West Coast Climate & Materials Management Forum

April 2020 Newsletter

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A Note from the Forum's Leadership Team

Hello Materials Management Community,

I want to remind everyone of the great resources on the West Coast Climate and Materials Management Forum's website. While we haven't been able to update and add to the information recently, the content is still highly relevant. These resources, which include webinars, toolkits and messaging, can help you integrate a materials management approach and actions into your climate action or sustainability plan.

The Forum has a long history of delivering top notch webinars from thought leaders and leading practitioners in materials management. Topics include consumption-based emission inventories and tools, food waste reduction strategies and research, and local policies to drive low-carbon concrete, to name just a few. You can check out the Climate Friendly Purchasing Toolkit with specific modules (many with associated webinars) to help your program drive down the emissions from food, diesel, IT, and other government purchasing sectors.

If you're new to materials management, explore the Climate Action Toolkit and The Materials Message to build your understanding as well as help you tell the story.

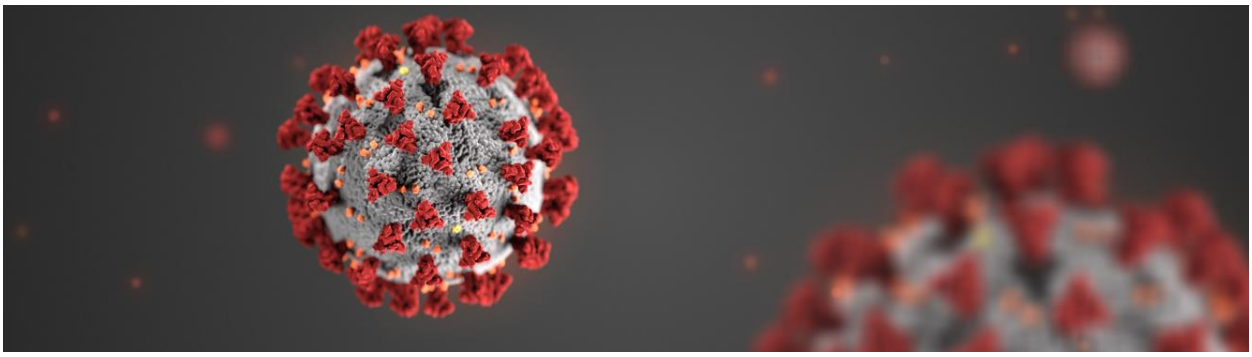
These great tools were built by teams of volunteers from state and local governments who understand the powerful environmental and climate benefits of a materials management

approach. If you have some extra time these days, I hope you'll visit the Forum's website, and take advantage of its many offerings.

In the meantime, take good care of yourself.

Best,
Shannon Davis, Oregon DEQ
West Coast Climate and Materials Management Forum's Leadership Team

COVID-19 Impacts and Perspective



In our work today we cannot ignore COVID-19's impacts. The primary acute impacts are obviously the critical and fatal cases of the virus. Our concern and sympathies are first and foremost with those that are battling the virus right now or have lost loved ones, and our gratitude is for those serving on the front line.

The secondary acute impacts – currently affecting more of the population than the virus directly – are the consequences of our response to limit the devastating health impacts. Our daily lives are restricted in ways many of us never imagined, through shelter-in-place orders, school closures, and business closures. Most of the Forum's partners are public employees. Some of us are called upon to perform duties related to COVID-19. Many of us are either unable to perform our work if it is considered non-essential or face layoffs or furloughs due to reduced general funds because local business revenues are plummeting.

Less directly, but of interest to this group, are the impacts to material flows. How is the virus and our collective response to it changing how we use materials? While most of the economy is suffering, online delivery companies are inundated with demand beyond their capacity. These methods of acquiring material goods comes with significant packaging waste. Avoiding contamination has us relying increasingly on single-use disposables. At the same time, overall consumer spending and confidence is dropping, meaning less goods are being produced and consumed. Food shopping, meal planning, and food waste reduction has come on the forefront as grocery purchases have become less convenient. Our farms that grow our food are impacted by health and safety impacts from this crisis, and many are facing challenges with getting their harvest to our tables.

Looking longer term, which of these trends will persist and which are temporary? What will the economic fallout and recovery look like? The response to COVID-19 has exposed weaknesses in our economy and governing system, showing that it is not resilient enough to slow down or pause for even a month without triggering a cascading crisis. Thought leaders around the globe are looking forward to preparing for the recovery, proposing to rebuild our economy and making a shift for supply chains to be more resilient. We need to be able to adapt to shocks like this pandemic, which are unfortunately predicted to increase in frequency and severity with climate change and growing social inequities. What does materials management look like in this new reality? How might this crisis change our relationship to our "stuff" in the long term?

Over the next few months, the Forum would like to explore these questions. If you have visions of what materials management looks like in a resilient recovery, share them by emailing Miya Kitahara at StopWaste at miya@stopwaste.org.

Sustainable Purchasing Video from Alameda County

Research from the Forum and others indicates that Scope 3 emissions related to purchasing can be a significant portion of an organization's total climate footprint. However, it can be challenging to understand where these emissions are happening and what we can do about them.

That's why Alameda County produced a 10-minute animated video to help others understand the climate protection value of sustainable purchasing. The video shows how governments, businesses and institutions can use their purchasing power to fulfil their organizations needs while reducing impacts to the climate and the environment. It also includes publicly available resources for starting your own program. The video is available on Alameda County's Sustainability website and can be reached directly via this link.

Alameda County encourages our Forum partners to share this video and use it for your organization's purposes. If you'd like to go a step farther and modify the video under a Creative Commons license (CC BY-NC 4.0) to include resources particularly relevant to your audience, just get in touch with Karen Cook at Alameda County at Karen.Cook@acgov.org. We hope you will find this to be a useful tool.

Local Government Policies to Drive Low-Carbon Concrete

Concrete is the most widely used construction material in the world and is responsible for six to ten percent of global anthropogenic carbon dioxide (CO_2) emissions*. Proven alternative technologies and practices that can reduce these emissions by more than half are readily available in the marketplace. Forum local government partners have developed policies related to incorporating more opportunities for low-carbon concrete. The following are updates related to a Forum webinar hosted in February 2020. (*Source: Architecture 2030)

The **Oregon Department of Environmental Quality** is working collaboratively with concrete producers to address challenges and develop solutions to lower the impacts of concrete. A key strategy is using lower cement mixes. Through a voluntary program, Oregon DEQ helps concrete producers generate environmental product declarations (EPDs) for each of their concrete mixes. EPDs are third-party verified product footprints that report on a variety of environmental impact categories. EPDs facilitate the reduction of environmental impacts by allowing purchasers to make more informed decisions based on the disclosed impacts of a concrete mix, thus helping to reduce environmental impacts. Visit the website for more information on this voluntary program.

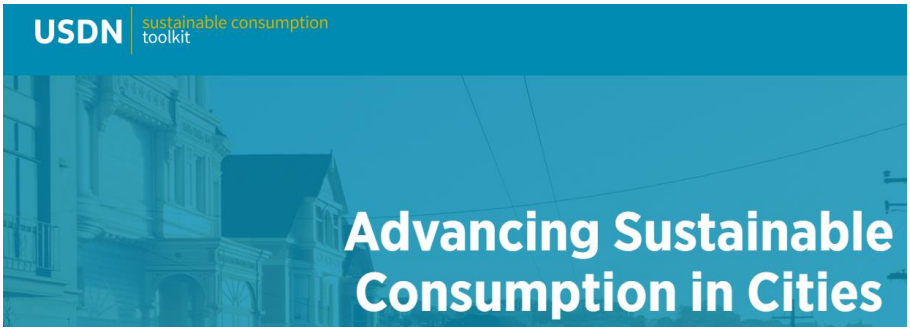
In Spring 2020, the **City of Portland (OR)** will begin pilot testing lower-carbon concrete mixes for flatwork, namely curbs and sidewalks. The first pilot sites will compare a 100% cement mix to various mixes using slag as a supplemental cementitious material (SCM). The slag mixes being tested include: 30% slag; 30% slag + Carbon Cure; 35% slag; 40% slag; and 50% slag. Later this year the City hopes to test concrete mixes utilizing glass pozzolan as a SCM. Results from the pilot tests will inform the development of a future global warming potential threshold for concrete mixes used on City-solicited construction projects. More information about the City's low-carbon concrete initiative can be found here.

Local governments have the authority to adopt building code amendments to require concrete mixes with lower greenhouse gas emissions impacts on all construction in their jurisdiction. In November 2019, the **County of Marin** (CA) was the first jurisdiction to do so, passing a low-carbon concrete code amendment. Their code development process included a regional stakeholder working group and the creation of tools to help other jurisdictions adopt similar code amendments. For more information, see a link to their press release.

Tools for similar low carbon concrete code amendments are now available in a toolkit on **StopWaste**'s (CA) website. The toolkit supplies background information and justification for a code amendment and template language based on the County of Marin's code amendment adoption. It also contains implementation resources, like compliance forms and sample specifications for compliant mixes. This is a resource for others interested in following the County of Marin's lead. Find the link to the toolkit here. The efforts by the County of Marin and StopWaste were funded through a Climate Protection Grant from the Bay Area Air Quality Management District.

These low carbon concrete policies were all highlighted in the Forum's WCCMMF February 2020 webinar which can be found here.

Updated Sustainable Consumption Toolkit from the Urban Sustainability Directors Network



The Urban Sustainability Directors Network (USDN) is currently hosting an updated Sustainable Consumption Toolkit. The web-based resource is designed to do two key things. It provides a clear and concise framing of key concepts that reveals how consumption is at the heart of many of the sustainability challenges cities are facing. It also showcases specific examples of

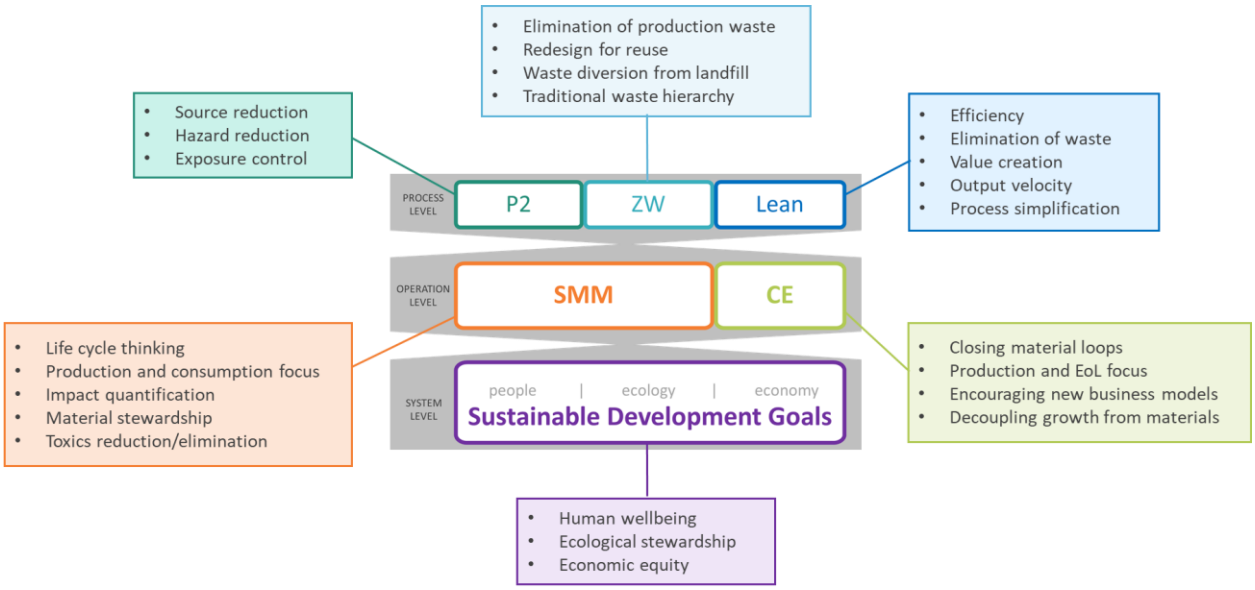
initiatives cities are already using to reduce the impacts of consumption and foster a new sense of individual and community prosperity. The new content features the latest research and on-the-ground innovation to tackle the growing impacts of consumption of goods and materials. The updated Toolkit includes two important additions:

1) Consumption Based Emissions Inventories (CBEI) Guidebook - Consumption of goods and materials is a key driver of greenhouse gas (GHG) emissions, but it is often overlooked in state and local government climate action planning. This guidebook provides advice for local governments seeking to measure and manage their carbon footprint using consumption-based emissions inventories.

2) Smart Shift - Given the ubiquity of consumption in the culture and economy, communicating about sustainable consumption and gaining support for taking action on this issue can be challenging. The *Smart Shift* report provides municipal leaders with analysis and guidance on how to frame the issue and engage stakeholders in shifting consumption patterns.

For more information, contact Babe O'Sullivan of USDN at babeosullivan@gmail.com.

Oregon DEQ's Sustainability Frameworks Review



Sustainability actions are organized in different frameworks, often with limited agendas focused on specific actions or slices of the environment. Common sustainability frameworks include Pollution Prevention, Zero Waste, Circular Economy, and Sustainable Materials Management.

Oregon DEQ reviewed these frameworks, comparing the stated principles of each framework with current actions and overlaying them with life cycle environmental burdens of material consumption. This view shows where efforts are directed and where gaps in environmental stewardship and social well-being exist.

They also compared the frameworks to the Sustainable Development Goals, which represent the culmination of the original global movement led by United Nations Development Programme. There are 14 top-level Sustainable Development Goals organized to strengthen environmental stewardship and uplift human well-being with equitable economic development.

The findings reveal that while there may be minor differences in the various framework priorities, there exist significant common ground for practitioners of different frameworks to cooperate towards the higher goal of environmental stewardship. Additionally, the report highlights a glaring gap of inattention to human well-being – the social contract of economic activities. The discussion asks practitioners to break from "tribalism" and leverage the strengths across frameworks to raise the bar on several critical Sustainable Development Goals. For the full frameworks review, visit here. You can also view a webinar on this topic here.

For more information, contact Minal Mistry from Oregon DEQ at Mistry.Minal@deq.state.or.us.

Partner Update: Northeast Waste Management Officials Association

The Forum invited Northeast Waste Management Officials Association (NEWMOA) staff to participate in its monthly Leadership Team conference calls to increase information sharing and collaboration on climate and materials management activities in both regions. This enhanced level of communication has enabled both groups to regularly share updates, webinars, resources, ideas, and tools.

NEWMOA has also been collaborating with the Northeast Recycling Council (NERC) on climate and materials management for the past four years. This was an outgrowth of a NEWMOA – NERC Joint Strategic Action Plan that was approved by the Boards of both organizations in 2017. NEWMOA and NERC have successfully completed many joint activities since then. The Action Plan focuses on a number of areas of mutual interest, including:

- Relationship between climate change and SMM
- Emerging contaminants in the solid waste stream
- Increasing the use of recycled content in products
- Food scraps reduction, recovery, and management
- Improving recyclables quality and end markets
- Extended producer responsibility
- Construction and demolition materials
- Tires

NEWMOA and NERC have supported a regional Workgroup of state solid waste officials interested in conducting consumption-based emissions inventories and integrating climate mitigation and resiliency into their work on solid waste and sustainable materials management (SMM) for the past four years.

In May 2019, NEWMOA and NERC jointly published a brochure and blog post to educate consumers on the climate impacts of consumption and steps individuals can take to limit these impacts. The brochure, "What Can We Do As Consumers About Climate Change?" is available for others to download and customize for their own use and branding. Members of the Forum were instrumental in providing feedback and suggestions on these documents.

Below are some recent and upcoming Northeast activities that may be of interest to Forum partners. For more information on NEWMOA-related projects, visit the website: or contact Terri Goldberg tgoldberg@newmoa.org.

What's New with Reducing & Recovering Wasted Food Webinar
Free Joint NEWMOA / NERC webinar
Thursday, May 21, 1:00 PM EST
To register, visit: https://register.gotowebinar.com/register/7622121772491175692.

The presenters will share the latest ideas and information on reducing wasted food and recovering and diverting what can't be reduced. Topics that will be covered include new tools and information from ReFED and on date labeling of food.

Presenters:

- Ariel Maria Ardura, Clinical Fellow, Harvard University, Food Law & Policy Clinic
- Katy Franklin, Operations Manager, ReFED

The Harvard Law School Food Law and Policy Clinic (FLPC) serves partner organizations and communities by providing guidance on cutting-edge food system issues, while engaging law students in the practice of food law and policy. Specifically, FLPC focuses on increasing access to healthy foods, supporting sustainable production and regional food systems, and reducing waste of healthy, wholesome food.

ReFED is a multi-stakeholder nonprofit, powered by an influential network of the nation's leading business, nonprofit foundation, and government leaders committed to reducing U.S. food waste. ReFED takes a data-driven approach to move the food system from acting on instinct to insights to solve our national food waste problem.

EPR for Packaging & Paper Products White Paper
NEWMOA and The Northeast Recycling Council (NERC) have published a joint White Paper on extended producer responsibility (EPR) for packaging and paper products (PPP). The goal of the White Paper is to provide state officials, policymakers, and affected industries with a baseline of shared knowledge on this topic. The Northeast Committee on the Environment, a program of

the Coalition of Northeastern Governors , requested that NEWMOA and NERC provide information about EPR for packaging and paper products to help them, other state officials, and others consider options for EPR for PPP. This White Paper provides an overarching understanding of the EPR system structure and design, requirements, and benefits. Last year, NEWMOA and NERC published a short introductory Fact Sheet on EPR for Packaging and Paper Products, and the White Paper is designed as a companion resource to provide more in-depth information about existing programs and proposals.

Use of Recycled Content in Roadway Projects Workshop

This workshop was originally scheduled for April and has been postponed to November 17, 2020. It will take place at the New Hampshire Department of Environmental Services offices in Concord, NH.

The Workshop is co-sponsored by NERC and NEWMOA in partnership with the Northeast Resource Recovery Association (NRRA), Maine Resource Recovery Association (MRRA), the Maine Department of Environmental Protection and Department of Transportation, the New Hampshire Department of Environmental Services and Department of Transportation, and the New Hampshire Technology Transfer Center. This special one-day workshop will provide new insights and examples of practical applications. Presentations will address:

- Plastic corrugated drainage pipes with recycled content
- Ground asphalt for roads
- Use of crumb rubber in roads
- Processed glass aggregate

For more information on the workshop and to register, visit here.

Buy Clean Washington Study

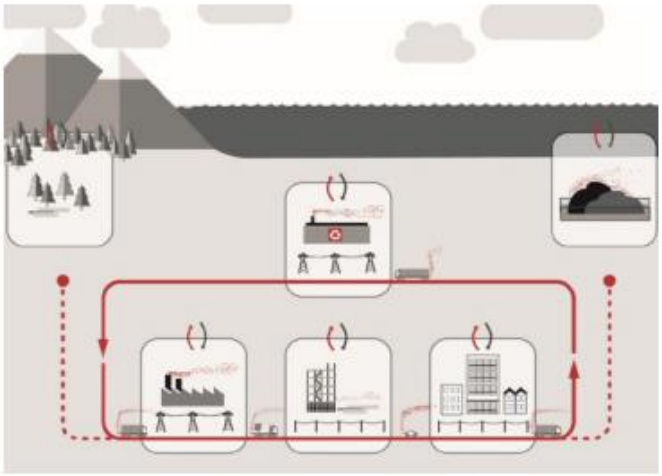


FIGURE 1 - EMBODIED CARBON OCCURS FROM EXTRACTING MATERIALS, MANUFACTURING, CONSTRUCTION, MAINTENANCE, END OF LIFE/DISPOSAL [1]. IMAGE CREDIT: MEGHAN LEWIS.

In October 2017, California passed the Buy Clean California Act, becoming the first state to require facility-specific Environmental Product Declarations and set global warming potential (GWP) thresholds for eligible materials used on public projects. In 2018 legislative session, Washington State considered similar Buy Clean legislation (HB 2412). The proposed 'Buy Clean' Washington legislation would require the Department of Enterprise Services to establish and publish a maximum acceptable global warming potential for each category of eligible materials in accordance with certain requirements. While the bill did not pass, stakeholder discussions surrounding the proposed legislation led to the Buy Clean Washington Study. In March 2018, the University of Washington's College of Built Environments was authorized by the Legislature to conduct the study, in collaboration with Central Washington University and Washington State University. The purpose of the Buy Clean Washington study was to analyze existing embodied carbon policy and propose methods to categorize structural materials and report structural material quantities and origins for the State of Washington. Consult the full study here.

Carbon Leadership Forum updates

Through robust online discussions, calls, and in-person gatherings, Carbon Leadership Forum (CLF) members explore all aspects of reducing the embodied carbon impacts of materials in the built environment including material selection, building design, lifecycle analysis, reuse, carbon storage, policy, and more. The CLF is a rich resource for state and local governments to engage with an enthusiastic group of architects, engineers, developers, material suppliers, and other industries. On May 22, the CLF policy sub-group will host a webinar Registration for that webinar as well as for past webinars are recorded and accessible online.

The Carbon Leadership Forum Community (a.k.a. Embodied Carbon Network) is growing and evolving into a new phase. The cross-disciplinary network now has over a thousand members

from more than thirty countries and most U.S. states and Canadian provinces. To accommodate its exponential growth in the last two years, CLF is migrating its online presence to a new platform more conducive to multiple simultaneous discussions: community.carbonleadershipforum.org. There are also over 20 local "hubs" forming around the planet, including several on the West Coast: Vancouver, Seattle, Portland, and the SF Bay Area. These offer an opportunity for discussions specific to local conditions and (hopefully in the near future) in-person gatherings. Join through the CLF Community platform to find your local hub.

Carbon Positive '20

In early March, before the shelter-in-place began, many CLF members joined with hundreds of architects at Carbon Positive '20 in Los Angeles, presented by Architecture 2030 and Architect magazine. The content covered both operational (energy usage) carbon and embodied carbon. The theme on embodied carbon was to find design and material innovations to not only reduce embodied carbon but also use buildings as carbon sinks through biogenic and other innovative materials. The architecture community is paying attention and are key allies to addressing embodied carbon. For more information explore Architecture magazine's Carbon Issue from January, and Architecture 2030's resources on embodied carbon.

Disclosure: Forum partner StopWaste is a sponsor of the Carbon Leadership Forum.

Forum Webinars: Please Stay Tuned

Thank you for tuning into the Forum's webinars to learn more about materials management related projects. While we aren't quite ready for scheduling webinars at this time, we are working with Forum partners to develop and schedule future webinars. We will make announcements for upcoming webinars through the Forum's listserv so please stay tuned. To view past webinar recordings, please visit here.