

**From:** [Deuel, John](#)  
**To:** [Sam Imperati](#); [Benton County Talks Trash](#)  
**Subject:** RE: Benton County Talks Trash Homework  
**Date:** Wednesday, September 21, 2022 5:20:47 PM  
**Attachments:** [image003.png](#)  
[image005.png](#)  
[SWAC MM WG Final Recommendations- 4-14-21.pdf](#)

---

**CAUTION:** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Here is part one of my homework on the SWMP table of contents. I also attach the work of a previous SWAC working group on Waste Prevention initiatives recommended for the County. From what I see in the current table of contents, I think that you have already incorporated some of the likely parts of this work but I wanted to make sure.

John Deuel, Recycling Program Manager  
Procurement, Contracts & Materials Management (PCMM)  
Oregon State University  
644 SW 13<sup>th</sup> Street  
Corvallis, OR 97333-4238  
Phone: 541-737-2856  
[deuelj@oregonstate.edu](mailto:deuelj@oregonstate.edu)  
[pacs.oregonstate.edu](http://pacs.oregonstate.edu)  
[recycle.oregonstate.edu](http://recycle.oregonstate.edu)  
(He, his)



Are you aware of the free student resources offered by the OSU Human Services Resource Center? [Learn more here.](#)

Oregon State University in Corvallis, OR is located within the traditional homelands of the Mary's River or Ampinefu Band of Kalapuya. Following the Willamette Valley Treaty of 1855 (Kalapuya etc. Treaty), Kalapuya people were forcibly removed to reservations in Western Oregon. Today, living descendants of these people are a part of the Confederated Tribes of Grand Ronde Community of Oregon (<https://www.grandronde.org>) and the Confederated Tribes of the Siletz Indians (<https://ctsi.nsn.us>).

*"Confidentiality: This e-mail and any files transmitted with it may contain confidential information that is intended only for the addressee(s). Unless otherwise indicated, please do not share or forward this information without the*

*sender's approval as it may not be intended for review, dissemination or use by other persons or unauthorized employees."*

Submit confidential feedback to the PaCS Department Head

---

**From:** Sam Imperati <samimperati@icmresolutions.com>

**Sent:** Saturday, September 17, 2022 3:13 PM

**To:** Duvall, Kathryn <Kathryn.Duvall@corvallisoregon.gov>; maryparmigiani534@gmail.com; ewpitera25@gmail.com; Deuel, John <john.deuel@oregonstate.edu>; christopher.mcmorran@gmail.com; ryanm@gerdingbuilders.com; louisa@peak.org; Brian.FULLER@deq.oregon.gov; marge@jyo.com; nwhitcombe@gmail.com; lizirish@ymail.com; RKnocke@republicservices.com; GRough@republicservices.com; SEdmonds@republicservices.com; daniel.redick@Co.Benton.OR.US; Joel Geier <clearwater@peak.org>; Sean.McGuire@co.benton.or.us; BMay@co.marion.or.us; bmay@co.linn.or.us; catherinerae@yahoo.com; BentonCountyTalksTrash@Co.Benton.OR.US

**Cc:** WYSE Nancy <nancy.wyse@Co.Benton.OR.US>; MALONE Patrick <Pat.Malone@Co.Benton.OR.US>; AUGEROT Xanthippe <Xanthippe.Augerot@Co.Benton.OR.US>; KERBY Joseph <Joseph.Kerby@Co.Benton.OR.US>; NICHOLS Darren <darren.nichols@Co.Benton.OR.US>; CRONEY Vance M <Vance.M.CRONEY@Co.Benton.OR.US>; WILLIAMS Inga <Inga.Williams@Co.Benton.OR.US>; REDICK Daniel <daniel.redick@Co.Benton.OR.US>; KWIATKOWSKI Maura <maura.kwiatkowski@Co.Benton.OR.US>; MAKEPEACE Amanda <amanda.makepeace@Co.Benton.OR.US>; MILO Erika <Erika.Milo@Co.Benton.OR.US>; GROGAN Cory <cory.grogan@Co.Benton.OR.US>; RAY Linda <Linda.Ray@Co.Benton.OR.US>; Adam Meyer <adam.k.meyer@gmail.com>; Amelia Webb <AmeliaWebb@icmresolutions.com>

**Subject:** Benton County Talks Trash Homework

[This email originated from outside of OSU. Use caution with links and attachments.]

Happy Saturday

Thank you for all the hard work on Thursday... we made very good progress!

I have attached the Draft Meeting Minutes for your review.

As promised, your homework assignments are attached and include the following requests:

1. SWMP Combined Table of Contents
2. Common Understandings Table of Contents, and

3. Compliance with Past Land Use Approvals.

Instructions are included for each assignment on the first page.

**DUE DATE: Thursday, September 22<sup>nd</sup> at 9:00 AM, so we can rool them up and present them to you in advance of our 10/6/22 meeting... sorry and thanks!**

Finally, please complete the meeting two evaluation found here:

<https://www.surveymonkey.com/r/9KG9VXF>

Please don't hesitate to reach out if you have any questions, and we are looking forward to seeing you at the landfill tour next Saturday... details and RSVP to follow early next week... including the closed-toe shoe requirement!

Thanks, Sam

**ICM** **Sam Imperati, JD | Executive Director**  
resolutions 11524 SW Vacuna Ct. | Portland, OR 97219-8901  
 (P) 503.244.1174 | (C) 503.314.1156 | (F) 503.244.1038  
[SamImperati@ICMresolutions.com](mailto:SamImperati@ICMresolutions.com)  
[ICMresolutions.com](http://ICMresolutions.com)

-

Benton County Solid Waste Advisory Council (SWAC)

# Recommendations for Advancing Waste Prevention in Benton County

Submitted by:

Materials Management/Waste Prevention Working Group

April 14, 2021

|  |           |
|--|-----------|
| Introduction   | 2         |
| Current Situation:   | 2         |
| Goal   | 4         |
| Paradigm Shifts  | 4         |
| Method   | 4         |
| Recommendations  | 12        |
| <b>A. Publish a Benton County 10 Year Solid Waste/Zero Waste Strategic Plan</b>  | <b>12</b> |
| <b>B. Establish a more formalized Benton County Materials Management Progress Report</b>   | <b>13</b> |
| <b>C. Timing/Roll Out</b>  | <b>13</b> |
| <b>D. Funding</b>  | <b>13</b> |
| <b>E. Initiatives (See following pages for details)</b>  | <b>15</b> |
| County wide collaboration for green businesses: Partnership of Saving Green and<br>County program (i.e. Marion County's EarthWISE) | 15        |
| Durable Goods Reuse Center and Repair Mall   | 17        |
| Expansion of Benton County/City of Corvallis "Library of Things" including event<br>servingware                                    | 19        |
| Construction & Demolition Waste Task Force   | 22        |
| Reusable Take Out Food Container Service   | 24        |
| Summary/Conclusion   | 26        |

Benton County Solid Waste Advisory Council (SWAC)  
Materials Management/Waste Prevention Working Group  
Recommendations for Advancing Waste Prevention in Benton County

**Introduction**

Purpose of the Waste Prevention Working Group (Working Group): At the regular meeting of SWAC in February of 2020, a working group was appointed to be led by SWAC member John Deuel. Its purpose is to develop recommendations to SWAC to increase waste prevention activities in Benton County, in accordance with Oregon Department of Environmental Quality goals that call for a “Materials Management” approach that goes beyond recovery. This followed the Council’s viewing of a [4-minute video presentation by ODEQ official David Allaway](#) on the often overlooked environmental benefits of waste reduction and that recycling may not always be the best choice for certain materials.

The SWAC Materials Management Working Group began meeting in March, 2020. The group included the following volunteers who were invited to participate:

- John Deuel, SWAC Member and Recycling Manager, Oregon State University
- Tino Barreras, Municipal Administrator/Education & Outreach at Republic Services
- Marjorie Stevens, Steering Committee Member, Corvallis Sustainability Coalition
- Jeanette Hardison, Director/Founder with No Food Left Behind-Corvallis and Outreach Specialist with Saving Green, Corvallis Sustainability Coalition
- Daniel Redick, Benton County Solid Waste and Water Quality Coordinator
- Bailey Payne, Sustainability Specialist, Corvallis 509J School District

Others contributing to the work have been former SWAC Commissioner Lauri Richer, Andrea Norris (OSU Campus Recycling) and Annette Mills (Corvallis Sustainability Coalition).

**Current Situation:**

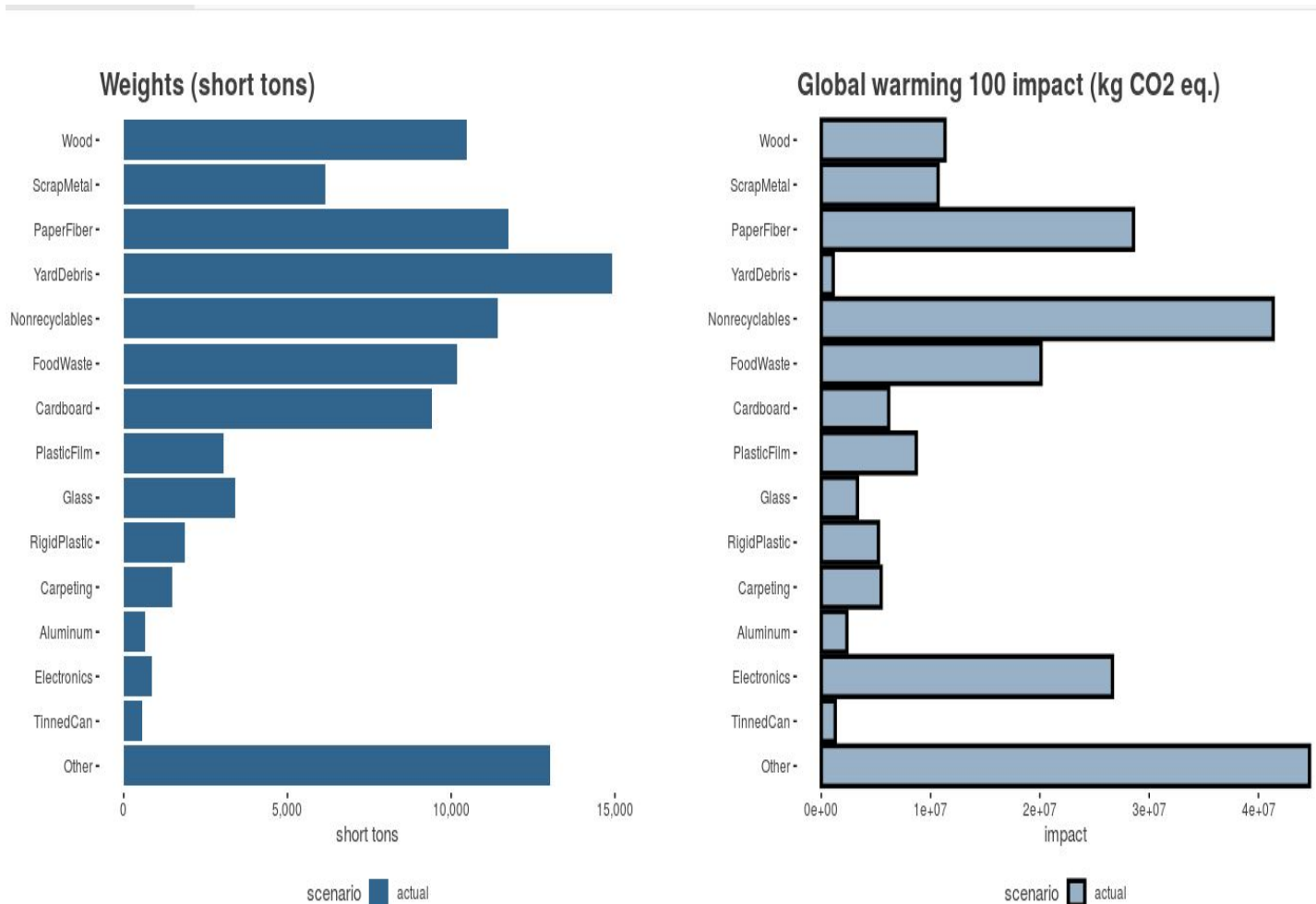
The amount of waste generated by the people who live and work in Benton County has been increasing, with recovery staying about the same or decreasing.

| Indicator (Per capita)       | 2013       | 2018       | % Change     |
|------------------------------|------------|------------|--------------|
| Waste disposed               | 1,324 lbs. | 1,498 lbs. | 13% Increase |
| Waste recovered (recycled or | 939 lbs.   | 819 lbs.   | 13% Decrease |

|                 |            |            |              |
|-----------------|------------|------------|--------------|
| composted)      |            |            |              |
| Recovery Rate   | 41.5%      | 35.3%      | 15% Decrease |
| Waste generated | 2,264 lbs. | 2,317 lbs. | 2% Increase  |

Source: Oregon Dept. of Environmental Quality

Impact on Climate: The chart below represents an estimated life cycle impact of the wastes disposed at Coffin Butte Landfill from Benton County in 2017. Note that the total weight of a particular material does not necessarily equate to its impact on global warming, among other indicators. For example, a relatively small amount of electronics disposed has a disproportionately large impact on greenhouse gases (GHG).



## **Goal**

Identify and recommend strategies and initiatives that will reduce Benton County's highest-impact wastes to support progress in achieving the State of Oregon's goal of generating 15% less solid waste than in 2012.

## **Paradigm Shifts**

Systems thinking: The Working Group believes that materials should be viewed within the larger context of the systems they "live" in. As opposed to traditional economic models, circular economy theory places each material within the systems that support its creation, use, disposition and reuse/recovery/regeneration phases. In this sense, our use of materials should aspire to imitate nature. Each waste goes into productive use for recreating something else or supporting another compatible system: cooperative use and interconnectedness across multiple sectors to achieve the best outcomes.

Equity and inclusion: The Working Group considers how equitable new waste prevention programs and services are delivered to be critical to their success. As an example, it is strongly encouraged to involve broad and diverse representation in efforts to develop new service. The Equity Impact Assessment Tool, adopted by the Corvallis Sustainability Coalition, is a positive way to ensure (maybe say facilitate, instead of ensure) that the development and implementation processes will result in the initiative serving more people that may be from diverse parts of Benton County's population.

## **Method**

The Working Group undertook the following steps to develop recommendations:

- I. Research and assess waste characterization study results conducted by Oregon Department of Environmental Quality from 2016 and 2017.
- II. Research and assess previous and current waste prevention programs, actions and activities conducted in Benton County.
- III. Develop criteria to evaluate and develop a list of initiatives that, when implemented, would increase the amount of waste prevented in Benton County.
- IV. Utilize a test analysis of Benton County's waste provided by ODEQ's Waste Impact Calculator.
- V. Recommendations

**Each of these areas of work will be described briefly below:**

**I. Research and assess waste characterization study results conducted by Oregon Department of Environmental Quality from 2016 and 2017.**



The Working Group wanted to know more about which wastes were not being recovered in the current recycling system in Benton County. To do this the results of a 2016-17 statewide waste characterization study were reviewed. The study had two levels of scope: A sampling of landfill wastes from the entire state of Oregon (referred to as "Downstate") and a sampling of wastes generated in the Portland metro area. Within the Downstate sampling, a sample taken from the Coffin Butte Landfill was analyzed and results provided separately. The raw data from these studies can be found on the Oregon Department of Environmental Quality website: <https://www.oregon.gov/deq/mm/pages/waste-composition-study.aspx>.

The informal review showed that the following materials have a high level of opportunity for increasing recovery and prevention, as related to the Working Group's efforts to develop waste prevention strategies.

- Building materials: =20-30% of waste generation in municipal waste stream
- Food: =16% of municipal solid waste; 70% of that was edible- Oregon Food Study

**II. Research and assess previous and current waste prevention programs, actions and activities conducted in Benton County.**

Research and assess previous and current waste prevention programs, actions and activities conducted in Benton County.

- The Working Group (Working Group) conducted a broad inventory and search for past and current waste prevention initiatives. They shared their own background knowledge and experiences as well as conducted research in the region.
- Inventory of initiatives: Below is a list of waste prevention initiatives inventoried with a brief description of each.

|          | <b>Waste Prevention Initiative</b> | <b>Category</b>                                     | <b>Description</b>   |  |
|----------|------------------------------------|---|--|--|
| <b>1</b> | GoBox, Eco2Go                      | REUSE: System for reusing take out food containers  | Go Box: This is intended to be similar to the on-campus EcoToGo boxes (above) but for eateries all over Corvallis; research/planning has been led by Coalition volunteers who are now too busy with employment and other Waste Prevention projects to bring program to fruition. Suggested by JH to have this be taken on by another entity! Eco2Go: Prevented 400,000 disposable containers from going to the landfill in the 2015-16 and 2016-17 school years or about 60 tons diverted per year.<br><a href="https://uhds.oregonstate.edu/food/sustainability-initiative#Eco2Go">https://uhds.oregonstate.edu/food/sustainability-initiative#Eco2Go</a> |  |
| <b>2</b> | Green Girl                         | REUSE: Service for loaning reusable servingware for | Eliminated the use of thousands of disposable party items.   |  |

|   |   |  |   |  |
|---|---|--|---|--|
|   |   | events   |   |  |
| 3 | Reusable Cup Campaign   | REUSE: Reuse of personal beverage containers   | Proposed to OSU Housing and Dining, but not yet adopted. Has the potential to reduce single-use cup waste by 78% on OSU campus.   |  |
| 4 | OSU Used Store  | REUSE: Sale of used materials  | Reused avg. 586 tons of materials/year since 2013. OSU policy calls for any OSU owned materials to be declared surplus before they are disposed of. The Materials Management Unit is responsible for receiving/collecting, documenting, storing and finding secondary uses, from sales to donations to recycling before disposing. <a href="https://fa.oregonstate.edu/surplus/publicsales/osused-store">https://fa.oregonstate.edu/surplus/publicsales/osused-store</a> .                              |  |
| 5 | Repair Fairs, Other repair services or systems                    | REUSE: Extending productive life of materials through repair;  | When was the first Fair?- October 2012; How many Fairs have been held?- 33 fairs in person plus the 1 virtual one; How many individuals attended altogether?- 1,382 attendees; 1,196 items have been worked on and we have a 76.6% repair rate overall! <a href="https://fa.oregonstate.edu/recycling/events-and-opportunities/volunteer-opportunities/waste-watchers-leadership">https://fa.oregonstate.edu/recycling/events-and-opportunities/volunteer-opportunities/waste-watchers-leadership</a> . |  |
| 6 | Corvallis Reuse Directory; RUN: Marion Co. Reuse Business Network | EDUCATION: Promoting reuse stores, non profits and business to business sourcing of industrial materials | REUSE DIRECTORY: <a href="https://sustainablecorvallis.org/?s=reuse+directory">https://sustainablecorvallis.org/?s=reuse+directory</a> . 36,500 copies printed over the 10 years of publication; now also ONLINE in searchable database paid by DEQ grant; immeasurable tonnage diverted from landfill by doing the research FOR people of where else they can get rid of something instead of just in the trash.   |  |
| 7 | No Food Left Behind   | EDUCATION: FOOD WASTE PREVENTION   | Challenge to Waste Less Food results:<br>- reduction of wasted food by 21%<br>- reduction in money wasted on food by 44%<br>- reached well over 9,000 individuals with more than 20,000 strategies tools in just 18 months<br>- <a href="https://nofoodleftbehindcorvallis.org/wp-content/uploads/2020/01/CorvSustCoalition-FINAL-Progress-Report.pdf">https://nofoodleftbehindcorvallis.org/wp-content/uploads/2020/01/CorvSustCoalition-FINAL-Progress-Report.pdf</a>                                 |  |
| 8 | LeanPath  | PREVENTION: COMMERCIAL FOOD WASTE PREVENTION METHOD  | <b>29% reduction of food waste by weight; 8% reduction in waste sent to landfills by weight. 26% (3,713 lbs) less food to Linn-Benton Food Share. 10% reduction in food cost.</b> The program has helped dining centers become more aware of their production habits and early numbers suggest it has correlated with reductions in food waste, food costs, and trash weights reported from dining centers.   |  |
| 9 | Better Bin  | EDUCATION: ONLINE APPLICATION TO GUIDE RESIDENTIAL/INDIVIDUAL FOOD WASTE PREVENTION                      | Grant proposal for food waste prevention. Originated in Minneapolis/ App to provide guidance to residents about managing their waste effectively  |  |

|    |  |   |   |  |
|----|--|---|---|--|
| 10 | Saving Green: Sustainability at Work/EarthWise/Green Schools/TRUE Zero Waste | CERTIFICATION AND SUPPORT OF COMMERCIAL AND INSTITUTIONAL GROUPS TO REDUCE AND RECOVER WASTE, AMONG OTHER SUSTAINABILITY MEASURES                   | <p>SAVING GREEN: Project works with local small-to-medium workplaces, connecting them with opportunities to prevent and reduce waste in the areas of water / stormwater, solid waste / recycling / composting, natural gas / electricity / solar / fleet.</p> <p>FREE and voluntary program. Will pair well with City of Corvallis' plans to create Green Business recognition program like EarthWise, above. EARTH WISE: Benton County using Marion County as a model. Approximately 200 businesses have received the certification. Creates a network of businesses that feed each other and compete. Case studies; 2 year certification. Metric capture would need to be improved.<a href="https://www.co.marion.or.us/PW/ES/disposal/events/Pages/VirtualEvents.aspx">https://www.co.marion.or.us/PW/ES/disposal/events/Pages/VirtualEvents.aspx</a>. GREEN SCHOOLS: School certification program; 3 tiers; Benefits higher for each higher tier; School recognition; Encourages schools to help other schools; Data is required for recertification. New certification pathway called Green Lunchrooms focuses on preventing food waste.</p> <p><a href="http://oregongreenschools.org/premier-schools-showcase/">http://oregongreenschools.org/premier-schools-showcase/</a>. TRUE ZERO WASTE: "As of 04/2019, 100 sites were certified: More than 190 million square feet of certified space; Certified projects in 24 U.S. states, plus Canada and Ireland; Certifications achieved by retail spaces, warehouses, manufacturing facilities, offices, distribution centers and more; and Companies with TRUE-certified facilities that include Tesla, Microsoft, Sierra Nevada Brewing Co., Nature's Path, Earth Friendly Products, Cintas and Etsy.</p> <p>No data found on the amount of waste prevented"</p> <p><a href="https://sustainablecorvallis.org/action-teams/economic-vitality/saving-green/">https://sustainablecorvallis.org/action-teams/economic-vitality/saving-green/</a></p> |  |
| 11 | Corvallis 509J Sustainability in Schools                                     | INSTITUTION WIDE SUSTAINABILITY INITIATIVES AT ALLCORVALLIS PUBLIC SCHOOLS; INCLUDES FOOD, BEVERAGE AND SERVING WARE WASTE PREVENTION AND EDUCATION | <p>The CSD serves approximately 5,500 lunches daily. To reduce waste, students choose their meals in the morning so that the appropriate amounts are delivered to each school, preventing food waste. The reusable trays are returned to the central kitchen, eliminating disposable trays. All schools have "No Thank You" tables for uneaten food that is eaten by other students who want seconds. Corvallis Sust. Coalition continuing Food Too Good to Waste presentations for 4th &amp; 5th graders. Most schools have water bottle filling stations. The CSD provides an incentive to each school's sustainability leader. These teachers lead sustainability efforts at their schools which includes waste reduction education. Facilities has an IPM program to reduce pesticide use and uses 3rd party certified green cleaners. Custodial SOP to reduce waste. In 2019-20, donated 145,248 books (rather than recycle) weighing 9.3 tons.</p> <p><a href="https://www.csd509j.net/departments/teaching-and-learning/sustainability/">https://www.csd509j.net/departments/teaching-and-learning/sustainability/</a></p>   |  |

|    |   |   |  |
|----|---|---|--|
| 12 | Textile Program at Schools  | EDUCATION AND REUSE   | Develop curriculum around textiles and their impact on the environment;<br>Collection Drive to compliment at High Schools; Leftovers to be salvaged; HS Dance and Trash Fashion Shows  |
| 13 | Last Dam Straw;<br>Single Use plastic bottle discontinuation, Corvallis School District                       | INSTITUTIONAL WASTE PREVENTION: REMOVAL OR BAN OF A SPECIFIC WASTE MATERIAL | <a href="#">Conversion of 300,000 + plastic straws to paper straws in all Dining Centers, and Memorial Union Retail Facilities; Last Dam Straw Article. Single-use plastic bottles still being used in some schools, although not many.</a>  |
| 14 | Natural Step  | WASTE PREVENTION: INDUSTRY COOPERATION ON PRODUCT DESIGN STANDARDS          | Commercial and Industrial to evaluate cradle to cradle design of heir products; 4 system conditions/ evaluative process for a business to use. Must meet for system conditions focussed on sustainability and materials. <a href="https://thenaturalstep.org/">https://thenaturalstep.org/</a> |
| ?  | Recovery at Coffin Butte prior to landfilling - diversion of construction and organic materials from landfill |   | We talked about this at meetings, but it wasn't included in the list - not sure what to call it, but I think it is something that had been considered in the past and not adopted for some reason that I don't know  |

Using the rubric (Method III), the preliminary results of a survey of Working Group members showed these initiatives scoring highest over all criteria categories:

- OSUsed Store
- No Food Left Behind
- Waste Prevention/Reuse Directory
- Saving Green/Earthwise/Green Schools
- Repair Services (in general)
- Green Girl

**III. Develop criteria to evaluate and develop a list of initiatives that, when implemented, would increase the amount of waste prevented in Benton County.**

The Working Group developed a list of criteria to evaluate the relative value of each with the overall goal of preventing waste in Benton County over the coming 5 to 10 years. The criteria selected were as follows:

- Accountability & Outcomes (measurability, impact, audience reach)
- Linkages to higher level plans (ODEQ 2050, Benton County 2040, Corvallis Climate Action Plan)
- Sustainability (Potential for funding, projected staying power, default behavior?)
- Usability & Engagement (Effectiveness, ease of implementation, cross-sector applicability, equitable access, audience reach, incentive, convenience)
- Other: Cost/Benefit; Potential impacts of Covid-19 on implementation

The rubric below was used as a starting point to evaluate the potential for each initiative. Some initiatives that were similar were grouped together.

| <b>Accountability &amp; Outcomes (25% of overall criteria categories)</b>   | <b>Weight</b> | <b>Relative Weight within Category</b> |
|---|---------------|--|
| How measurable were the outcomes?   | 15            | 21%                                    |
| How well did the initiative demonstrate a desired impact on waste prevention metrics; prevention, reuse, rethinking, including the relative value of the upstream impacts such as greenhouse gas emissions? | 30            | 43%                                    |
| How well did the initiative reach the audience that will result in the largest reduction in waste?  | 25            | 36%                                    |
| <b>Relative Weight of this category</b>   | <b>70</b>     | <b>25%</b>                             |
|   |               |  |
| <b>Linkages to State, County, City and broader goals (16% of overall criteria categories)</b>   | <b>Weight</b> | <b>Relative Weight within Category</b> |
| <a href="#">How well did this initiative support and is consistent with the Oregon DEQ 2020 Materials Management Framework for Action?</a>  | 15            | 33%                                    |
| <a href="#">How well did this initiative support the Benton County 2040 Thriving Communities Vision's Core Values?</a>  | 15            | 33%                                    |
| <a href="#">How well did this initiative support the Corvallis Climate Action Plan?</a>   | 15            | 33%                                    |
| <b>Relative Weight of this category</b>   | <b>45</b>     | <b>16%</b>                             |
|   |               |  |
| <b>Sustainability (14% of overall criteria categories)</b>  | <b>Weight</b> | <b>Relative Weight within Category</b> |
| How self funding did the project become?  | 10            | 25%                                    |
| How sustainable is the project? Will the project have a good possibility of continuing after the initial resources to get it started?   | 15            | 38%                                    |
| How well did the practice or policy move forward as the "default" behavior or choice?   | 15            | 38%                                    |
| <b>Relative Weight of this category</b>   | <b>40</b>     | <b>14%</b>                             |
|   |               |  |
| <b>Usability and Engagement (32% of overall criteria categories)</b>  | <b>Weight</b> | <b>Relative Weight within Category</b> |

|  |               |  |
|--|---------------|--|
| How effective was the tactic or strategy used, even if the overall initiative may not have been?   | 5             | 6%                                     |
| How easy was it to implement this initiative? For example did it require action from one regulatory body or did it require a much broader effort such as a stakeholder process or an election?                           | 10            | 11%                                    |
| How much did the initiative or waste stream have cross sector applicability? For example commercial vs. residential and vice versa? Industrial?  | 10            | 32%                                    |
| How impactful was the reach of the initiative in terms of number of people or organizations engaged?   | 25            | 28%                                    |
| How well did the initiative reach a group who are usually underserved by sustainability programs ?   | 15            | 17%                                    |
| How much of an obvious incentive (i.e. financial) was there for average households to participate?   | 20            | 22%                                    |
| How easy, convenient and actionable was the initiative for most people? (Did not require or mandate participation to be successful)  | 30            | 33%                                    |
| <b>Relative Weight of this category</b>  | <b>90</b>     | <b>32%</b>                             |
| <b>Other impacts (13% of overall criteria categories)</b>  |               |  |
|  | <b>Weight</b> | <b>Relative Weight within Category</b> |
| How well would the initiative succeed within current or anticipated impacts from COVID-19?   | 5             | 14%                                    |
| How well would the initiative be impacted by any changes to the Franchise Agreement between Benton County and a future Agreement holder? (If initiative would have a high impact on the franchise agreement, score low.) | 15            | 43%                                    |
| How well did the initiative measure cost:benefit in any way and if so, how significant were the results?   | 15            | 43%                                    |
| <b>Relative Weight of this category</b>  | <b>35</b>     | <b>13%</b>                             |

**IV. Utilize a test analysis of Benton County’s waste provided by ODEQ’s Waste Impact Calculator.**

Utilize a test analysis of Benton County’s waste provided by ODEQ’s Waste Impact Calculator (WIC). The Working Group consulted with Martin Brown, a solid waste analyst at ODEQ and contributor to the development of the WIC. This is an interactive tool that enables users to input variables of materials quantities and methods of processing those materials including recovery/recycling, landfill, and prevention. Based on extensive and the most updated published national data of greenhouse gas impacts (GHG), the WIC produces results of these scenarios and provides a way to project the

relative value in reduced environmental impact of increasing recovery or prevention of certain wastes.

The benefits of this tool for the current work:

- Shifts emphasis from concerns about using up landfill space and obvious damage of certain wastes to the environment (i.e. plastics) to include the “hidden” upstream negative impacts of waste, such as greenhouse gas emissions (GHG).
- Goes beyond weight based measures such as recycling, diversion or recovery rate to look at environmental impacts:
  - Production (extraction, manufacturing)
  - Transportation of waste (i.e. glass vs. plastic)
  - Recovery/Recycling environmental impacts
- Provides a snapshot, “big picture” of about 20 broad categories of waste in Benton County in 2018
  - ODEQ-commissioned Waste Composition study
  - Material Recovery Survey
  - Does not include cars, C&D and industrial waste
  - Does not capture impacts from the “use” phase of materials
- Identifies “hot spots” that are of concern to our community at the moment and provides a basis for evaluating actual risk. Tells us if a waste is really a concern or whether we need more information.

Prioritization of materials to target: with the waste and recovery composition data added into the WIC, the Working Group was able to place increased priority on the following materials:

- High impact materials for maximizing recycling/recovery opportunities: Paper, wood, and concrete
- High impact materials for maximizing reduction/prevention opportunities: Electronics, single use packaging, food.

## Recommendations

### V. Materials Management Working Group Recommendations

Following review and analysis of the data available, the Working Group had extensive discussions about waste prevention behavioral theories, policies, existing initiatives, and possible funding resources. Further interviews were held with several key stakeholders to gain their feedback on the ideas being considered. The following pages will provide the Working Group's recommendations for initiatives that could be implemented as part of a broader solid waste management plan for Benton County.

#### A. Publish a Benton County 10 Year Solid Waste/Zero Waste Strategic Plan

In recent years, Oregon's municipalities have been following the "Opportunity to Recycle", as required by ODEQ. Cities and contracted haulers have filled out annual surveys to report how many waste reduction activities have been completed with results have been documented and submitted to ODEQ. From the Working Group's perspective, Benton County could benefit from longer term materials management planning.

Benton County should develop a long term (10 year) strategic plan with goals for solid waste. The charge of this Materials Management Working Group to recommend targeted actions for waste prevention should be re-evaluated once a broader strategic plan is completed. There are very good models from other Oregon counties and national organizations to consult and use to develop this plan. They include:

- [Global Alliance for Incineration Alternatives \(GAIA\) Zero Waste Master Plan](#)
- [Post Landfill Action Network \(PLAN\)](#)
- [Marion County, Oregon Solid Waste Management Plan](#)
- [Association of Oregon Recyclers](#)
- [Oregon Dept of Environmental Quality](#)

Consider [DEQ's 2020 Framework for Action](#) to guide recommendations:

- Materials have the most useful life possible before and after discards. Promote reuse and repair to extend product life (cars, electronics, clothing & furniture).
- Focus on statewide high-priority materials:
  - Building materials: =20-30% of waste generation in municipal waste stream



- Food: =16% of municipal solid waste; 70% of that was edible-  
Oregon Food Study
- Leverage county procurement to drive changes in upstream production design, better environmental performance & improved labor conditions.
- Educate for sustainable consumption (balance material goods/lifestyles that allow for people and natural systems to thrive).
- Wherever possible, evaluate and strategically reduce toxics & hazardous materials.

## **B. Establish a more formalized Benton County Materials Management Progress Report**

This reporting would provide data from monitoring and tracking results and outcomes. To measure progress and results of any specific recommendations for targeted actions or programs, the Working Group recommends using existing ODEQ waste and recycling characterization studies for planning, followed by a measurement plan that is tailored to the material or materials targeted to be reduced or recovered by that action:

- Recommended initiatives should have a mechanism for measuring its impact on actual waste prevention from a documented, credible baseline. Prioritize initiatives that measure results that demonstrate a desired impact on waste metrics (as opposed to number of people reached, etc.). Communicate with leaders of other current initiatives to capture metrics moving forward.
- Use best practices for outreach and marketing using models such as Community Based Social Marketing (CBSM).
- For a broader and longer term context, consider a metric that goes beyond diversion of waste or recycling, such as waste generated per capita.
- Focus on strategies and initiatives that historically have had good results:
  - Workforce development & business incubators/pilots
  - Partnerships with industry groups: promote healthy competition
  - Support initiatives with a broad reach (number of people/organizations engaged, variety of tactics used, etc.) unless they are intentionally small in scope to be piloted and could later be rolled out on a larger scale

## **C. Timing/Roll Out**

- Phased approach. Build on an early success by starting with a program or service that will have high probability of citizen and business engagement quickly.

## **D. Funding**

- Pending the development of a long-range solid waste strategic plan for Benton County, the Working Group recommends SWAC put forward one or two

programs for implementation in the FY2022 fiscal year, with a specific supplemental budget request to the Board of Commissioners following the development of a detailed implementation plan.

- Other sources of funding should be explored such as state (Repair & Reuse Workforce Development Grant) or federal grant funds (EPA Region 10 resilient community grant fund or other federal grants).

**E. Initiatives** (See following pages for details)

- 1. County-wide collaboration for green businesses: Partnership of Saving Green and County program (i.e. Marion County's Earthwise)**
- 2. Durable Goods Reuse Center and Repair Mall**
- 3. Expansion of Benton County/City of Corvallis "Library of Things" including event servingware**
- 4. Construction & Demolition Waste Task Force**
- 5. Reusable Take Out Food Container Service**

**1. County wide collaboration for green businesses: Partnership of Saving Green and County program (i.e. Marion County's EarthWISE)**

- What high impact materials will this initiative prevent as waste?
  - Paper (Offices)
  - Food (Preconsumer/Grocers; Restaurants)
  - Yard Debris (Landscapers)
- What current condition would this initiative address?
  - Currently only X% of workplaces in Benton County demonstrate active waste prevention activities; this will increase overall involvement in WP
- What are barriers to implementing?
  - Busy workplace schedules
  - Follow-up and implementations difficult
- Who are the stakeholder groups to engage?
  - Chamber of Commerce
  - Economic Development
  - Restaurant owners
  - Landscapers
- How would it work?
  - Workplaces invited to participate
  - Assessments and recommendations provided
  - Recommendations implemented
  - Efforts publicly acknowledged
- What are the things to monitor and measure?
  - List of strategies implemented
  - Testimonials

- Measurable outcomes if available (Materials audits; Trash/Recycling/Composting collection services)
- What would make it easier for businesses to participate?
  - Business receive assistance and regular communication from local knowledgeable supporters
- Will it save people money or other resources?
  - Yes: recommendations implemented will reduce costs and/or the business' environmental footprint
- What models or best practices would help guide this initiative?
  - Marion County's EarthWISE
  - Corvallis Sustainability Coalition's Saving Green
  - [Sustainability at Work](#) - Portland Metro area
  - Lane County / BRING [Business Resources](#)
- Is there legislation that would support this initiative?
  - There is much legislation at the State level under debate at the time of preparing this report that would support and further move businesses toward greener practices and policies. Examples include product stewardship for plastic packaging and foodware, mattresses; And, modernizing Oreongs recycling system that would lead to greater producer responsibility.

## 2. Durable Goods Reuse Center and Repair Mall

- What is the purpose: To extend the life of many items being landfilled that may need only minor repair. The idea is to create one or more “Interception” points for residents to donate and retrieve materials for a second life. Partnerships with existing thrift groups to compliment their capabilities and services. The **Repair Mall** is a central location for repair of multiple types of common items with a wide range of repair services and classes on how to repair. Entrepreneurs could lease space to repair leather, upholstery, tailors, furniture repair, shoe repair, electronics, etc. Potential for job skills training and keeping repair trades alive.
- What high impact materials will this initiative prevent as waste?
  - Electronics
  - Non-recyclables (composites),
  - Wood (Furniture)
  - Textiles
- What current condition would this initiative address?
  - Prevention/slowing of resource extraction through better use / life extension of existing products (items that end up at landfill diverted?)
- What are barriers to implementing?
  - Location
  - Need to promote collaboration with existing thrift and reuse organizations
- Who are the stakeholder groups to engage?
  - Republic Services
  - Residents
  - Civic Leagues, HOA’s
  - Thrift centers and secondary building supply stores
    - i. ReStore, Habitat for Humanity
  - Corvallis Sustainability Coalition Waste Prevention Action Team (Reuse Directory)
- How would it work?
  - Intercept targeted durables
  - Centralize them at one location for repair and training of volunteers/staff/residents
  - Redistribute

- What are the things to monitor and measure?
  - Weight/volume of materials diverted to reuse
  - GHG of materials diverted
- What would make it easier for businesses to participate?
  - Business receive assistance and regular communication from local knowledgeable supporters
- Will it save people money or other resources?
  - Yes: Avoided cost of purchasing new
- What models or best practices would help guide this initiative?
  - [ReBuilding Center, Portland](#)
  - [Bring Recycling](#), Eugene
  - Orcas Island Exchange (near Washington State)
  - Alliance for Technology Refurbishing & Reuse
  - Ifixit
  - Repair.org
  - Habitat for Humanity ReStore
  - Corvallis Bicycle Collective
- Is there legislation that would support this initiative?
  - Oregon "Right to Repair" Law

### **3. Expansion of Benton County/City of Corvallis "Library of Things" including event servingware**

- Purpose: A key concept for preventing waste is to extend the use of durable items that are typically not needed for ongoing use. A common commercial example is Corvallis or Philomath Rental, which is for renting tools such as pressure washers and carpet cleaners. For three years, the Benton County Corvallis Library has operated a small "Library of Things" to loan out a wide range of items. This has been a popular program circulating 124 items to Library members in the same way one would borrow a library book. The Library staff does not market it heavily to avoid creating a backlog of requests they would not have the inventory to accommodate.

A similar program for items loaned out is serving ware for small local events operated by Lauri Richer, aka "Green Girl." This popular service is also in high demand during event season. By offering this service, a large amount of single-use serving ware waste can be avoided. The new dishwashing equipment at the Benton County Fairgrounds could be considered for expanding this service to a larger number of events. On average, Lauri works 10 to 20 hours a week to support this service with serving ware for 400 place settings. She has offered to turn over all of this to a new program, should one come about.

The Working Group recommends that these services be combined and expanded to include more variety and number of items to loan.

- What high impact materials will this initiative prevent as waste?
  - Wood (Furniture)
  - Metals (Tools, composite products)
  - Paper
  - Polystyrene
  - Single use plastic cutlery
- What current condition would this initiative address?
  - Prevention/slowing of resource extraction through better use / life extension of existing products (items that end up at landfill diverted?)
- What are barriers to implementing?
  - Location

- Need to promote collaboration with existing thrift and reuse organizations
- Who are the stakeholder groups to engage?
  - Benton County/Corvallis City (Expanding current hosting with resources and dedicated funding for subsidizing the service).
  - Green Girl (Lauri Richer as Advisor/donor of materials and client list)
  - Caterers
  - Retired citizens (volunteers)
- How would it work?
  - The County/City develops a broader library of things with more variety of items; combined staffing/volunteers; and locations for pickup and drop off.
  - People sign up for a County library card
  - People request to borrow an item
  - Library provides a confirmation quickly to confirm availability
- What are the things to monitor and measure?
  - Number of items borrowed and the upstream environmental impact avoided
- What would make it easier for people to participate?
  - A large variety of useful items regularly available for short borrowing
  - Low or no cost to borrow
  - More than one location for pickup and drop off
  - Strong marketing
- Will it save people money or other resources?
  - Yes, depending on how much the service is subsidized
- What models or best practices would help guide this initiative?
  - Corvallis-Benton County Public Library - <https://cbcpubliclibrary.net/libraryofthings//>
  - Salem Public Library
  - Beaverton City Library - <https://www.beavertonlibrary.org/377/Library-of-Things>
  - Tool Libraries: <https://localtools.org/find/>
  - Sacramento Public Library - <https://www.saclibrary.org/Books-Media/Specialty-Checkouts/Library-of-Things>
  - Ann Arbor District Library - <https://aadl.org/catalog/browse/unusual>



- Cary Memorial Library, Lexington, MA - <https://www.caryllibrary.org/library-of-things#:~:text=The%20Library%20of%20Things%20is,opportunities%20for%20learning%20and%20engagement>
- Is there legislation that would support this initiative?
  - Bans or limitations of single-use serving ware or take out items are not being considered; however polystyrene was being considered for a ban but did not make it through committee in the 2021 Oregon Legislature.
- Related recommendations:
  - Continue and support the Interactive [Corvallis Sustainability Reuse Directory](#), Repair Fairs, Local Repair Services and Donation Programs (Good Will, The Arc, Habitat for Humanity ReStore)
  - Extending Product Life: determine ways to promote and remove barriers to reuse and repair
  - Building an online library of common product manuals and guidance on how to find and use them
  - Aside from cell phones and computers, streamline support from manufacturers for consumers to get other frequently fixed easily

#### **4. Construction & Demolition Waste Task Force**

- Purpose: With population and construction expected to increase in Benton County, waste from demolition, renovations and new construction will also increase. The Working Group recommends exploring opportunities for advancing recovery of construction and demolition waste. Since much needs to be learned about current practices and opportunities, a first step would be to form a task force of representative local construction industry, government and non-profit stakeholders to share knowledge, best practices and challenges. This task force would survey existing conditions, identify needs for further research, and conduct pilot programs. Their objective would be to assess opportunities and make recommendations. Work currently being done at Oregon State University with contractors indicates an interest on their part to collaborate for solutions. Findings and recommendations could also further inform SWAC of the need for C & D facilities, infrastructure and market development.
- What high impact materials will this initiative prevent as waste?
  - Concrete
  - Metals/Wiring
  - Gypsum/Drywall
  - Wood
- What current condition would this initiative address?
  - Disposed building materials make up 20-30% of Benton County Municipal Solid Waste
  - There are limited recovery opportunities, incentives or support for small and mid sized contractors to establish building material and demolition waste recovery and resume programs
- What are barriers to implementing?
  - Markets at high enough value point to support cost of diversion
  - Scaling and logistics coordination of separation and hauling
  - Laydown space for small projects in high-density areas
- Who are the stakeholder groups to engage?
  - Benton County Planning Dept.
  - Contractors
  - Materials haulers
  - C & D processors & recyclers
  - Developers and architects
  - Property owners/Project Managers
  - Retired citizens (volunteers)

- How would it work?
  - County recruits representatives from key stakeholder groups to work on a task force with a 1-year timeframe
  - Task force conducts discussions, surveys, research and makes recommendations to SWAC
- What are the things to monitor and measure?
  - Quality of recommendations to move an initiative forward
  - Level of interest from stakeholder groups
- What would make it easier for stakeholders to participate on a Task Force?
  - Clearly defined scope and deliverables
  - Ongoing guidance and a well qualified facilitator/chair of the Task Force
  - Funding support for the work of the Task Force.
- Will it save people money or other resources?
  - Not likely in the short term
- What models or best practices would help guide this initiative?
  - [Marion County](#)
  - Portland Metro [Guide to Construction Salvage & Recycling](#)
  - [Construction & Demolition Recycling Association](#)
- Is there legislation that would support this initiative?
  - Unknown at this time
- Related recommendations:
  - Conduct targeted audit of most disposed of C & D such as gypsum wallboard, wood, brick, concrete
  - Reevaluate the idea of establishing a low tech C & D MRF & Mercantile in the County
    - Is there another location beside Coffin Butte to consider
    - Mercantile to sell items

## 5. Reusable Take Out Food Container Service

- Purpose: One of the strategies that is highly valued by the Working Group is to build into everyday routines opportunities for Benton County consumers to practice reuse. Further, this strategy works when a choice is so desirable or other choices so limited that it becomes “the default” behavior. Replacing single use food take out containers and serving ware would be a highly visible and effective way to accomplish this as so many residents enjoy the many take out food options in Benton County and particularly downtown Corvallis. The Working Group believes this can best be accomplished through a cooperative effort organized among voluntary participating restaurants.
- What high impact materials will this initiative prevent as waste?
  - Non-recyclable paper
  - Non-recyclable plastic (polystyrene)
- What are barriers to implementing?
  - Markets at high enough value point to support cost of diversion
  - Laydown space for small projects in high density areas
- Who are the stakeholder groups to engage?
  - Restaurants
  - Entrepreneurs
  - Chamber of Commerce
  - City of Corvallis
  - Corvallis Sustainability Coalition/Waste Prevention Action Team
- How would it work?
  - County recruits representatives from key stakeholder groups to work on a task force with a 1 year timeframe
  - Task force conducts discussions, surveys, research and makes recommendations to SWAC
- What are the things to monitor and measure?
  - Weight and/or volume of avoided uses of single-use take out containers
  - Greenhouse gases (GHG) prevented
- What would make it easier for restaurant owners and their customers to participate?
  - Voluntary participation for businesses
  - Convenience in drop off locations
  - Incentives for restaurants and diners
  - Strong marketing campaign

- Will it save people money or other resources?
  - Depends on cost to restaurants to participate
- What models or best practices would help guide this initiative?
  - [GoBox PDX](#)
  - [Eco2Go- Oregon State University](#)
- Is there legislation that would support this initiative?
  - Bans or limitations of single-use serving ware or take out items are not being considered; however polystyrene was being considered for a ban but did not make it through committee in the 2021 Oregon Legislature.
- Related recommendations for reducing food waste
  - Evaluate levels of commercial vs. residential edible and non-edible food waste in Benton County
  - Collaborate with the highest generators of commercial food waste: grocers, caterers and restaurants
  - Evaluate expanding use of the following models:
    - i. No Food Left Behind
    - ii. LeanPath software (bulk purchase through Oregon Cascades West Council of Governments (CWCOG))
  - Grants for more commercial kitchen upgrades such as the Benton County Fairgrounds Kitchen Upgrade grant (durable dishes, flatware and commercial dishwasher)

## **Summary/Conclusion**

The work reflected in this document is intended to be a recommended pathway to increasing waste prevention in Benton County, to better meet County and State waste reduction goals in a way that is inclusive, comprehensive and collaborative. The Working Group acknowledges that these recommendations are built upon many years of hard work and other past and current initiatives that have been effective.

It is also critical to consider these recommendations within a broader, longer range solid waste strategic plan that better evaluates County policies and structures that may be presenting barriers to enhanced waste prevention practices by consumers and businesses.

The specific initiatives will be a new starting point for action. Implementation may appear challenging, but the County is at an important juncture to go beyond the status quo towards the higher sustainability goals we all must meet.