Interim Roadmap to 2020: Materials Management Update

David Allaway
Oregon Department of Environmental Quality

Oregon Global Warming Commission
June 25, 2018
Interim Roadmap to 2020

Topical Roadmaps:
- Energy/Utilities
- Transportation & Land Use
- Industrial Use
- Forestry
- Agriculture
- Materials & Waste Management
Materials
Life Cycle of Materials
Carbon Footprinting

**EPD “Nutrition” Label**

<table>
<thead>
<tr>
<th>Your Building Product</th>
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<tbody>
<tr>
<td><strong>LCA IMACT MEASURES</strong></td>
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<tr>
<td><strong>Amount per Unit</strong></td>
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<tr>
<td>Primary Energy (MJ)</td>
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<tr>
<td>Global Warming Potential (kg CO² eq)</td>
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<tr>
<td>Ozone Depletion (kg CFC-11 eq)</td>
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<tr>
<td>Acidification Potential (mol H+ eq)</td>
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<tr>
<td>Eutrophication Potential (kg N eq)</td>
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<tr>
<td>Photo-Oxidant Creation Potential (kg O3 eq)</td>
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</tbody>
</table>

*Your Product’s Ingredients: Listed Here*
True “Net Zero” Standards for Buildings

The Total Carbon Study
Case Study of DPR Construction
San Francisco Office Building – Net Positive Existing Building Reuse
A Focus on Manufacturing Stage
Embodied Carbon via Tally – LCA Revit Plug In

November 13, 2015
Prepared by
Ecological Building Network
11 Mark Dr #4
San Rafael, CA 94903
Integral Group
427 13th Street
Oakland, CA 94612
Siegel & Strain Architects
1295 59th St
Emeryville, CA 94608

EXECUTIVE ORDER NO. 17-20
ACCELERATING EFFICIENCY IN OREGON’S BUILT ENVIRONMENT
TO REDUCE GREENHOUSE GAS EMISSIONS AND ADDRESS
CLIMATE CHANGE

WHEREAS, climate change presents a significant threat to our livelihoods, economic security, environment, health, and well-being.

WHEREAS, there has been an increase in extreme weather events, including more frequent and intense heat waves and wildfires. According to the Oregon Climate Change Research Institute and other regional studies, the best available science indicates Oregon is at risk of serious impacts to its natural resources due to climate change.

- Water resources are being affected by decreased winter snowpack, changes to seasonal runoff patterns, decreased precipitation in Eastern Oregon, and increased intensity and occurrence of flooding.
- Agricultural resources are being affected by increases in temperatures.
- Ocean acidification is increasing and there are changes in ocean currents.
- Significant parts of the Oregon coastal region, stretching 363 miles, will be impacted by an expected rise in sea level up to 1 to 4 feet by 2100, incurring billions of dollars of damages and losses to roadways and structures.
- Climate change impacts threaten the State’s agricultural, fishing, timber, recreation, and tourism industries, thereby threatening the livelihood of the State’s residents and an important source of Gross State Product for the state.

WHEREAS, energy efficiency leads to significant greenhouse gas reductions that are essential to meeting our state greenhouse gas reduction goals and addressing climate change.

WHEREAS, Oregon is committed to meeting the international Paris Agreement targets to reduce greenhouse gas emissions by 26 to 28 percent below 2005 levels by 2025.

WHEREAS, Oregon has adopted goals to reduce greenhouse gas emissions to 10 percent below 1990 levels by 2020 and at least 75 percent below 1990 levels by 2050 as described in ORS 468A.20.
Life-Cycle Metrics for Foods

Food Product Environmental Footprint Literature Summary:
Tomatoes

with support from The Oregon Sustainability Board

A report by Center for Sustainable Systems, University of Michigan
Martin Heller September 2017
Preventing the Wasting of Food
Preventing the Wasting of Food

- Baseline measurement
- Grants
- ORLA outreach
- Pacific Coast Collaborative regional program
Evaluation of Climate, Energy, and Soils Impacts of Selected Food Discards Management Systems

Prepared for the State of Oregon
Department of Environmental Quality

October, 2014

Prepared by: Dr. Jeffrey Morris, Sound Resource Management Group, Inc.

In association with: Dr. Sally Brown, University of Washington
Dr. H. Scott Matthews, Avenue C Advisors, LLC
Mr. Matt Cotton, Integrated Waste Management Consulting, LLC
Consumption-Based Emissions Inventory

Local Consumption, Global Impact
Greenhouse Gas Emissions from Consumption in Oregon
Final Report – August 2, 2011

Peter Eriksson, Michael Lazarus, Elizabeth A. Stanton, and Fransisk Aelkonan
Stockholm Environment Institute (U.S. Center), for the Oregon Department of Environmental Quality

Oregon’s Greenhouse Gas Emissions through 2015:
An assessment of Oregon’s sector-based and consumption-based greenhouse gas emissions
May 2018

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“Tier Two” Highlights

Materials Management in Oregon
2050 Vision and Framework for Action

Adopted by the Environmental Quality Commission
December 6, 2012

David Allaway | Oregon Department of Environmental Quality
Thank You!

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