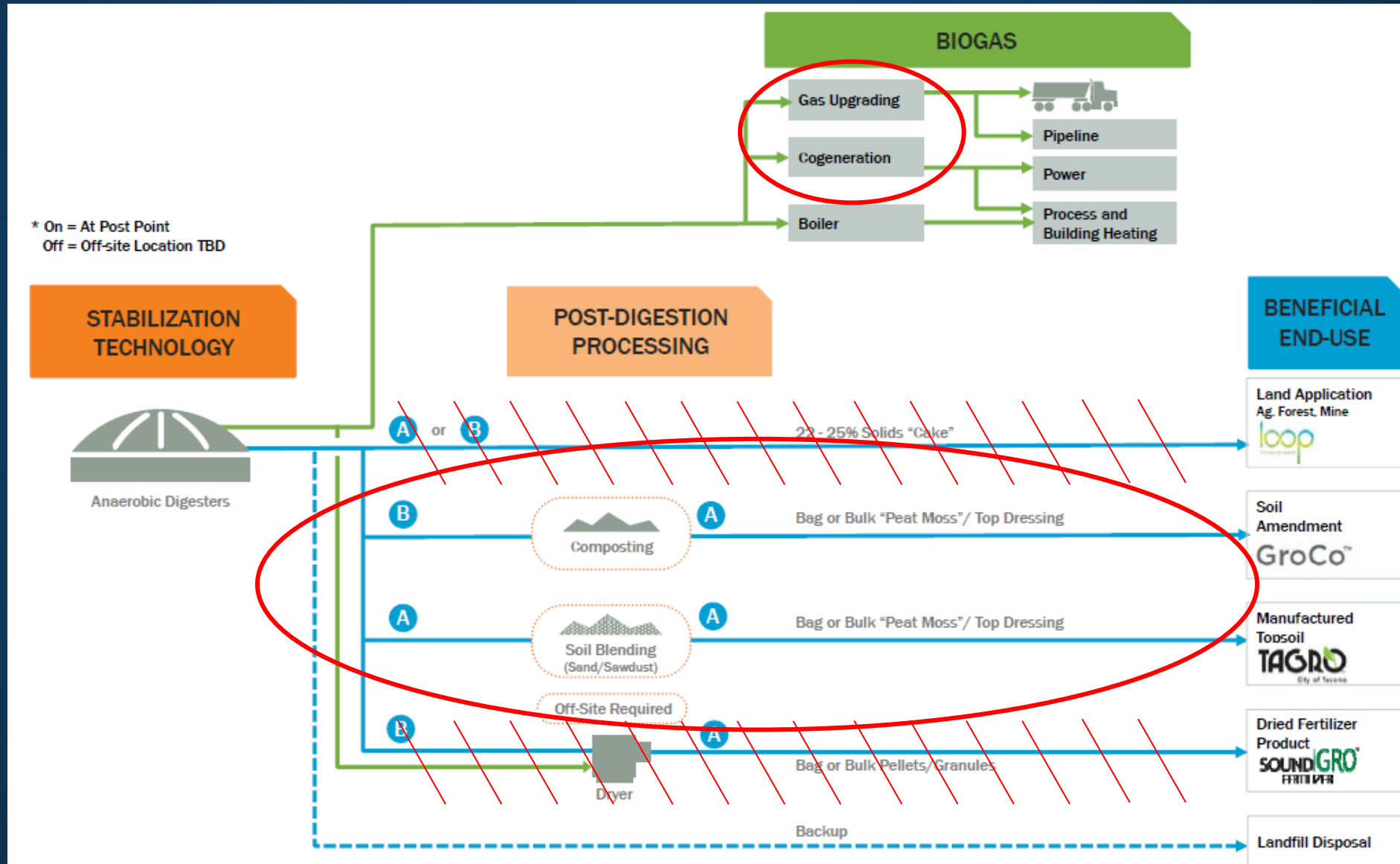
- TBL+ process supported
- Interest in moving to a Class A biosolids product



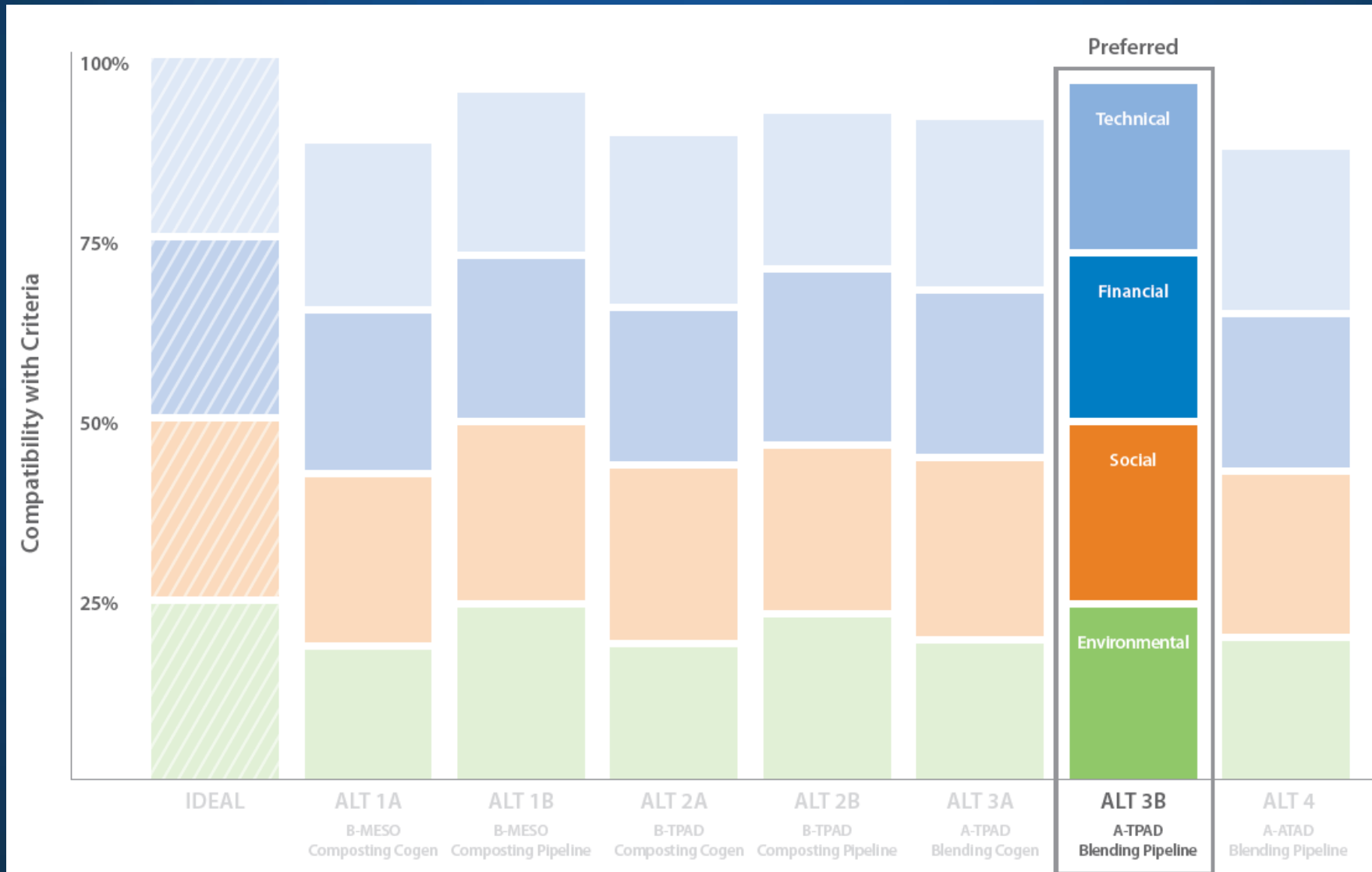
# Phase 1 – Identified Class A product for local beneficial reuse



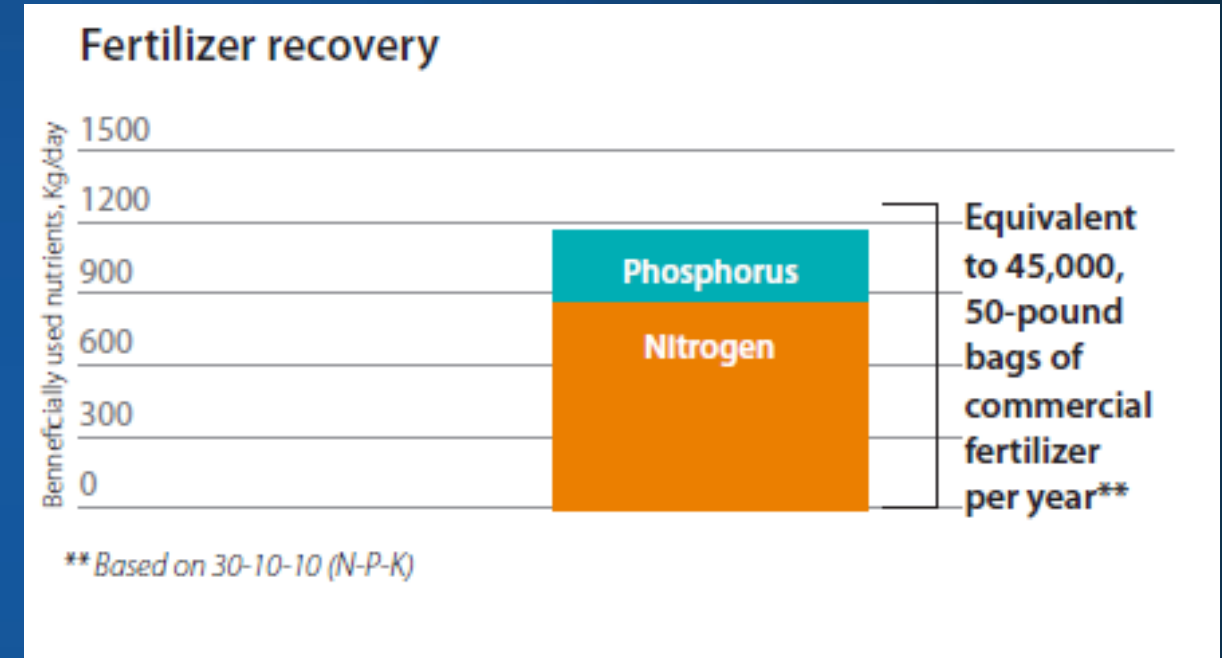
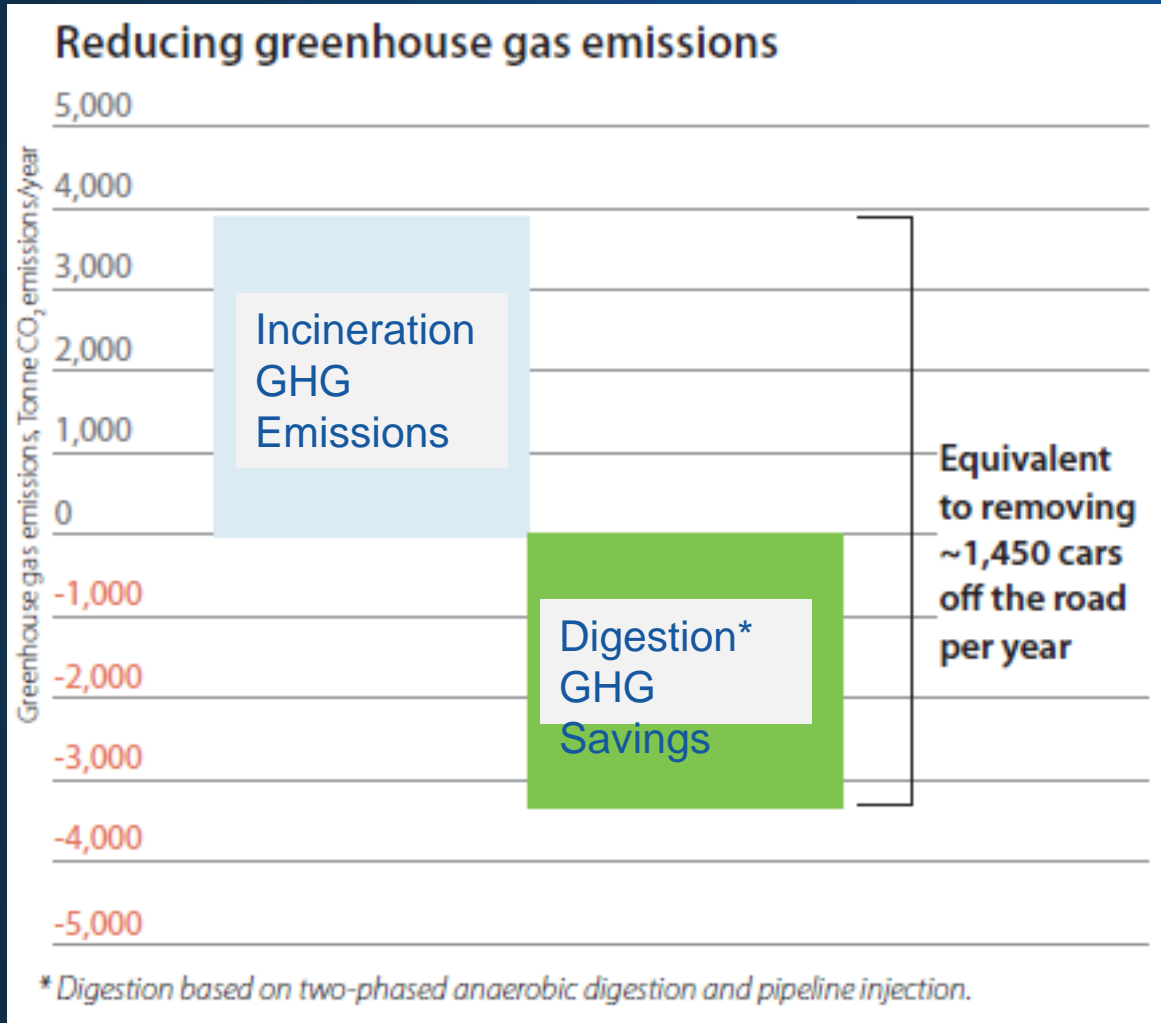
# Phase 2 – Select Digestion-based approach to produce Class A and Biogas use



# Phase 2 - Preliminary TBL+ Results: Class A Digestion and Pipeline Injection



# Anaerobic digestion-based solution benefits



# A demonstration garden at Post Point showcases biosolids at work

- ✓ Provides nutrients
- ✓ Improves soil health/tilth
- ✓ Sequesters carbon





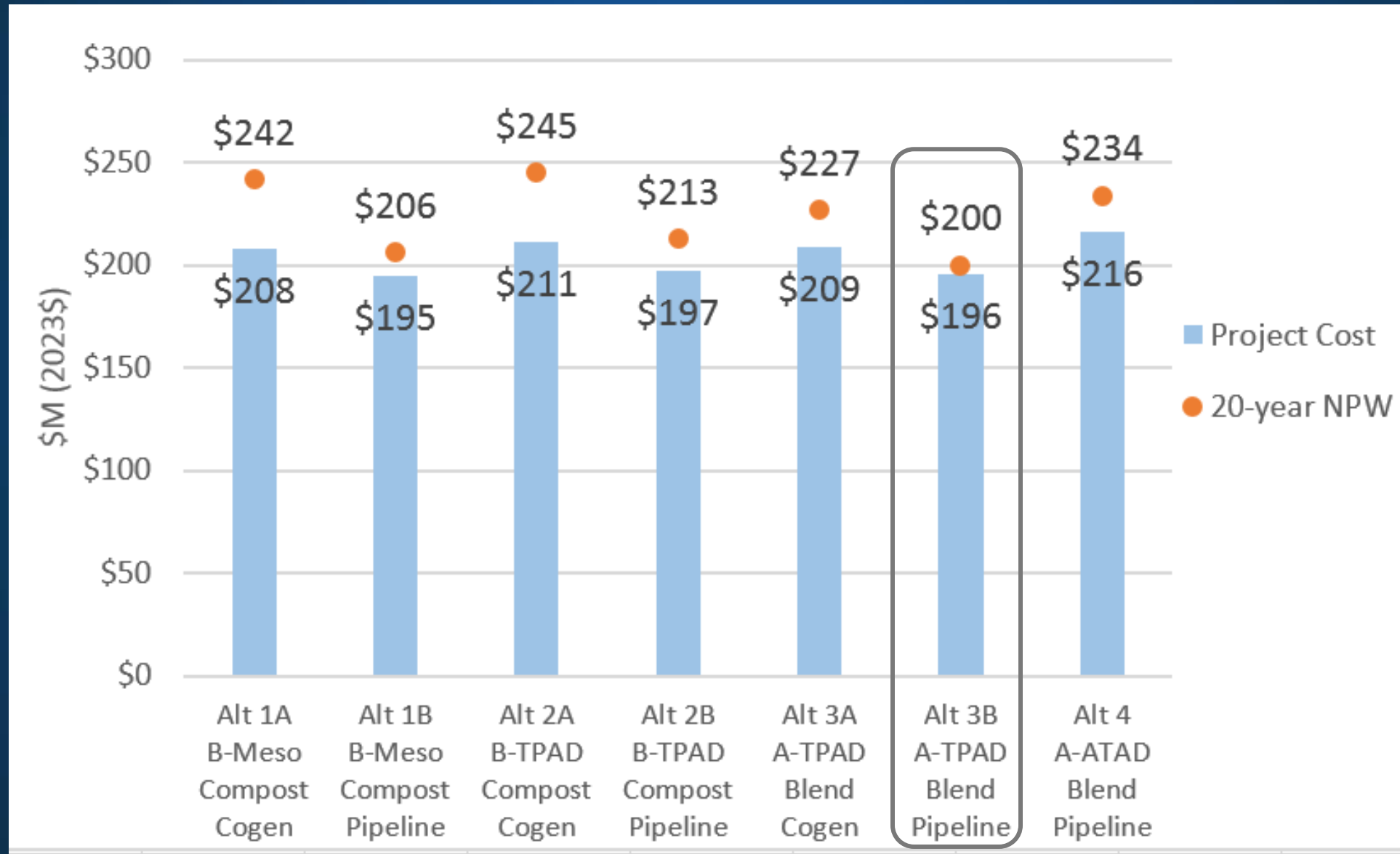
# Beyond a new solids treatment system, the project includes integrating other City functions

- Solids treatment
- Energy recovery
- Ancillary systems
- Integrated Ops/  
Community Building



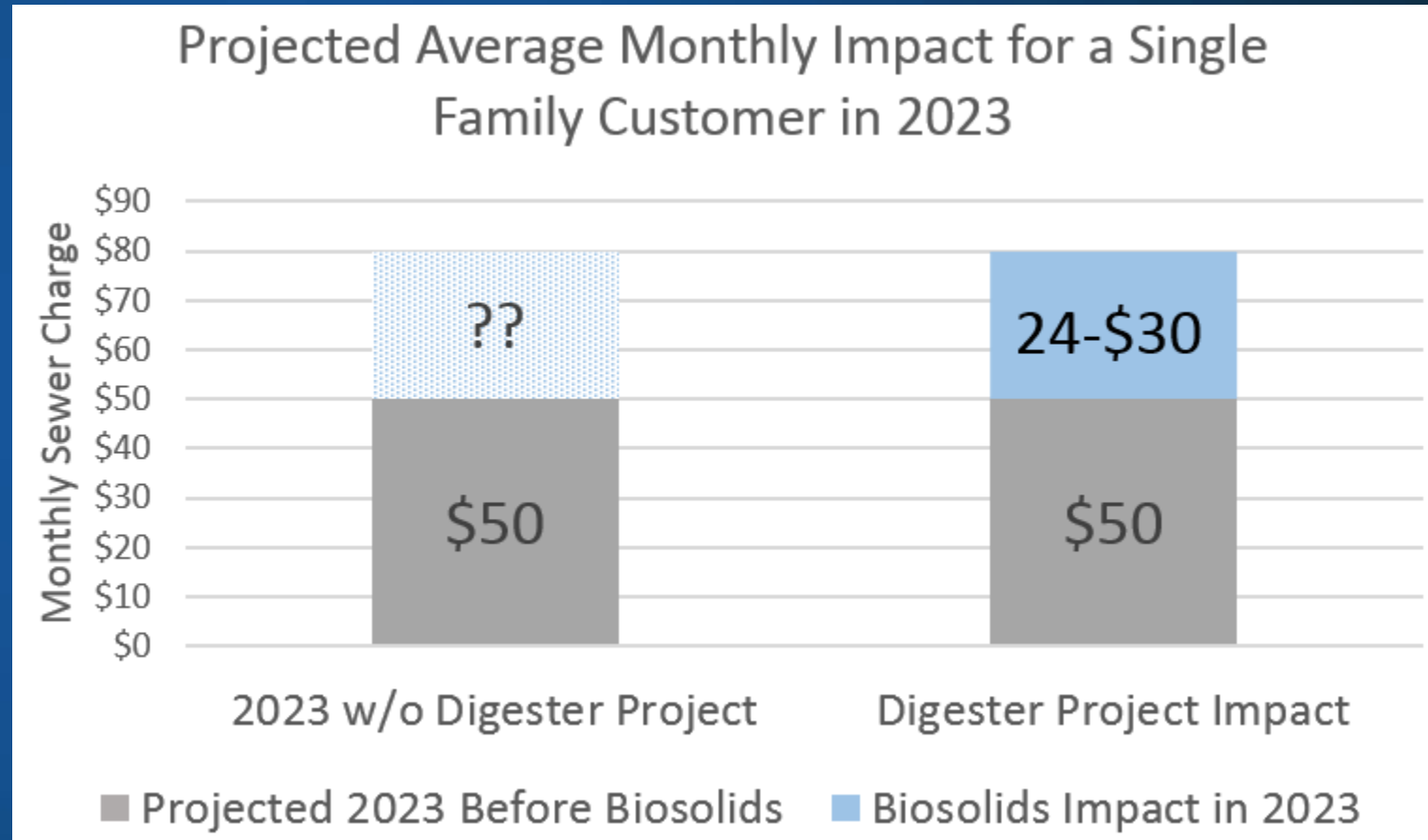
Example of a community education and environmental outreach center (LOTT Alliance, Olympia, WA)

# Planning Level Cost Estimate Summary



# Potential Rate Impacts

- \$24-\$30/ERU/month on average
- Preliminary Analysis
- Based on Equivalent Residential Unit
- Rates vary across customer classes
- Additional work needed for impacts to customers and affordability metric



# Phase 3 – Facility Plan, Procurement, and Predesign

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



*City Of Bellingham*

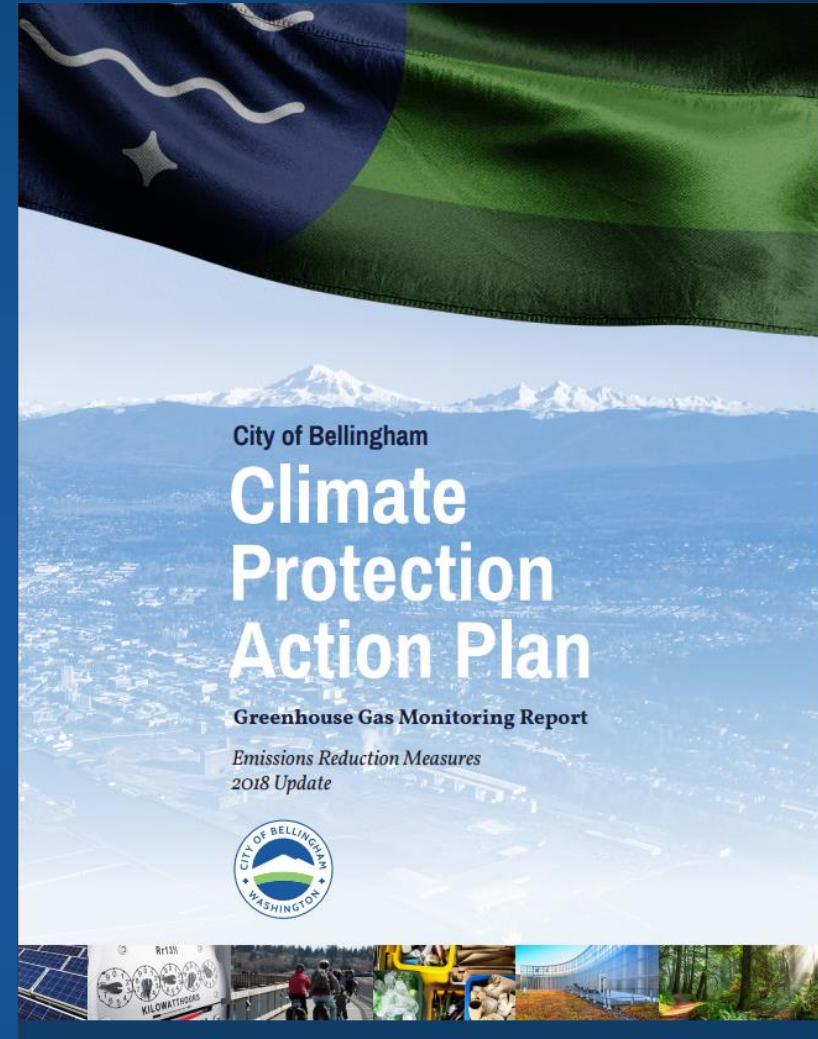
Greenhouse Gas Inventory and  
Climate Protection Action Plan

*May 2007*



1

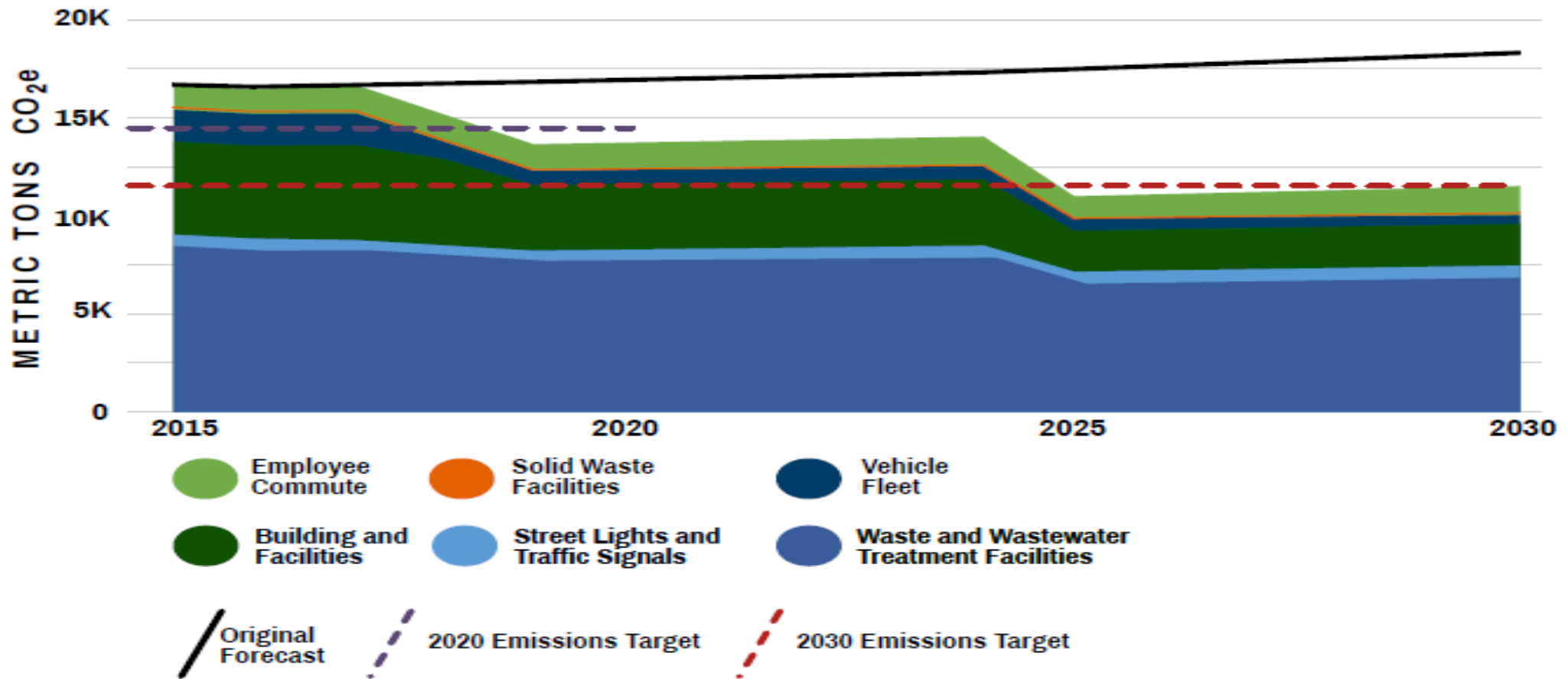
2007



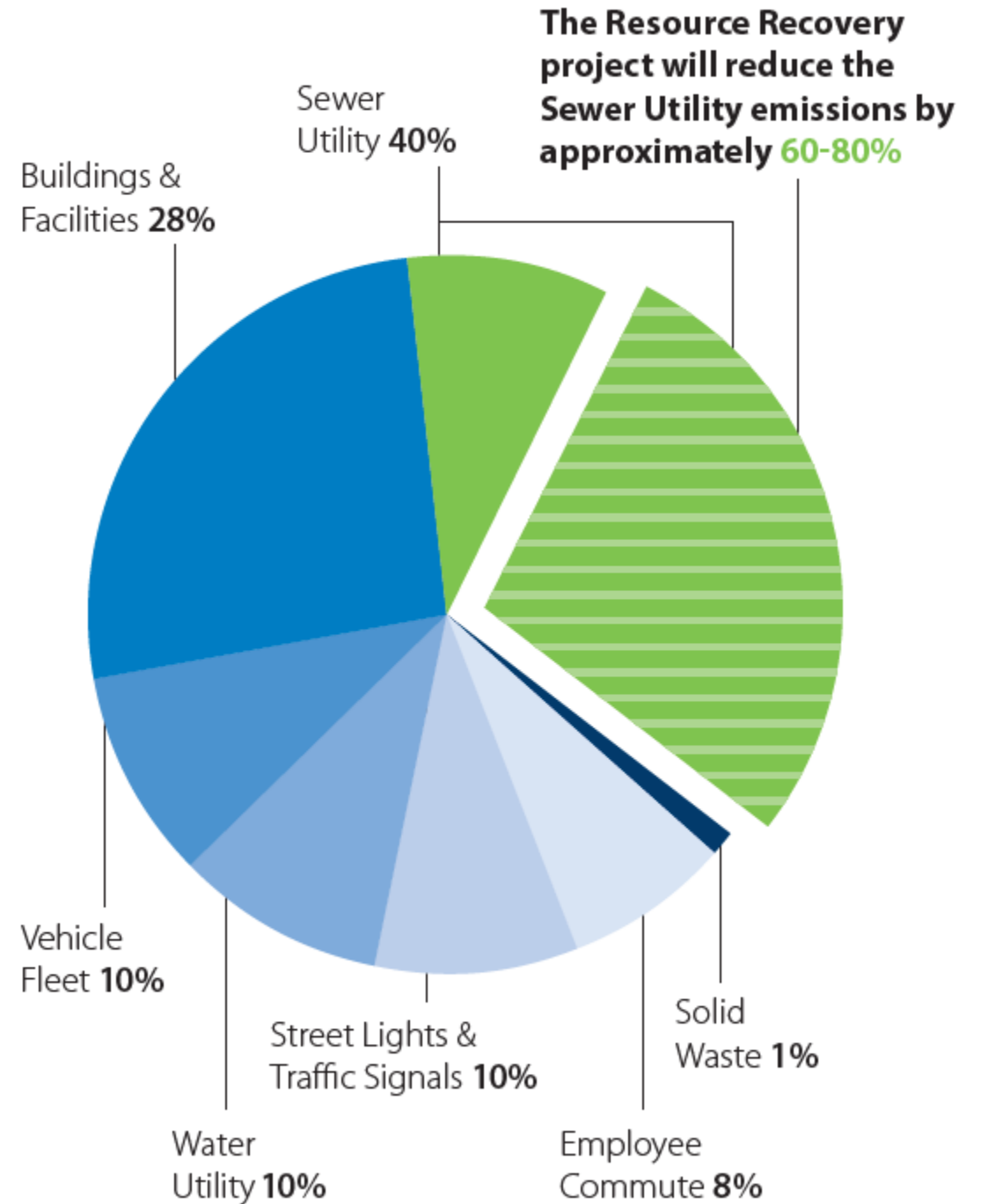
2017

# Climate Action Plan

# Municipal Emissions Forecast



# Post Point Resource Recovery Emissions Reduction CO<sub>2</sub>e



# Resource Recovery Project Update

Presented by: Eric Johnston, P.E., Rob Johnson, Bellingham Public Works  
Tadd Giesbrecht, P.E. Brown and Caldwell  
360.778.7700 [ecjohnston@cob.org](mailto:ecjohnston@cob.org), [rjohnson@cob.org](mailto:rjohnson@cob.org)



**Brown AND Caldwell**

**carollo**