



**REUSABLE  
TRAYS**  
*for* **MEALS**  
**ON WHEELS  
PROGRAMS**

**CASE STUDIES**

*May 2022*

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

## Contact

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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>1</sup>

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

### Landfill space conserved<sup>2</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**

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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**

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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 Based on a weight of 32g per plastic tray with film
- 2 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)