



UJAA ZERO WASTE GUIDE

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2021

INTRODUCTION

This is the Zero Waste Guide for UUAA as part of the larger carbon neutrality plan drafted by my group through the University of Michigan Graham Sustainability Scholars. My group members include our lead, Zoe Bultman, and Eloise Janssen, Elana Weberman, Morgan McBain, and myself, Bridgette Pollaski. The work outlined in this document covers increasing a culture of sustainability and zero waste, funding zero waste activities, recommendations on composting, and the framework for a potential collaborative recycling hauling pilot. Working on zero waste initiatives aren't directly reducing emissions, but they are essential in reaching carbon neutrality through indirect changes. I hope that this guide will offer technical support and ideas as you delve into your zero waste journey as a congregation.

Best of luck,

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FUNDING

The county offers a Waste Reduction Scholarship/Sponsorship for local organizations seeking funding for projects that reduce waste or increase education surrounding waste. These sponsorships will match 50% for funding said projects. For example, if UUAA wants to invest \$5,000 into a zero waste project, the county will match the \$5,000. In some cases, the funding that organizations put in can be funds estimated from volunteer time. For more information and to apply, visit [this webpage](#). Reach out to Isabella Garramone (garramonei@washtenaw.org) directly to further discuss the sponsorships and to get more information on other organizations, including religious organizations, who are working on similar waste and sustainability goals. I highly recommend reaching out to Bella as a resource for both zero waste funding and support.

ZERO WASTE CULTURE

Being zero-waste goes beyond finding solutions for recycling and composting. Being zero waste also goes beyond buying fancy sustainable “swaps” or alternatives. In reality, a true zero waste culture starts with being mindful of the materials you own, purchase, and dispose of. There are several ways congregants at UUAA can practice zero waste mindfulness that I will suggest below.

Encouraging the Reuse of Materials

Reusing materials and goods is an under-communicated aspect of sustainability. By using the goods that have already been produced, there are fewer resources extracted, less money spent on new materials, fewer emissions associated with production and distribution of materials, fewer items sent to landfills, and most importantly, a greater appreciation for materials that we already have. If not done already, UUAA can incorporate a “Free Table” at a central location at the facility where members are free to give and take materials they no longer desire. This is preferred to donating to companies such as Goodwill or Salvation Army, where many of the materials actually end up being landfilled. Rummage sales are also another great way to encourage the reuse of materials but also have the potential to generate funds for furthering sustainability-related activities. Finally, UUAA could run a fundraiser for UUAA-branded Bento Boxes (see [Reusable Serveware Price Comparison](#) document) to use at events to cut down on compostable serveware and to increase community on reusing goods.

Repair Cafe

Another great alternative to buying new is repairing broken objects. Historically, broken objects were repaired before they were replaced. It’s integral to being zero waste to expand the life of an object to get as much usage as possible. A repair cafe is an event where skilled individuals in activities such as sewing, electronics, bike repair, etc. come together with other individuals who have broken objects and get their items repaired. Established repair cafe organizers often cite their events as being hubs for socialization, increasing knowledge and self-sufficiency in maintaining objects, and increasing engagement from a diverse range of individuals. A repair cafe could take place as an extension of the congregation’s social hour.

Sharing Goods and Resources

Another excellent mindful activity is creating a space to share resources. Many items, especially objects such as tools, are purchased for minimal use. Instead of 10 people buying one drill for specific projects, 10 people could crowdfund 1 drill to pass along when needed. This concept of sharing resources is exemplified locally in the Water Hill neighborhood of Ann Arbor. The neighborhood shares the cost of an industrial snowblower and created a volunteer drive service, called [Snow Buddy](#), which plows the sidewalks of the entire neighborhood. This could be applied to UUAA by creating a

community resource system where congregants can “rent” certain items owned by the congregation and encouraged to share items amongst congregants.

Connecting to the Production of Goods

For some, another fun way to become mindful of the materials you own is to learn how to tinker or create them yourself. There are a few local resources that UUAA congregants could utilize together as both a learning and bonding experience.

The first is the [Michigan Folk School](#), located on 7734 Plymouth Road in Ann Arbor. Their mission is to create “a community engaged in authentic, hands-on experiences through the teaching and sharing of traditional folk arts, crafts, music, and skills in an inspiring natural setting and to promote the preservation of forest and farmland.” They offer a wide range of classes such as organic gardening, blacksmithing, woodworking, and more.

The second is [Maker Works](#), located at 3765 Plaza Dr off of Ellsworth. Maker Works is a makerspace that provides “access to thousands of dollars worth of tools, space for projects big and small, formal instruction and support for learning, and vibrant community of like-minded people.” They have equipment for woodworking, jewelry making, electronics tinkering, metalworking, and crafting. Maker Works offers classes and specialized parties that may be of interest to UUAA congregants.

Washtenaw County Trash to Treasure Guide

Washtenaw County offers a resource called the [Trash to Treasure guide](#) which offers information and recommendations for local resources in the repair, reuse, recycling, and disposal of goods. I’ve worked on this project personally as a county intern, and at the time of writing (March 2021), the guide is not yet updated to the website. Check back in a couple of months to access and share this resource with congregants.

Zero Waste Events

Reference the [UUAA Outreach and Engagement Toolkit](#) created by my fellow Graham Scholars group member, Elana Weberman, for more information on green events and advice for zero waste events organized by UUAA.

For additional zero waste event support, contact Isabella Garramone (garramonei@washtenaw.org) at the Washtenaw County Public Works. Bella can work with the congregation further on the logistics of zero waste events, including planning support, providing physical waste receptacles, labor, and sometimes waste hauling.

COMPOSTING RECOMMENDATIONS

On-Site vs. Industrial Composting

We're lucky to live near an industrial composting facility. [WeCare Denali](#) is the composting company that processes the incoming compost from Ann Arbor residents and the University of Michigan. The techniques used at industrial composting facilities, such as WeCare Denali, differ from your run-of-the-mill home compost. Industrial facilities are able to process organic matter at a much quicker pace than a smaller compost pile. Thus, these facilities are able to process [BPI-certified](#) compostable serveware. However, there are still benefits for small organizations in creating an on-site compost system. For UUAA, below are the pros and cons [comparing on-site composting to industrial composting](#).

Pros

- Increased community engagement with varying members of the organization.
- The finished compost can be applied to landscaping or gardening projects to improve soil health.
- Contamination is easy to spot on a smaller scale given there is a person providing maintenance to the compost.
- There is no need for solving logistical challenges for transporting compost to the WeCare facility.

Cons

- An on-site compost needs consistent and long-term maintenance.
- Compostable serveware from large events cannot be processed efficiently in a smaller compost setup. Also, food items such as meat, bones, and oils cannot be added to on-site compost as it is more difficult to fully process and easily attracts pests.
- Proper training is needed to avoid smells or issues with pests.

Recommendation

Given that the main function of compost collection at UUAA would be for catered events, I recommend utilizing WeCare Denali. If the congregation seeks out reusable serveware for future events, I would recommend investing in an on-site composting site.

Compostable Serveware

Disposable serveware offers great convenience for larger events where finding volunteers for clean-up is difficult. Although it is convenient, there is often waste associated. Given UUAA utilizes WeCare Denali as a composting solution, compostable serveware can replace plastic or styrofoam serveware. Please reference the compostable serveware price comparison sheets to see what kinds of compostable serveware exists.

Based on those price comparison sheets, World Centric is the most cost-effective brand for compostable serveware. Below is a table comparing the price of disposable and compostable serveware and data from average monthly used disposables at UUAA.

DISPOSABLE PRODUCTS USED AT UUAA			
Product	Average Monthly Used	Average Monthly Cost \$ (Disposable)	Average Monthly Cost \$ (Compostable)
Dinner Plates	200	14	28.37
Medium Plates	100	5	-
Dessert Plates	100	5	5.68
Bowls	100	5	30.49
Forks	250	5	15.76
Knives	250	5	14.27
Spoons	250	5	15.73
Napkins	800	8	8
Hot/Cold Cups	900	23	100.98
Cold Cups	300	12	38.19
Cup sleeves	400	12	22.67
Totals:	3650	99	280.14

Recommendation

I recommend purchasing compostable items from [World Centric](#), as they are a reliable and cheaper compostable serveware brand. As shown in the table, the cost of compostables is significantly higher than regular disposables. Because of this, I have a few recommendations to reduce cost. First, I recommend purchasing sporks in place of buying separate forks and spoons. 250 separate compostable forks and spoons would total \$32, whereas 250 sporks would cost \$15.92, saving roughly \$16. Additionally, bowls are an item with a high cost and less usage. To cut the cost, I recommend either steering away from using bowls or to substitute reusable bowls or, if necessary, substitute disposables. Another high cost comes from the hot beverage cups. I recommend strongly encouraging congregants to bring their own mugs as a way to both cut costs of compostable cups but also to encourage this more environmentally-preferred behavior. On this note, I recommend also encouraging congregants to bring their own serveware (such as a UUAA Bento Box) from home to then take with them and wash accordingly. Please reference the Bento Box fundraising activity for more details. Finally, napkins do not need to be purchased through World Centric, so I recommend purchasing them as normal to reduce costs.

Collection Logistics

What is being composted?

The likely main materials that will be present for composting are 1) food waste, 2) compostable serveware, and 3) napkins and paper towels. Anything that is edible or non-manmade can technically be composted at an industrial composting site.

What do we collect the compost in?

Given the recommendation to drop off compost at WeCare Denali, the composting collection process should be fairly simple. For events, compost can be collected in any sort of bin or trash can. You can use a trash can with specific labeling to indicate that it is a compost bin, or you can use [disposable cardboard box bins](#). For both plastic trash cans and cardboard box bins, you will need a compostable liner to prevent any leakage and for ease of collection. You'll need to make sure that you purchase the appropriately sized bags for your container. I recommend using [this site](#) to navigate and purchase different compostable bags.

Recommendation

For the physical bins, I recommend purchasing a plastic bin instead of using cardboard boxes, as you will save money over time. Plastic bins can be reused and cleaned accordingly whereas cardboard boxes may need to be replaced much sooner. I recommend purchasing 55-gallon trash cans, [similar to these](#), or if you would like something smaller, you could browse [this site](#) to find more compost bin options. A larger bin with an open-top will make for ease in the collection during events where there are high volumes of compostables being disposed of. The specific trash can that I linked is green, and having a brightly colored compost bin that stands out from other trash cans can help encourage education and the sorting of differently routed materials (recyclables vs. compostables vs. landfill items). Combined with the 55-gallon trash container, I recommend purchasing [64-gallon ECOSAFE compostable liners](#).

How do we keep our compost clean from contamination?

Keeping compost free from plastic contamination is essential. The end product of composting is a fertile material that gets added to the soil. Contamination in compost can lead to the furthered contamination of soil that grows our food and is the basis of our environment. Plastic has the potential to leach harsh chemicals into the soil, degrade into microplastics, or be consumed by wildlife. That being said, there are a few ways to reduce compost contamination at events.

Recommendation

I recommend using volunteers at events to monitor compost bins. Having trained volunteers to help congregants sort their waste offers a few benefits. The first being that contamination is greatly reduced, as volunteers are tracking what is being disposed of. Secondly, interacting with a trained volunteer provides a learning experience for those

disposing of their waste. Learning from another person instead of just referencing signage or text will be more long-lasting and effective. Third, having volunteers monitor bins shows that the congregation is serious about creating a sustainability culture and that zero-waste actions are important. People respond well to behavior change when it is more socially acceptable.

Additionally, I recommend that UUAA creates signage to show congregants what can go into compost. A visual cue combined with the social interaction of a volunteer bin monitor can help congregants learn more about what can be composted. I've created a mock-up of what the compost signage could look like. Feel free to use the sign as it is or as inspiration for further design.



How do we drop off our compost?

After events, the compost liners will need to be tied off and taken to the [WeCare Denali](#) facility at 4170 Platt Road, about a 10-minute drive from UUA. According to their website, these are their open hours and days depending on the season:

April 1-June 30:

Monday-Friday 7am-4pm

Saturday 7am-12pm

Sunday closed

July 1-March 31:

Monday-Friday 7am-4pm

Saturday closed

Sunday closed

If the compost cannot be dropped off on the same day, I recommend finding a location to store the bags that is not outside but also not in a common space until it is able to be dropped off. Storing outside overnight could lead to pest issues. Collected food scraps will only start causing smells after multiple days on end, so as long as it is brought to the facility within about 2 or 3 days, there should not be any significant issues. You may also want to store the compost with some sort of secondary containment if liquids are inside the collection.

Someone will need to physically transport the compost to the facility. Once there, the volunteer will approach the front office to weigh the vehicle. The worker will provide clarification on where to drop off the materials, and the volunteer will drive towards the back of the facility and unload the materials. Then, they will drive back through the scale to determine the amount dropped off. Compost drop-off is \$15 per cubic yard. There are no cash transactions for payment, and a receipt will be given afterward. More information on the price sheet can be found [here](#).

RECYCLING HAULING COLLABORATION

Pilot Collaborative: Faith-Based Waste Reduction Recycling Network

Purpose

Share the cost of waste hauling; increase recycling (paper, plastic, glass); share best practices and information with partners; and reduce waste among faith-based organizations in Washtenaw County. Based on how well the pilot works, determine the potential for adding a compost hauling initiative between established partners and the WeCare Denali composting facility.

Prior to Drop-off Logistics

The first step in creating a hauling network is to make sure there are clear expectations as to what each participant can recycle. This would include a list of all acceptable

materials or agreed-upon materials to collect. Prior to the hauling day, all participating organizations would need their waste to be prepared for drop-off. This includes separating out the recyclables by **paper, cardboard, glass, metals, hard plastics, soft plastics, and styrofoam**. Having waste pre-sorted can be achieved by providing separate bins at the collection site. For example, there would be different bins for cardboard and styrofoam where the bins are labeled for that particular waste. Having separation at collection would cut down on the extra labor and time needed to sort through all of the materials. Next, the materials would need to be prepared for transport either before or on the day of hauling. I recommend bagging the smaller items, such as plastics, metals, styrofoam, and glass but making sure that the bags are not tied tightly. Tightly bagging the recyclables will make them harder to sort later down the line. For cardboard, make sure to break down any boxes, but it would be easiest to handle to leave outside of a bag.

The frequency of hauling would need to be gauged depending on the availability of volunteers and the first few hauling events, however, a once-a-month hauling day would allow for better planning of each haul day. Before the hauling begins, there will need to be a route set with all participating members. I recommend using the [tool RouteXL](#) which allows individuals to input up to 16 addresses and creates the most efficient route. Leading up to the hauling event, it would be helpful to contact the participating organizations to confirm that their waste will be available for pickup and to inquire where the volunteers should expect the recyclables (other volunteers to greet the haulers, in a specific location such as a shed, etc.). This role would consist of a single person to maintain consistency, and they would need to convey any relevant information to the hauling volunteers. On the day of the hauling, there will need to be at least two volunteers: one driver with a hitch on their vehicle and 1 helper. The volunteers would first pick up the trailer for hauling and then navigate the route previously generated and pick up the recyclables from each participating location.

For the trailer itself, I recommend using the [4' x 8' cargo trailer from U-Haul](#). This is not only the cheapest option for trailers in the area but also comes covered. When hauling light materials such as plastics and cardboard, it is important that they are covered to prevent accidental littering from materials flying out of the trailer or vehicle. You may need to rent one of the larger trailers from U-Haul to accommodate more recyclables from additional collaborators.

Recycle Ann Arbor Drop-Off Station

The Recycle Ann Arbor Drop-Off Station is located on 2950 E Ellsworth Road, about a 10-minute drive from UUA. Once the volunteers arrive and check-in, they will need to drop off the recyclables by type. The Drop-Off station has multiple bins for paper (white paper, magazines, newspaper, etc), and the volunteers can put them all in one. Sorting the paper helps the staff, but it is not required. There is a separate area for cardboard where it gets compacted in a bailer. The plastic bottles and tubs go into another bin. The staff will be present to assist in dropping of materials in their respective location. Below

is a list of the prices taken from the [Drop-Off Station website](#), and here is the [price list document](#).

Recycle Ann Arbor Drop-Off Station Acceptable Items at No Additional Cost

- Auto Batteries
- Cardboard
- Glass
- Metal items
- Motor and Vegetable Oil (less than five gallons)
- Oil Filters (five or less)
- Paper
- Plastic Bags
- Plastics
- Styrofoam
- Textiles (up to three bags)

Estimated Cost of Monthly Drop Off Shared Among Collaborators

- U-Haul offers a 4' x 8' Cargo Trailer for ~\$14.95/4hr
- Recycle Ann Arbor Large Vehicle Annual Pass - \$160/year
- **Estimated Total Annual Cost: \$339.40**

Additional Information

Local Trailer Rentals

- A-1 Rentals offers 7x14 Dump Trailer - \$100/4hr \$155/day
- U-Haul offers a 4' x 8' Cargo Trailer for ~\$14.95/4hr
- U-Haul offers a 5' x 8' Cargo Trailer for ~\$18.95/4hr
- U-Haul offers a 6' x 12' Cargo Trailer for ~\$29.95/4hr

Recycle Ann Arbor Drop-Off Station Prices

- Standard Entrance Fee \$3
- Standard 10 Visit Pass \$25
- Standard Annual Pass \$80
- Large Vehicle Recycling Fee \$15
- Large Vehicle 10 Visit Pass \$100
- Large Vehicle Annual Pass \$160

Possible Faith-Based Organizations for Collaboration

Based on how well this works, determine the potential to expand to other faith-based and non-profit organizations outside Ann Arbor City limits but within Washtenaw County. Below is a list of potential collaborators.

St Nicholas Greek Orthodox Church

3109 Scio Church Rd, Ann Arbor, MI 48103
(734) 332-8200

Knox Presbyterian Church

2065 S Wagner Rd, Ann Arbor, MI 48103
(734) 761-5669

Ann Arbor Baptist Church

2065 S Wagner Rd, Ann Arbor, MI 48103
(734) 995-5144

New Progressive Missionary

5055 Platt Rd, Ann Arbor, MI 48108
(734) 973-2740

Holy Faith Church

6299 Ann Arbor-Saline Rd, Saline, MI 48176
(734) 429-2991

First United Methodist Church of Saline

1200 N Ann Arbor St, Saline, MI 48176
(734) 429-4730

Keystone Church

3375 Saline Waterworks Rd, Saline, MI 48176
(734) 944-5397

The Church of Jesus Christ of Latter-day Saints

525 Woodland Dr E, Saline, MI 48176
(517) 546-3678

Christ Our King Lutheran Church

3255 Saline Waterworks Rd, Saline, MI 48176
(734) 429-9200

Fellowship Baptist Church

1045 W Bemis Rd, Saline, MI 48176
(734) 429-7196