

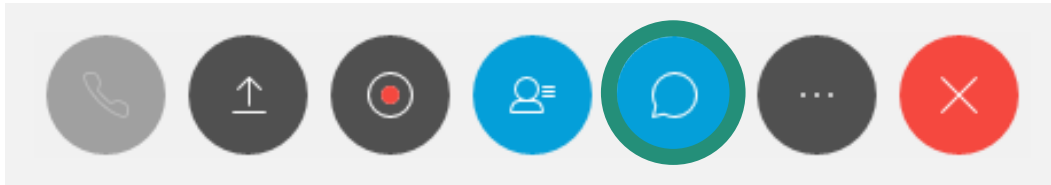
Framework for Action Update

Materials Management

August 14, 2019
Portland, Oregon

Logistics

- This webinar is not the recycling steering committee
- If you can't hear the audio, please dial in to the conference line at: (877) 336-1828, access code 7760985
- You will be in listen only mode
- The webinar will be recorded and shared
- If you have questions submit them via the chat function



- Survey

Conserve
resources

Protect the
environment

Live well



Planning Team – Framework Update



Jordan Palmeri



Sanne Stienstra



Peter Canepa



Cathie Rhoades



Shannon Davis

Meeting Objectives

- Create a shared understanding of the project purpose and process
- Share a selection of DEQ program highlights and lessons learned
- Outline next steps for stakeholder involvement



Mount Jefferson, Cascade Range

Agenda

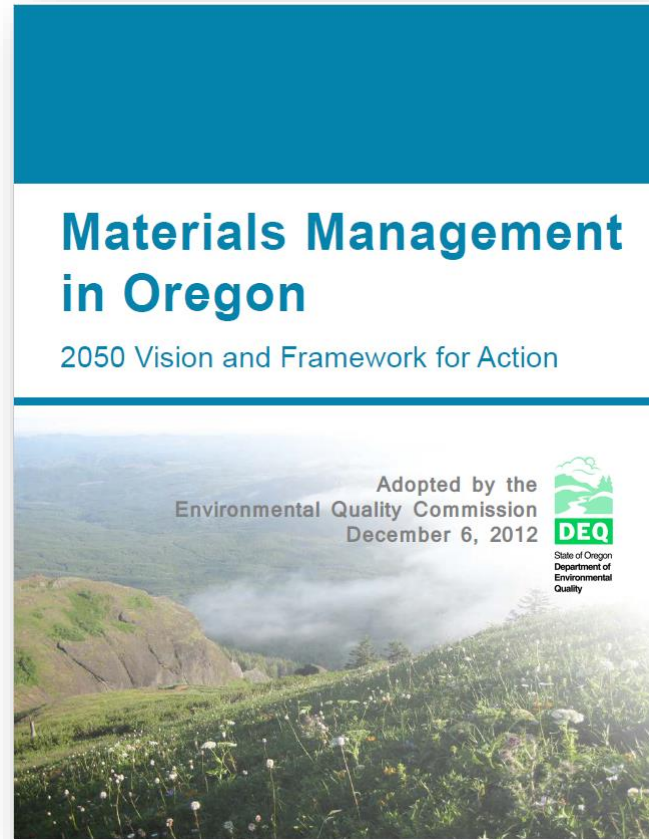
- Project overview
- Program Highlights since 2013
- Gaps
- Future work
- Next steps



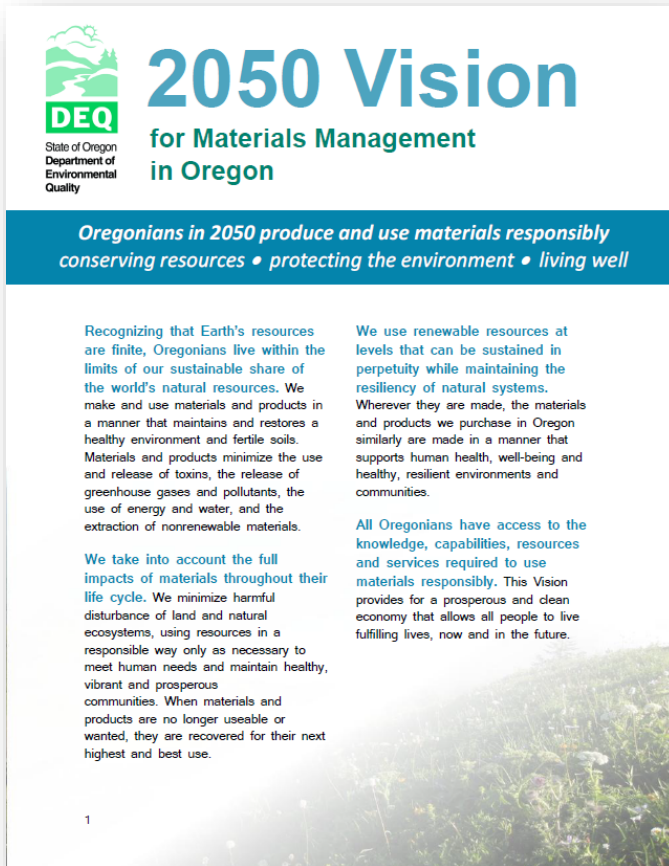
Mount Hood, Cascade Range


Project overview

2050 Vision and Framework for Action



Three main parts to the plan




State of Oregon
Department of
Environmental
Quality

2050 Vision

for Materials Management in Oregon

*Oregonians in 2050 produce and use materials responsibly
conserving resources • protecting the environment • living well*

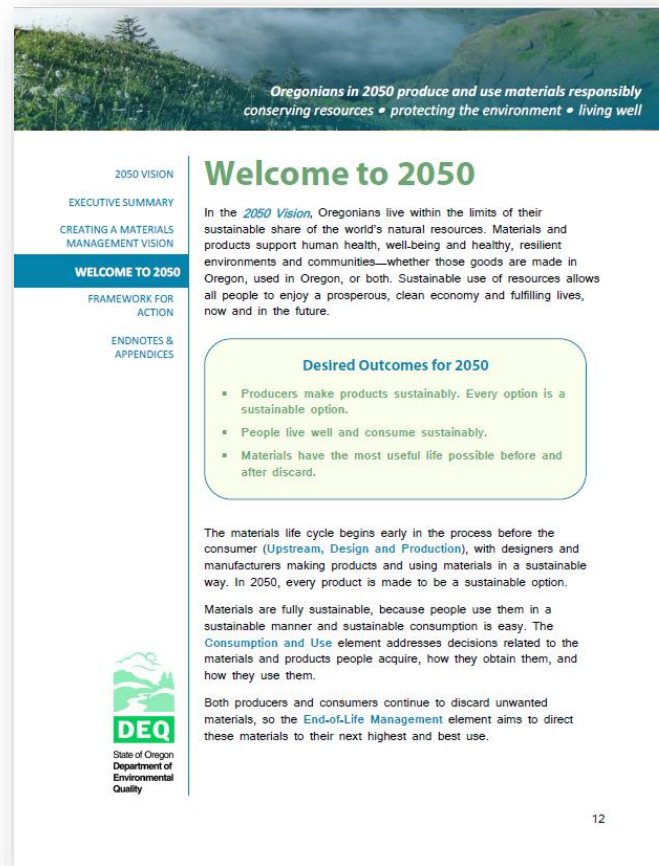
Recognizing that Earth's resources are finite, Oregonians live within the limits of our sustainable share of the world's natural resources. We make and use materials and products in a manner that maintains and restores a healthy environment and fertile soils. Materials and products minimize the use and release of toxins, the release of greenhouse gases and pollutants, the use of energy and water, and the extraction of nonrenewable materials.

We take into account the full impacts of materials throughout their life cycle. We minimize harmful disturbance of land and natural ecosystems, using resources in a responsible way only as necessary to meet human needs and maintain healthy, vibrant and prosperous communities. When materials and products are no longer useable or wanted, they are recovered for their next highest and best use.

We use renewable resources at levels that can be sustained in perpetuity while maintaining the resiliency of natural systems. Wherever they are made, the materials and products we purchase in Oregon similarly are made in a manner that supports human health, well-being and healthy, resilient environments and communities.

All Oregonians have access to the knowledge, capabilities, resources and services required to use materials responsibly. This Vision provides for a prosperous and clean economy that allows all people to live fulfilling lives, now and in the future.

1



*Oregonians in 2050 produce and use materials responsibly
conserving resources • protecting the environment • living well*

2050 VISION
EXECUTIVE SUMMARY
CREATING A MATERIALS
MANAGEMENT VISION
WELCOME TO 2050
FRAMEWORK FOR
ACTION
ENDNOTES &
APPENDICES

Welcome to 2050

In the *2050 Vision*, Oregonians live within the limits of their sustainable share of the world's natural resources. Materials and products support human health, well-being and healthy, resilient environments and communities—whether those goods are made in Oregon, used in Oregon, or both. Sustainable use of resources allows all people to enjoy a prosperous, clean economy and fulfilling lives, now and in the future.


Desired Outcomes for 2050

- Producers make products sustainably. Every option is a sustainable option.
- People live well and consume sustainably.
- Materials have the most useful life possible before and after discard.

The materials life cycle begins early in the process before the consumer (Upstream, Design and Production), with designers and manufacturers making products and using materials in a sustainable way. In 2050, every product is made to be a sustainable option.

Materials are fully sustainable, because people use them in a sustainable manner and sustainable consumption is easy. The *Consumption and Use* element addresses decisions related to the materials and products people acquire, how they obtain them, and how they use them.

Both producers and consumers continue to discard unwanted materials, so the *End-of-Life Management* element aims to direct these materials to their next highest and best use.


State of Oregon
Department of
Environmental
Quality

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*Oregonians in 2050 produce and use materials responsibly
conserving resources • protecting the environment • living well*

Framework for Action

Taking action upstream—in design and production—offers the best opportunities to realize the *2050 Vision*. While producers shift to more sustainable actions, consumers also have important roles to play in the types of products they demand, how they use them, and how items are managed once they are no longer wanted. Effective management at end-of-life then redirects resources back into productive use, while helping to reduce the negative impacts of disposal.

To help achieve the *2050 Vision* in Oregon, DEQ must take several different types of actions. The *Framework for Action* includes pathways to lead Oregon to the desired outcomes for 2050. These pathways include:

OREGON TODAY

- Foundations
- Policies and Regulations
- Collaboration and Partnerships
- Education and Information

OREGON IN 2050

Within the pathways, this document lists potential actions for DEQ and others to pursue and leaves room to develop new actions over time. The framework is intended to serve as a flexible platform for action to guide progress toward the *2050 Vision*; it is not designed as an implementation plan for specific actions. The framework is structured to allow adaptability in implementation and detailed action planning as it steers overall efforts in the direction of the vision and desired outcomes for 2050.


State of Oregon
Department of
Environmental
Quality

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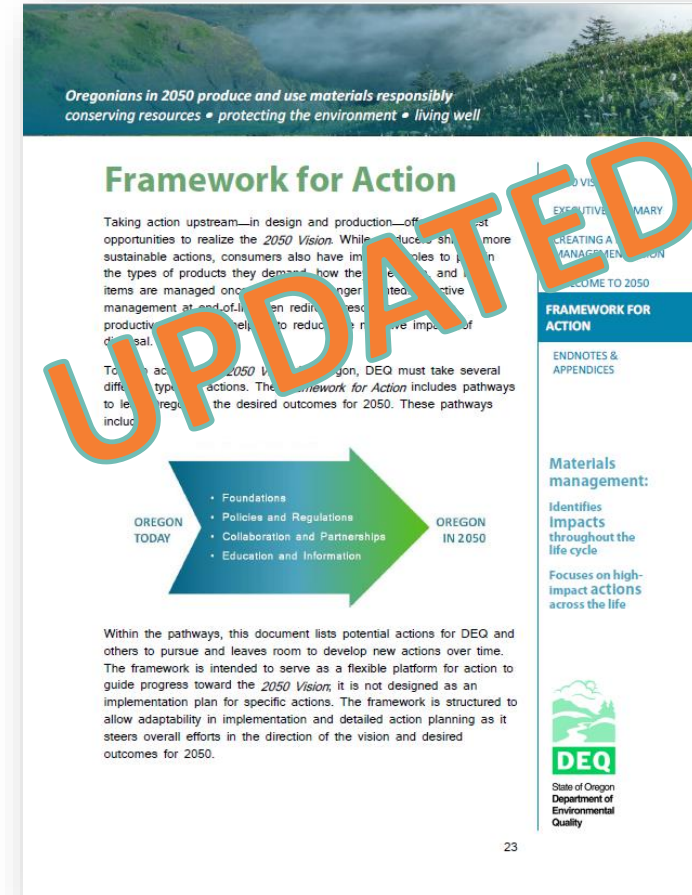
What is the Framework for Action now?

1. Flexible platform that guides progress toward achieving the 2050 Vision
2. Currently, a list of potential actions for DEQ and others to pursue (60 actions)



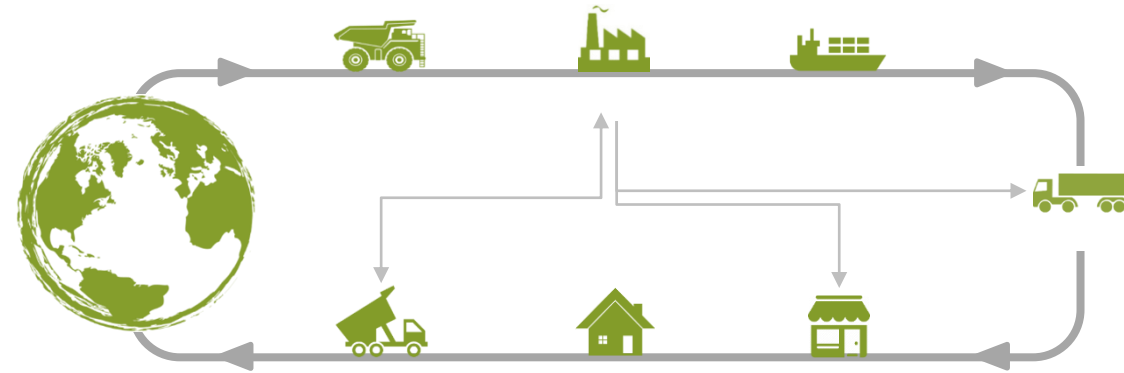
Project Goal

- Update and publish the Framework for Action in the 2050 Vision for Materials Management in Oregon



Why we are updating the Framework?

1. Appreciate and celebrate our work and partners
2. Reinforce life cycle thinking for environmental protection
3. Renew focus on achieving the 2050 Vision
4. Fulfill our commitment to update the Framework after 6 years



Timeline

JUNE	JULY	AUGUST	SEPT	OCT	NOV	DEC	JAN
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Internal workgroups



Stakeholder
webinar

Draft updated
Framework

Draft updated
Framework to
EQC

Stakeholder
outreach



Process to Develop Program Highlights

- ✓ Inventory milestones and achievements for DEQ's work since 2012
- ✓ Connect inventory to the Framework
- ✓ Reflect on the outcomes and lessons learned of the program highlights
- ❑ Identify external work in Oregon that is advancing progress towards the 2050 Vision

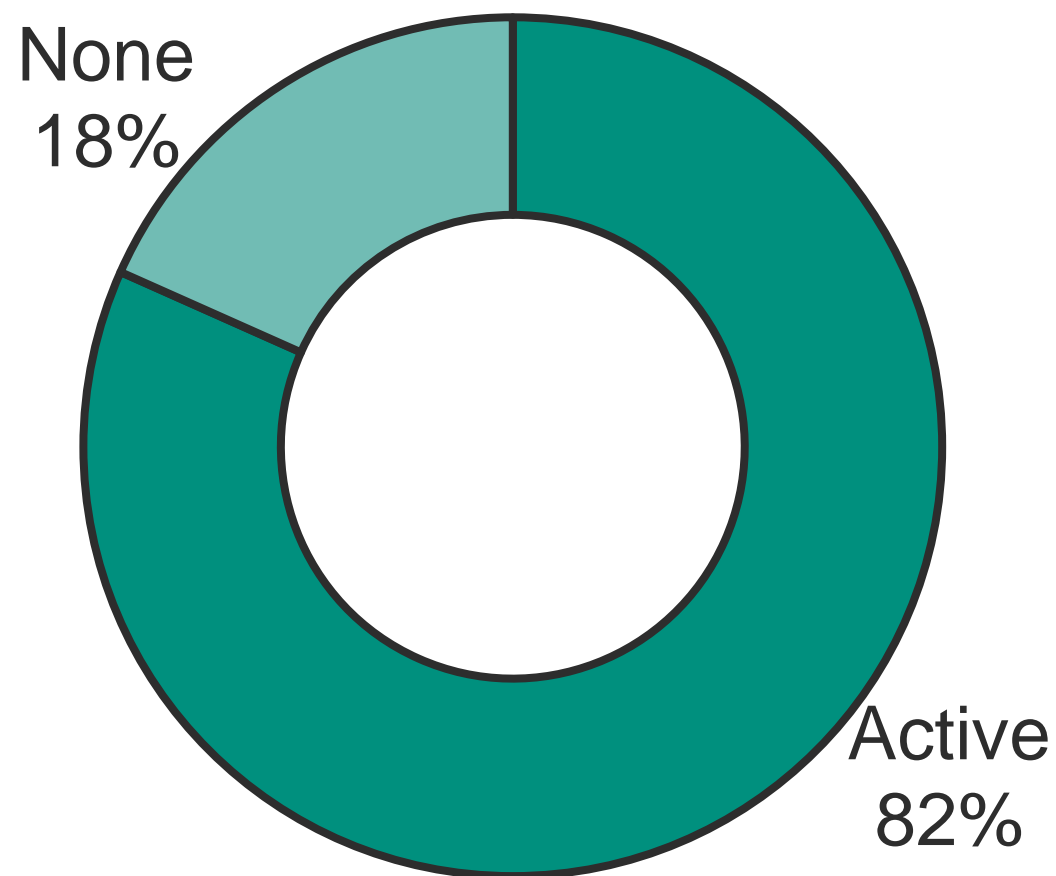


Netarts Bay, Oregon

Connecting inventory of work to the Framework

Pathway	Category	Action	Lifecycle Stage	DEQ achievements
Policies and Regulations (P)	P2. Reduce life cycle impacts through product stewardship	a. Identify opportunities and establish voluntary programs for producers and retailers to support sustainable production and minimize life cycle impacts of products, such as greenhouse gas reductions and phase-out of persistent, bioaccumulative toxics.	Upstream, design, production	1) Concrete EPD program 2) OASES intern program

Activity level for Framework Actions (60 actions)



Materials Management in Oregon

DEQ Program highlights 2013-2019



<https://www.oregon.gov/deq/FilterDocs/MM-Highlights.pdf>





Crater Lake, Klamath County

Getting to 2050

In Oregon, our way of life is deeply connected to the environment and natural resources. And for 50 years, the Department of Environmental Quality has worked to protect this identity. In 2012, with support from the Environmental Quality Commission, DEQ went a step further to lay the groundwork to protect Oregon's air, land, water and natural bounty for future generations to come by adopting **Oregon's 2050 Vision for Materials Management**.

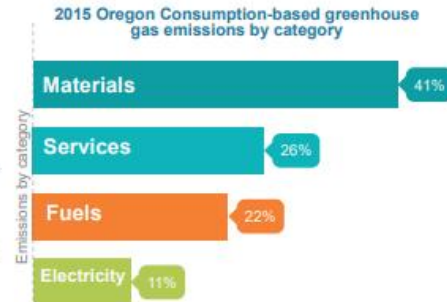
Along with the 2050 Vision, DEQ developed **The Framework for Action** to provide a roadmap to achieving the Vision. It charts a course of action to create an Oregon where producers make products sustainably, Oregonians live within their share of the world's natural resources, and materials have the most useful life possible. It recognizes that materials, environment, and quality of life are linked.

A lot has happened since the Vision was adopted in 2012. This report highlights some of our achievements – many made possible through the strength of partnerships – and helps us reflect on what we've done, and where we're going.

Why materials matter

DEQ estimates that the consumption of materials contributes to approximately **41 percent** of all greenhouse gas emission in Oregon. Materials matter because they are central to our economy, our environment and our communities. The extraction, manufacturing, transport, use, and disposal of materials has profound impacts on the air we breathe, the water we drink, the productivity of our soils and the health of numerous ecosystems.

DEQ uses a holistic, lifecycle approach called "materials management" that seeks to reduce environmental impact by managing materials throughout all stages of their lifecycle.



Desired Outcomes for 2050

- Producers make products sustainably. Every option is a sustainable option.
- People live well and consume sustainably.
- Materials have the most useful life possible before and after discards.

DEQ can provide documents in an alternate format or in a language other than English upon request. Call DEQ at 800-452-4011 or email deqinfo@deq.state.or.us.

Program highlights since 2013

Color boxes represent where each item fits into the material life cycle.

- Upstream**
Resource extraction, design, production, transportation
- Full life cycle**
All impacts
- Consumption**
Materials use
- End of life**
Disposal and recovery

ADU: Accessory Dwelling Unit
EO: Executive Order
EPR: Extended Producer Responsibility
LCA: Life Cycle Assessment
MRO: Maintenance, Repair, and Operations
OASE: Oregon Applied Sustainability Experience
OTR: Opportunity to Recycle
SB: Senate Bill

Foundational



Policy and Regulation



Research



Implementation through collaboration



By the numbers



State to complete consumption-based emissions inventory; run a voluntary EPD program; support City of Portland's 1st in the nation policies around deconstruction and concrete purchasing.



Awarded through 74 grants supporting projects that promote prevention, reuse, repair and recycling in Oregon.



Accessory Dwelling Unit (ADU) owners surveyed in Portland, Eugene, and Ashland as part of the first national survey of how ADUs are being used.



Schools DEQ visited to remove dangerous chemicals from science classrooms and train teachers on proper disposal.



Solid waste disposal sites DEQ monitors and inspects for environmental protection.



Environmental Product Declarations (EPD) for concrete published.



Pounds of electronic devices collected through the Oregon E-Cycles program.



Stakeholders engaged in 22 meetings over 14 months to help pass SB 263, 245.



Paid interns hired to reduce pollution at 20 Oregon businesses (funded through the OASE intern program).



Restaurants that participated in DEQ's food waste prevention workshops in 2019.

Thank you.

DEQ relied heavily on stakeholders to create the 2050 Vision for Materials Management in Oregon and to pass Senate Bills 245 and 263 through the 2015 legislature. These bills expanded DEQ's authority to work across the life cycle of materials, provided improvements to the opportunity-to-recycle laws, and created a more stable funding structure for DEQ's Materials Management program. This involved an enormous investment of time and energy from our stakeholders – for that, we thank you.

The 2050 Vision is intended to be a vision for Oregon, and we cannot achieve the vision alone. We will continue to partner with others to create a more sustainable future – a future where producers make products sustainably, Oregonians live within their sustainable share of the world's natural resources, and materials have the most useful life possible.

To learn more about DEQ's Materials Management program, visit <https://www.oregon.gov/deq/mm>.



Haystack Rock, Clatsop County

Program Highlights

Foundational Work

- **Senate Bills 245 + 263**
- **Staffing up**
- **Strategic plans**
- **Research efforts**
- **Consumption-based greenhouse gas inventory**
- Materials impact calculator app
- Presentations
- Newsletters
- Material Recovery Survey
- Waste composition study

Senate Bill 245

78th OREGON LEGISLATIVE ASSEMBLY-2015 Regular Session

Enrolled Senate Bill 245

Printed pursuant to Senate Interim Rule 213.28 by order of the President of the Senate in conformance with presession filing rules, indicating neither advocacy nor opposition on the part of the President (at the request of Governor John A. Kitzhaber, M.D., for Department of Environmental Quality)

CHAPTER

AN ACT

Relating to solid waste disposal fees; creating new provisions; amending ORS 459.235, 459.236, 459A.025, 459A.110 and 459A.120; and repealing ORS 459.112, 459.114 and 459A.115.

Be It Enacted by the People of the State of Oregon:

2016 FUNDING ADJUSTMENTS

SECTION 1. ORS 459.235, as amended by section 8 of this 2015 Act, is amended to read:

459.235. (1) Applications for permits shall be on forms prescribed by the Department of Environmental Quality. An application shall contain a description of the existing and proposed operation and the existing and proposed facilities at the site, with detailed plans and specifications for any facilities to be constructed. The application shall include a recommendation by each local government unit having jurisdiction and such other information the department deems necessary in order to determine whether the site and solid waste disposal facilities located [thereon] at the site and the operation will comply with applicable requirements.

(2) The Environmental Quality Commission shall establish a schedule of fees for disposal site permits. [The permit fees contained in the schedule shall be based on the anticipated cost of filing and investigating the application, of issuing or denying the requested permit and of an inspection program to determine compliance or noncompliance with the permit.] Consistent with the policies in ORS 459.015, moneys collected under this section shall be used to fund oversight activities related to solid waste disposal sites, including but not limited to policy development, permitting, inspecting, monitoring, enforcement, training, technical assistance, responding to complaints, rulemaking and any other activities that support the safe management of solid waste.

[(3) In addition to the fees imposed under subsection (2) of this section, the commission shall establish a schedule of permit fees for the purpose of implementing this section and ORS 90.318, 182.375, 279A.125, 279A.155, 279B.025, 279B.240, 279B.270, 279B.280, 459.005, 459.015, 459.247, 459.418,

Senate Bill 263

78th OREGON LEGISLATIVE ASSEMBLY-2015 Regular Session

Enrolled Senate Bill 263

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CHAPTER

AN ACT

Relating to materials management of solid waste; creating new provisions; and amending ORS 459.055, 459.305, 459A.005, 459A.010, 459A.020, 459A.029, 459A.030, 459A.035 and 459A.050.

Be It Enacted by the People of the State of Oregon:

OPPORTUNITY TO RECYCLE: GOAL AND RECOVERY RATE UPDATES

SECTION 1. ORS 459A.005 is amended to read:

459A.005. (1) As used in ORS 459.015, 459.250 and 459A.005 to 459A.665, the "opportunity to recycle" means at least that the city, county or metropolitan service district responsible for solid waste management:

(a)(A) Provides a place for collecting source separated recyclable material located either at a disposal site or at another location more convenient to the population being served and, if a city has a population of 4,000 or more, collection at least once a month of source separated recyclable material from collection service customers within the city's urban growth boundary or, where applicable, within the urban growth boundary established by a metropolitan service district; or

(B) Provides an alternative method [which] that complies with rules of the Environmental Quality Commission; and

(b) Complies with the [rates and program elements required under ORS 459A.010] program element requirements described in section 5 of this 2015 Act.

(2) The "opportunity to recycle" defined in subsection (1) of this section also includes a public education and promotion program that:

(a) Gives notice to each person of the opportunity to recycle; and

(b) Encourages source separation of recyclable material.

SECTION 2. ORS 459A.005, as amended by section 1 of this 2015 Act, is amended to read:

459A.005. (1) As used in ORS 459.015, 459.250 and 459A.005 to 459A.665, the "opportunity to

2015



Senate Bill 245

Senate Bill 263

Increased funding + broadened fee use

- Raised tip fee from \$0.81 to \$1.18
- Clarified uses of fees
- Allows EQC to adjust tip fee
- Partial tip fee rebate for economically distressed counties
- Authorizes grants and loans to businesses and non-profits instead of just local governments

Expanded recovery + New goals

- Added recycling program elements and increased # required for cities
- Emphasized reduced contamination
- New waste prevention programs
- Extends opportunity to recycle to multi-tenant
- New watershed recovery goals
- New statewide recovery and generation goals

Staffing up



Jonathan Rivin

Babe O'Sullivan

Strategic plans

Oregon DEQ Strategic Plan for Preventing the Wasting of Food

March 2017

Materials Management
700 NE Multnomah St.
Suite 600
Portland, OR 97232
Phone: 503-229-5696
800-452-4011
Fax: 503-229-5850
Contact:
www.oregon.gov/DEQ

DEQ is a leader in restoring, maintaining and enhancing the quality of Oregon's air, land and water.



Strategic Plan for Reuse, Repair, and Extending the Lifespan of Products in Oregon

December 2016

Environmental Solutions Division, Materials Management Program
700 NE Multnomah St.
Portland, OR 97232
Phone: 503-229-5696
800-452-4011
Fax: 503-229-6762
Contact: David Allaway
www.oregon.gov/DEQ

DEQ is a leader in restoring, maintaining and enhancing the quality of Oregon's air, land and water.



DEQ Integrated Toxics Reduction Strategy

2018 Update

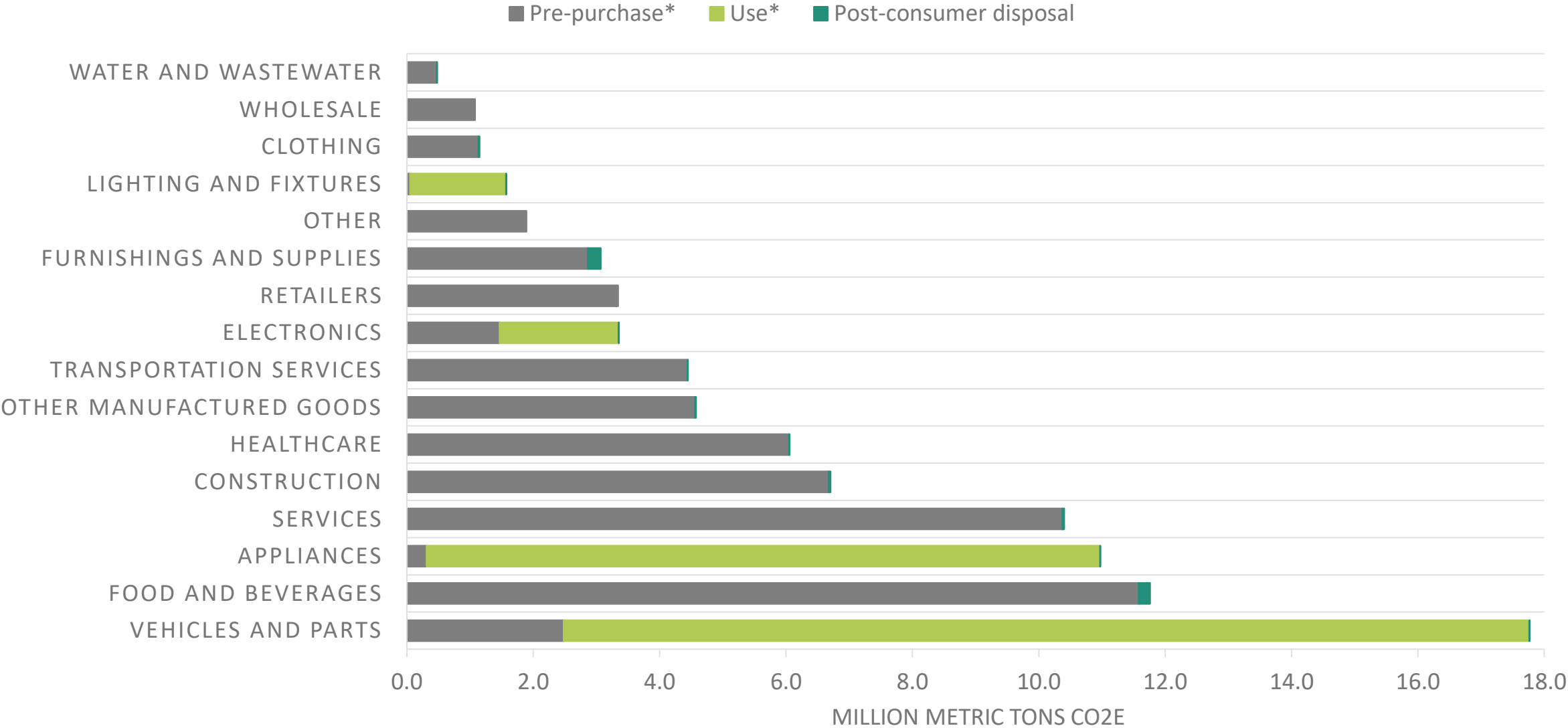
December 2018

Oregon DEQ
700 NE Multnomah St.
Suite 600
Portland, OR 97232
Phone: 503-229-5696
800-452-4011
Fax: 503-229-5850
Contact: Kevin Masterson
www.oregon.gov/DEQ

DEQ is a leader in restoring, maintaining and enhancing the quality of Oregon's air, land and water.



Consumption-based greenhouse gas inventory



Research efforts

Material
Attributes

LCA of
Beer
Kegs

LCA of Food
Waste
Treatment

Deconstruction vs.
Demolition LCA

Plastics
Recovery

Product
Footprinting

Food
Rescue LCA

Wasted
Food

Sustainability
Frameworks

Lifecycle impacts of the
Solid Waste Stream

Embodied Carbon
in Buildings

The floor plan for the second floor is as follows:

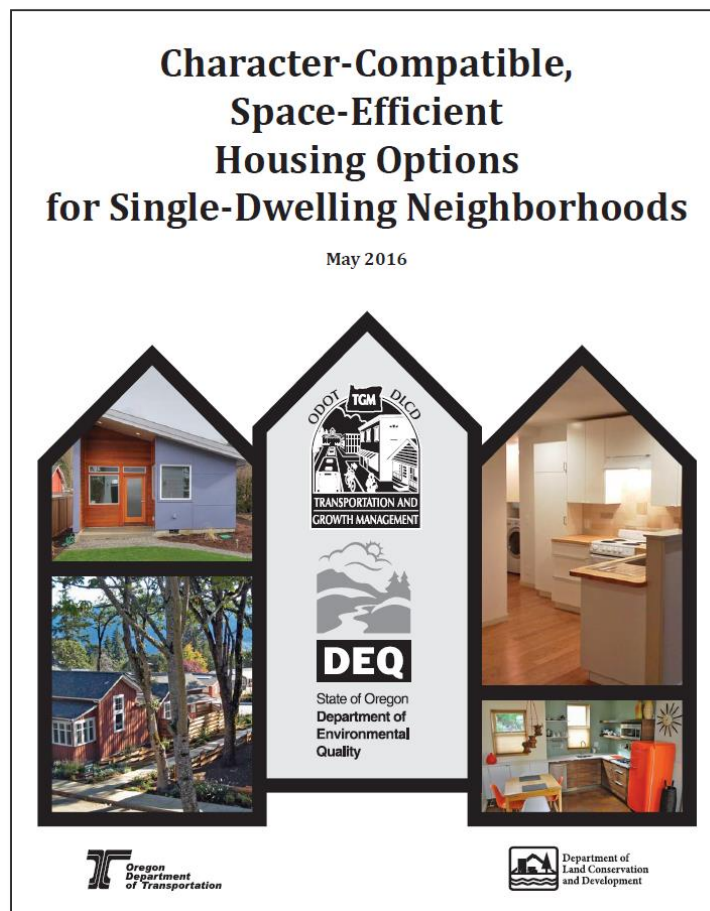
- Left Wing:**
 - ELECT. ROOM (E)
 - Restrooms (R) with wheelchair symbols
 - SERVER (E)
 - OFFICE (E)
- Central Wing:**
 - LUNCH (E)
 - CONF. (E)
 - OFFICE 8'-0" X 14'-7"
 - OFFICE 10'-1" X 14'-7"
 - OFFICE 11'-3" X 14'-7"
 - OFFICE 10'-11" X 15'-0"
 - OFFICE 12'-4" X 9'-10"
 - OFFICE 12'-8" X 9'-10"
- Right Wing:**
 - RECEP.
 - CONFERENCE ROOM
 - OFFICE 11'-6" X 18'-7"
 - OFFICE 11'-5" X 10'-1"
 - OFFICE 11'-5" X 9'-2"
- Other Labels:** Suite I, Suite H, Suite G, Suite F, Suite E, Suite D, Suite C, Suite B, Suite A.



Built Environment

- **Small housing initiatives**
- **Concrete**
- Executive Order 17-20
- Guidance on controlling lead dust in demolitions
- Embodied carbon research
- Demolition vs. Deconstruction
- Green building rating systems
- American Institute of Architects (AIA) Materials Matter educational series

Small housing initiatives



Concrete



EPD "Nutrition" Label

Your Building Product

Amount per Unit

LCA IMACT MEASURES	TOTAL
Primary Energy (MJ)	12.4
Global Warming Potential (kg CO ₂ eq)	0.96
Ozone Depletion (kg CFC-11 eq)	1.80E-08
Acidification Potential (mol H ⁺ eq)	0.93
Eutrophication Potential (kg N ⁻ eq)	6.43E-04
Photo-Oxidant Creation Potential (kg O ₃ eq)	0.121

Your Product's Ingredients: Listed Here

Material recovery + disposal

- **International Recycling Market disruption**
- **Recycling Steering Committee**
- **Household Hazardous Waste collection**
- **School lab cleanouts**
- **Opportunity to Recycle compliance**
- **Solid waste compliance**
- Multi-tenant recycling
- Landfill redevelopment
- Compost industry statement
- Paint EPR
- Electronics EPR
- Pharmaceutical EPR
- Bottle bill updates

International recycling market disruption



Recycling Steering Committee



Opportunity to Recycle Implementation

- All 35 Wastesheds around the state chose new recovery goals
- 18 Wastesheds and 66 Cities have implemented Contamination Reduction Education Plans
- 9 Wastesheds and 42 cities have implemented new Waste Prevention and Reuse Program

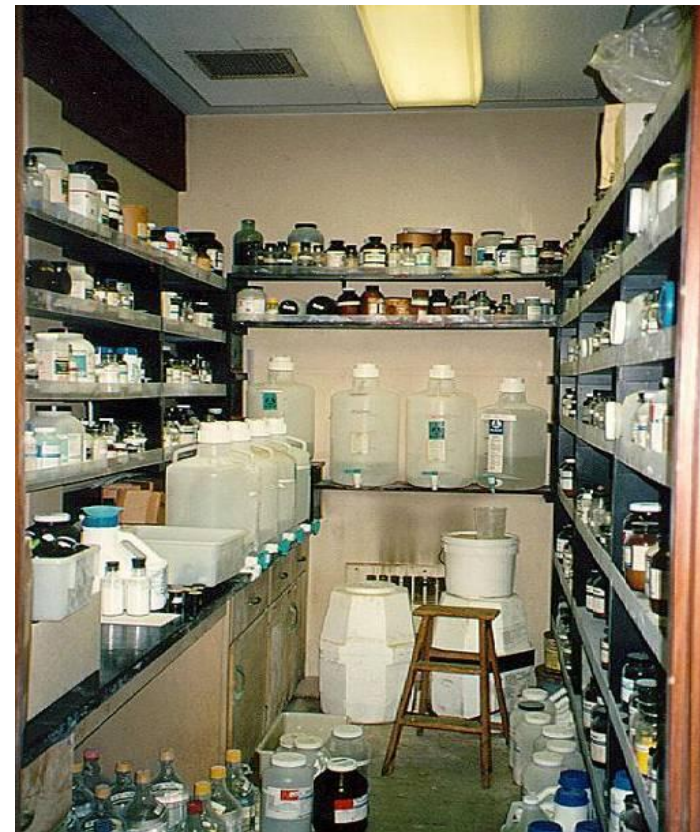


Solid Waste Compliance

- 360 solid waste and disposal sites have DEQ permits.
- 238 facilities will be inspected for environmental protections this year.
- 95% facilities are in compliance with their DEQ permit.
- Over 350 solid waste complaints have been investigated.



Household Hazardous Waste / School Lab Cleanouts



Food

- **Wasted food prevention – commercial**
- **Wasted food prevention - residential**
- Pacific Coast Collaborative
- Residential messaging work
- Food rescue LCA
- Food Product Environmental Footprint summaries

Wasted Food Prevention – commercial sector



Wasted Food Prevention – residential sector

Oregon Wasted Food Study



Summary of Findings

1

Of the food waste we throw away ...



Community based work

- **Intern program – Oregon Applied Sustainability Experience**
- **Grants**
- Waste prevention campaigns
- Refillable water bottle pilot
- Toxics reduction

Intern program – 2018 students and businesses



BOEING

 **Columbia**
Sportswear Company®

NEW SEASONS
MARKET


NOSSA FAMILIA
COFFEE

 **KNIFE RIVER**
CORPORATION
AN MDU RESOURCES COMPANY

 Northwest
Green Chemistry

 **CB^A** **CRAFT BREW**
ALLIANCE


DEQ

Grants

Ashland



Southern Oregon University

- Seeks to reduce the amount of food waste generated at its residential dining hall by reducing plate sizes from 10.5 to 9 inches

Portland



City of Portland

- The city of Portland awarded small grants to sub-recipients in the building and deconstruction field.

Benton County



Benton County, Fairgrounds Kitchen Upgrade

- Will purchase durable dishes, flatware, and a commercial dishwasher to use at the county fairgrounds.

Eugene



City of Eugene

- The City of Eugene included a Consumption and Waste chapter in its updated community Climate and Energy Action Plan.

Workforce Grants

Portland



Salvage Works

- Hired a new employee to increase capacity for reusing salvaged wood

Salem



Garten Recycling

- Trained two adults with disabilities

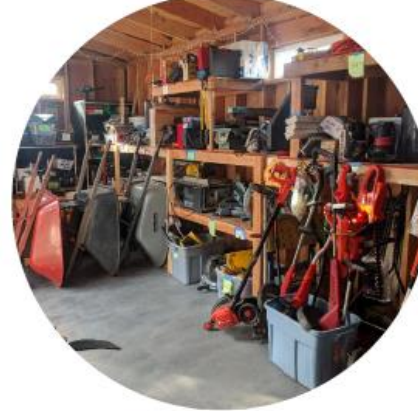
Cascade Locks



The Renewal Workshop

- Two employees hired
- Increased repair capacity by 25%
- Added three new sewing machines

Eugene



The Toolbox Project

- Nonprofit, volunteer-driven tool-lending library
- Hired an operations manager to improve financial self-sufficiency and expand services
- Membership increased by 42%

Program-wide lessons learned

- Legislation is time and resource-intensive
- Projects take time – have the long view
- Do fewer things well
- Partnering with businesses can be tricky as a regulatory agency
- Recycling markets disruption consumed a lot of program resources
- Workforce development grants have more potential
- Need balance between research and implementation
- No template for this work
- Be iterative and adapt
- Challenging to work on time sensitive issues in a slow gov't bureaucracy
- Significant engagement needed and different communication styles
- Categorizing work by lifecycle stage can be limiting

Gaps

Gaps

An area of opportunity between
where we are today and
where we want to be in 2050

2019

2050



Example gaps

“Design for environment not prioritized in product stewardship laws.”

“Rural governments don’t have enough resources to effectively oversee recycling.”

“We’re not leading with discussions of wellbeing.”

Future work areas

Next steps

Next Steps

Stakeholder Survey:

- Sent via email to all webinar registrants
- Direct link to survey:

bitly.com/FrameworkUpdateSurvey



Twin Peaks, Wallowa Mountains

DUE August 28, 2019

Questions?

Contact the planning team:



Three Sisters, Cascade Range

Jordan Palmeri | jordan.palmeri@state.or.us

Peter Canepa | peter.canepa@state.or.us

Shannon Davis | shannon.davis@state.or.us

Cat Rhoades | cathie.rhoades@state.or.us

Sanne Stienstra | sanne.stienstra@state.or.us