



State of Oregon Department of Environmental Quality

## Preliminary Work Plan to Reduce Food Waste

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**Background:** An estimated 25 to 40 percent of all food produced or imported for consumption in the United States is never eaten, and food waste has increased significantly over time. In Oregon, food contributes close to 15 percent of our consumption-based greenhouse gas emissions. Reducing food waste has multiple environmental, economic and social benefits, and is a relatively low-cost pathway for lowering emissions. EPA estimates that preventing one ton of food from being wasted results in 6-7 times larger lifecycle greenhouse gas benefits, on average, than recovering food waste via composting or anaerobic digestion. For these reasons, Oregon has agreed to work toward the goal of reducing food waste by 50 percent by 2030.

**Executive Order 20-04** directs DEQ and the Environmental Quality Commission to “take actions necessary to prevent and recover food waste, with the goal of reducing food waste by 50 percent by 2030, to reduce greenhouse gas emissions resulting from such waste, including but not limited to engaging with states and other jurisdictions, industry, food retailers, and brand manufacturers to develop and implement strategies to prevent and recover food waste.”

**Current Work in Oregon:** In 2017, DEQ adopted a framework strategy for reducing wasted food in Oregon. That strategy has a goal of reducing the generation of wasted uneaten food by 15 percent by 2025 and 40 percent by 2050. The 2017 Strategic Plan focuses on prevention and reuse (delivering edible food that would otherwise be wasted to hungry people via partnerships with food banks and others), and includes a set of nine priority activities to help move the state toward those reduction goals. This work involves many partnerships with agriculture, food distributors and retailers and others, and will require additional resources to complete. The activities in the plan will not, by themselves, achieve the level of reductions sought in either the 2017 Strategic Plan or in the executive order. Nevertheless, the first priority for DEQ in implementing this portion of the order will be working with others to secure the resources to fully implement the 2017 strategy.

**Phase Two Work to Implement EO 20-04:** To go beyond the important, but incremental improvements in source reduction and expansion of food rescue/reuse under the 2017 Strategic Plan, DEQ will convene a collaborative effort to develop a Phase Two Food Waste Strategy. Achieving a 50 percent reduction in wasted food will require maximizing existing known approaches, while at the same time developing new pathways that will include education, market-driven strategies, and exploration of regulatory strategies. Due to its

greater GHG reduction potential, DEQ will prioritize prevention in developing new strategies, but also will need to increase reuse and recovery to reach fifty percent waste reduction by 2030. The following table summarizes the next three years of the overall work plan.

| DEQ/EQC Preliminary Work Plan for Reducing Food Waste in Oregon |   |    |      |    |    |    |  |    |    |    |  |    |    |    |  |    |    |    |      |    |    |    |
|---|---|----|------|----|----|----|--|----|----|----|--|----|----|----|--|----|----|----|------|----|----|----|
|   | 2020  |    | 2021 |    |    |    | 2022   |    |    |    | 2023   |    |    |    | 2024   |    |    |    | 2025 |    |    |    |
|   | Q3  | Q4 | Q1   | Q2 | Q3 | Q4 | Q1   | Q2 | Q3 | Q4 | Q1   | Q2 | Q3 | Q4 | Q1   | Q2 | Q3 | Q4 | Q1   | Q2 | Q3 | Q4 |
| A1  | Develop Additional Resources to Implement Known Approaches and the 2017 Food Waste Reduction Strategy |    |      |    |    |    |  |    |    |    |  |    |    |    |  |    |    |    |      |    |    |    |
|   | Continue to Build Partnerships and Add Resources to Implement the 2017 Food Waste Reduction Strategy  |    |      |    |    |    |  |    |    |    |  |    |    |    |  |    |    |    |      |    |    |    |
| A2  |   |    |      |    |    |    | Scope New Approaches to Prevention and Develop Programmatic Options for Phase Two Strategic Plan |    |    |    |  |    |    |    |  |    |    |    |      |    |    |    |
|   |   |    |      |    |    |    |  |    |    |    | Seek EQC and/or Legislative Authorizations to Implement Phase Two Food Waste Plan and Strategies |    |    |    |  |    |    |    |      |    |    |    |
| B   |   |    |      |    |    |    |  |    |    |    |  |    |    |    | Begin Implementing Phase Two Strategies for Food Waste Reduction |    |    |    |      |    |    |    |
|   |   |    |      |    |    |    |  |    |    |    | Strategic Planning to Expand Food Waste Recovery   |    |    |    |  |    |    |    |      |    |    |    |

**A. Prioritize Prevention**

Opportunities to prevent food waste are significant and exist both in the residential and business sectors. Households account for an estimated 51 percent of food waste generation; commercial food service accounts for 47 percent. According to DEQ research, 70 percent of food waste is food that could have been eaten – only 30 percent is inedible. That 70 percent is Oregon’s opportunity.

Work on prevention under the 2017 strategy, and through new strategies developed in Phase Two are described below.

## 1. Develop Additional Resources to Implement Known Approaches and the 2017 Food Waste Reduction Strategy

In the near term (the next five years), DEQ estimates that about 10 percent of food waste generation could be prevented. This would require a significant increase in resources from what is currently available, focused on the following areas:

- a. *Commercial outreach*: continued partnership with Oregon Restaurant and Lodging Association; increased and enhanced technical assistance to businesses.
- b. *Systemic/institutional causes of food waste*: expanding regional efforts through the Pacific Coast Collaborative beyond grocers to other segments of the food supply chain to reduce systemic and institutional contributors to waste.
- c. *Schools*: working in partnership with Oregon Green Schools, prevent food waste through improved cafeteria practices.
- d. *Residential campaigns and initiatives*: augment DEQ’s planned statewide campaign and associated local campaign materials, increasing outreach and technical assistance across the state.
- e. *State Procurement*: embed food waste prevention in state-run food service (prisons, educational institutions).

**Table 1 – Estimated budget for near term prevention activities:**

| <b>Pathway/Activity</b>  | <b>Current Resources<br/>2020-2024</b> | <b>New Resources<br/>2020-2024</b> |
|--|--|------------------------------------|
| <i>Commercial</i> : Ongoing partnership with ORLA/expanded outreach        | \$60,000                               | \$1,000,000                        |
| <i>Systemic/Institutional</i> : Ongoing grocer and expanded PCC activity   | \$300,000                              | \$1,250,000                        |
| <i>Schools</i> : Equipment and education/outreach                          | --                                     | \$500,000                          |
| <i>Residential</i> : State-wide campaign and expanded residential outreach | \$250,000                              | \$4.5 to \$6.25M                   |
| <i>State Procurement</i> : Outreach/training                               | --                                     | \$250,000                          |
| <i>DEQ Staffing</i>  | \$850,000                              | \$2.3M                             |
| <b>TOTAL</b>   | <b>\$1.46 M</b>                        | <b>\$9.8 M to \$11.55M</b>         |
| <b>Total GHG Reductions</b>  | <b>1-2%</b>                            | <b>10%<sup>1</sup></b>             |

<sup>1</sup> Estimated 10% reduction in food waste generation derived from UK WRAP results achieved over 3 years and projected over 10 years implementing programs of similar size and scope. *Courtauld Commitment 2025 Milestone Progress Report*, UK WRAP, 24 January 2020.

## **2. Scope New Approaches to Prevention and Develop Programmatic Options and Phase Two Strategic Plan**

At the same time that DEQ expands work on known pathways, the agency also will implement a rigorous scoping process to identify the new actions and policies that will be necessary to go beyond ten percent reductions. Because no other jurisdictions have developed actions or programs to achieve this level of reduction, this scoping exercise will require substantial research, investigation and innovative thinking to identify and explore new opportunities and develop advances on existing approaches to move beyond ten percent prevention. The results of this scoping effort will be the basis for a Phase Two Strategic Plan that describes the specific projects that could be implemented in Oregon.

### **B. Expand Recovery**

Oregon has an existing statutory goal to recover 25 percent of its food waste by 2020. That goal is not expected to be reached. Recovery rates in Oregon have been flat at 7-8 percent since 2011 despite several significant efforts around the state. Some local governments have added curbside collection of organic material to their waste collection programs. Metro recently enacted a policy to require commercial food service operations to collect food waste and divert it from disposal in landfills; the policy is scheduled to go into effect in September 2020. When fully implemented in 2025, Metro estimates the policy will result in recovery of 55,000 tons of food waste via composting and anaerobic digestion.<sup>2</sup>

DEQ will need to conduct a strategic planning process designed to determine how to accelerate expansion of food waste recovery. That process will begin with an assessment of the current recovery system statewide and address the following key issues:

- Building demand for recovery products
- Expanding processing infrastructure<sup>3</sup>
- Promoting development of collection programs
- Role of regulatory drivers
- Messaging that complements prevention efforts
- Ensuring quality material is collected (i.e., minimize contamination)

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<sup>2</sup> Metro's commercial food scraps policy – if it meets its goals – could nearly double Oregon's current recovery rate.

<sup>3</sup> As a point of reference, Metro estimated the cost of constructing a new anaerobic digester with 65,000-ton capacity at between \$30 and \$50 million.

Like prevention, achieving expanded recovery will require additional research, effective partnerships, improved communication and education, and adequate funding.

**Table 2 -- Estimated budget for New Prevention and Recovery Efforts**

| <b>Pathway/Activity</b>  | <b>Required Resources<br/>2021-2022</b> | <b>Required Resources<br/>2023-2030</b>                 |
|--|---|---|
| Research/Scoping Strategic Plan  | 250,000                                 | TBD   |
| Implementation is to be determined, based on specific provisions of the strategic plan | TBD                                     | TBD   |
| <b>Total</b>   | <b>\$250,000</b>                        | <b>TBD</b>  |
| <b>Total GHG Reductions</b>  | <b>0</b>                                | <b>20% prevention reduction**<br/>25% recovery rate</b> |

\*\* As noted above, preventing one ton of food from being wasted results in 6-7 times larger lifecycle GHG benefits, on average, than recovering food waste via composting or anaerobic digestion. Preventing 20 percent of waste will result in much greater GHG reductions than increasing recovery rates to 25 percent.