DATE: September 30, 2025

TO: Clean Water Services Advisory Commission Members and Interested Parties

FROM: Elizabeth Edwards, Chief of Staff

SUBJECT: **INFORMATION FOR OCTOBER 8, 2025, CWAC MEETING**

A Clean Water Services Advisory Commission (CWAC) meeting is scheduled for **Wednesday, October 8, 2025.** The meeting will be in a hybrid format at the **CWS Central Building in Beaverton** and on Zoom. The meeting will begin at 6:30 p.m.

Meeting location:

- **In person in the** Central Large Conference Room at the CWS Central Building, 15195 NW Greenbrier Parkway in Beaverton.
- **Online via Zoom.** Zoom offers the option to connect to video, slides, and audio via a device with internet access, or an audio-only connection through any telephone line.
  - Interested parties should register for this meeting by October 6 by following the instructions on the website.
  - Please plan to establish your connection to the meeting 10-15 minutes before the 6:30 p.m. start time to allow the meeting to begin promptly.

Dinner will be served at 5:30 p.m. for CWAC members attending in person. CWAC members should notify Katie Cheney **(**CheneyK@CleanWaterServices.org **503.681.5116)** by Monday, October 6, **if you are unable to attend or if you plan to attend via Zoom** so food is not ordered for you.

The CWAC meeting packet will be emailed to CWAC members and posted to the CWAC section of the Clean Water Services' website.

Enclosures in this packet include:

- October 8, 2025, agenda and other materials
- September 10, 2025, meeting summary

Clean Water Services Advisory Commission

October 8, 2025
AGENDA

6:30 p.m. **Welcome and Introductions**

6:45 p.m. **Nominate and Confirm Budget Committee Members**

Clean Water Services' Budget Committee is made up of the five members of the CWS Board of Directors and five representatives from CWAC who reside in Washington County. The CWAC representatives serve three-year, staggered terms. Two terms expired in September 2025 (Elaine Stewart and Ramesh Krishnamurthy). Andy Haugen, Terry Song, and Alan Jesse hold the other three positions. Haugen's term expires in 2026; Song and Jesse's terms expire in 2027. The Budget Committee is scheduled to meet on Friday, May 8, 2025.

- Kathy Leader, Chief Financial Officer

Requested action: *Nominate two new members to the Budget Committee and confirm three existing members for recommendation to the Board.*

7:00 p.m. **Scoggins Dam Safety Project Update**

The Bureau of Reclamation recently notified Clean Water Services and other regional partners of a revised approach to advance seismic modifications for Scoggins Dam. CWS staff will update CWAC on Reclamation's recent decisions and will provide information on anticipated next steps including local partner coordination and federal delegation outreach.

- Tracy Rainey, Government Relations Manager

Requested action: *Informational/discussion item*

7:30 p.m. **Wants from Wastes: Developing a Composting Program at CWS**

CWS collects organic material from street sweeping, the leaf disposal program, and regular maintenance of water quality facilities. A portion of street sweeping material is screened for reuse as a soil amendment. However, most of the material is stockpiled temporarily at CWS facilities and ultimately disposed within landfills, where it contributes to landfill methane emissions and resource depletion. Staff will share details about developing and piloting a composting program.

- John Goetz III, Water Resources Analyst, Water Engineering & Technology

Requested action: *Informational*

8:15 p.m. **Invitation for Public Comment**

8:20 p.m. **Announcements**

8:30 p.m. **Adjourn**

Next meeting: **November 12, 2025**

Clean Water Services Budget Subcommittee

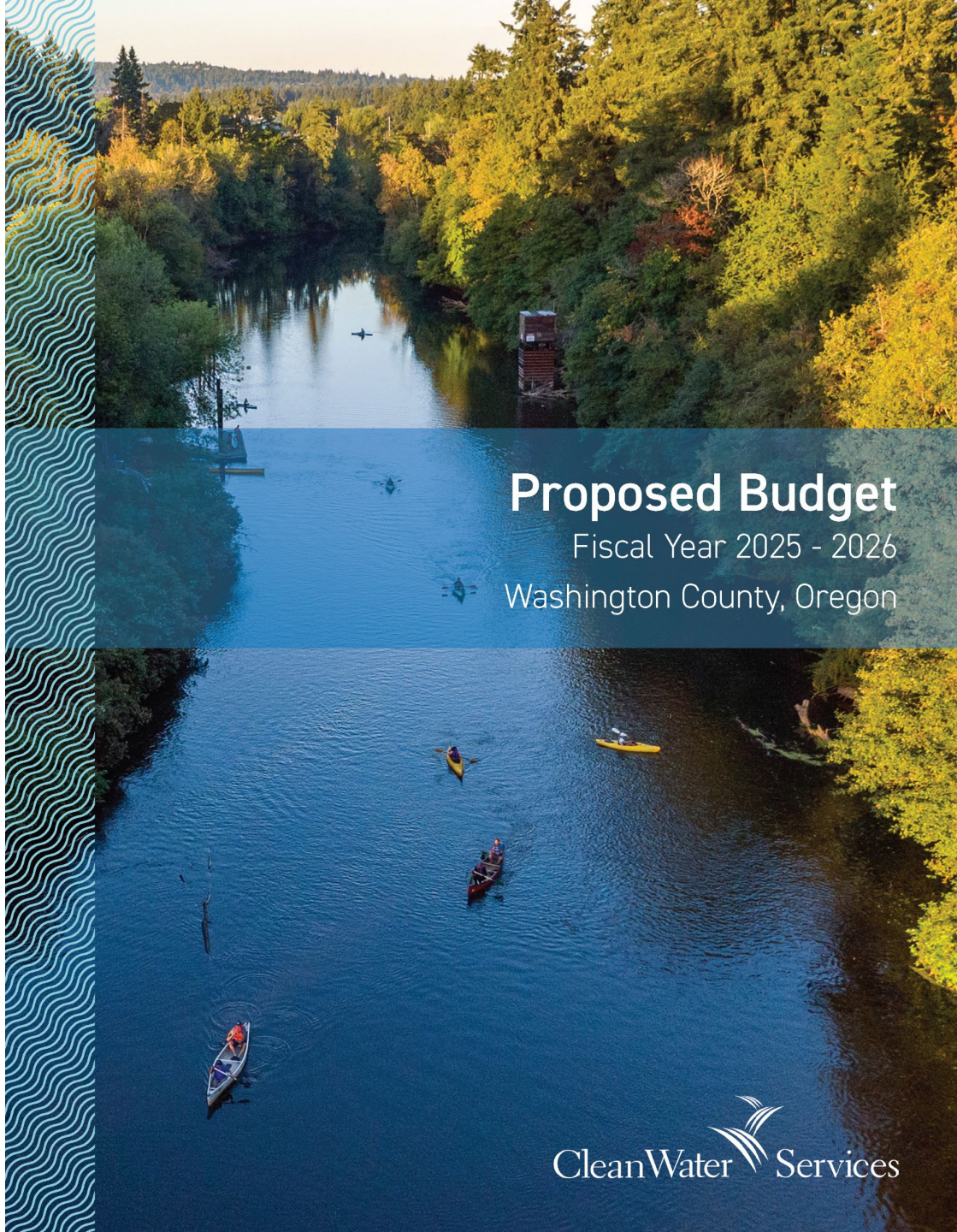
Clean Water Services Advisory Commission

Kathleen Leader, Chief Financial Officer

October 8, 2025

CWS Budget Committee

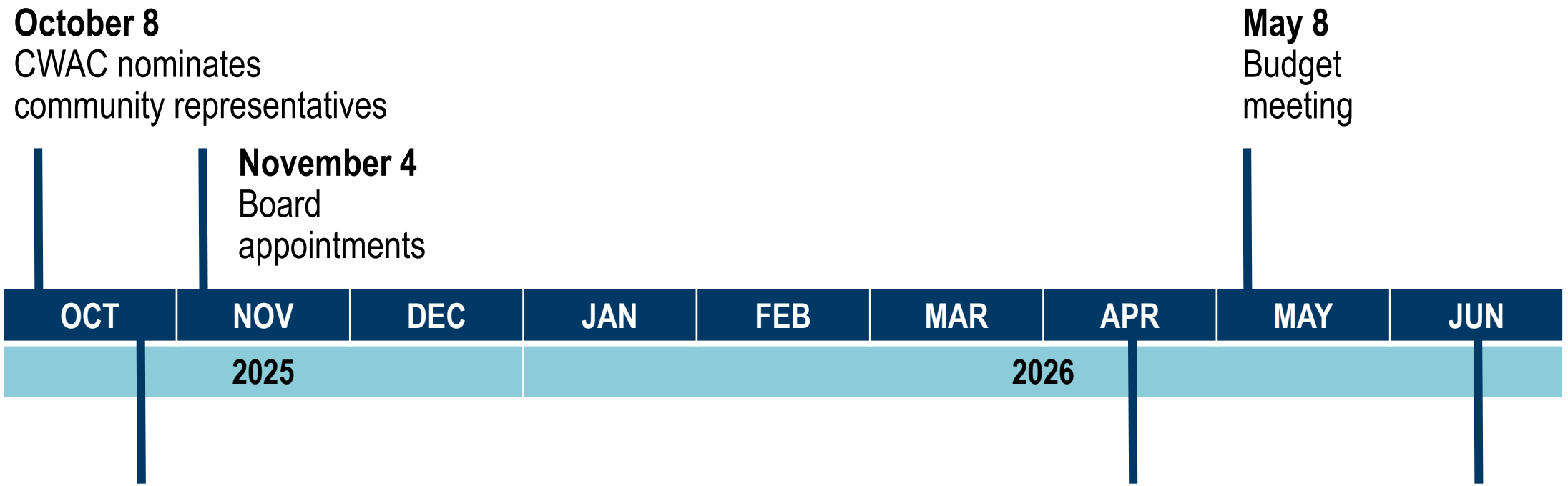
- The Clean Water Services Budget Committee is composed of the five Board members and five CWAC members
  - CWAC members represent the community
    - Serve three-year terms
    - Must live in Washington County or CWS service territory



2025-26 Budget Subcommittee

	Position	Residence	Term Expires	First Appointment
Elaine Stewart	Environment 2	District 2	09/30/2025	03/07/2023
Ramesh Krishnamurthy	District 2	District 2	09/30/2025	02/18/2025
Andy Haugen	District 4	District 4	09/30/2026	03/05/2024
Terry Song	District 3	District 3	09/30/2027	02/22/2022
Alan Jesse	Agriculture 2	District 4	09/30/2027	02/18/2025

2026 Budget Committee Timeline



2026-27 Budget Subcommittee

	Position	Residence	Term Expires	First Appointment
Andy Haugen	District 4	District 4	09/30/2026	03/05/2024
Terry Song	District 3	District 3	09/30/2027	02/22/2022
Alan Jesse	Agriculture 2	District 4	09/30/2027	02/18/2025
Vacant	**-**		**09/30/2028**	**-**
Vacant	**-**		**09/30/2028**	**-**

Eligible to 2026-27 Budget Subcommittee

CWAC Member	Position	Residence	Term Expires
Marc Farrar	Builder/Developer 1	District 4	09/30/2026
Elaine Stewart	Environment 2	District 2	09/30/2026
Ashley Farrell	Business 1	District 2	09/30/2027
Rebecca Shell Kanarek	District 1	District 1	9/30/2028
Nisha George	At-Large District	At-Large District	9/30/2029
Ramesh Krishnamurthy	District 2	District 2	9/30/2029
Lakshmi Tata	Agriculture 1	District 2	9/30/2029
Drake Butsch	Building/Developer 2	District 2	9/30/2029

Not eligible: Stu Peterson and Glenn Fee live outside Washington County and CWS service boundary

Questions?

Scoggins Dam: Seismic Modification Project Update

Tracy Rainey, Government Relations Manager

Clean Water Services Advisory Commission

October 8, 2025

Presentation Overview

- Overview of Tualatin Project (Scoggins Dam/Hagg Lake)
- History of Tualatin Joint Project
- Safety of Dams project update
- Local beneficiary response
- Questions/discussion

Tualatin Project: Project Authorization & Purposes

- 1966: Project authorized by Congress
- Authorized as the “Tualatin Project”
  - Includes Scoggins Dam, Henry Hagg Lake, Patton Valley Pumping Plant, Spring Hill Pumping Plant, booster pumping plants, piped lateral distribution systems
- Authorized project purposes
  - Irrigation, municipal and industrial, water quality protection, flood control, recreation, and conservation of fish and wildlife resources
- Local repayment partners (reimbursable)
  - Tualatin Valley Irrigation District
  - Cities of Beaverton, Hillsboro, and Forest Grove
  - Clean Water Services
  - Lake Oswego Water Corporation

Stored Water Uses

- Allocation of stored water (53,600 acre-feet)
  - Drinking water to over 400,000 individuals
    - Cities of Hillsboro, Forest Grove, Beaverton
    - Approximately 25% of stored water (about 13,500 acre-feet)
  - Irrigated agriculture for about 17,500 acres
    - Tualatin Valley Irrigation District
    - Approximately 50% of stored water (about 27,000 acre-feet)
  - Water quality releases
    - Clean Water Services (Clean Water Act permit compliance, including thermal management)
    - Approximately 25% of stored water (about 12,500 acre-feet)
- Additional benefits
  - Flood control for upper basin (50-year storm event)
  - Supports more than 280,000 jobs

History of Tualatin Joint Project

1997-2012

Regional Water Supply Feasibility & Planning Efforts

1997: Tualatin Basin Water Supply Partnership completes Integrated Water Resource Management Strategy

- Identified need for additional water supply (agriculture, municipal, fish, flow)

2001-2004: Water Supply Feasibility Study - Tualatin River Basin

- Future water supply feasibility

2004-2012: Tualatin Basin Water Supply Project

- Explored options, including dam raise for additional stored water

2008-2012

Bureau of Reclamation

Seismic evaluation, draft Environmental Impact Statement (EIS) for expanded storage options

2008: Evaluate seismic risks

2009: Draft EIS for additional water supply options

2012: Reclamation completes corrective action study

- Scoggins identified as among the most seismically threatened dams
- Shifted project into Safety of Dams program

2013-2020

Joint Project authorization, feasibility

2015: Tualatin Joint Project partnership (congressional authorization)

- Seismic and expanding storage

2020: Joint Project feasibility design

- Options
  - Seismic only
  - Raise dam
  - Downstream dam

2014-2016: Preliminary planning for Willamette Water Supply Pipeline

2021: CWS decision to advance seismic-only project

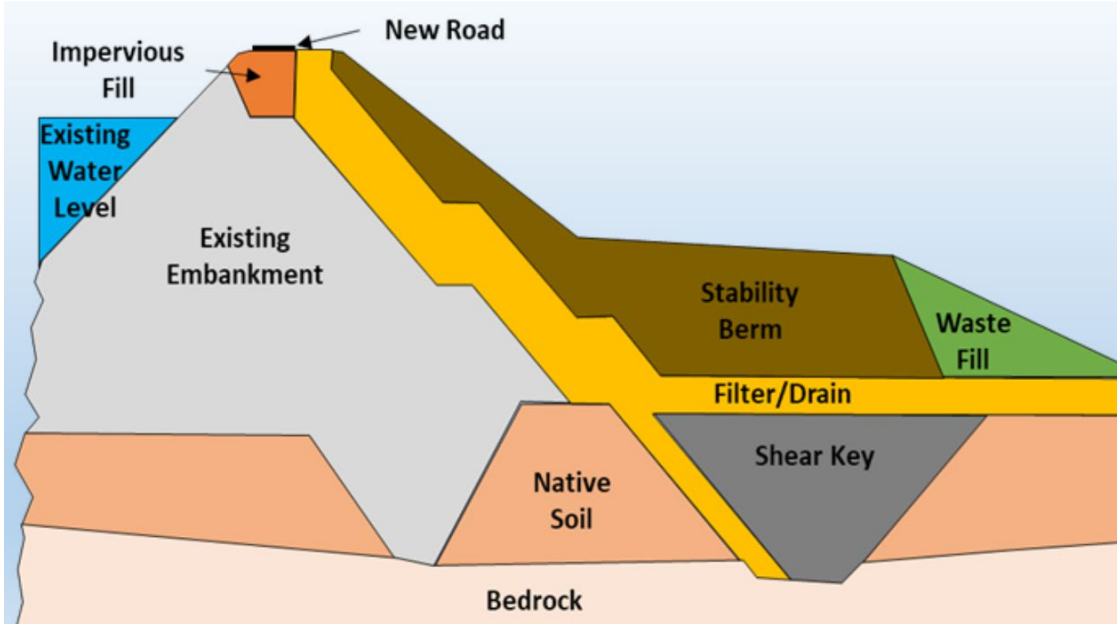
2021: Decision to Advance Dam Safety Only Project

- Public safety, protecting region's primary water supply
- Cost
  - $750 million for dam safety only
    - 85% federal / 15% local
  - Over $1 billion for expanded storage options
    - CWS cost share = amount beyond dam safety modifications
- Infrastructure Investment & Jobs Act (2021)
  - Accelerated timeline for dam safety projects
- Thermal modeling
  - Additional stored water alone – not enough for thermal compliance
  - Focus on reuse, shading, optimizing operations, etc.

2021-2025: Dam Safety Modification Project

Proposed project

- Excavate and backfill portions of the crest and existing embankment
- Construct a downstream shear key
- Install a downstream rock filter and drain
- Install a stability berm over the shear key and downstream slope of dam
- Raise the dam crest by about 7 feet
- Demolish and reconstruct the existing spillway, bridge, and ancillary features
- Construct a new two-lane road across the dam



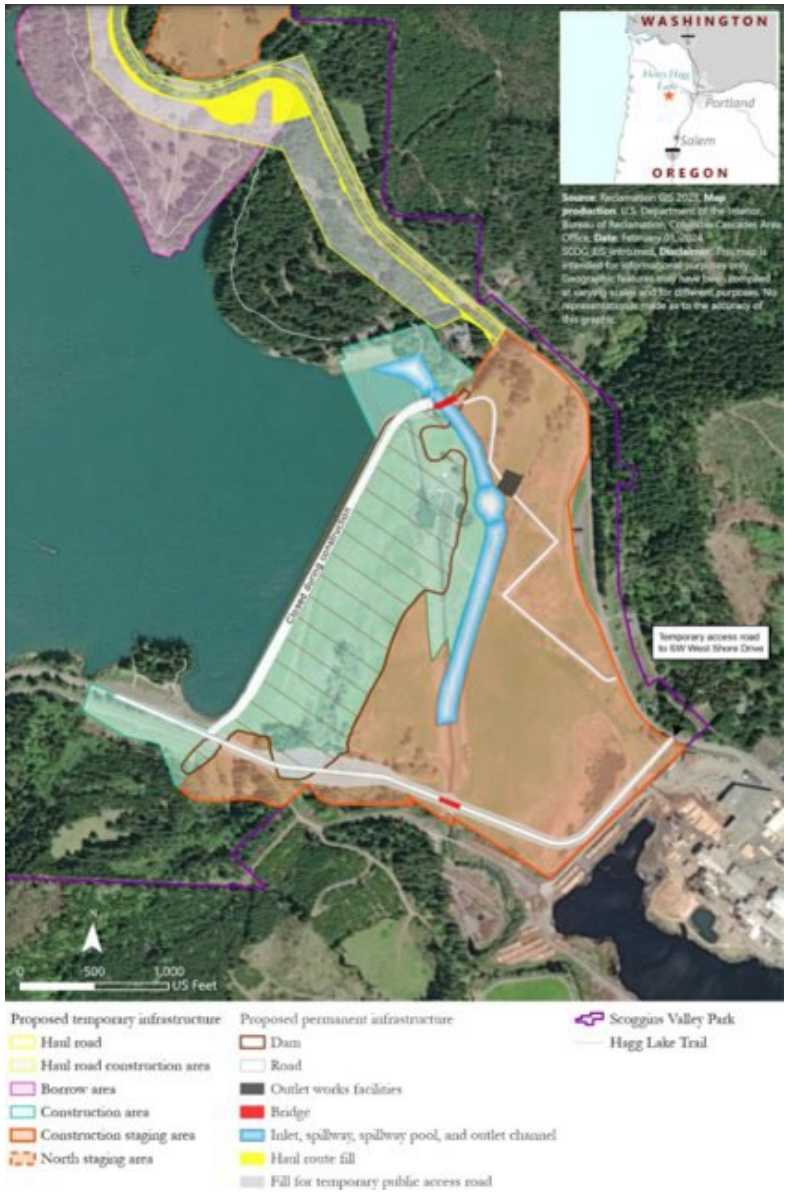
usbr.gov/pn/programs/sod/scoggins

2021-2025: Dam Safety Modification Project

Project becomes a federal project

- CWS and other repayment partners are “cooperating agencies”
- Shift in public engagement (Bureau of Reclamation)

- Cost update
  - 2024: Updated project cost ($900 million for SOD project)
- Updates to Economic Benefit and Repayment Analysis (2023-2024)
- Construction timeline
  - 2024: Environmental Impact Statement
  - 2027-28: Final project design estimated to be complete
  - 2029: Start construction
  - 2035: Construction estimated to be complete



May 2025: Reclamation Decision

- New project cost estimates shared
  - Project cost increased to $1.03 billion
- Reclamation determined need to pause further work on dam safety-only project
  - Due to economic analysis of nonstructural alternatives
  - Resulting determination: Pursuing project in its current form would not be cost-effective
- Nonstructural alternatives would significantly reduce stored water capacity for the region as a means to reduce seismic risk
  - Reservoir restriction estimated cost $362 million
- Reclamation will pursue new structural alternative
  - Focus on reducing highest risk aspects of facility
  - Focus on spillway and adjacent embankment

Local Project Beneficiary Response

- Shared concern over cost estimates for prior Dam Safety project
  - $1.03 billion estimated project cost (likely to increase)
  - 85% / 15% cost-share
- Opposition to reservoir restriction option
  - Recognition of role of Office of Management and Budget
  - Costs for spillway project must be less than reservoir restriction cost
  - If reservoir restriction gains momentum, a more robust economic and environmental analysis should be completed
- Project partners are supportive of efforts to advance spillway modifications
  - Reclamation must demonstrate that any new structural alternatives will be designed to adequately mitigate risks associated with various Cascadia-subduction zone type events
  - Reclamation should engage with the public to update them on new direction

2020: Economic Repayment Analysis

- Estimating total benefits to the country provided by Scoggins Dam and Hagg Lake
- Determining allocation of 15% local share among local repayment partners ("reimbursable costs")
- Last analysis completed in 2020 (five-year shelf life)
- 15% of about $770 million (2020 project cost estimate)
- Reimbursable costs based on net economic benefits (not quantity of water)

SOD Cost allocation by user ($M)

User	Reimbursable purpose									Total repayment by user
	Irrigation*			M&I**			WQC**			
	Hagg Lake releases		Repmt. by user	Hagg Lake releases		Repmt. by user	Hagg Lake releases		Repmt. by user	
	AF/year	% by user		AF/year	% by user		AF/year	% by user		
TVID	17,332	100.0%	$24.9	912	6.3%	$2.1	0	0.0%	$0.0	**$27.0**
JWC	0	0.0%	$0.0	13,027	90.3%	$30.5	0	0.0%	$0.0	**$30.5**
LOC	0	0.0%	$0.0	485	3.4%	$1.1	0	0.0%	$0.0	**$1.1**
CWS	0	0.0%	$0.0	0	0.0%	$0.0	12,230	100.0%	$53.6	**$53.6**
Total	17,332	100.0%	$24.9	14,424	100.0%	$33.8	12,230	100.0%	$53.6	**$112.2**

Repayment Analysis Update Process

- Meetings with new economist
  - Fall 2023, winter 2024
- Separating fish and wildlife benefits from water quality benefits
  - Fish and wildlife are a separate, authorized purpose of project (nonreimbursable)
  - 2020 benefits analysis includes the following on fish and wildlife value:
    - "It is assumed that the quantifiable economic benefits associated with the fish and wildlife purpose are captured in the WQC and recreation benefits analyses sections of this study."
- CWS interested in capturing value of the benefit of flow augmentation for fish
  - Potential for federal government credit to CWS?

2025: Draft Economic Repayment Analysis

- Presented to local project beneficiaries in March 2025
- Valued water quality stored water using municipal and industrial wholesale rate
- Recognizes that water quality releases contribute to potable water conditions

Local Project Beneficiaries	Total Repayment by User (2020) - TOTAL $112.2	Total Repayment By User (2025) - TOTAL $167	What the increase would have been if based on increased project estimate alone (48.84% or $54.8
TVID	$27.0	$44.0	$40.2
JWC	$30.5	$64.2	$45.8
LOC	$1.1	Not specified	$1.3
CWS	$53.6	$58.9	$79.8

CWS Position & CWAC Discussion

- CWS position
  - Opposition to any proposed reservoir restriction
  - Support for Reclamation's efforts to advance structural modifications, even if they are scaled or phased (note: Reclamation must be able to demonstrate adequate seismic resilience for a Cascadia Subduction Zone level of event)
- Do members of CWAC have any concerns with the proposed position/approach?
- Is there additional information that would be helpful for CWAC to have?

Wants FROM Waste

DEVELOPING A COMPOST PROGRAM

JOHN GOETZ III, GABE SOHLER

CLEAN WATER SERVICES ADVISORY COMMISSION | OCTOBER 8, 2025

Clean Water Services

Continued reliance on landfill disposal of organic waste poses an economic burden on CWS resources and an environmental impact on the service area.

Our Opportunity:

Prioritize funding and staffing resources for a compost program to divert organic waste from landfills and transform it into a valuable and sustainable resource.

This initiative aligns closely with CWS vision, mission, and values, which emphasize:

ENVIRONMENTAL STEWARDSHIP

SUSTAINABILITY

DEDICATION TO COMMUNITY

GUIDED BY SCIENCE

What Is Composting?

Composting is the natural process of breaking down organic materials, such as yard waste, wood waste, food scraps, and other biodegradable substances, into nutrient-rich soil amendments.

BENEFITS

1. Commitment to Resource Recovery. Composting turns what was once considered waste into a product that benefits local soil health and ecosystems.

2. Less to Landfills. It lessens the amount of waste that ends up in landfills (and methane production), extending the lifespan of these facilities. This also reduces the costs, fossil fuel consumption, and greenhouse gas emissions associated with transporting materials to landfills.

3. Fostering Community. By partnering with residents, local businesses, and other organizations to collect waste materials, CWS can foster stronger ties within the community.

4. Revenue and Cost Savings. It offers an opportunity for revenue generation by selling finished compost to residents and local entities, including landscapers, nurseries, agricultural producers, and government agencies.

Clean Water Services

Current State

WHAT ARE WE DOING NOW?

CURRENT STATE

CWS manages a variety of material sources as part of its ongoing efforts to maintain environmental and water quality, comply with permits, and meet community needs.

WHERE IS THIS MATERIAL COMING FROM?

- Street sweepings
- Water quality facility maintenance material
- Leaf disposal program

WHERE IS IT ENDING UP?

- Hillsboro landfill
- Recology organics
- Private agricultural landowners
- Wasco County landfill

Estimated Annual Costs of Current Disposal Methods

	Street Sweepings[1]	Water Quality Facility Maintenance Material	Leaf Disposal Program	Total
CY	750	1000	3000	**4750**
Tons[2]	190	218	761	**1169**
Number of Trucks[3]	75	100	300	**475**
Disposal Cost	$19,000	$7,000	$39,000	**$65,000**
Staffing Cost[4]	$17,000	$22,000	$67,000	**$106,000**
Truck Cost[5]	$1,000	$3,000	$5,000	**$9,000**
Annual Cost	$37,000	$32,000	$111,000	**$180,000**


= 10 Trucks

[1] Quantity shown does not include ~65% fines quantified in the beneficial use determination and ~5% trash

[2] Weight was estimated dependent on material to a cubic yard (CY) to ton conversion to help estimate costs for landfill tipping fees

[3] Dump trucks assumed to carry 10 CY

[4] Assumes 2 workers, needing 4 hours, with a $28/hour wage

[5] Assumes $1.38 per mile traveled from storage facility to disposal site

Clean Water Services

Future State

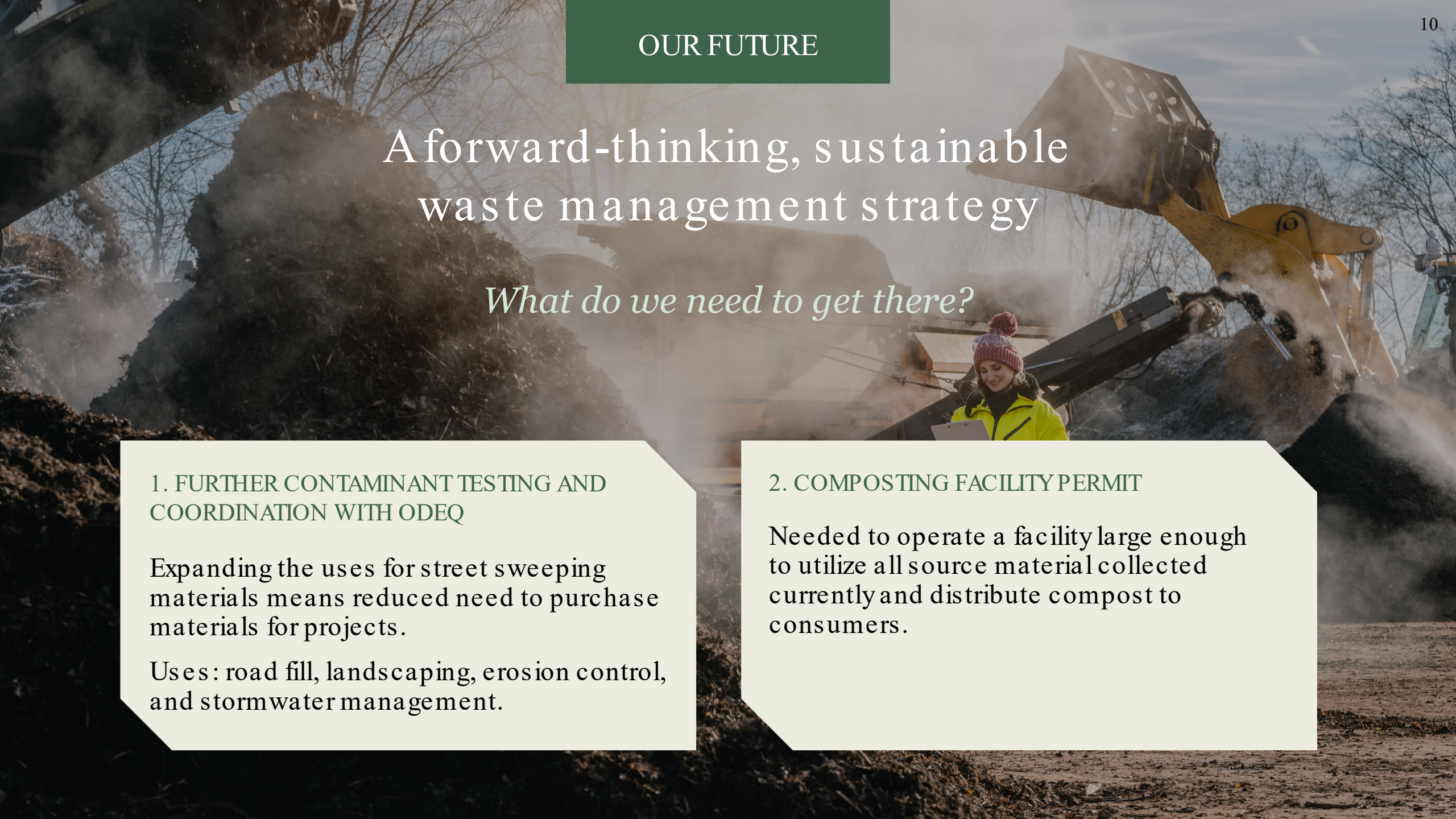
WHERE COULD WE BE?

CWS Resource Recovery Potential

OUR FUTURE

A forward-thinking, sustainable waste management strategy

What do we need to get there?



1. FURTHER CONTAMINANT TESTING AND COORDINATION WITH ODEQ

Expanding the uses for street sweeping materials means reduced need to purchase materials for projects.

Uses: road fill, landscaping, erosion control, and stormwater management.

2. COMPOSTING FACILITY PERMIT

Needed to operate a facility large enough to utilize all source material collected currently and distribute compost to consumers.

Clean Water Services

Pilot Program

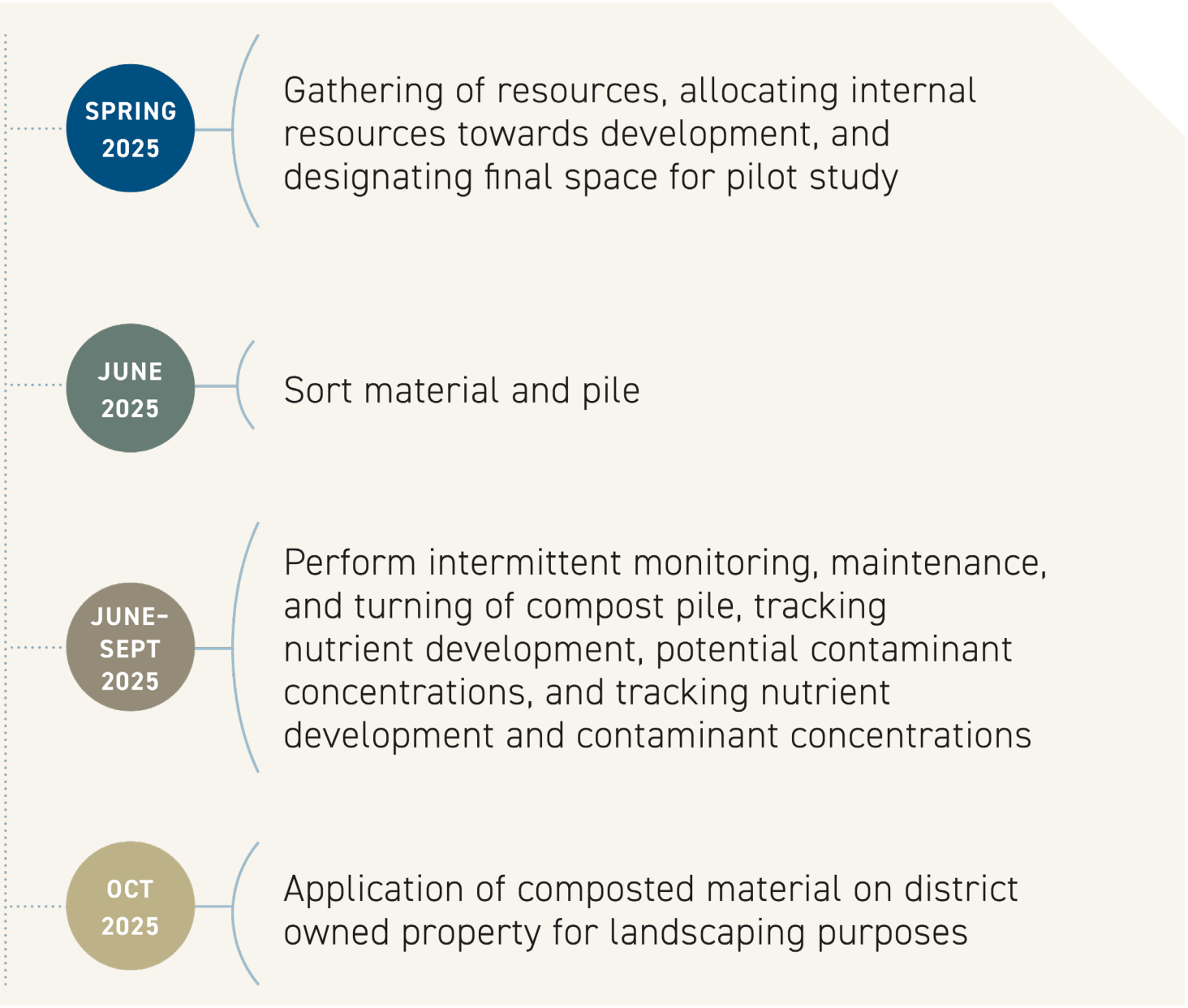
VALIDATING PROOF OF CONCEPT

WHERE

Forest Grove Water Resource Recovery Facility

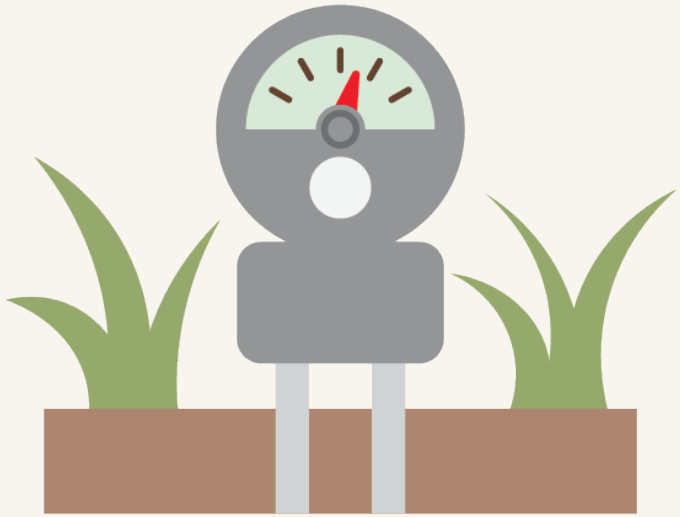
WHO

Interdepartmental and interdisciplinary team of CWS staff

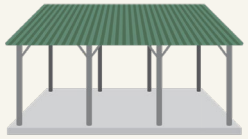


GOALS

1. Analyze the breakdown of CWS-sourced materials
2. Monitor contaminant levels
3. Increase community engagement and education



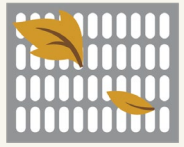
Requested Resources



Covered concrete pad

Sorting bays

Front-end loader and operator



Screening system and operator

Dewatering collection system

Process monitoring system

Estimated Total Cost of Pilot Startup

Description	Quantity	Unit	Unit Cost	Total Cost
Site Clearing & Preparation	12,500	SF	$2	$25,000
Equipment				
Dewatering System	1	LS	$5,000	$5,000
Temperature and Moisture Probes	1	LS	$1,200	$1,200
Labor & Management				
Initial Transport & Piling	32	hr	$28	$896
Pile Turning (Twice Monthly)	96	hr	$28	$2,688
Temperature, pH & Moisture Monitoring (Twice Monthly)	48	hr	$28	$1,344
Office Staff Status Reports	84	hr	$30	$2,520
Sample Testing (Once Monthly)				
Collection	24	hr	$28	$672
Lab Analysis	6	each	$1,500	$9,000
			30% Contingency	$14,496
			Total	**$62,900**

SF = square feet | LS = lump sum | hr = hour

Total cost of pilot startup is rounded

SUMMARY

This new composting program will reduce waste to landfills, decrease greenhouse gas emissions, and create valuable resources that support local communities and ecosystems.

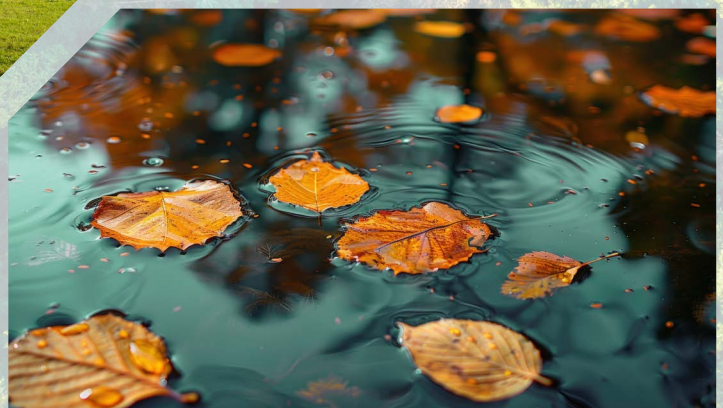
Q&A

Clean Water Services

Clean Water Services

Wants FROM Waste

DEVELOPING A COMPOST PROGRAM



INTRODUCTION & PURPOSE

CWS currently collects organic material from street sweeping, the leaf disposal program, and regular maintenance of water quality facilities (WQF). A portion of street sweeping material is screened for reuse as a soil amendment, subject to allowable land applications as dictated by permitting requirements. However, a majority of this volume is stockpiled temporarily at District-owned facilities and ultimately disposed within landfills, where it contributes to landfill methane emissions and resource depletion. The continued reliance on landfill disposal of organic waste generated by regular District operations poses economic burden on District resources and environmental impact to the service area.

> *This document serves to propose prioritization of funding and staffing resources for a compost program to help divert organic waste collected throughout current District operations from landfills, transforming it into a valuable and sustainable resource.*

This initiative aligns closely with our Vision, Mission Statement, and Values, which emphasize **environmental stewardship**, **sustainability**, and **dedication to community**. By integrating composting into our resource recovery practices, we are not only addressing waste disposal issues but also advancing CWS's commitment to protecting natural resources, enhancing water quality, and fostering a healthier environment for current and future generations.

The environmental impacts of our current waste management practices are undeniable. Landfills are major sources of greenhouse gas emissions, particularly methane, a leading contributor to climate change. The economic costs of landfill use are also substantial, involving not only increasing disposal and tipping fees but also the lost potential of valuable materials that could be repurposed.

By implementing a compost program, we aim to manage these created and collected materials more efficiently. In the following sections, we will explore the current state of waste disposal, the environmental and cost implications of continued landfill usage, and how a shift towards composting can contribute to both environmental and economic sustainability.

CURRENT STATE

Where is this material coming from?

CWS currently manages a variety of material sources as part of its ongoing efforts to maintain environmental quality, maintain water quality permit compliance, and meet community needs. These materials, often seen as waste, can be more effectively managed through innovative solutions such as composting production. Sources of potentially compostable material that CWS handles, and their current destination, include the following:

Street Sweepings: As part of routine street maintenance, CWS collects and disposes of street sweepings throughout the service area on a monthly basis. Sweepings consist primarily of debris such as dirt, leaves, grass clippings, and other organic matter, along with small amounts of inorganic matter like litter, gravel, and sand. Street Sweeping Material is currently passed through a 1" sorting screen to filter out large debris. The fine, filtered material can be utilized in limited construction fill scenarios, with documented approval per the Beneficial Use Determination (BUD), provided by Oregon Department of Environmental Quality (DEQ). See the permitting section below for a path to potentially expanded uses of these 'street sweeping fines' and the proposed composted material. Most material larger than 1" (which accounts for 30% by volume) primarily consists of wood waste, leaf litter, and other potentially compostable source material and is currently landfilled.

Water Quality Facility Maintenance Material: The District's Field Operations staff performs routine annual maintenance on over 1,000 public Water Quality Facilities (WQF), consisting of green stormwater infrastructure like bioretention facilities, bioswales, and planters. The annual maintenance requires treatments such as mowing, pruning, trash removal, fence repairs and other tasks to ensure storm water flows are managed and treated as part of the District's MS4 permit. These maintenance activities produce large quantities of sticks, branches, wood waste, leaves and other organic material which is stored at Forest Grove for further processing. Currently, most of the materials generated from the WQF maintenance are chipped using a rented tub grinder prior to landfilling.

Leaf Disposal Program: CWS runs a leaf disposal collection program, where residents are encouraged to bring fallen leaves and yard debris to designated drop-off sites throughout the service area. Drop offs are allowed on 6 dates throughout the fall season. These materials, which primarily consist of leaves and organic yard waste, have been historically brought to West Union Gardens for mulching and disposal by the private agricultural landowner, for a fee. The agreement with West Union will expire within the year, offering CWS the opportunity to consider alternative solutions.

Currently, these materials are primarily collected and disposed of through traditional disposal methods and often end up in landfills. However, these materials, particularly the organic content, have the potential to be repurposed, offering an opportunity for greater environmental and economic benefits.

Where is this material ending up? What are the impacts?

COST IMPACTS

To better understand the scope and costs associated with organic material disposal, District staff were consulted to provide estimated quantities and current cost data for each of the primary collection sources, including street sweepings, water quality facility maintenance materials, and leaf litter. The weight of these materials was estimated based on their specific characteristics, using a cubic yard (CY) to ton conversion based on material, to help calculate disposal costs.

CWS currently disposes of organic materials at various locations in the region, including:

- Hillsboro Landfill
- Recology Organics
- Private agricultural landowners (West Union Gardens)
- Wasco County Landfill

The disposal process for these materials involves several key operational steps that incur direct and indirect costs. These include staffing time for material collection and transport, trucking fees for transportation, covering fuel, maintenance, and wear-and-tear, all in addition to tipping fees at the disposal facility.

ESTIMATED ANNUAL COSTS OF CURRENT DISPOSAL METHODS

	Street Sweepings[1]	Water Quality Facility Maintenance Material	Leaf Disposal Program	Total
CY	750	1000	3000	**4750**
Tons[2]	190	218	761	**1169**
Number of Trucks[3]	75	100	300	475
Disposal Cost	$19,021	$6,539	$39,000	**$64,560**
Staffing Cost[4]	$16,800	$22,400	$67,200	**$106,400**
Truck Cost[5]	$1,035	$2,760	$4,968	**$8,763**
Annual Cost	$36,856	$31,699	$111,168	**$179,730**

= 10 Trucks

[1] *Quantity Shown does not include ~65% fines quantified in the BUD and ~5% trash*
[2] *Weight was estimated dependent on material to a CY to ton conversion to help estimate costs for landfill tipping fees*
[3] *Dump Trucks assumed to carry 10 CY*
[4] *Assumes 2 workers, needing 4 hours, with a $28/hr wage*
[5] *Assumes $1.38 per mile traveled from storage facility to disposal site*

FUTURE STATE

This section explores the process and benefits of composting, potential uses for composted materials, necessary permitting considerations, and a summary of associated costs, in order to clarify how composting represents a forward-thinking, sustainable waste management strategy for CWS.

What is composting?

Composting is the natural process of breaking down organic materials, such as yard waste, wood waste, food scraps, and other biodegradable substances, into nutrient-rich soil amendments. This process is facilitated by microorganisms, such as bacteria, fungi, and other decomposers, that transform the organic matter into a nutrient-rich product to improve soil quality and support plant growth. The composting process relies on two primary categories of organic materials: green materials and brown materials.

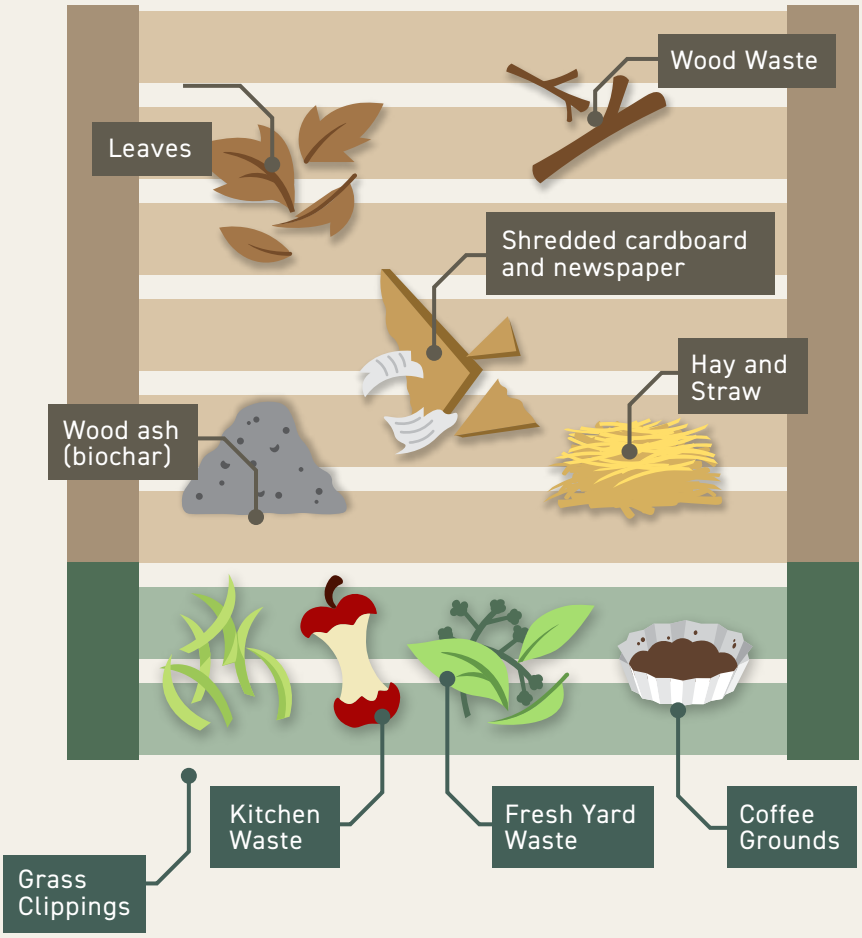
Green Material is nitrogen-rich materials that are essential for providing microorganisms in the compost with the nutrients they need to thrive and break down organic matter. Green materials promote active microbial activity, which speeds up the decomposition process. Common green materials include:

- Fresh grass clippings
- Kitchen waste
- Fresh yard waste (e.g., green leaves, weeds, and plant trimmings)
- Coffee grounds

Brown Material is carbon-rich materials that make up most of the volume of the compost pile and provides energy to the microbes. Brown materials tend to be dry and fibrous which helps to aerate the compost, which is crucial for allowing oxygen to reach the microorganisms responsible for decomposition. Examples of brown materials include:

- Leaves
- Wood waste - chips, twigs, and sawdust
- Shredded cardboard and newspaper
- Wood ash (biochar)
- Straw and hay

MAKEUP OF COMPOST



CARBON SOURCES (3/4)
BROWN MATERIAL

NITROGEN SOURCES (1/4)
GREEN MATERIAL

A well-balanced compost pile typically requires a ratio of about 3-parts brown materials to 1-part green materials.

This balance ensures that there is enough carbon to support microorganisms, as well as sufficient nitrogen to fuel their growth. Properly mixing the green and brown materials also promotes airflow within the pile, which is crucial for aerobic decomposition while also helping prevent unpleasant odors. By combining green and brown materials in the right proportions, you can create an effective system that breaks down organic waste into nutrient-rich compost that can improve soil health and contribute to sustainable agriculture. The District has a consistent supply of brown material that can be stockpiled for use in this process and will need to reach out to local business or other stakeholders to identify needed.

BENEFITS OF COMPOSTING

- **Commitment to Resource Recovery.** It supports the broader goals of sustainability by turning what was once considered waste into a valuable product that benefits local ecosystems and communities. By recycling organic materials, composting helps save valuable landfill space, extending the lifespan of these facilities and reducing the need for new landfill sites.
- **Less to Landfills.** Diverting material to composting helps lessen both the amount of waste that ends up in landfills and the associated methane production. As organic materials break down anaerobically in landfills, they generate methane, a potent greenhouse gas that directly contributes to climate change.
- **Fostering Community.** Composting opens opportunities to build connections and relationships with the local community. By partnering with service area residents, local businesses, and other organizations to collect waste material for composting, CWS can foster stronger ties within the community which is helpful for continued growth of district operations. CWS can offer the finished product to local farmers, landscapers, or residents, either for free or for sale, or a combination based on consumer scale. This creates a circular economy where both waste is reduced, valuable products are returned to the community, all while promoting local sustainability and economic growth.
- **Revenue and Cost Savings.** Initiating a composting program offers an opportunity for revenue generation by selling finished compost to residents or other local entities, including landscapers, nurseries, agricultural producers, and nearby government agencies. This would create a revenue stream while supporting sustainable practices within the local community. Additionally, it could reduce reliance on external purchasing of material for District projects enhancing both the economic and environmental sustainability of the District's operations.

PERMITTING AND REGULATORY COMPLIANCE

Beneficial Use Determination for Street Sweeping Material

CWS has a BUD for street sweeping fines authorized by DEQ. This approval allows for the land application in specific, pre-approved uses. Street sweepings are more tightly regulated for land applications due to the potential for contaminants present in road debris, such as metals, chemicals, and other pollutants. This makes the material more challenging to use in certain applications without additional testing and approvals.

CURRENTLY APPROVED

The currently approved BUD includes the following non-residential applications for street sweeping fines:

- Non-residential common construction fill including use in general construction fill and utility trenches
- Non-residential landscaping fill including roads, medians, shoulders, and vegetated areas along parking strips.

FUTURE POSSIBILITY

With further contaminant testing and coordination with the ODEQ, there is potential to expand the approved uses for street sweeping material. These additional uses could include:

- Non-food Crop Agricultural Land Application
- Soil Mixes for Non-residential Bioretention, Stormwater Facilities, and Green Stormwater Infrastructure (GSI)

By expanding the uses for street sweeping materials, CWS can reduce the need to purchase external materials for projects, such as road fill, landscaping, erosion control, and stormwater management.

COMPOSTING FACILITY PERMIT FOR WQMM AND LEAF COLLECTION MATERIAL

CWS would need to acquire a Composting Facility Permit through DEQ to operate a facility large enough to utilize all source material collected currently, which totals approximately 4,750 CY annually. This permit allows for the operation of a composting facility with over 100 tons of feedstock and the ability to sell or distribute compost to agricultural operations or other consumers while ensuring safe, environmentally responsible, and regulatory compliant operations. The permit requirements specifically outline performance standards such as::

- Proper management of stormwater, process water, leachate and liquid digestate to prevent pollution and groundwater contamination
- Odor minimization to mitigate impact on nearby residents
- Prevention of vector propagation by eliminating conditions that attract flies, rodents, and other pests
- Standards for pathogen testing and reduction to protect public health and the environment

The practice of using service area source material to process organic waste into valuable products is not new. Several cities across Oregon have successfully implemented similar programs utilizing a Compost Facility Permit. For example:

- **City of Portland & PBOT** - Portland's Sutherland Yard Recycling Facility has a program that processes organic materials, including yard waste and leaf collection into compost which is then sold to consumers for $24/cubic yard.
- **City of Albany, OR** - The City of Albany operates a composting program that processes yard waste, including leaves, yard waste, and biosolids into compost. This compost is then used for city projects or sold back to residents.

These examples demonstrate the viability of composting organic materials under a composting facility permit, offering a model for CWS to further develop its own program. CWS can build upon established knowledge and best practices of other agencies as well as private composting facilities in the region, ensuring that its composting program is both efficient and aligned with state regulations and requirements.

Aspirational Vision

As CWS continues to innovate in resource recovery, long-term ambitions for expanding the composting program could be further enhanced by integration of biochar and biosolids into the composting process..

BIOSOLIDS

Biosolids are nutrient-rich organic materials that are a by-product of the wastewater treatment process. These materials contain essential plant nutrients like nitrogen, phosphorus, and potassium, making them valuable in composting processes. CWS currently produces Class B biosolids at the Durham and Rock Creek facilities; if treated and stabilized to meet Class A regulatory standards, biosolids can be safely incorporated into compost to enhance nutrient content and be eligible for more land applications with fewer restrictions, including direct application to crops.

In Oregon, cities like Albany have successfully integrated Class A biosolids into their composting programs, using a combination of yard debris and biosolids to create a high-quality product for local wholesale. The biosolids are consistently managed to ensure they meet safety and environmental standards, with regular testing to comply with regulatory requirements. This approach not only helps manage biosolid waste but also produces a valuable soil amendment that benefits local agriculture and landscaping.

BIOCHAR

Biochar is a form of charcoal that is produced by heating organic material in a low-oxygen environment in a process known as pyrolysis. Biochar can be added to a compost mix to enhance the quality and effectiveness of the final product by improving soil aeration, water retention, and increase in microbial activity.

Biochar could provide a valuable solution for managing both current sources of wood waste as well as increasing wood waste generated through proactive management of invasive species growth, specifically related to the Emerald Ash Borer (EAB), which threatens Oregon's ash tree population. As the pest spreads, large amounts of wood waste will result from tree removals and pruning efforts. Many partner agencies, cities, and communities plan to engage in tree removal or mitigation pruning efforts ahead of the insect's local population expansion. For example, the City of Beaverton's most recent inventory shows it has over 2,057 ash trees in public spaces. If each of these trees is more than 12" in diameter, that equates to roughly 885 tons of wood waste that is potentially convertible to biochar. With many ash trees throughout Washington County, wood waste disposal will become challenging and costly, with landfills possibly reluctant to accept the material.

Using pyrolysis equipment such as Air Curtin Incinerators, Ring of Fire Kilns, or Carbonators, infested wood waste can be converted into biochar. Owning and operating biochar equipment comes with additional costs and regulatory approvals surrounding air quality testing that would need to be considered.

PILOT PROPOSAL

We propose to convene an interdepartmental and interdisciplinary team to develop a means of combining street sweepings, WQF maintenance materials, and leaf litter debris, as well as additional "green" material" obtained through local businesses or partners, into products with the aim of reducing District operating costs while creating a beneficial soil health amendment. This pilot project would help validate a proof of concept for a larger scale compost facility implemented either on existing district owned land or purchased land. There are currently two large clarifier projects within the WRRFs that can accept the finished compost for further trials, monitoring, and soil benefit.

With a source material quantity below 100 tons, or approximately 450 CY (335 CY brown material vs. 115 CY green material), a composting facility permit is not needed for this pilot phase project and can be internally managed with some additional resources listed below. The District currently has a sufficient quantity of feedstock material from the collected sources described in this document to implement a pilot program at the Forest Grove WRRF.

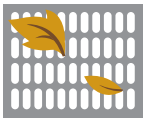
REQUESTED RESOURCES

To effectively implement this pilot, the following resources will be required:

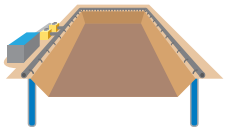
- **Covered Concrete Pad:** (approximately 125' x 100' overall site): A designated area for sorting and processing materials. The cover will help protect the materials from adverse weather and ensure consistent processing.

- **Sorting Bays:** Several individual bays for sorting sourced materials, including separating green materials and screening for trash.

- **Front-End Loader and Operator:** A front-end loader will be needed for transporting large quantities of material within the composting area, aiding in the movement of source materials and finished compost. This machine can also be used for initial mixing, turning, and aeration of the compost pile.



- **Screening System and Operator:** To remove larger debris and ensure the final compost product is of appropriate size and consistency.



- **Dewatering Collection System:** This will help manage moisture levels in the composting process, ensuring optimal conditions for microbial activity and minimizing leachate runoff.

- **Process Monitoring System:** The ability to routinely monitor important parameters such as temperature, moisture, oxygen, and carbon dioxide, will support development of a consistently high quality product by giving operators real-time performance data.

SCHEDULE

With enough currently stockpiled source material and approaching end of winter, we propose to capitalize on the spring and summer 2025 season to initiate this pilot study. A compost pile of this size can take approximately 4 to 6 months to mature and be ready for end use. For the purposes of planning and costs summarized below, a 6-month overall timeline was used.

SPRING 2025

Gathering of resources, allocating internal resources towards development, and designating final space for pilot study

JUNE 2025

Sort material and pile

JUNE–SEPT 2025

Perform intermittent monitoring, maintenance, and turning of compost pile, tracking nutrient development, potential contaminant concentrations, and tracking nutrient development and contaminant concentrations

OCT 2025

Application of composted material on district owned property for landscaping purposes.

COST

The total cost for initiating this pilot composting program is estimated to be $62,900. This includes the resources, equipment, and labor required for the successful startup and operation of the project, as outlined below:

Description	Quantity	Unit	Unit Cost	Total Cost
Site Clearing & Preparation	12,500	SF	$2	$25,000
Equipment				
Dewatering System	1	LS	$5,000	$5,000
Temperature and Moisture Probes	1	LS	$1,200	$1,200
Labor & Management				
Initial Transport & Piling	32	hr	$28	$896
Pile Turning (Twice Monthly)	96	hr	$28	$2,688
Temperature, pH & Moisture Monitoring (Twice Monthly)	48	hr	$28	$1,344
Office Staff Status Reports	84	hr	$30	$2,520
Sample Testing (Once Monthly)				
Collection	24	hr	$28	$672
Lab Analysis	6	each	$1,500	$9,000
			30% Contingency	$14,496
			Total	**$62,900**

The District can reduce overall costs by utilizing existing assets for this pilot program. In particular:

- **Available Land:** The Forest Grove WRRF has suitable land that can be used for the composting process, eliminating the need for purchasing new land.
- **Existing Equipment:** The District already possesses some of the necessary equipment, such as front-end loaders, trucks, and monitoring equipment, which can be used for the pilot phase, minimizing leasing and purchase expenses.
- **Labor and Expertise:** The District has internal staff with the necessary expertise in operating machinery, managing waste, and monitoring, meaning external contractors or additional staffing may not be necessary for the pilot phase.

GOALS

This pilot aims to achieve the following and report back after pilot completion with direction on how to potentially bring this pilot to scale:

- **Analyze the Breakdown of District-Sourced Materials** by observing and reporting the decomposition rate, microbial activity, and the overall effectiveness of these materials as compost feedstock.
- **Monitor Contaminant Levels** in the incoming feedstock and track how they break down or persist in the compost, ensuring the final product is safe and beneficial for soil and plant health.
- **Increase Community Engagement and Education** with local businesses, residents, and stakeholders to promote sustainable waste management practices and explore opportunities for collaboration or material sourcing.

INVOLVEMENT

For the successful startup and continued operation of a compost program, both internal and external collaboration will be essential. Clear and coordinated communication across departments and with external stakeholders will ensure that everyone involved understands the program's goals and their role in making it successful.

Internal

Regulatory Affair Department (RAD)
Permitting assistance and navigating regulatory hurdles

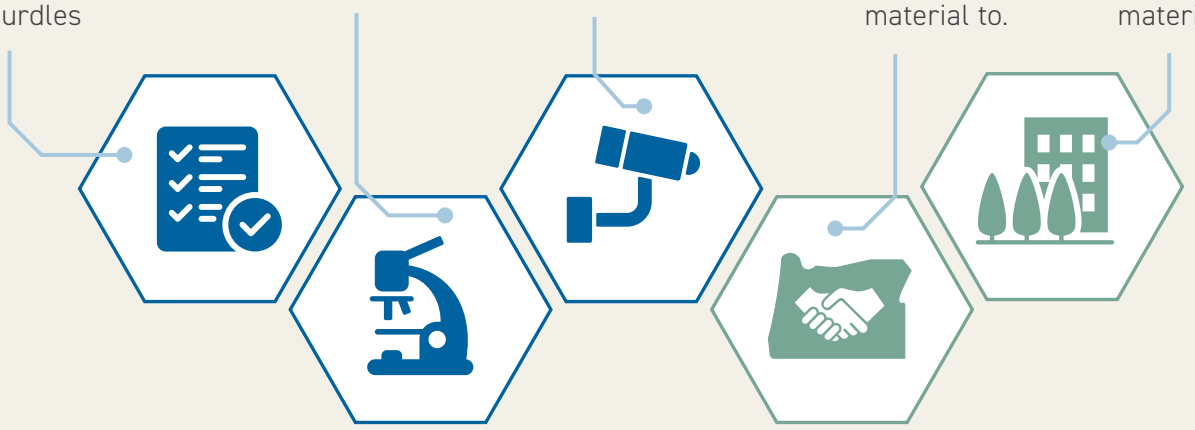
Research & Innovation Department (R&I)
Assistance with materials testing for various contaminants

Natural Systems Enhancement & Stewardship Department (NSES)
Natural area monitoring assistance

External

Nearby Partner Cities and Agencies for partnerships to source and potentially use or sell material to.

Local Businesses and other potential stakeholders for sourcing green material.



SUMMARY

CWS currently prioritizes resource recovery in many other aspects of operations. The composting process not only aligns with CWS's environmental and sustainability goals but also supports the organization's broader mission of protecting water quality and enhancing the region's natural resources. Through composting, CWS can reduce waste to landfill, decrease greenhouse gas emissions, and create valuable resources that support local communities and ecosystems.

Prepared by: Jared Kinnear
John Richard Goetz III
Gabe Sohler
Bryan Thistle
Tyler Ochoa

with support from

Clean Water Services Advisory Commission Meeting Summary

Date: September 10, 2025

Location: CWS Administrative Building Complex and on Zoom

CWAC MEMBERS PRESENT

- Terry Song (District 3/Snider), CWAC chair
- Glenn Fee (Environment 2), CWAC vice chair
- Andy Haugen (District 4/Willey)
- Ashley Farrell (Business 1) – remote
- Elaine Stewart (Environment 1) - remote
- Marc Farrar (Builder/Developer 1)
- Matt Wellner (Builder/Developer 2)
- Nisha George (At-Large District/Harrington)
- Rebecca Shell Kanarek (District 1/Fai)
- Stu Peterson (Business 2)

CWAC MEMBERS ABSENT

- Alan Jesse (Agriculture 2)
- George Marsh (Agriculture 1)
- Ramesh Krishnamurthy (District 2/Treece)
- Sherilyn Lombos (Cities/nonvoting)
- Rick Shanley (CWS/nonvoting)

MEMBERS OF THE PUBLIC

- Dale Feik, Chair of Washington County Citizen Action Network

CWS STAFF

- Elizabeth Edwards, Chief of Staff
- Tracy Rainey, Government Relations Manager
- Perry Sunderland, Water Engineering & Technology Interim Director
- Karen Bill, Treatment Plant Services Engineering Division Manager
- Karen Chichetu, Laboratory Manager
- Kathy Leader, Chief Financial Officer
- Joe Gall, Chief Utility Relations Officer - remote
- Shannon Huggins, Public Involvement Coordinator
- Jody Newcomer, Technical Editor
- Katie Cheney, Executive Assistant
- Josh Bernier, Senior Information Technology Technician

1. CALL TO ORDER

The meeting was called to order at 6:32 p.m.

2. WELCOME AND INTRODUCTIONS ..... 00:00 on recording

3. 2025 STATE LEGISLATIVE SESSION RECAP ..... 02:59 on recording

The 2025 state legislative session adjourned on June 27. CWS staff updated CWAC on session highlights and outcomes relevant to Clean Water Services.

- Tracy Rainey, Government Relations Manager

Issues Discussed

- Personal income tax as a source of funding.
- Details of the federal funds we're receiving or not receiving, such as health care, including Medicaid, and taxable income.
- Requirement for state and local governments to balance budget.
- Middle housing and permits.
- Senate Bill 974 and timeline for engineering review

4. BUILDINGS UPDATE: RIPL, CENTRAL, AND SPRINGER ..... 36:53 on recording

CWS developed an occupied building plan to improve resiliency, accommodate long-term staffing needs, and meet regulatory compliance requirements. Staff provided an update on the phased construction of RIPL and CWS Central, and a design update on the Springer facility.

- Perry Sunderland, Water & Engineering Technology Interim Director
- Karen Bill, Treatment Plant Services Engineering Division Manager
- Karen Chichetu, Laboratory Manager

Issues Discussed

- Construction scope, budget, purpose for RIPL.
- Modular design at RIPL so it can be modified in the future.
- Lab work to meet regulatory requirements.
- Future of ABC.
- Layout of CWS Central, including permit counter.
- Springer being built to Class 4 seismic design.
- Where are the people who will be based at Springer working now?
- Lifespan and maintenance plans for buildings.
- Sustainability considerations, such as conservation, energy conservation, use of native plant landscaping, onsite stormwater capture, in building plans.
- Modeling stormwater features that can be used at other businesses.
- Other new operations facilities in the region.
- Role of CWAC in building projects.

5. PLAN TO RESTORE PUBLIC TRUST ..... 01:22:39 on recording

On April 8, 2025, the CWS Board of Directors adopted a Resolution and Order (CWS RO 25-5) directing Clean Water Services to audit spending, review policies, conduct a domicile review of Clean Water Insurance Company, restrict executive management team expenditures, and provide training. This presentation is an update on the actions taken to implement CWS RO 25-5.

- Elizabeth Edwards, Chief of Staff

Issues Discussed

- Access to purchasing cards.
- CWAC members on budget committee emphasized customer assistance program to Board.
- Board involvement and oversight.
- Learnings to incorporate into stakeholder or community engagement?
- Effect on organization morale.
- Travel to competitions.
- Effect on retention and recruitment.
- How did CWS own the problem, accept responsibility, and acknowledge the problem.
  - Our Commitment to You - Clean Water Services

6. INVITATION FOR PUBLIC COMMENT..... 1:48:48 on recording

- Dale Feik commented on Tracy Rainey's presentation on Scoggins Dam to the Board at the Sept. 9 work session, local emergency response, and the book "On Tyranny."

7. ANNOUNCEMENTS, QUESTIONS, COMMENTS..... 1:51:49 on recording

- The next CWAC meeting is scheduled for October 8 at Central.
- George Marsh and Matt Wellner will be stepping down from CWAC at the end of the month. Matt encouraged CWS to continue to find ways to incorporate the expertise of CWAC members.

8. MEETING ADJOURNED at 8:25 pm