

AGENDA

CLALLAM COUNTY SOLID WASTE ADVISORY COMMITTEE

Clallam County Courthouse, Room 160
223 East 4th St Port Angeles, WA
January 22, 2025 – 3:00 p.m.

****ATTENTION****

Clallam County Solid Waste Advisory Committee meetings will also be available virtually at:

If you would like to participate in the meeting via Zoom video conference, visit <https://zoom.us/join> and use

Meeting ID: 847-6222-6562 and Passcode: 12345

This meeting can be viewed on a live stream at this link: <https://clallamcowa.portal.civicclerk.com/>

Public comment and questions can be directed to County Public Works at 360-417-2441,
ron.garcelon@clallamcountywa.gov

A. WELCOME/CALL TO ORDER/ROLL CALL

B. REQUEST OF MODIFICATIONS/ADDITIONS TO AGENDA

C. APPROVAL OF PREVIOUS MEETING MINUTES: Sept 25, 2024

D. REPORTS AND PRESENTATIONS

- Clallam County
- City of Port Angeles
- City of Sequim
- Other Members or Stakeholders

E. CONTINUING MATTERS

1. Clallam County Solid Waste Management Plan
 - Discuss Chapter 9 (Miscellaneous Solid Wastes) Recommendations.

Link to Solid Waste Management Plan:

<https://www.clallamcountywa.gov/documentcenter/view/5449/comprehensive-solid-waste-management-plan-update-pdf?bidid=>

F. NEW BUSINESS ITEMS

- SWAC MEMBERSHIP, APPOINTMENT TERMS, VACANCIES ETC.
- LEGISLATIVE UPDATE HANDOUTS - WACSWM
- TOPICS OF INTEREST IN 2025 – GENERAL DISCUSSION

G. NEXT-MEETING/FUTURE AGENDA ITEMS DISCUSSION – Confirm next meeting date and targeted discussion items.

Currently Scheduled SWAC regular meetings (subject to change):

3/26/25	3pm – 4:30pm
5/28/25	3pm – 4:30pm
7/23/25	3pm – 4:30pm
9/24/25	3pm – 4:30pm
10/22/25	3pm – 4:30pm (BOCC Conference room not available)

H. PUBLIC COMMENT – Limit comments to 3 minutes each

I. ADJOURNMENT

Clallam County Solid Waste Advisory Committee (SWAC)
DRAFT Sept 25, 2024 Meeting Minutes

Abbreviations:

City of Port Angeles (CoPA); City of Sequim (CoS), Clallam County: ClaCo; Environmental Health (EH) City of Forks (CoF); Waste Connections (WC) , Ecology (ECY), Jamestown S’Klallam Tribe (JSKT) Solid Waste Management Plan (SWMP)

A. ROLL CALL:

Members:

Meggan Uecker, CoS alt
Brian Tate, Waste Connections(3:33)
Deacon Johnston, Makah
Steve Johnson, Business Community
Latrishia Suggs, CoPA

Staff/Interested Parties:

Eli Owens, ClaCo EH
Ron G., ClaCo Utility Program Manager
Benji Astrachan, WSU Extension
Lacy Kooiman, ECY
Blake Nelson, ECY
Mike Healy, CoPA
FaLeana Welch, Public (3:40)
Gavin Wuttken, Around Again
James, Public
Lauren Breynaert, MYNO Carbon

B. REQUEST FOR MODIFICATIONS TO AGENDA:

NONE

C. APPROVAL OF MINUTES:

July Minutes approved with correction to Lazy J Tree Farm tonnage. Motion passed unanimously.

D. REPORTS AND PRESENTATIONS: Meeting and presentation audio can be accessed here:

<https://clallamcowa.portal.civicclerk.com/event/754/media>

1. MYNO Carbon
 - presentation slide show available on county website (attached to Minutes)
2. Around Again
3. Clallam County
 - Household Hazardous Waste Event in Forks, WA
 - 72 vehicles
 - Act Environmental was contractor
4. City of Port Angeles
 - Looking into glass recycling alternatives
 - New Public Works Director: Scott Curtain
5. Lazy J Farms
 - They are accepting yard waste again. Grinder has been repaired
6. City of Sequim
 - Exploring e-waste recycling options and battery fire hazard issues

F. CONTINUING MATTERS

1. Clallam County Solid Waste Management Plan
 - Discuss Chapter 9 (Miscellaneous Solid Wastes) Recommendations
~ *Tabled until next meeting* ~
2. Follow-up on Organics Discussion:
 - Question about Chapter 8, recommendations O1): “10% reduction” appears to refer to reduction of organic waste by 10% by weight. Based on data from 2015-2016 WA

Statewide waste characterization study appears to indicate this reduction goal to be approximately 1100 tons.

G. NEW BUSINESS ITEMS

Next meeting - January 22, 2025 @ 3pm

New items for discussion at next meeting - 2025 Legislative updates

I. PUBLIC COMMENT –

- Steve Johnson (member) commented that he would like us to have a presentation on Waste-to-Energy during a future SWAC meeting.

J. ADJOURNMENT: 4:38 pm



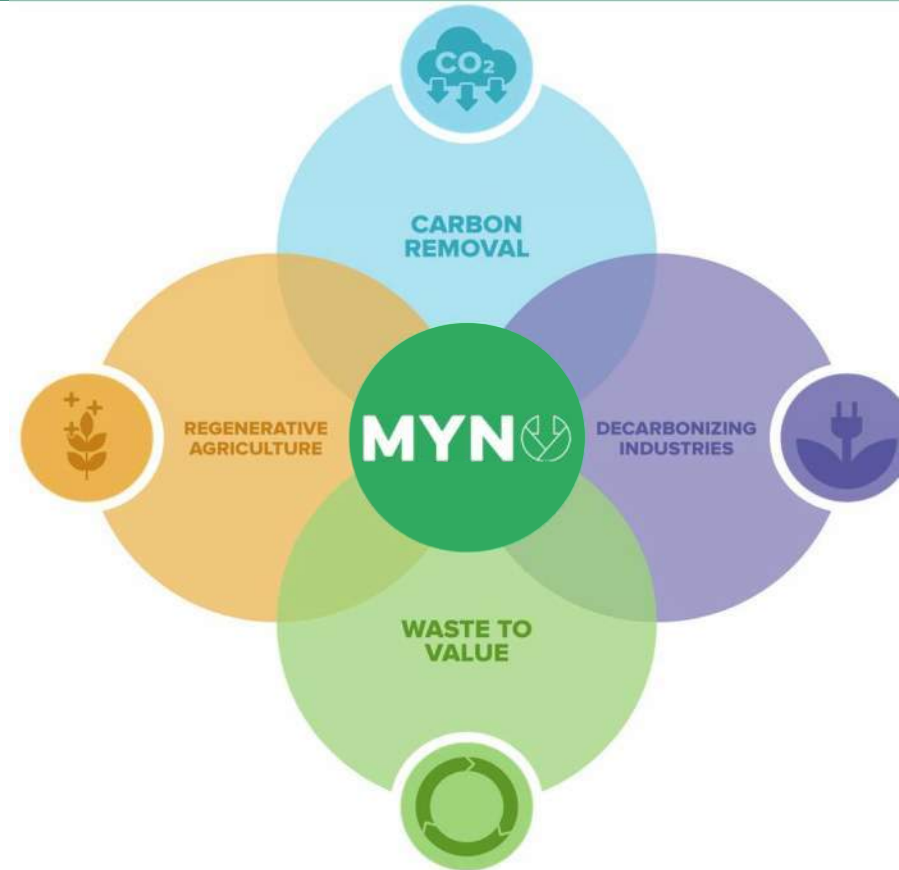
**Clallam County Solid Waste Advisory
Committee (SWAC)**

Lauren Breynaert, Myno Carbon

Our Approach

Biochar Carbon Removal Facilities (CRFs) remove carbon by converting sustainably sourced biomass into biochar and carbon-negative renewable baseload electricity.

- Source sustainable feedstock to support forest health.
- Produce biochar to support regenerative agriculture and ecological remediation.
- Remove and sequester carbon.
- Generate renewable baseload power helping decarbonize the grid.



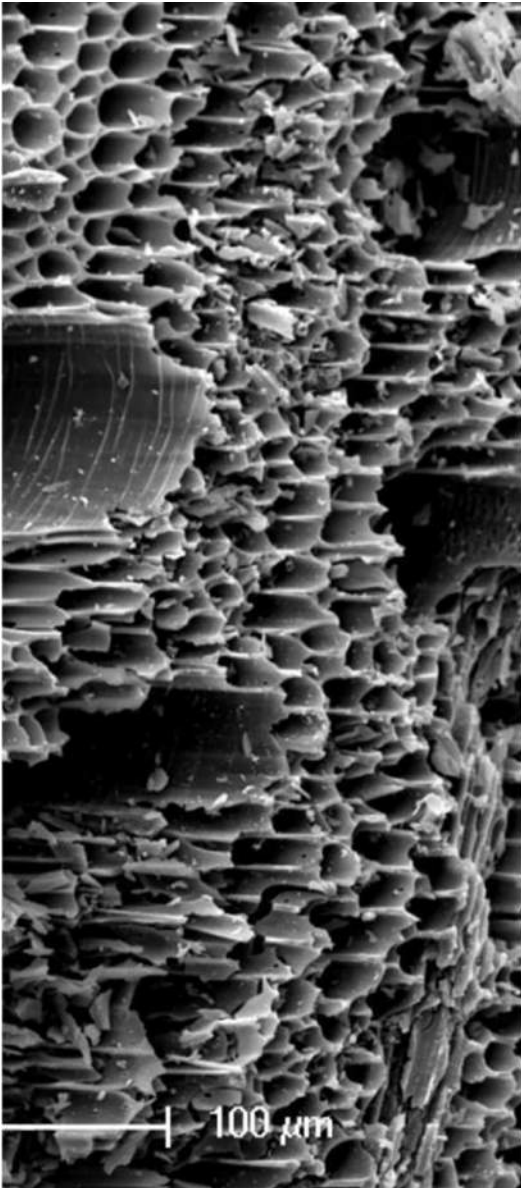
Achieving Carbon Removal with Biochar

Biochar is a highly porous stable carbon produced when waste biomass is heated in a low-oxygen environment in a process called pyrolysis.

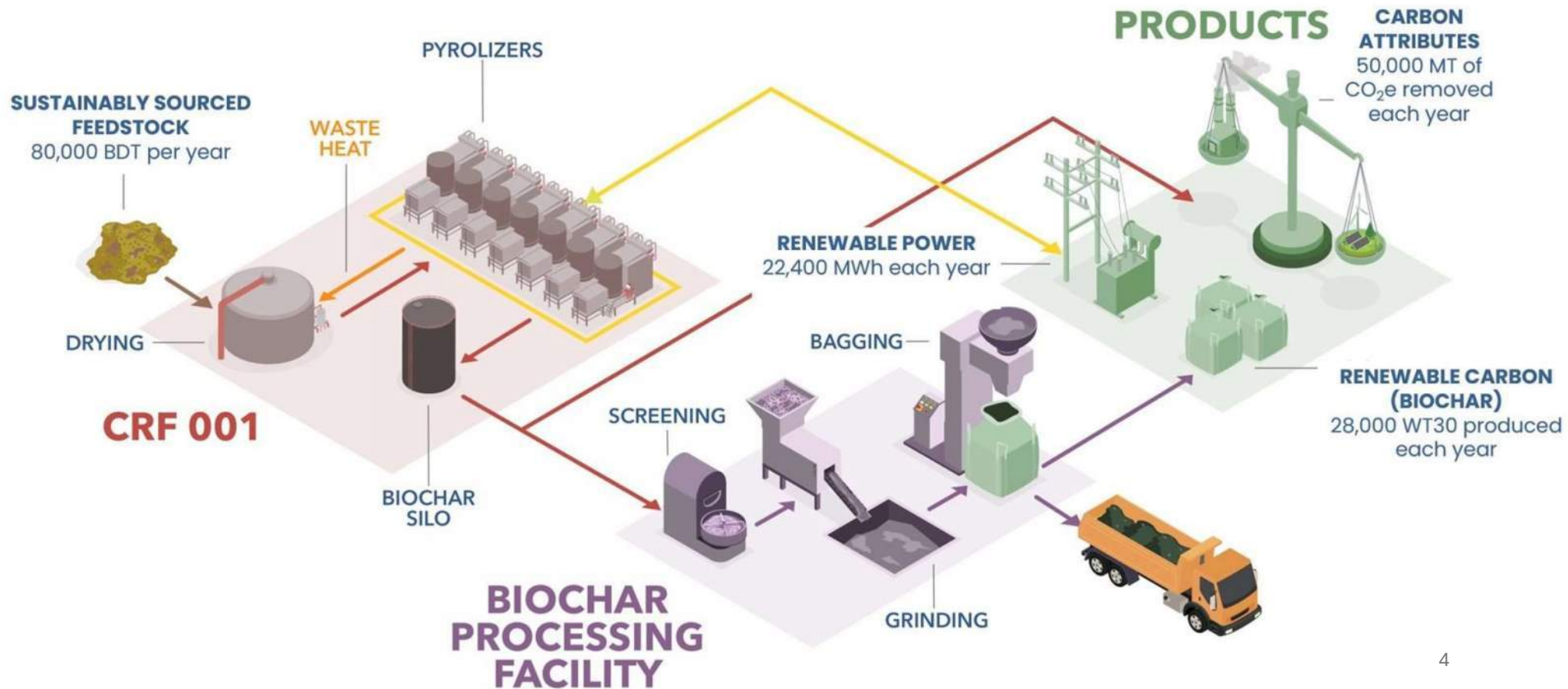
Biochar's porosity gives it extraordinary amounts of surface area, making biochar highly adsorbent and resistant to decomposition.

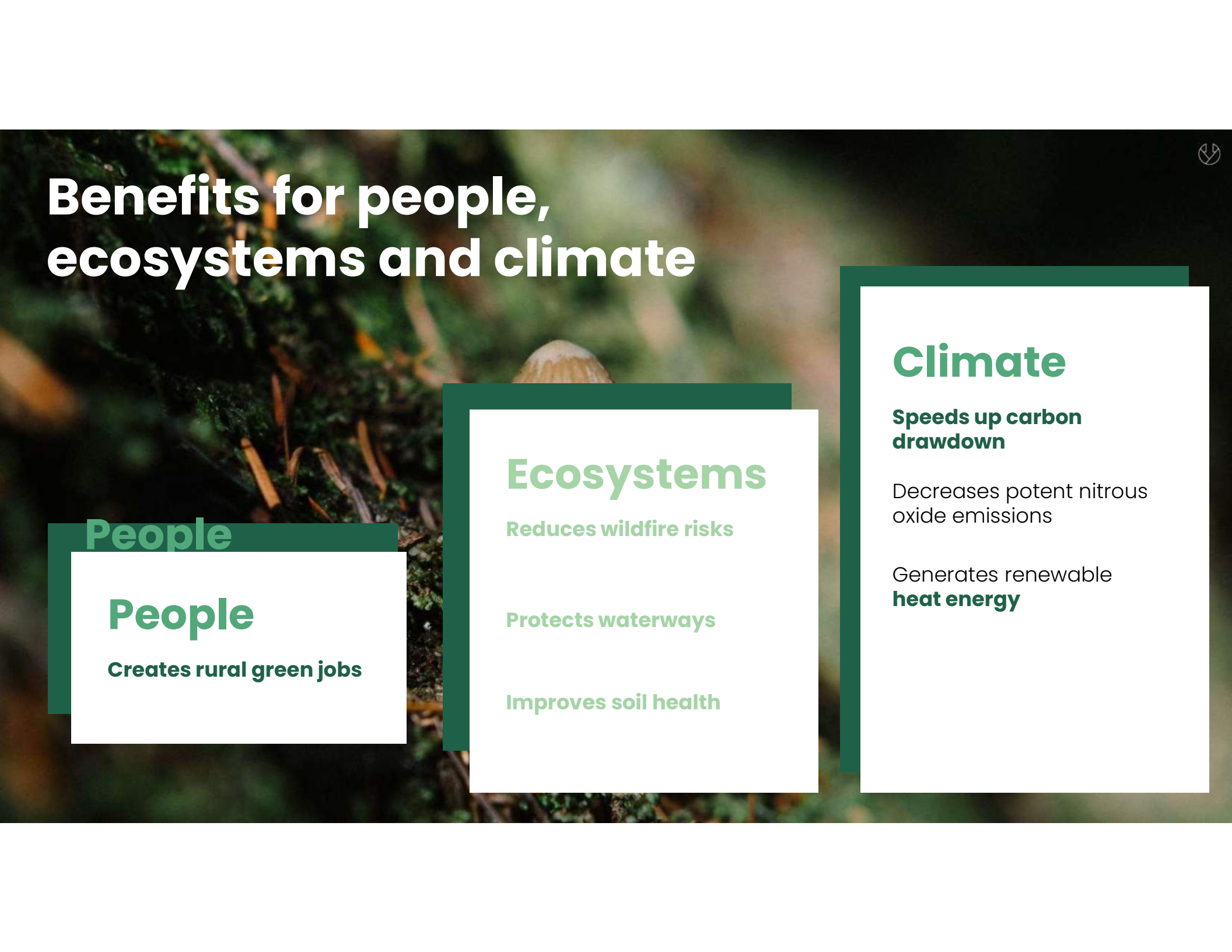
Biochar is recognized by the IPCC one of the best methods for removing significant amounts of CO₂ from the atmosphere by 2050.

By converting organic waste into biochar, it is possible to achieve negative emissions while decarbonizing key markets.



Port Angeles Carbon Removal Facility



A close-up photograph of a forest floor, showing moss, small mushrooms, and fallen pine needles. The image is slightly blurred, creating a sense of depth.

Benefits for people, ecosystems and climate

People

People

Creates rural green jobs

Ecosystems

Reduces wildfire risks

Protects waterways

Improves soil health

Climate

**Speeds up carbon
drawdown**

Decreases potent nitrous
oxide emissions

Generates renewable
heat energy

Biochar Market Segments



- Remediation adsorption material
- Stormwater water filtration media
- Agricultural and fertilizer amendment
- Compost and potting media soil amendment
- Concrete additive
- Animal feed amendment

Three Initial Myno Biochar Products

Bulk Granular Biochar



Size: ~1 – 4 mm
Moisture Content: ~30%

Markets: Solid Fertilizers, Animal Feed, Compost, Green Infrastructure

Liquified Nanoscale Carbon Boost (NCB)



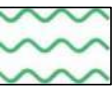
Size: D50 = ~100 nanometers
Moisture Content: Colloidal Suspension
Markets: Liquid Fertilizers, Remediation

Bulk Micronized Biochar



Size: <177 microns
Moisture Content: ~3%

Markets: Remediation, Concrete, Asphalt



Benefits of Biochar for Soil Health



Increased nutrient & water retention



Improved plant growth & yield



Improved soil structure



Enhanced water filtration & pollutant removal



Permanent carbon removal



Biochar-Amended Compost

BAC provides numerous advantages over traditional compost, including:

- Increased nutrient and water retention.
- Improved compost structure, reducing compaction.
- Enhanced germination capacity to increase plant growth.
- Reduced odor.
- Biochar's high surface area and porosity helps retain nutrients such as nitrates within the compost, enhancing nutrient availability for plants over longer periods of time, to support plant growth.
- Increased filtration capabilities for pollution contamination removal.

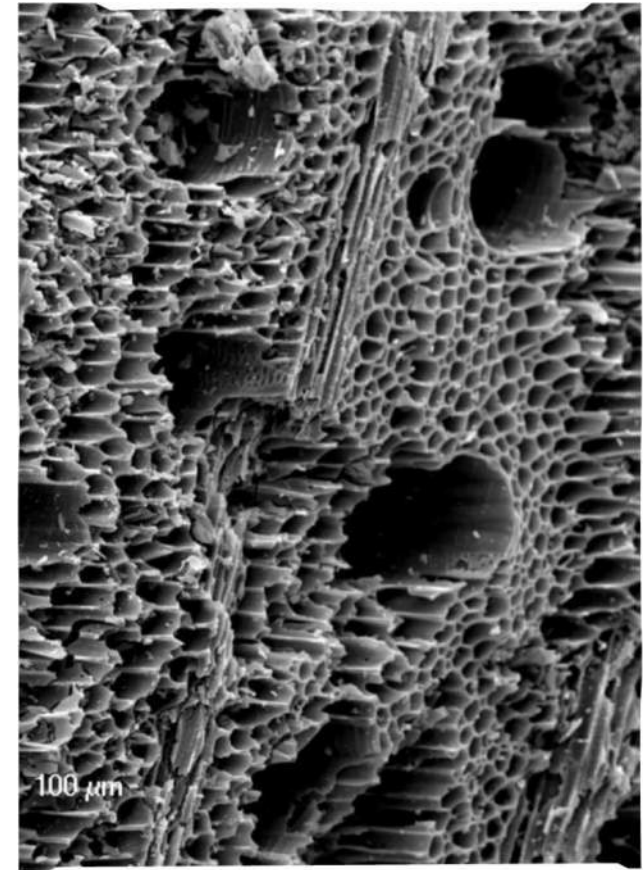


BRADY

Biochar: Swiss-Army Knife for Contaminant Removal

Biochar can effectively remove and reduce contaminants including:

- Metals: Lead, copper, chromium, cadmium, zinc, cobalt & nickel
- Emerging Contaminants: PFAS
- Organic compounds
 - Gasoline, diesel
 - polychlorinated biphenyls (PCB), and polycyclic aromatic hydrocarbons (PAH)
 - Total dissolved organics
 - Herbicides and pesticides
- Totals suspended solids (TSS)
- Nutrients such as phosphorus and ammonia
- Antibiotics and pharmaceuticals



Slide 10

- LB0** maybe we can add an asterixis that we have research paper to back this up **
Lauren Breynaert, 2024-09-05T20:53:08.653
- AC0 0** [@Lauren Breynaert] don't we have research for all of these?
Amy Campbell, 2024-09-10T17:17:21.309
- LB0 1** yes
https://mynocarbon.sharepoint.com/:x:/r/sites/PortAngeles2/_layouts/15/Doc.aspx?sourcedoc=%7Baf487de1-daf
Lauren Breynaert, 2024-09-10T18:55:44.181
- AC1** We should include a slide for each contaminants
Amy Campbell, 2024-09-10T17:30:30.329
- LB1 0** There is not a lot of great data for each of these, but we could try
Lauren Breynaert, 2024-09-10T18:55:58.791

Biochar-Amended Concrete

Early studies indicate adding roughly 2-percent by weight of biochar, to cement, increases the strength of the cement with no loss in ductility.

Biochar reduces the carbon intensity score of concrete, reducing overall GHG emissions.

Myno completed a trial with Angeles Concrete to develop biochar-amended concrete product.



Myno's Mission

Myno's mission is to profitably remove as much carbon as we can, as fast as possible, at scale. We are focused on building Carbon Removal Facilities (CRFs) that convert waste biomass into biochar and renewable energy to sequester carbon and help decarbonize the economy.

Myno CRFs reduce emissions, permanently remove carbon, and support environmental restoration and regenerative agriculture, while mitigating the impacts of climate change.

Myno's 2030 Annual Impact Goals:

150,000

tons renewable carbon
material (biochar/yr)

375,000

metric tonnes CO₂e
removed/yr

750,000

metric tonnes of CO₂e
avoided/yr

500,000

MMBTU of renewable
energy/yr

Slide 12

LB0 do we need profitably here?

Lauren Breynaert, 2024-09-05T21:01:39.389

AC0 0 [@Lauren Breynaert] agree to remove the word. Believe i pulled this from an investor slide where that would be important. :-). [@Thor Kallestad] any reason we wouldn't want to remove?

Amy Campbell, 2024-09-06T13:21:25.423

LB1 maybe say environmental instead of habitat

Lauren Breynaert, 2024-09-05T21:02:05.796

AC1 0 done!

Amy Campbell, 2024-09-06T13:20:15.155

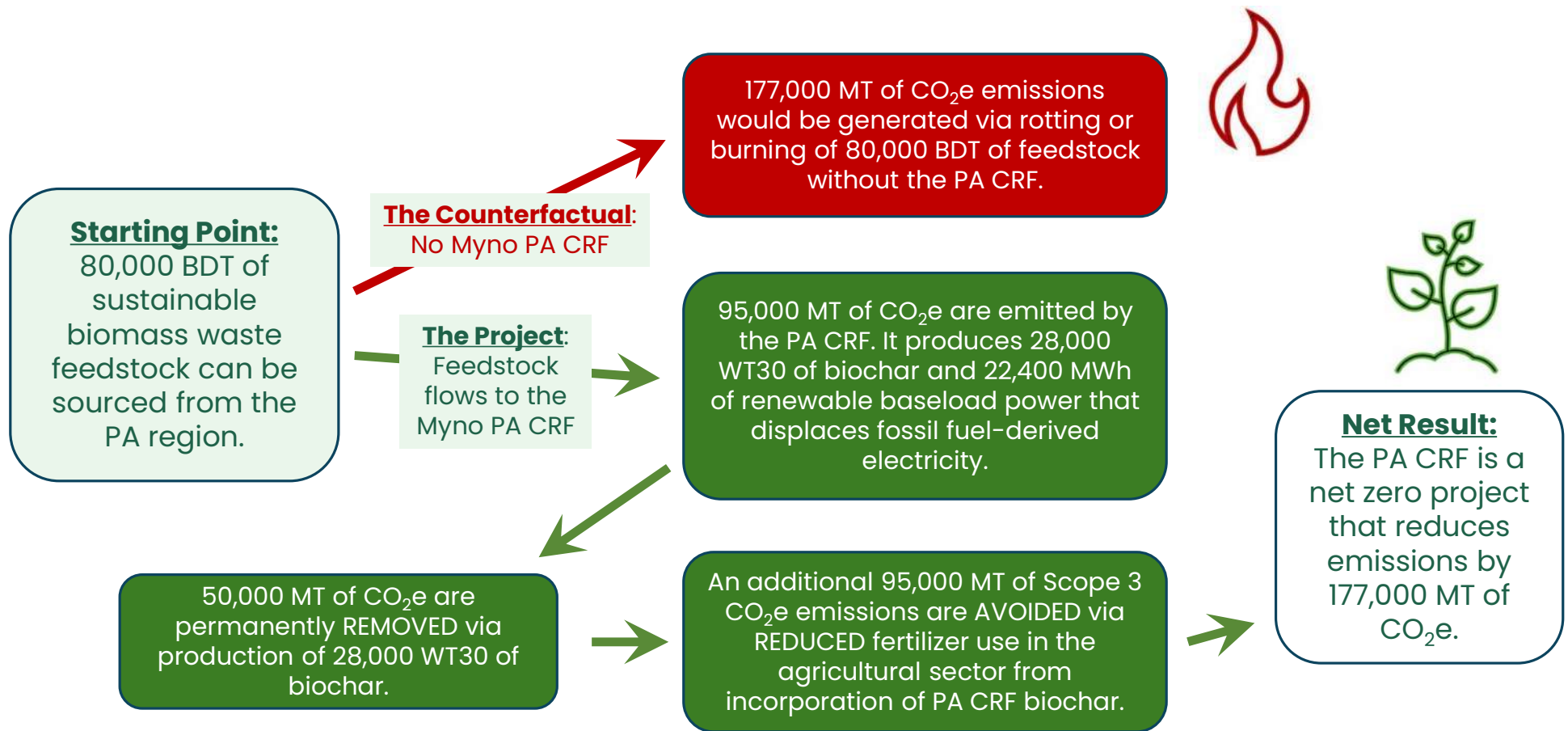


Let's connect!

Lauren Breynaert

Lauren@mynocarbon.com

Port Angeles CRF Carbon Impact







"WORKING TO MAKE WASTE A RESOURCE"

EST. 2009 501 (C) 3 NONPROFIT
2,899,381 LBS. OF STUFF DIVERTED
321,646,856 LBS. OF CO₂e

EMPLOY 5 PEOPLE
\$100,000 IN LOCAL SALES TAX

ADAPTATION AND REDIRECTION

- REUSE EVENTS
- TOOL LIBRARY
- FRESH START ART
- SOLES FOR SOULS
- FLOURECENT LIGHTBULBS
- EYEGLASSES
- WINE CORKS
- CELLPHONES
- PAINTCARE

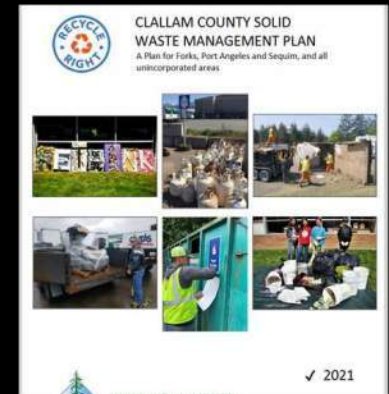


GOALS OF THE SOLID WASTE MANAGEMENT PLAN THAT AROUND AGAIN COULD PLAY A PART

- WR1) CONTINUE TO PROMOTE WASTE REDUCTION ACTIVITIES.
- WR3) CONDUCT PUBLIC EDUCATION ABOUT HOW TO AVOID WASTING FOOD.
- WR5) PROMOTE REUSE OF CONSTRUCTION MATERIALS.
- WR6) CONDUCT MORE PROMOTION OF ON-SITE COMPOSTING.
- WR7) PURSUE GRANTS AND INVESTMENTS TO INCREASE FOOD RECOVERY.
- WR8) SUPPORT REUSE EVENTS ORGANIZED AND IMPLEMENTED BY OTHERS.
- R1) THE SWMP RECOMMENDS ADOPTING A 75% RECOVERY GOAL BY 2025.
- R2) CONTINUE PUBLIC EDUCATION EFFORTS.

CROSSOVER GOALS FROM THE COMPREHENSIVE PLAN FOR THE CITY

- O5) Investigate options for food waste.
- O10) Consider proposals for alternative methods for wood waste.
- MW11) Explore regional solutions for specific construction and demolition materials.



Solid waste management plan recommends a 75% reduction by 2025

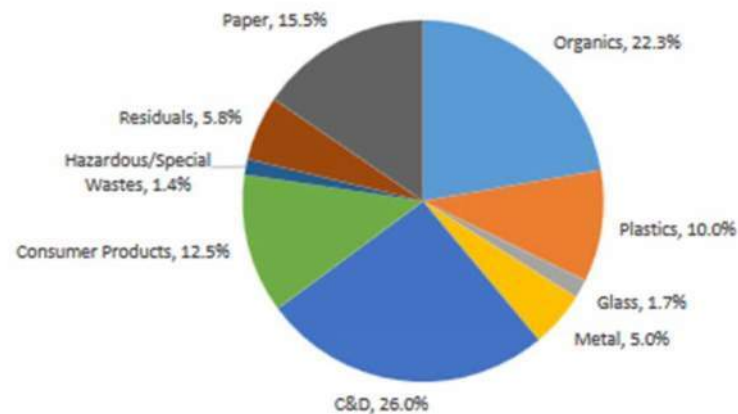
56,000MT of waste currently collected and exported

Expected to double by 2040

TARGET GOAL 42,000MT 2025

TARGET GOAL 84,000MT by 2040.

Figure 2-3. Waste Composition for West WGA





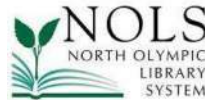
AROUND AGAIN 2.0

WORK ON OUR OWN RESOURCE STREAM LOCALLY



AROUND AGAIN AS A PARTNER

- Focused on this issue
- Experimental business model
 - Potty pebels
 - Deconstruction projects
 - Anderson construction
- A record of follow through for 15 years
- Respected partner in the community
- Consulting with cities and private companies



Questions ?

THANK YOU

Gavin Wuttken

Around Again

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“WORKING TO MAKE WASTE A RESOURCE”