Creating a Sustainable Future through Food Waste Reduction

2021 Year-End Report for the Pacific Coast Food Waste Commitment
Acknowledgements

The Pacific Coast Food Waste Commitment could not accomplish our work without the generous support of our funders:

![Foundation Logos]

We are also grateful for the continuing financial support and steadfast engagement provided by the PCFWC’s jurisdiction members, without which this effort would not be possible.

About the Pacific Coast Collaborative

The Pacific Coast of North America represents the world’s fifth-largest economy, a thriving region of 55 million people with a combined GDP of $3 trillion. Through the Pacific Coast Collaborative (PCC), British Columbia, Washington, Oregon, California, and the cities of Seattle, Portland, San Francisco, Oakland, Los Angeles, and Vancouver, British Columbia are working together to build the sustainable low-carbon economy of the future. Formed in 2008, the PCC has established ambitious goals for reducing greenhouse gas emissions by at least 80 percent by the year 2050 through the transformation of energy systems, buildings, and transportation, and through food waste management – all of which would serve as a model for national and global action.

The PCC leverages the leadership and ambition of its partners along the West Coast, working across geographic borders and vertically among city, state, and provincial governments to support and strengthen our collective efforts. Together, we are creating great places to live, work, and start and grow businesses – all while reducing harmful greenhouse gas emissions and protecting the natural resources that draw people from all over the world to the Pacific Coast region.
About the Pacific Coast Food Waste Commitment

The PCC Food Waste Reduction Project began in June 2016, when the PCC entered into the Pacific North American Climate Leadership Agreement and committed to advance organic waste prevention and recovery initiatives to reduce carbon emissions from the region’s food waste stream, which spurred the creation of the PCC Food Waste Working Group. U.S.-based leaders from the food industry were invited to collaborate with area jurisdictions in a public-private commitment to cut the amount of wasted food in half by 2030 – a success metric aligned with United Nations Sustainable Development Goal 12.3 and other global, national, and regional commitments.

To assist in moving the initiative forward, the PCC established collaborations with ReFED, WRAP, and World Wildlife Fund (WWF) as resource partners to provide expertise, additional philanthropic funding, and capacity for implementation. Cascadia Policy Solutions serves as facilitator and has provided foundational and ongoing critical support to the PCC since 2011.

Jurisdiction Members

- State of California
- State of Oregon
- State of Washington
- British Columbia, Canada
- City of Los Angeles
- City of Oakland
- City of Portland
- City of San Francisco
- City of Seattle
- City of Vancouver, British Columbia
- Alameda County, CA
- King County, WA

Business Signatories (as of 12/31/21)
Introduction

Around the world, more than one-third of all greenhouse gas (GHG) emissions come from the production, distribution, and consumption of food. Atmospheric concentrations of methane, a greenhouse gas that is 87 times more potent than CO2, have more than doubled since pre-industrial times, most of which were driven by the agriculture sector and fossil fuel use. And as forests and grasslands are converted for agricultural use, the world is losing vitally important ecosystems that not only remove greenhouse gases from the atmosphere, but also provide other critical services, such as clean air and clean water. A 2019 study found that the U.S. is losing an area equivalent to a football field of nature to human development, including converting land for crops and farmland, every 30 seconds.

Addressing climate change requires repairing our food system, and the “low-hanging fruit” within that system is food waste. In the United States, 35% of food goes unsold or uneaten, and most of this ends up as waste sent to landfills, incineration facilities, or down the drain, or is simply left in the fields to rot. Food waste causes 4% of U.S. GHG emissions, and food waste in landfills is the third largest source of methane in the U.S. Given its relatively short lifetime in the atmosphere, targeting methane now will reduce GHG emissions in just a decade or two. Making better use of the food we are already growing means that we will need less cropland and water resources to feed growing populations, preserving forests and grasslands so that they can continue removing GHGs from the atmosphere and yielding other life-sustaining services.

New Name, New Look

This year, we introduced a new brand for the PCC Food Waste Reduction Project (previously known as “West Coast Voluntary Agreement to Reduce Wasted Food”). The new “Pacific Coast Food Waste Commitment” name, logo, and visual identity debuted in August, with the goal of connecting this effort to the broader Pacific Coast Collaborative but still clearly identifying it as a unique program. (Signatories and partners of the PCFWC are not required to join the Pacific Coast Collaborative.) The new name also captures the idea that participants are stepping up and pledging to make a difference – committing themselves to work together to advance food waste reduction as a climate change solution.
At the Global Climate Action Summit in September 2018, U.S.-based leaders from the food industry were invited to collaborate with area jurisdictions to cut the amount of wasted food in the Pacific Coast region in half by 2030 – a success metric aligned with United Nations Sustainable Development Goal 12.3 and other global, national, and regional commitments.

All PCC jurisdictions and cities have worked independently on reducing wasted food in the preceding years, and participation in the PCC Food Waste Reduction Project has been explicitly written into the strategic plans of many jurisdictions and departments to achieve impact at scale throughout the entire region. The PCFWC has a focus on food waste prevention, which provides the highest potential for the reduction of greenhouse gas emissions. Prevention requires broader collaboration, coordination, and communication, thus the sharing of implementation costs among city, state, and philanthropic funding sources.

Many funders have recognized the importance of food waste reduction as a climate change strategy and have generously provided grant funding. Additionally, jurisdiction partners have generously contributed to the effort as well.

This report provides an overview of PCFWC’s progress in 2021 in the key areas of recruitment, signatory engagement (through working groups and pilot projects), and data reporting. It also provides a first-look at baseline data from our retail signatories; aggregated and anonymized, it is representative of retailers across the region and is an important marker that will be used to measure progress in subsequent reporting periods.
Recruitment

2021 PCFWC signatory recruitment was bookended by two major wins. In February, we announced that Food Northwest had joined the PCFWC as our first manufacturing signatory. One of the nation’s largest food processing trade associations, Food Northwest is working to advance the ability of the food industry to produce and deliver food from PCFWC states Oregon and Washington, as well as Idaho, to the world. With more than 350 members, Food Northwest will provide a critical pathway for us to reach manufacturers as we build out programming in that sector.

The year ended with the announcement at COP26 that Walmart had joined the PCFWC as a data signatory. As the number one seller of grocery items in the country, Walmart’s data will go a long way to helping us understand the extent of food waste and the impact of our interventions. Importantly, Walmart brings PCFWC over the target 50% retailer market share threshold, enabling us to publicly share aggregated, anonymized data. As the dominant player in the industry, their participation will also help encourage other retailers and their partners in the supply chain to join the PCFWC – in 2022 and beyond.

Throughout the rest of the year, we continued with our recruitment efforts. In line with food waste voluntary agreements being delivered with WRAP throughout the world, we have focused on engaging with the sectors and organizations who can deliver the most impact for the PCFWC. We identified a list of 66 major food manufacturers with operations on the West Coast and engaged/met with companies to provide details on the benefits of participating in the PCFWC. From these efforts, Bob’s Red Mill, which produces natural, certified organic, and gluten-free milled grain products, has joined.

Flexible Funding to Drive Change

As the PCFWC continues to expand in scope, it will be critical to have commensurate financial support from its growing member base to provide the measurement and technical assistance and offer the pilot projects that are pivotal to the initiative’s success. As such, the resource partners are in the latter stages of developing a new payment framework that would provide more incentive for current and potential signatories to join. This flexible payment model will be unveiled in 2022 and will allow businesses to support the PCFWC as either data-only or full signatories, to help ensure that a wider range of organizations can join this collaborative effort.
We have also received strong interest from ten manufacturers who were unable to join in 2021 but anticipate signing on in 2022.

Additionally, because food waste is a systemwide problem, we are continuing our efforts to expand our work to additional industry sectors. In 2021, we conducted research and are ready to start reaching out to 55 major growers/processors throughout the region. We have also identified the top 17 hospitality and foodservice companies along the West Coast and are developing an outreach plan for implementation in 2022.

**Virtual Recruitment Event with EDF**

In September, PCFWC held its first recruitment event as part of Climate Week NYC, a special series of events hosted annually by international non-profit Climate Group in conjunction with the United Nations and which provided a global opportunity to come together to accelerate climate action and assess progress ahead of COP26.

PCFWC partnered with the Environmental Defense Fund (EDF), one of the world’s most influential environmental organizations with strong brand recognition among corporate audiences. In addition to a presentation from EDF on the responsibility that businesses have to advance climate goals, the event featured remarks from PCFWC jurisdiction partner Kyle Pogue (CalRecycle), resource partner Ian Bowles (WRAP), and signatories Raley’s, Sprouts, and Bob’s Red Mill, who shared their insights on the importance of the PCFWC and the power of public-private agreements in the fight against food waste.

This event provided a great opportunity for signatory prospects to hear directly from PCFWC partners. We had approximately 30 live attendees for the hour-long event and shared the recording with a broader audience through social media channels, as well as directly with signatory prospects. Additionally, a cut from the full event video was played during the PCFWC presentation at COP26.
Signatory Engagement: Working Groups

Sharing best practices and building upon the food waste reduction successes of partners can increase the potential for broader regional success. To facilitate an exchange of insights into sector-wide challenges and solutions to overcome them, working groups composed of signatories, jurisdictions, and engagement partners (e.g., trade bodies and technical experts) were established and continue to serve as the backbone of the PCFWC effort.

In 2020, using the same model as in the UK’s Courtauld Commitment (see chart on page 4), the first working groups focused on Dairy, Produce, and Measurement/Reporting were launched. A special Policy Roundtable was also convened to provide signatories with a chance to speak directly with policy teams from the jurisdiction partners about specific legislation that is relevant to food waste reduction best practices. In 2021, an additional working group focused on Food Recovery was launched based on feedback from signatories and jurisdiction partners. We also added a Communications Working Group specifically for jurisdiction partners.

All of the working groups were designed to provide a safe environment for constructive discussions. Participants listened, collaborated, and learned from special guests like The Sustainability Consortium, California food recovery organizations, subject matter experts from WRAP – and each other.
2021 Update

**Dairy WORKING GROUP**

The PCFWC signatories were particularly excited about making in-store/supply chain improvements. During working group sessions, they discussed the complicated topic of product labeling and date labeling in length. They then identified two pilot ideas to pursue further:

- Identifying potential solutions (e.g., consumer education, technology, SOPs, etc.) to reduce yogurt waste
- Investigating the connection between insufficient labeling and dairy waste (building on successful interventions WRAP has led on this in the UK)

The Dairy Working Group also welcomed guest speakers from The Sustainability Consortium and the Innovation Center for Dairy.

**Produce WORKING GROUP**

A number of potential projects were discussed in the Produce Working Group, with the aim of addressing immediate food waste challenges within the produce sector. The majority of participants voted to support a project that explores the consumer produce buying experience online — recognizing an overlapping opportunity to improve the current customer experience while also preventing food waste from the farm to the home.

This project aligns with the Target-Measure-Act framework through identifying the impacts of increasing consumer produce purchases online on food waste volumes at various levels, from farm to consumer. This will bring to light how e-commerce is changing the way consumers purchase produce, and how increasing data points can inform businesses of future food waste threshold volumes.

We also asked participants the question: “If you had approximately $10,000 to run a pilot to help reduce your produce waste, what would it be?” The subsequent list was narrowed down to the following three potential pilots:

- Improving produce surplus thresholds
- Developing SOPs for produce culling and scan-out
- Researching consumer comfort with off-spec produce to then test how much produce waste could be avoided by relaxing retail produce specs for several produce types

There was particular energy around a standardized set of best culling practices (already in RFP form and sent to the group for review).
### 2021 Update

#### Policy WORKING GROUP

PCFWC signatories continue to review pilot project ideas for the Policy Working Group. The issue of inconsistent policies across states and jurisdictions has been identified, and participants are now seeking to bring in national stakeholders to provide clarity on policies and potential collaboration on improving current laws.

The working group welcomed the PCFWC jurisdiction partners to contribute to its discussions.

#### Food Recovery WORKING GROUP

Food Recovery Working Group discussions have focused on improved product labeling and best practices with culling and donating. PCFWC signatories identified the following pilot ideas to pursue further:

- Exploring reporting shrink by department, setting targets, and grading stores, as not all stores have good data
- Collecting better data on what percentage of shrink is usable by donation partners and then what percentage is actually donated
- Exploring short and focused manager training on waste reduction strategies for stores during the onboarding process (externally available to all)
- Creating a social responsibility program where passionate sustainability-focused colleagues in stores are identified as Food Waste Prevention Champions

The working group also welcomed a handful of West Coast food recovery agencies for various discussions.

#### Communications WORKING GROUP

The Communications Working Group met quarterly with jurisdiction partners to discuss upcoming communications activities, as well as to ensure alignment between resource partner outreach and any local outreach. Discussions included an overview of PCFWC communications channels, and how they can be leveraged at the local level (e.g., sharing PCFWC social posts or blogs, etc.). The Communications team also worked with Seattle Public Utilities on a pitch to the local National Public Radio station to highlight PCFWC activities in the area, and how they are part of Washington’s long-term commitment to reducing food waste and protecting the environment.

The Working Group also weighed in on the rebranding, which led to the new Pacific Coast Food Waste Commitment name, logo, and visual identity.
One of the main benefits of joining the PCFWC is the opportunity to participate in a series of pilot projects, working with consultants and other industry experts to address real-world operational challenges in addressing food waste. Thanks to funding generously provided by Crown Family Philanthropies, signatories could participate in the pilots free of charge (except for any hard costs). Projects with five participating signatories were launched in 2021 and are currently at different stages of progress:

- **1:1 Technical Assistance** - Abbe & Associates and the Center for EcoTechnology worked with Raley’s, Sprouts, New Seasons, and PCC Markets to develop solutions for company-specific challenges, including in the areas of ordering, inventory, surplus, and waste management.

- **E-Commerce** - Cascadia Consulting (no relation to PCFWC resource partner Cascadia Policy Solutions) worked with a grocery retail signatory to address food waste reduction opportunities in-store and within their e-commerce operations.

- **Inventory Technology** - Solution providers Shelf Engine and Afresh worked with several PCFWC signatories to share their data from demonstration projects to help show how inventory technology can increase order accuracy and reduce surplus and wasted food. Proving this technology works through an unbiased business case will provide the retail sector with tangible evidence that it is worth investing in.

The learnings from each project will be shared with other signatories, as well as packaged into a report (removing all confidential information) to help inform food waste reduction efforts among the broader industry.
PCFWC at COP26

In November, the United Nations hosted the 2021 United Nations Climate Change Conference at the SEC Centre in Glasgow, Scotland. Known as “COP26,” or the 26th Conference of the Parties to the UN Framework Convention on Climate Change, the two-week event was attended by more than 25,000 delegates from nearly 200 countries, including heads of state, business leaders, and representatives from a range of NGOs.

This year, PCFWC was proud to host a special session in the “America Is All In” pavilion. Titled “Models for Implementing 50% by 2030: Partnerships to Reduce Wasted Food on the North American West Coast,” the event featured live remarks and discussion between:

- Kate Brown, Governor of State of Oregon
- Jennifer Hennessey, Washington Governor Jay Inslee’s Senior Policy Advisor for Environment, Water & Ocean Health
- Shereen D’Souza, California Deputy Secretary for Climate Policy and Government Relations
- Marcene Mitchell, Senior Vice President of Climate Change, World Wildlife Fund
- Dr. Richard Swannell, International Director of WRAP
- Jane Ewing, Senior Vice President of Sustainability at Walmart
- Gregor Robertson, Former Mayor of Vancouver, BC and PCC Ambassador

During her remarks, Jane Ewing also announced Walmart’s participation in the PCFWC as a data signatory. We also shared a short video featuring a discussion between our Raley’s, Sprouts, and Bob’s Red Mill partners, who shared their reasons for participating in the partnership.

This was an unprecedented opportunity to share the PCFWC’s progress in recruitment and fundraising with a global audience, and to highlight the importance of public-private partnerships in achieving climate goals. A recording of the event has received more than 240 additional views so far.
Data collection is critical for food waste reduction initiatives, as it is used to:

- Establish a baseline for improvement;
- Monitor progress;
- Identify hotspots that need action; and
- Highlight successes that can be replicated.

Throughout 2021, data collection was a major focus of the PCFWC, and by the end of the year, we had received 2019 data on Unsold Food Rates and Unsold Food Destinations from more than 30% of regional grocery market share. (In 2022, we will be collecting data for 2020-2021, allowing us to compare year-over-year changes.) This data collection effort is a significant contribution to the body of knowledge, as the only comparable data sets available come from two sources – in 2009, FMI, the Food Industry Association fielded a survey among its members for information on unsold food rates, and in 2016, the Food Waste Reduction Alliance (FWRA) gathered data on food waste destinations among its members. (We have provided a comparison between our data and that from FMI and FWRA below.)

**Unsold Food Rates**

*In 2019, a total of 772 thousand tons of food went unsold in regional grocery stores, which is equivalent to $3.63 billion in lost sales.* Unsold food includes all food that went unsold in each grocery store food department, including edible food and food scraps (pits, peels, etc.). This metric is the most important measure for tracking food surplus at retail, because it is a direct measure of food waste prevention. The ultimate goal of a retailer is to prevent food waste by selling 100% of its product to customers. Any food that goes unsold is not only bad for the retailer’s bottom line, but it is also bad for people and the environment. It ultimately drives higher prices that get passed along to customers, and the unsold food can end up in landfills where it generates methane emissions. Even if the food is kept out of the landfill and sent to other destinations, such as composting or anaerobic digestion, by this point most of the environmental damage is already done. The emissions offset of composting, anaerobic digestion, and other destinations does not compare to all the emissions that went into producing the food product that then needs to be replaced by producing another product to meet demand.
2019 Grocery Unsold Food Rates for Reporting PCFWC Retailers

<table>
<thead>
<tr>
<th>Category</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Produce</td>
<td>6.4%</td>
</tr>
<tr>
<td>Breads &amp; Bakery</td>
<td>7.4%</td>
</tr>
<tr>
<td>Dairy &amp; Eggs</td>
<td>2.6%</td>
</tr>
<tr>
<td>Prepared Foods</td>
<td>9.3%</td>
</tr>
<tr>
<td>Fresh Meat &amp; Seafood</td>
<td>5.7%</td>
</tr>
<tr>
<td>Dry Goods</td>
<td>1.5%</td>
</tr>
<tr>
<td>Ready-to-Drink Beverages</td>
<td>2.0%</td>
</tr>
<tr>
<td>Frozen</td>
<td>1.1%</td>
</tr>
</tbody>
</table>

Reported numbers represent over 30% of regional grocery market share.

2019 Estimated Total Regional Tons Grocery Unsold Food

<table>
<thead>
<tr>
<th>Category</th>
<th>Tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Produce</td>
<td>274,798</td>
</tr>
<tr>
<td>Breads &amp; Bakery</td>
<td>96,227</td>
</tr>
<tr>
<td>Dairy &amp; Eggs</td>
<td>89,361</td>
</tr>
<tr>
<td>Prepared Foods</td>
<td>71,654</td>
</tr>
<tr>
<td>Fresh Meat &amp; Seafood</td>
<td>71,104</td>
</tr>
<tr>
<td>Dry Goods</td>
<td>61,372</td>
</tr>
<tr>
<td>Ready-to-Drink Beverages</td>
<td>39,121</td>
</tr>
<tr>
<td>Frozen</td>
<td>18,741</td>
</tr>
</tbody>
</table>

Estimated tonnages are based on the unsold food rates from reporting retailers, representing more than 30% of regional market share, applied to total regional retail food sales.
<table>
<thead>
<tr>
<th>Department</th>
<th>Tons Food Handled</th>
<th>Tons Food Sold*</th>
<th>% of Food Sales</th>
<th>Tons Food Unsold</th>
<th>Retail $ Million Unsold</th>
<th>Unsold Food Rate</th>
<th>% of Unsold Food</th>
</tr>
</thead>
<tbody>
<tr>
<td>Produce</td>
<td>4,300,443</td>
<td>4,025,645</td>
<td>22.21%</td>
<td>274,798</td>
<td>$820</td>
<td>6.39%</td>
<td>38.04%</td>
</tr>
<tr>
<td>Breads &amp; Bakery</td>
<td>1,293,372</td>
<td>1,197,145</td>
<td>6.61%</td>
<td>96,227</td>
<td>$842</td>
<td>7.44%</td>
<td>13.32%</td>
</tr>
<tr>
<td>Dairy &amp; Eggs</td>
<td>3,490,661</td>
<td>3,401,300</td>
<td>18.77%</td>
<td>89,361</td>
<td>$705</td>
<td>2.56%</td>
<td>12.37%</td>
</tr>
<tr>
<td>Prepared Foods</td>
<td>770,477</td>
<td>698,822</td>
<td>3.86%</td>
<td>71,654</td>
<td>$443</td>
<td>9.30%</td>
<td>9.92%</td>
</tr>
<tr>
<td>Fresh Meat &amp; Seafood</td>
<td>1,243,083</td>
<td>1,171,978</td>
<td>6.47%</td>
<td>71,104</td>
<td>$418</td>
<td>5.72%</td>
<td>9.84%</td>
</tr>
<tr>
<td>Dry Goods</td>
<td>4,037,620</td>
<td>3,976,248</td>
<td>21.94%</td>
<td>61,372</td>
<td>$73</td>
<td>1.52%</td>
<td>8.50%</td>
</tr>
<tr>
<td>Ready-to-drink Beverages</td>
<td>2,006,195</td>
<td>1,967,074</td>
<td>10.85%</td>
<td>39,121</td>
<td>$246</td>
<td>1.95%</td>
<td>5.42%</td>
</tr>
<tr>
<td>Frozen</td>
<td>1,703,683</td>
<td>1,684,942</td>
<td>9.30%</td>
<td>18,741</td>
<td>$88</td>
<td>1.10%</td>
<td>2.59%</td>
</tr>
<tr>
<td>All Food</td>
<td>18,845,533</td>
<td>18,123,155</td>
<td>100.00%</td>
<td>722,378</td>
<td>$3,633</td>
<td>3.83%</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

* Food sales numbers are 2019 estimates for the PCFWC U.S. Region as a whole, including California, Washington, and Oregon, using data from the ReFED Insights Engine, which is based on underlying data from Nielsen IQ.

Unsold food rates were highest in the Prepared Foods (9.30%) and Breads & Bakery (7.44%) departments. This could be due to increased customer demand for fresh, made-on-site, made-today items. Predicting customer demand for these items on any given day at any given grocery store is very difficult. Retailers have to balance potential sales losses with overproduction. If a customer shows up wanting an item and it is not available, that is a lost sale. But if a certain number of items are made in the morning and they are not all purchased that day, they end up getting disposed of.

It is worth noting, however, that the Produce department is the largest driver of unsold food from a volume perspective. Produce is estimated to account for 38% of unsold grocery food by volume. Even though Prepared Foods and Breads & Bakery have the highest unsold food rates, they are low sales volume departments, only accounting for a combined 10% of food sold by weight. Produce on the other hand has a high sales volume, accounting for 22% of food sold by weight. Combined with its unsold food rate of 6.39%, this leads to the most unsold food of any department by far.

As noted previously, the only other comparable data source is an FMI survey from 2009. One could conclude from comparing these numbers that unsold food rates have increased since the FMI survey was conducted. While this is certainly possible, it could just be a difference in the retailers surveyed. As we gather data from PCFWC retailers in future years, we will be able to show more direct comparisons of unsold food rates over time.
Unsold Food Destinations

Unsold food at grocery stores is sent to a number of different destinations. Some is donated to food banks, pantries, and other hunger relief organizations. Some of it is wasted, which the PCFWC defines as anything sent to landfill, incineration, or sewer. Additionally, some is sent to other non-waste destinations, such as composting or anaerobic digestion.

Data tracking discrepancies are a major complication when determining how much food goes unsold and where it goes. Most retailers are still in the process of building out their food waste tracking systems to make them more accurate and sophisticated. Because of this, there can be major differences between the tons of unsold food a retailer estimates they have based on their unsold food rates and the tons they have tracked as being sent to each destination. Most of the time, if you add up the tonnages reported to each destination, the total weight will be much lower than the amount of unsold food estimated based on unsold food rates. This means that there is a significant amount of unsold food that is underreported in one or more destinations. While theft can help explain some of it, this is usually relatively small. More common are situations such as retailers donating more food than they thought or throwing something away while they were in a hurry and forgetting to log it. Unknown Destination Rate is a great metric to measure the sophistication of a retailer’s food waste tracking systems. If the Unknown Destination Rate is high, as it was for the PCFWC retailers, it is important to

Prior to this data collection initiative, the only comparable data on unsold food rates was from a 2009 member survey conducted by FMI, the Food Industry Association. One could conclude from comparing these numbers that unsold food rates have increased since the FMI survey was conducted. While this is certainly possible and could be due to increased customer demand for fresh, made-on-site, made-today items that lead to higher unsold food rates, it could also just be a difference in the retailers surveyed.
What Happens to Food Not Sold at Grocery Stores?

Donations Capture Rate
= Tons Donated / Tons Unsold

Waste Rate
= (Tons Landfilled + Tons Incinerated + Tons Sewer) / Tons Unsold

Unknown Destination Rate
= (Tons Unsold - Tons Reported to any Destination) / Tons Unsold

- Donations Capture Rate: 14%
- Waste Rate: 13%
- Unknown Destination Rate: 31%

Estimated Tons by Destination

- Donations: 104,181 (14%)
- Anaerobic Digestion: 120,355 (17%)
- Composting: 117,394 (16%)
- Animal Feed: 48,132 (7%)
- Industrial Uses: 13,443 (2%)
- Land Application: 0 (0%)
- Landfill: 95,953 (13%)
- Sewer: 1,134 (0%)
- Incineration: 0 (0%)
- Unknown Destination: 221,777 (31%)

Destination tonnages are 2019 estimates for the PCFWC U.S. Region as a whole, including California, Washington, and Oregon assuming the PCFWC retailers that reported data are representative of the entire region.

Understand that the reported Donations Capture Rate, Waste Rate, or both could be significantly underreported.

The following numbers represent the average rates reported across the PCFWC retailers for 2019:
As noted previously, the only other comparable data source is an FWRA study from 2016. The graph below shows a comparison of destinations between that study and PCFWC Signatories.

Prior to this data collection initiative, the best available data on unsold food destinations came from a 2016 member survey conducted by the Food Waste Reduction Alliance (FWRA). When comparing these numbers, it is important to note the following differences between the surveys: 1) The FWRA survey was a U.S. national survey, and the PCFWC numbers only reflect California, Oregon, and Washington; 2) the FWRA survey methodology did not account for tracking discrepancies, as reflected in the amount of food going to an Unknown Destination; and 3) the retailers that reported data to FWRA are not the exact same group of retailers that reported for this PCFWC initiative.
Impacts of Unsold Food

Assuming that the PCFWC retailers that reported data are representative of the PCFWC U.S. region as a whole, the Impact Calculator in ReFED’s Food Waste Insights Engine estimates that the current impacts of unsold food in the region are the following:

<table>
<thead>
<tr>
<th>Positive Impacts</th>
<th>Negative Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEALS RECOVERED</td>
<td>MEALS NOT RECOVERED</td>
</tr>
<tr>
<td>173,635,564 Meals Donated</td>
<td>1,030,315,534 Meals not Donated</td>
</tr>
<tr>
<td>(enough to feed 104,390 people for one year)</td>
<td>(if it was donatable, would be enough to feed an additional 619,428 people for one year)</td>
</tr>
<tr>
<td>CARBON FOOTPRINT</td>
<td>WATER FOOTPRINT</td>
</tr>
<tr>
<td>2,072,361 MTCO2e</td>
<td>128,847 Million Gallons of Water Use</td>
</tr>
<tr>
<td>(equivalent to 448,555 passenger vehicles driven for one year)</td>
<td>(equivalent to 195,170 Olympic size swimming pools)</td>
</tr>
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Additional Thoughts on Data Reporting

The data reporting process starts well before data submission using the online ReFED Grocery Retail Calculator tool. The ReFED team developed written measurement guidelines and provided one-on-one support to signatories as needed in locating and refining the necessary data sets for reporting. Once a submission is received from a signatory, ReFED’s Data & Insights team audits the data to ensure that it has been entered correctly, includes all required information, accounts for any information gaps, and more. Because this is a new way for signatories to capture metrics related to food waste, these reviews resulted in providing additional one-on-one support as needed to individual signatories to address any reporting challenges and to troubleshoot their various unique concerns, with the goal of improving data quality in preparation for a full analysis. As the process becomes more familiar to signatories, we expect data submission to become more streamlined in subsequent years.

In 2021, the resource partners also developed a reporting process for manufacturing signatories that we look forward to piloting in 2022. Unlike retail, where most grocery retailers have a similar product mix, manufacturers vary drastically in the number and type of products they produce. This will be an important consideration and challenge as we develop anonymity thresholds for future public reporting.

Measurement is critical in the fight against food waste, and this information will support those efforts by highlighting where attention and resources need to be directed – by PCFWC signatories and those businesses that have not yet joined. We are excited at the progress of data reporting this year, and we are looking forward to the next rounds of reporting to begin charting progress.
Looking Ahead

While COVID-19 provided a unique opportunity for businesses to rethink their operations in a way that could address food waste, it has also made it more challenging for them to institute major changes beyond those required to simply stay open and operate safely. As such, it remained difficult for them to engage on an issue like food waste, which may have felt somewhat removed from their immediate daily concerns. While our business outreach efforts continued, we remain optimistic that 2022 will continue to increase the focus on sustainability efforts like food waste reduction.

Retailer signatory engagement will continue in 2022 with the completion of our first round of pilot projects, which includes analyzing the results and publishing the findings. We will also launch a new round of pilot projects, which will be determined by the hot spots identified by the retailers’ baseline data.

On the manufacturing side, we are excited to officially launch a pilot test of the new ReFED Manufacturing Food Loss and Waste Calculator and reporting methodology with Food Northwest. Participation in the pilot test will be an important way to demonstrate to potential signatories the benefits of joining the PCFWC, so it will be accompanied by a robust recruitment effort.

We are also excited to expand our recruitment focus to the hospitality and foodservice sectors in 2022. Businesses in these sectors are uniquely positioned to benefit from participation in an initiative like the PCFWC, because of their consumer-facing nature – consumers are increasingly knowledgeable about sustainable business practices and increasingly willing to take their financial support to those organizations that are taking steps to improve environmental sustainability.

Food waste is a systemwide problem, which means it will require systemwide action to address it. With a strong base of PCFWC partners, 2022 will focus on connecting to multiple segments of the supply chain, expanding outreach, and sparking action by leveraging the data and insights that can only come from a collaborative effort such as this.
Get in Touch

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