



# CHOOSE *to* REUSE

A MANUAL ON REUSABLE TRAYS FOR  
MEALS ON WHEELS PROGRAMS

*May 2022*

# TABLE *of* CONTENTS

<b><u>WHY REUSABLES FOR MEALS ON WHEELS?</u></b>	1.
<u>The Problem with Plastic Waste</u>	2.
<u>The Good News About Reusable Trays</u>	3.
<u>A Note on Recycling</u>	4.
<u>A Note on Compostables</u>	5.
<b><u>HOW TO IMPLEMENT A REUSABLE TRAY PROGRAM</u></b>	6.
<u>Option 1: Purchase and Wash Your Own Trays</u>	7.
<u>Funding for Reusables</u>	10.
<u>Option 2: Contract with a Reusable Dishware Service</u>	11.
<b><u>OTHER WAYS TO REDUCE WASTE</u></b>	13.
<b><u>CASE STUDIES</u></b>	14.
<u>Aging and Disability Resource Center, St. Croix County, Wisconsin</u>	15.
<u>Spectrum Community Services, Alameda County, California</u>	18.
<u>Three Rivers Community Action, Inc., Minnesota</u>	22.
<u>Semcac Community Action Agency, Southeastern Minnesota</u>	25.
<b><u>ADDITIONAL RESOURCES</u></b>	27.
<b><u>ENDNOTES</u></b>	28.

# WHY REUSABLE DISHES FOR MEALS ON WHEELS?



Meals on Wheels programs are vital to the health of our society. We want to start by thanking them for their good work and acknowledging the critical role they play in keeping people fed and so much more in communities all across the country.

Meals on Wheels and other meal delivery programs have an excellent opportunity to save money on the cost of purchasing single-use packaging for every meal and reduce plastic waste by switching to a reusable tray system.

Reusable polypropylene trays cost between \$4.50 to \$10 and up per tray, depending on the size, style, and quality of the materials. Though reusable containers require an up-front investment, they save significant money over time. By investing in reusable trays at \$10 each, a program that feeds 500 clients five meals a week can save \$27,000 in packaging costs the first year, and \$37,000 the second year, compared to using a \$.30 disposable tray for each meal. A \$10 reusable tray will pay for itself after 33 uses and will last for at least four years.

According to Meals on Wheels America, Meals on Wheels served 2.4 million seniors in 2018.<sup>1</sup> At an average of 261 delivery days in a year,<sup>2</sup> Meals on Wheels programs served approximately 646 million meals in 2018—fulfilling a vital need for hunger relief and human contact while reducing ER visits. However, using single-use plastic meal trays is having a negative impact on our environment.

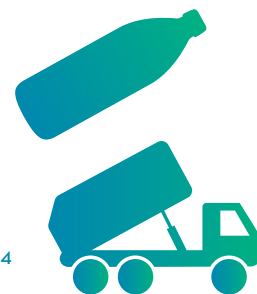
**646 million meals** served in **single-use plastic trays** with **plastic film** represents:

- **45.6 million pounds of plastic waste**

(based on a weight of 32g per plastic tray with film)<sup>3</sup>

- **1.1 million cubic yards of landfill space**

(based on a conversion of 1yd<sup>3</sup> per 40.4lbs mixed #1-#7 plastic waste)<sup>4</sup>



Keep in mind that those statistics are from 2018; the number of meals being served today is higher as programs see increasing need for services. According to Meals on Wheels America, programs were serving 84% more clients and 100% more meals in 2021 at the height of the coronavirus pandemic, and demand is still increasing at the same time as rising food costs.

Reusable trays can potentially alleviate financial constraints. Meals on Wheels programs are well-positioned to switch to using reusable meal trays because they already have a closed-loop system in place—volunteers or staff can pick up the used trays when they drop off the next meals and return the used trays to the central kitchen, minimizing loss while maximizing savings and environmental benefits.

## The **Problem** with **Plastic** – At a **Glance**



- ~ **8 to 15 million metric tons of plastic enter our oceans each year**, threatening the health and sustainability of our marine ecosystems and wildlife.<sup>5</sup>
- ~ **The vast majority of disposable trays are not recycled.** Although disposable plastic trays may have the “chasing arrows” symbol on them or be labeled as “recyclable,” less than 6% of plastic is effectively recycled. The rest is landfilled, incinerated, or winds up littered in the environment. Polystyrene, in particular, is not recyclable.
- ~ Plastics are made from chemicals and fossil fuels, and **emissions from plastic production are fueling climate change.**
- ~ **Plastic production, use, and disposal in the US contributed 232 million tons of greenhouse gas emissions** in 2020, the equivalent of 116 average coal-fired power plants.
- ~ **90% of emissions from plastic production are emitted in just 18 communities in the US**, which are two-thirds more likely to be communities of color.
- ~ **40% of all plastics** produced is **single-use packaging.**<sup>6</sup>
- ~ **Plastics contain hundreds of added chemicals**, many of which are toxic and can leach into food and contribute to health problems.<sup>7</sup>

# The **Good News** About **Reusable Trays**

Many single-use plastics can be replaced with reusable products, including the meal delivery trays used by Meals on Wheels. Some meal programs have successfully implemented reusable meal trays and recommend them to others. The benefits of reusable trays include:



## **Environmental Impacts**

While any type of tray has environmental impacts, **reusable polypropylene trays** are **environmentally preferable** to single-use plastic trays after just 10 uses.<sup>8</sup>



## **Cost Savings**

**Reusable trays** can offer **significant cost savings** over all types of single-use trays.

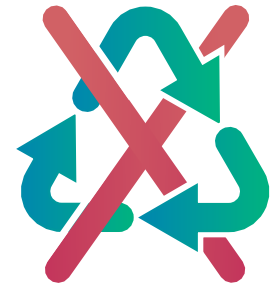


## **Shared Commitment to Environmental Protection**

Programs that rely on reusable trays report that they feel more gratified knowing that they've significantly **reduced** their **plastic waste** and **impact on our planet**.

## A Note on Recycling

Single-use plastic meal trays may show the chasing arrows symbol and/or be advertised as recyclable. This does not mean the trays are recycled. In the U.S. less than 6% of all plastics are recycled, and only 2% are *effectively* recycled, meaning they are turned into a new product of equal or greater value. The rest are downcycled—turned into a product of lesser value. All plastics are eventually disposed of in a landfill, incinerator, or as litter.



Plastic meal trays are especially hard to recycle for three reasons:



They are **sealed with plastic film**, creating a mixed material that is more difficult to process.



They are **contaminated with food**, which makes them non-recyclable and contaminates other recyclable materials.



Your community's recycling infrastructure must be able to accept the material and process it into a valuable product to sell. Not every community has recycling infrastructure, and most only accept #1 and #2 plastics if they are clean and not mixed with other plastics. **Whatever material is placed in a recycling bin that your community cannot process will go to a landfill or incinerator.**

Similarly, single-use cardboard trays are not recyclable because they are contaminated with food. They are also mixed materials: most cardboard or paper food packaging (such as takeout coffee cups) have a thin plastic liner that makes them a non-recyclable mixed material.

The bottom line is, **even if a plastic product is advertised as recyclable, that doesn't mean that it gets recycled.**

More often than not, the single use plastic will be landfilled, incinerated, or wind up as litter.

## A Note on Compostables

It's tempting to consider single-use "compostable" trays as a solution to reducing plastic waste. While single-use compostable trays may seem like a more environmentally-friendly option, they can be as bad as or worse than single-use plastics across numerous environmental metrics.

Almost all single-use compostable foodware cannot be composted in a backyard composter, it must be processed in an industrial composting facility that reaches a high enough temperature to break down the product. Most communities do not have industrial composting operations in their area or nearby. If your community does not have an industrial composting facility, the "compostable" packaging will end up in either a landfill or an incinerator. Even if your community does offer industrial composting, unless the material can be placed in a curbside bin, the client is more than likely to place the item in the trash, where its final destination will be a landfill or incinerator.

Another concern is that the term "compostable" is not regulated, so there are no clear standards for what that term means when it comes to packaging.

### There are **no federal guidelines** for food packaging **to be labeled "compostable."**

Many compostable foodware items use per- and polyfluoroalkyl substances (PFAS) to create a grease and waterproof barrier. PFAS is a toxic "forever chemical" that does not break down in the environment and is not something you want contaminating your composted dirt. Unfortunately, product manufacturers are not required to disclose if their foodware contains PFAS, so it's impossible to ascertain whether a compostable item contains these chemicals. For more information on PFAS chemicals, [click here](#).

For more information on compostables, please see the fact sheet in the [Resources](#) section.



# HOW TO IMPLEMENT A REUSABLE TRAY PROGRAM



Meal on Wheels programs require sturdy, reusable polypropylene trays because they must be microwaveable, shatter-proof, lightweight, and not hot to the touch. While it would be better not to use plastics, alternative materials such as stainless steel, glass, and ceramic are problematic for seniors and those with disabilities.

There are two popular options available to programs that wish to switch to reusable tray systems:



**Purchase reusable trays  
and wash them on-site**



**Contract with a reusable  
dishware service**



# Option 1: **Purchase** and **Wash Your Own Trays**

While purchasing reusable trays requires an upfront investment, programs that can own and wash their own dishes benefit from significant cost savings.

## PROS

- + **Saves money** over time compared to disposables
- + Significantly **reduces plastics waste**
- + **Improves food presentation** and the client experience
- + **Reduces exposure** to toxic chemicals
- + **Reduces greenhouse gas** emissions
- + **Reduces strain** on municipal resources

## CONS

- × **Upfront investment** to purchase trays
- × Requires a **dishwasher** and **kitchen space**
- × Requires a change in **kitchen workflow**



## How It Works

Purchasing reusable trays and washing them in-house is the most common method of reuse for Meals on Wheels programs. The number of trays needed is typically two per client (or two per meal that you plan to serve in reusable trays), plus an extra 20% of that number to account for lost or damaged trays. The used trays are picked up when the new meals are delivered and returned to the kitchen to be washed, sanitized, and used again.

## Tray Return

Efforts should be made at the start of the reuse program to encourage behavior change and ensure the trays are returned right away. Clients should rinse the trays and drivers should pick up the used trays each day. We recommend establishing a protocol for tray return and implementing a robust education campaign for clients, staff, and volunteers about the new system that begins in advance of the roll out of the new system. Make sure to provide materials for new clients and explain the process clearly when they enroll.

Proven methods for successful tray return:

- ~ Place a **dishwasher safe label** label (available either blank or with custom text from many sources online) on the trays with instructions to return.
- ~ Use a **checkbox system** where the drivers keep a list of every client on their routes, placing a check for each tray given and returned.
- ~ Send **periodic reminders** to clients and their families.
- ~ If a particular recipient continually does not return the trays, **make a note** and provide that person with a disposable tray moving forward.

## Dishwashing, Sanitation, and Health

Meals on Wheels programs do NOT require an additional permit to wash their own trays. Clients are asked to rinse the trays and drivers return the used trays to the kitchen to be washed and sanitized. If needed, programs can purchase dishwashing equipment and hire staff; this expense should be offset or covered by the savings that reusable trays afford. If it is not possible to wash the trays on-site, programs may be able to arrange to use existing dishwashing equipment at nearby schools or hotels during off hours.

Commercial dishwashers can be certified to sanitize trays. They must have an outside thermometer to ensure the rinse cycle reaches 180°F for at least ten seconds. Dishwashers run the gamut in terms of size, style, utility, capacity, and price. Three popular styles are countertop and under-counter, which save space, and pass-through dishwashers.

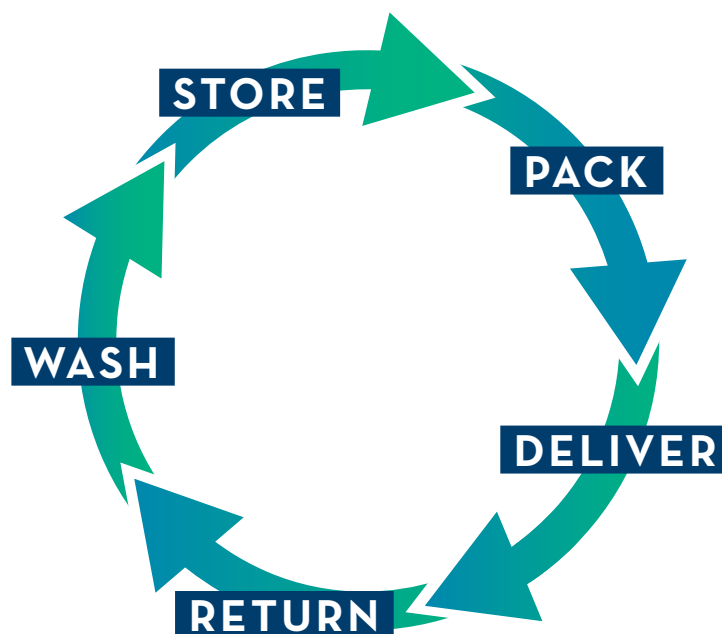
- [Click here](#) for instructions to wash and sanitize using a 3-compartment sink from the National Restaurant Association
- [Click here](#) for information on NSF commercial dishwasher certification requirements

Sanitation requirements are similar to any restaurant that serves food on reusable dishes:

- ~ Used trays cannot be transported in the same carrier as fresh trays or meals, so **use a separate box or bag** designated for collection in each vehicle. Similarly, used trays cannot pass through a food preparation area or be stored on the same surface as food or clean dishes.
- ~ **Trays must be air-dried.** Dishwashers reach hot enough temperatures that the trays air-dry quickly, an essential feature in tight kitchens that need to stack trays for storage.

## Implementation

Programs should spend a sufficient amount of time explaining to staff, volunteers and meal recipients why this switch is happening and how everyone can play a role in improving the environment. Extra outreach will be needed in the beginning, as old habits are hard to change.



# Funding for Reusables

## Plastic-Free Restaurants

Plastic Free Restaurants is a nonprofit organization offering resources and funding for establishments that want to switch from disposable meal containers to reusables. They can help subsidize the cost difference between disposable and reusable containers for restaurants, schools, and Meals on Wheels. This organization offers up to a \$.50 subsidy per container to replace single-use plastic with durable, reusable plastic trays. For information on how to apply, visit [plasticfreerestaurants.org/resources](https://plasticfreerestaurants.org/resources).

## City, County and State Budgets

Talk with your state and local representatives about the benefits of funding reusables in the next budget cycle—a win-win for the government and the Meals on Wheels programs in the state. Meals on Wheels saves money, allowing them to provide better services. Municipalities enjoy reduced waste straining municipal resources, as well as a reduction in greenhouse gas emissions which helps them reach critical climate change goals.

- [Click here](#) for a sample letter to representatives
- [Click here](#) for a sample memo laying out key environmental and budgetary concerns

## Rotary Club Grants

Rotary Clubs offer small grants for community projects. [Check your local Rotary Club](#) to see if there is an opportunity to apply for funding for reusables.

## Fundraising

Consider writing a grant or asking for donations to support a reusable tray program. Partner with local environmental organizations, who will instantly see the benefit of this switch.

## Option 2: **Contract** with a **Reusable Dishware Service**

For some programs, handling the dishwashing for reusable trays on-site is not a viable option, but they may be able to take advantage of a reusable dishware service. In this model, programs do not need to purchase their own trays and instead pay a wash fee per tray. The service picks up used trays and delivers clean trays daily.

### **PROS**

- + The rinsing, washing, sanitizing, and drying is **handled for you**
- + **No dishwasher** required
- + **No need** to procure **your own trays**
- + **Saves space** in tight kitchens
- + Supports a **circular reuse economy**
- + Significantly **reduces plastic waste**
- + **Minimal change** to kitchen workflow

### **CONS**

- × Can be **more expensive**
- × Service is **not available in all areas**
- × Container choices can be **limited**



## How It Works

The first consideration is to find out if there is a reusable dishware service available in your area. If there is, you will need to determine if they are able to service your program and then negotiate a contract. In most cases, the dishwasher owns the containers and charges a service fee.

Don't know where to start? [Upstream](#) provides a directory of reusable food container and dishwashing services.

## Tray Return

Generally, measures to ensure trays are returned are the same as if you are doing your own dishwashing. Some reusable dishware companies use QR codes on the trays to keep track of inventory. The company will charge your program for any lost trays.



## Dishwashing

As with the DIY dishwashing, clients are asked to rinse their trays, and drivers take the used trays back to the kitchen. The used trays are collected in a receptacle provided by the reusable dishware company. The company will pick up the used trays and deliver clean, sanitized trays each day.

## Implementation

Tray loss is most likely to occur at the start of the reusable program. It's important to make a clear plan for tray return and educate staff, volunteers, and clients before, during, and after switching to reusables. Additionally, programs should budget to cover a 20% loss of trays, as the reusable dishware service will bill you for lost trays. Once you work out an agreement with a vendor, you will most likely sign a contract with them for a certain period of time.

# OTHER WAYS TO REDUCE WASTE



## Congregate dining

Offer **reusable dishes, utensils, cups,** and **napkins** at congregate dining sites.

If providing takeout meals, offer **disposable utensils only upon request.**

## Reusable delivery bags

The US uses **100 billion plastic shopping bags** each year, which represents **12 million barrels of oil.**<sup>9</sup>



Is your program planning to switch to reusables after reading this guide?  
Please let us know by emailing [beyondplastics@bennington.edu](mailto:beyondplastics@bennington.edu).

# CASE STUDIES



1. **Aging and Disability Resource Center**  
St. Croix County, Wisconsin
2. **Spectrum Community Services**  
Alameda County, California
3. **Three Rivers Community Action, Inc.**  
Minnesota
4. **Semcac Community Action Agency**  
Southeastern Minnesota



# Reusables Case Study 1: **Aging and Disability Resource Center, St. Croix County, Wisconsin**

## Contact

**Renea Aeschliman** / *Support Program Associate* / [adrcinfo@sccwi.gov](mailto:adrcinfo@sccwi.gov)

The Aging and Disability Resource Center runs a meal delivery program for seniors using three-compartment reusable trays from Nutrisystem [Meals on Wheels Store](#).

- ~ Reusable program length: **20+ years**
- ~ Nutrition sites: **9**
- ~ Meals served per day: **125-150**
- ~ Meals served per year: **37,000+**



## How It Works

Staff or volunteers deliver the returnable containers directly to participants. Participants are instructed to place their container(s) from the previous delivery in a spot the staff or volunteer can see and easily access. The staff or volunteer brings the empty containers back to their vehicle and places them in a milk crate, plastic tote, or paper bag to keep them separate from the meals to be delivered.



The Home-Delivered Meal Program in St. Croix County has been using returnable containers for 20+ years. The containers have changed over the years—currently, each of the nine Senior Nutrition Sites uses one specific style of their liking... so the product is consistent and can be utilized at any of our Senior Nutrition Sites.”

**-RENEA AESCHLIMAN, AGING AND DISABILITY RESOURCE CENTER**

The Aging and Disability Resource Center (ADRC) purchases their trays through the [Nutrisystem Meals on Wheels Store](#).

ADRC uses two different color bags to distinguish hot and cold foods. The hot bags hold the reusable trays. ADRC reports the bags have lasted 10+ years and were purchased from [Sterno](#). ADRC opted for velcro closures as they found zippers were more prone to breaking.

## Tray Return

Each participant has the process explained during the initial sign-up process, and information is included in the Home-Delivered Meal Program Introduction Letter. Reminders are sent out from time to time when inventory is low or containers have not been returned.

If containers are not returned from a participant, the driver marks the route sheet and notifies the Nutrition Program Manager. If a participant consistently does not rinse and return a container, they get switched to disposable polystyrene trays—but ADRC reports this is a rare issue.

## Dishwashing

Once the containers get back to the Senior Nutrition Site, staff or volunteers will inspect them to make sure they have been rinsed and then run them through the commercial dishwasher to be washed and sanitized. The trays are left out to air-dry overnight.

The Senior Nutrition Sites are equipped with commercial dishwashers: four pass through and four under counter. One site has a home dishwasher and must use the three-step method of washing/rinsing/sanitizing. Clean containers are stored upside down in cupboards or large plastic totes.

## Budget Impact

- **A program of comparable size** using the most popular single-use plastic trays on the market would spend **\$11,583 per year** on trays.
- Over seven years, from 2013-2020, **St. Croix ADRC** spent an average of **\$1,100 per year** on reusable trays.
- The **savings per year** comes to an average of **\$10,483**.  
[Click here to see how these numbers were calculated.](#)



We did not realize how vital these containers were to our program—and our budget! Our Nutrition Program Managers were very happy when we reintroduced them even though it meant more washing on their end. They saw the benefits!! And so do we.” -RENEA AESCHLIMAN, ADRC

## Environmental Impacts

### Plastic waste diverted<sup>10</sup>

- Over 20 years: **26.1 tons**
- Per year: **1.3 tons**

### Landfill space conserved<sup>11</sup>

- Over 20 years: **1,292 yd<sup>3</sup>**
- Per year: **64.6 yd<sup>3</sup>**

# Reusables Case Study 2: **Spectrum Community Services, Alameda County, California**

## **Contact**

**Becky Bruno / Senior Meals Program Manager / [bbruno@spectrumcs.org](mailto:bbruno@spectrumcs.org)**

Spectrum Community Services is a provider for Meals on Wheels congregate dining. At the start of the coronavirus pandemic, Spectrum closed their kitchen and switched their congregate sites from in-person dining to takeout meals. They partnered with their sister organization, SOS/Meals On Wheels, who prepared home delivered chilled meals in individual one-time use containers so the seniors could take their meal home.

Spectrum started their reusable container service when they returned to their kitchen in October 2021, after 18 months of partnering with the SOS/Meals on Wheels kitchen.

- ~ Reusable program length: **6 months**
- ~ Nutrition sites: **11**, with **8 using reusable containers**  
(as of May 2, 2022)
- ~ Meals served per day in reusable trays: **250**
- ~ Anticipated meals served in 2022: **110,000**  
(62,000 in reusable containers)



## Making Reuse a Priority

When Spectrum Community Services had to close their kitchen as a result of the coronavirus pandemic, their kitchen staff worked side-by-side with SOS/Meals on Wheels to prepare meals that could be individually served, and they are proud to say they never missed a day of service. Spectrum's congregate dining sites became distribution sites.

After 18 months working with SOS/Meals on Wheels, when Spectrum started to plan for returning to their own kitchen, they had to come up with a plan for providing appropriate containers. As a congregate program, they previously served seniors seated in groups with plates and bowls as they ate together. Take-away containers were new for Spectrum. With the full support of Executive Director Lara Calvert, Spectrum's Senior Meals Program Manager Becky Bruno started researching for a reusable solution.

After consideration, Spectrum realized that buying the containers themselves wouldn't work because they don't have the space to wash and air-dry them. Not all of their sites have dishwashers, and some barely have a kitchen. Short-staffing was also an issue. Spectrum needed a reusable dishware service that could fit within their needs and budget. After getting quotes from a few local companies, Senior Meals Program Manager Becky Bruno decided to contract with Sparkl dishwashing service.



It was easier to let a third party manage the washing and sanitizing.” -BECKY BRUNO, SENIOR MEALS PROGRAM MANAGER, SPECTRUM COMMUNITY SERVICES

## How It Works

Spectrum drivers go from the main kitchen where food is prepared to the distribution sites. They come back with the coolers, catering pans and the dirty reusable meal containers that have been returned. No additional driving is required, just additional space in the vans to keep dirty containers separate. From the main kitchen, the dishware service picks up the used containers and delivers clean containers each day; they also provide reusable bags for the seniors to carry the containers.

## Container Return

When Spectrum was new to using reusable meal delivery containers, they hit some bumps at the start with container returns and communicating with the seniors. Initially, staff counted and verified reusable container inventory manually, but they no longer do this as it is too time consuming. Instead, they have focused on clear communication when a new person enrolls in the program, and now that the senior participants understand the reuse program, returns are better.



The rate of return has been very good. There has been some damage... in the beginning we had a few people that threw them away, and that was mostly due to a language barrier, so we've provided written instructions in English and Chinese.”

**-BECKY BRUNO**

Spectrum delivers to congregate dining sites, so not everyone eats every single day. However, when clients do come, they have been returning their dishes.



The public sites are a little bit more complicated, but I would say that it's just the communication. At most of our sites the volunteers have a really good relationship with the participants—they say please bring it back next time, and they do bring it.” **-BECKY BRUNO**

## Dishwashing

Because Sparkl Reusables handles all the dishwashing for Spectrum, all that is needed is to collect the used containers and keep them separate from clean containers and the food prep area. Sparkl picks up the used containers from Spectrum and drops off clean containers each day.

## Budget Impact

The **cost per full service delivery, wash, and pickup per meal container set** (which includes a clamshell and lidded bowl) for Spectrum is **\$0.80**. The cost is more expensive than single-use disposable containers; though Spectrum did not have to purchase the containers, they are fronting the cost for the sites that don't have the funds to cover their own dishwashing expenses. These expenses come to over \$5,000 per month. Spectrum was able to get some funding specifically for reuse to help offset the increased cost.



The food has to be in a container, and in reality right now, the price of disposable containers is really high. At first it was a cost savings, but then production issues caused backorders; sometimes you wouldn't know if you would get it or not. The dishware service cost is a little bit more, but not so much that it makes a significant difference. Disposables are expensive.” -**BECKY BRUNO**

## Funding

Funding was secured through **Rotary Clubs** in Alameda County. The Rotary Club in Castro Valley gave a \$1,000 grant for reuse for two sites to cover two months of reuse in Castro Valley. Each city in Alameda County has its own Rotary Club, so Spectrum has also applied to Rotaries in Union City, Hayward, San Leandro, and Oakland. A lot of city grants are not specifically for reusables and can go towards general operating expenses. [Click here](#) to see a sample narrative.

In addition to Rotary requests, Spectrum has been trying to find other private funders as well and continues the effort to seek out funding.

The reusable dish service Sparkl was able to obtain some funding through Stop Waste, a public agency governed by the **Alameda County Waste Management Authority**, the **Alameda County Source Reduction and Recycling Board**, and the **Energy Council** ([stopwaste.org](http://stopwaste.org)). This funding support helped to keep dishwashing and reuse costs low for Spectrum.

# Reusables Case Study 3: **Three Rivers Community Action, Inc., Minnesota**

## Contact

**Carla Pearson / Older Adult Services Coordinator**

**[CPearson@threeriverscap.org](mailto:CPearson@threeriverscap.org)**

Three Rivers Community Action, Inc.'s Meals on Wheels (MOW) are delivered by volunteers to the homes of people 60 years of age and older, and to people under 60 years of age who are living with disabilities, who are unable to prepare hot nutritious meals on a regular basis and are homebound (unable to drive to a meal site, a restaurant, or grocery store) or grocery shop on a regular basis.

They use reusable trays that are microwave safe and need to be returned to the caterer for sanitation and reuse. The trays are purchased from the [Meals on Wheels Store](#).

- ~ Reusable program length: **15+ years**
- ~ Kitchens: **3**
- ~ Clients: **140**
- ~ Meals served per day in reusable trays: **140**
- ~ Meals served per year: **33,500**



## How it Works

Three Rivers CAP contracts with sister Community Action Program which prepares meals for 125 participants in two kitchens. A second contract with a rural hospital fulfills the other 15 meals. The requirement for reusable containers is included in their contract language.

Volunteers deliver the meals in reusable containers directly to participants. Participants are instructed to return their container from the previous delivery to the volunteer. Volunteers bring the empty containers back to the caterer for cleaning and sanitizing.

## Tray Return

When a participant is referred to the program, Three Rivers CAP explains how the reusable trays work; the participant is instructed to rinse the trays and return them to the volunteer the following service day. Volunteers are instructed to always ask participant for the used trays prior to giving them the new meal to insure tray return. Both participants and volunteers receive periodic reminders to return trays.



To limit the weight of the delivery bags for their volunteers and maintain quality temperatures of food, the caterers separate the hot and cold food bags, and they also put a limit on the number of clients on each route.



Reuse is a priority for our program for financial sustainability and environmental responsibility. The participants can microwave the meal in these trays, and they are much better for our Earth, especially our oceans.” -CARLA PEARSON, LSW, OLDER ADULTS SERVICES COORDINATOR, THREE RIVERS COMMUNITY ACTION, INC.

## Dishwashing

The caterers, with which Three Rivers CAP contracts, are responsible for sanitizing the trays using a commercial dishwasher. Trays air dry overnight, are stacked the next morning, and ready for reuse.

## Budget Impact

- The number of **reusable trays** required to serve the program at its current capacity is **250**.
- Overall, the program spends about **\$1,100 each year** on reusable trays to serve **33,500 meals** for **140 clients**.
- This amounts to an **average cost** of **\$0.35 per meal**.

## Environmental Impact

By not using disposable plastic trays, every year Three Rivers Community Action, Inc.:

- diverts **2,363 pounds of plastic waste**, and
- saves **58.5 cubic yards of landfill space**.

# Reusables Case Study 4: **Semcac Community Action Agency, Southeastern Minnesota**

Semcac is a Community Action nonprofit agency with a Senior Nutrition program whose mission is to promote the independence, dignity, good health, and nutritional wellbeing of older persons. They provide senior dining in 11 counties and home deliver meals in 8 counties.

- ~ Reusable program length: **15+ years**
- ~ Nutrition sites: **42** (with 40 using reusable trays)
- ~ Meals served per day in reusable trays: **538** (as of May 2022)

## How It Works

Meals on Wheels of Southeastern Minnesota uses reusable three-compartment trays from the [Meals on Wheels Store](#) for their sites that use reusable trays. They use the basic bottom with a domed lid, which allows for taller food such as a baked potato or piece of chicken. Using the same trays across the program prevents mismatched trays and lids.

Between 2020-2021, the nutrition sites switched back and forth between disposable polystyrene containers and reusable containers due to COVID, but as of May 2022 they are back to using reusable trays for most deliveries. The clients also prefer the reusables over disposables. The reusables allow better presentation of the food while being reheatable and preventing food mixing.



We use the trays because it keeps the quality of our product. It is easy for the Senior to reheat and is convenient to store leftovers. It also keeps waste out of the landfills.”

**-CAROLYN FREESE, LEAD PROGRAM COORDINATOR**

## Tray Return

The clients are instructed to rinse and return the trays. Each tray has a dishwasher safe sticker with instructions to return it in order to prevent tray loss. Reminder letters are also sent to clients and their families, which include pictures of the trays along with instructions to return them. If there is an issue with a client not rinsing or returning trays, that client is switched to disposable trays. This program has been using reusable trays for more than 15 years and still has some of the original trays in use.

## Dishwashing

Meals on Wheels of Southeastern Minnesota includes seven central kitchens which serve 150-300 meals each. The containers are washed in commercial dishwashers and then air dried; because of the high temperatures achieved by commercial dishwashers, the trays dry quickly. Volunteers help with the dishwashing. Overall, dishwashing takes about an hour or less for each site.

Lead Program Coordinator Carolyn Freese notes tomato-based foods do not stain the containers. If there is an issue with staining, the program uses a destainer soaked overnight. Bleach would destroy the finish on the containers. The Meals on Wheels Store also sells destainer.

## Funding

Between 2020-2021, Semcac secured grant funding through the United Way for support to buy trays and transportation bags. They also appealed to smaller foundations and charities in their local communities; the majority of these funding appeals were strictly to purchase reusable trays.

## Budget Impacts

- Between 2018 and 2019, Semcac purchased **3,920 trays** with lids from the Meals on Wheels Store, totaling roughly \$36,260 spent over three years—**\$12,086 per year** on average.
- Semcac reports that during those years, they spent an average of **\$0.16 per meal on reusable trays**, which at the time was slightly more expensive than polystyrene containers which cost about \$.10 each.
- However, **the cost of polystyrene has doubled as of May 2022**; with an 68% increase in home-delivered meal recipients since 2019, **Semcac is on track to save \$4,800 in 2022 by using reusable trays** over polystyrene.

## Environmental Impacts

By choosing reusable trays, each year Semcac:

- diverts nearly **10,000 pounds of single-use plastic waste**, and
- conserves **237 cubic yards of landfill space**.

# ADDENDUM: ADDITIONAL RESOURCES

- ~ [List of reusable container types](#) and where to buy them
- ~ [MOW America webinar with Beyond Plastics](#)
- ~ [Sample return reminder](#) to program recipients and volunteers
- ~ Resources for reuse
  - [Plastic Free Restaurants](#) (funding and resources on reuse)
  - [National Reuse Network](#)
  - [ReThink Disposable](#)
- ~ Beyond Plastics [fact sheet on reusables for MOW](#)
- ~ Beyond Plastics [fact sheet on compostables](#)
- ~ Beyond Plastics [cover letter for state legislators](#)
- ~ Beyond Plastics [memo to NYS legislators for funding request](#)
- ~ Conversion table for environmental metrics
  - [Worksheet version](#)
  - [Spreadsheet version](#)
- ~ Cost savings calculator
  - [Worksheet version](#)
  - [Spreadsheet version](#)
- ~ [Sample narrative](#) for grant funding through Rotary Clubs

# ENDNOTES

- 1 Meals on Wheels America. (2020, September). How Meals on Wheels is Funded. Retrieved February 1, 2022, from [https://www.mealsonwheelsamerica.org/docs/default-source/fact-sheets/2020/2020-national/mowa\\_2020factsheet\\_funding.pdf](https://www.mealsonwheelsamerica.org/docs/default-source/fact-sheets/2020/2020-national/mowa_2020factsheet_funding.pdf)
- 2 MOW Store. (2017). MOW Store Tray Flier. Retrieved February 1, 2022, from <http://mowstore.com/wp-content/uploads/MOWSTORE-TRAY-FLYER-2017.pdf>
- 3 Goldsmith, A. (2021). Weight of popular single-use plastic tray with film using digital scale.
- 4 Environmental Protection Agency. (2016, April). Volume to Weight Conversion Factors Memorandum. Retrieved February 1, 2022 from [https://www.epa.gov/sites/default/files/2016-04/documents/volume\\_to\\_weight\\_conversion\\_factors\\_memorandum\\_04192016\\_508fnl.pdf](https://www.epa.gov/sites/default/files/2016-04/documents/volume_to_weight_conversion_factors_memorandum_04192016_508fnl.pdf)
- 5 Front. Mar. Sci., 25 September 2019 | <https://doi.org/10.3389/fmars.2019.00627>
- 6 <https://www.science.org/doi/10.1126/sciadv.1700782>
- 7 Schreder, E., & Dickman, J. (2018). (rep.). Take Out Toxics. Toxic-Free Future. Retrieved February 2, 2022.
- 8 <https://www.redish.com/our-impact>
- 9 10 Facts About Single-use Plastic Bags. (n.d.). Retrieved February 2, 2022, from [https://www.biologicaldiversity.org/programs/population\\_and\\_sustainability/sustainability/plastic\\_bag\\_facts.html](https://www.biologicaldiversity.org/programs/population_and_sustainability/sustainability/plastic_bag_facts.html)
- 10 Based on a weight of 32g per plastic tray with film
- 11 Based on a conversion of 1yd<sup>3</sup> per 40.4lbs mixed #1-#7 plastic waste; [https://www.epa.gov/sites/default/files/2016-04/documents/volume\\_to\\_weight\\_conversion\\_factors\\_memorandum\\_04192016\\_508fnl.pdf](https://www.epa.gov/sites/default/files/2016-04/documents/volume_to_weight_conversion_factors_memorandum_04192016_508fnl.pdf)