Recycle Leaders, Loop Closing, and Soilful

Food First: A Replicable Model in Washington, DC for Engaging Ward 7 and 8 Residents in Taking Action on Sustainability

Food Loss and Waste Measurement Case Study

Organizations

Recycle Leaders, Loop Closing and Soilful are three small businesses in Washington, DC[1] that teamed up to implement a Community Action Grant funded by Sustainability DC 2.0, a city-funded initiative. The grant supported piloting the "Team Up on Food Waste @ DC Wards 7 and 8" action research project with residents living in a food desert. Recycle Leaders is a social enterprise that helps schools and students learn to lead lasting change by implementing impactful waste action projects. Loop Closing is a social enterprise that enables organizations to compost their food scraps on-site to meet their zero-waste goals and live their values while dismantling structural inequities. Soilful provides expertise in urban agriculture and food access in wards 7 and 8, which are the areas of the District of Columbia in which families face the greatest challenges to food access and food security.

Introduction

In April 2020, Recycle Leaders launched the Team Up on Food Waste @ Home challenge in response to the need of several schools in the DC Metro area for a remote action project for Earth Day 2020, due to COVID-19. In particular, a local high school green team had been planning to conduct food waste audits at school, and Ellie Fried, the leader of that green team, was interested in the opportunity to manage social media and communications for the challenge as her senior project. The project was perfectly aligned with the theme of Earth Day 2020, the 50th anniversary of Earth Day, which was themed around Climate Action.

The Team Up on Food Waste @ Home challenge was a fun, four-week, completely voluntary competition that provided a structured way for students and families to work on reducing food waste at home together. During the four

What was measured?

Team members of the "Team up on Food Waste @ DC Wards 7 and 8" action research team measured their own households' "preventable food waste" and took action to reduce it during an 8-week action research course that included 6 weeks of data collection, 2 weeks of baseline data and 4 weeks of taking action.

How was it measured?

Teammates used a standard data sheet to keep a running list of each item of "preventable food waste" that was discarded and why, then reported weekly volume and weight data.

What were the outcomes?

Together, participants (referred to as "action researchers") reduced reported "preventable food waste" by approximately 60%. In addition, action researchers reported benefits such as saving money and time. They also enjoyed the experience and became interested in taking further action (e.g. starting to compost). Lessons learned from this project informed the creation of a guide in partnership with the Audubon Naturalist Society on leading a "Make the Most of Food" civic action challenge for teachers and green team leaders. This guide takes into account inclusivity considerations for students and households facing food access and food security challenges, which was the purpose of the project.

weeks, each participating team collected seven days of baseline data on "preventable food waste," took action to reduce it and reported the results. The procedures were designed for easy participation without any special supplies. The challenge was based on a DC-wide four-week civic action research project challenges for schools that Beth Gingold, the founder of Recycle Leaders, had designed and delivered when she managed the recycling program for DC Public Schools. This first shorter challenge helped to pave the way for the longer eight-week challenge discussed in this case study.

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1) "Washington, DC" is also sometimes referred to as "the District of Columbia" or abbreviated to "DC" alone.

However, Recycle Leaders was concerned that the messaging focused on climate change could come off as "tone deaf" to households struggling with food access, especially in the face of COVID-19. Conversations with teachers and principals demonstrated that they shared this concern. Based on these concerns, the team needed to determine how to tailor the messaging so that it would appeal to households that are also grappling with food access and food security.

This concern was very much aligned with the concerns of Sustainable DC, which created the Sustainable DC Community Action Grant to support priority residents in developing and piloting action plans. In addition, the team interviewed members of the EPA's "Food: Too Good to Waste" Peer Network and found that there was a lot of interest in learning how to tailor the challenge to meet the needs of households experiencing food access and food insecurity challenges.

To address this challenge, the Sustainable DC grant supported the Team Up on Food Waste @ DC Wards 7 and 8 action research project. In the project, a team of DC residents, who did not need experience in research or preventing food waste, were paid to participate in the challenge as action researchers and give in-depth feedback. In total, eight residents were named "action researchers" on behalf of their households, which contained 30 people in total. The teammates were paid US$100/week to attend a weekly Zoom class, collect data daily and submit weekly reports. Action researchers who successfully completed the course had the opportunity to present their findings and recommendations to Sustainable DC.

This grant also supported contracting focused on communications and outreach. The grant also allowed the team to engage Calep Epps and Rhonda Keith, two school custodian leaders with expertise in food waste and composting, as community consultants. Finally, the grant supported scaling activities, such as research on the experience of other districts and the collection of documentation for future case studies.

Setting the Scope

The timeframe for data collection was 6 weeks during summer 2020. The material type was food only, not including liquids or inedible parts like shells, rinds, and pits. The baseline destinations for the materials were landfill, controlled combustion, and sewer/anaerobic digestion. All action researchers reported that at the outset they were disposing of their compostable waste in the trash, and several also reported using a garbage disposal.

In Washington, DC, residential trash collection services typically dispose of trash using controlled combustion. Garbage disposals send the waste to DC Water, which operates the largest anaerobic digestion waste-to-energy facility in North America. Other potential destinations for compostable waste available to DC residents, which were all introduced in class, included composting (by participating in the DC Department of Public Works' drop-off program or hiring a private company for pickup, a community compost cooperative such as those supported by the DC Department of Recreation, or backyard or vermicomposting at home).

Two of the action researchers reported taking advantage of the drop-off or compost cooperatives as a result of their participation in this project.
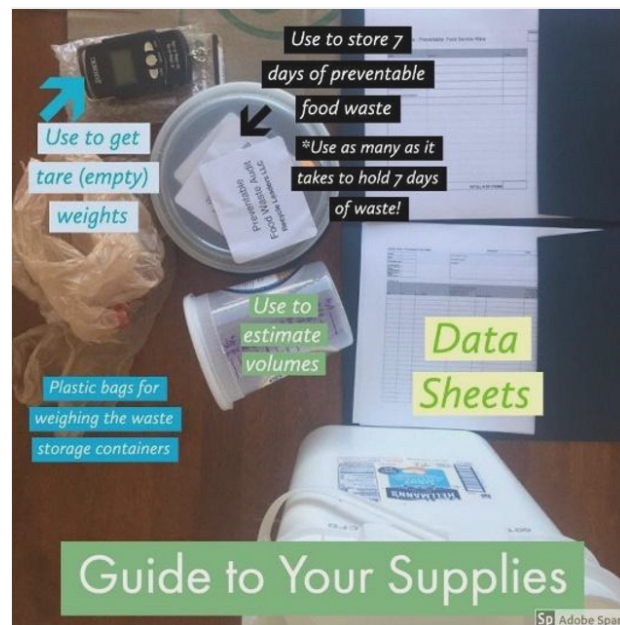
FLW Measurement Methods

Image 1. This "meme," designed to be easily sharable through the mobile app and on social media, guided researchers on using the supplies provided in their waste audit supply kits.

Each action researcher was provided with a standard "waste audit supply kit" that included reused containers for holding food waste and measuring volume, printed data sheets (in case households lacked easy access to a printer) and hanging scales. The teammates collected data on edible food waste for 6 weeks; they collected baseline data for 2 weeks, then collected data as they took action for a further 4 weeks. They were instructed to record each discarded food waste item using the data sheet provided and write notes on the type of item and reasons for discarding. They were also asked to keep the discarded items in a container, and at the end of the week to measure and report both the volume and weight of those items in a weekly report provided by Google Forms (which also included space for feedback and observations). Finally, they were asked to submit photos of their weekly waste and their completed raw data sheets.

Results

Collectively, teammates reported data that showed an approximately 60% reduction in household "preventable food waste," and most action researchers reported zero preventable food waste during at least one week near the end of the challenge. Action researchers also reported testing various reduction strategies. Favorite strategies included cleaning out and organizing the refrigerator, shopping with meals in mind and planning meals with portion sizes in mind. For families with children, a favorite strategy was actively managing access to snacks; before the challenge, children would open snacks and not store uneaten portions properly, leading to waste. Organizing food storage stood out as a one-off strategy that can be recommended to any household. This strategy can make

Image 2. This "meme," shared on social media and through the mobile app, shows a real example of how the course facilitator reorganized her refrigerator during the challenge.
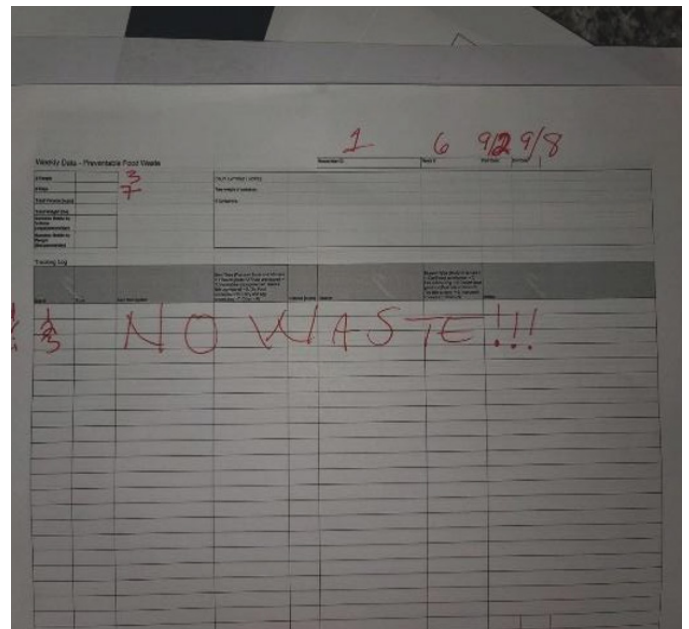

Image 3. Toward the end of the challenge, most participants reported on their data sheets, like this one, at least one week where they achieved zero waste.

it easier to implement other, higher maintenance, strategies regardless of differences in food access. For instance, a very simple, effective single action is to designate a specific space in the refrigerator for leftovers, which can be labeled with an "Eat First" sign.

On average, the project's 30 participants (including the 8 researchers and the members of their households) reduced preventable food waste from about 136 grams/person/day (0.3 lbs/person/day) to about 45 grams/person/day (0.1 lbs/person/day) over the 4-week action period. This means 76 kilograms (168 pounds) of food waste was prevented over the course of the project; if this level were to be maintained over a full year, it would result in a total reduction of about 1 tonne.

The challenge achieved a retention rate of 80%. The researchers who completed the challenge reported high levels of satisfaction with the results of the participation, and everyone enjoyed being recognized in the Virtual Awards Ceremony at the conclusion of the challenge. The awards ceremony highlighted each person's unique contributions to the team and awarded households in categories such as Highest Performance (lowest average food waste during action period), Most Improved (largest % decrease between baseline and action periods) and Most Replicable Solution (subjectively awarded for a good idea that can easily be shared and replicated).

"Listening to other people's ideas and thoughts on how they could better their homes and how they managed their waste really gave me a lot of ideas."
Charday Eury, participant

Outcomes

The project achieved the expected outcome of reducing food waste in participating households. In addition, several teammates reported substantial cost savings, with one anecdotally sharing that she cut her family grocery bills by more than half. Teammates also reported saving time from fewer grocery store trips, which is even more substantial for families who live in food deserts and have to travel significant distances to the grocery store.

The teammates also reported positive social outcomes. They enjoyed the experience of meeting weekly and sharing ideas, especially during the COVID-19 pandemic when opportunities for community building were restricted. An unexpected positive outcome was that the course participants became interested in composting their waste and spontaneously decided they wanted to take a class field trip to a nearby community compost cooperative.

In the course of the project, Recycle Leaders received very useful feedback for refining the details of running a challenge. For example, the data sheet and explanations needed to be adapted for an audience with limited technical skills. Communication methods also had to be tailored to the participants to increase interactivity and promote idea sharing. To facilitate this, participants used a mobile chat app to share ideas and lessons with each other. The app proved to be an effective tool for sharing course materials and reminders about data submission deadlines. Weekly emails were found to not be an effective means of communication.

From a data-gathering perspective, the biggest challenge was establishing an accurate baseline. Introducing the project's purpose—reducing food waste—inherently prompted behavior changes. Additionally, the first week of data collection naturally included trial and error as the researchers learned the methodology. Finally, ensuring that participants did not under-report their food waste data was an ongoing challenge.

Overall, three key lessons stand out as key learnings for other organizations undertaking a similar project:

1. Inclusive positivity motivates everyone.

We can make a food waste challenge that is inclusive for families facing challenges to food access and food security by employing positivity, peer support and payment. Additionally, by focusing on "making the most of food" and emphasizing the goal of using data to improve our own lives through better food management, as well as its complementarity with other goals such as eating healthy, we can reach far beyond the audience that would be engaged by messaging that is more exclusively focused on reducing food waste as a way of fighting climate change.

2. Fun action research challenges generate solutions that work for everyone.

The action research model addresses the fact that one size does not fit all when it comes to effective actions for reducing food waste; every family and every situation is different, so different strategies are necessary. Rather than prescribing lists of potential actions that may or may not be relevant, action research empowers the participants to use their own data to assess their specific situations and challenges and come up with tailored solutions that work for them.

"I participated because food waste has been a major challenge for me for a while and I thought it would be a great opportunity to put forth the effort to make a change and the project would give me a sense of accountability."
Taft Barber, participant

3. Teams create accountability and sustain motivation.

While setting clear measurable goals can motivate action toward those goals by individuals, this challenge shows that creating a united team is a highly effective way to sustain motivation and help participants hold each other accountable. Researchers reported that a primary motivating factor for completing the challenge, especially for those who ended up going above and beyond the "requirements" of the course, was the aspect of being part of a supportive team.

For the next steps of this project, Recycle Leaders has partnered with the Audubon Naturalist Society to draw on the lessons learned to develop a guidebook and resources for teachers and green team leaders. This guidebook will enable teams of students and their households to replicate this civic action research model while taking into account the inclusivity considerations identified through this project, specifically those that apply to families facing challenges to food access and food security. For more information, see https://www.recycleleaders.com/.