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# REUSE, RECYCLE

## A STARTER KIT

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**Reuse, Recycle Starter Kit**  
+  
**City of Holland Recycling Impact Communications**

**ACKNOWLEDGMENTS**

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## **MOTIVATIONS & USER GUIDE**

### **MOTIVATIONS**

Our consumption habits are a core driver of climate change. In today's convenience and throw away culture, we have enabled an "out of sight, out of mind" environment, but there truly is no "away." When we bury resources in the landfill, we are burying value and perpetuating the extraction of natural resources on a finite planet.

"A colossal amount of resources go into creating single-use packaging - to the tune of 10 percent of wood harvested, 20 percent of aluminum mined, 40 percent of plastic created and 50 percent of glass produced."

- Suz Okie, Director of Design Strategy & Circular Economy - [GreenBiz](#)

**There is so much room for reduction, reuse, and recycling! Not only can we make the environmental case for reducing, reuse, and recycling, we can make an economic case too.**

### **USER GUIDE**

This Starter Kit is meant to act as a guide for local governments who are ready to take action under the Reuse and Recycling "R's." It points you to a subsidy opportunity for reusable wares, covers how to calculate community waste management impacts, and shares editable access to recycling educational materials in English and Spanish. This Starter Kit also makes the case for expanding your recycling program into multifamily housing and points you to grants that can support these efforts. It offers considerations you should take into account when pursuing these initiatives.

**LET THIS REUSE, RECYCLE STARTER KIT TAKE THE FIRST STEPS FOR YOU.**

## REUSE

### SUBSIDIES FOR REUSABLE WARES IN SCHOOLS, RESTAURANTS, MEALS ON WHEELS, Plus DISH MACHINE OPTIONS

#### A CASE FOR REUSE

“A colossal amount of resources go into creating single-use packaging - to the tune of 10 percent of wood harvested, 20 percent of aluminum mined, 40 percent of plastic created and 50 percent of glass produced.”

- Suz Okie, Director of Design Strategy & Circular Economy - [GreenBiz](#)

Many food serving entities understand the value of adopting reuse but have concerns about the cost of implementation and operation. Fortunately, there are programs that offer subsidies for reusable wares, energy efficient appliance rebates, and a multitude of case studies that show reuse is not only better for the environment, but the better economic choice.

#### PLASTIC FREE RESTAURANTS

Many restaurants, schools, stadiums, event centers, etc. rely on single-use wares such as plates, trays, utensils, and cups to serve food and drink. [Plastic Free Restaurants](#) can help your community go reusable while saving money!

#### GO FROM SINGLE-USE...



#### TO REUSE!



#### Plastic Free Restaurants Subsidy

Plastic Free Restaurants is a 501(c)(3) on a mission to eliminate petroleum-based single-use plastic from restaurants, schools, stadiums, Meals on Wheels programs, healthcare facilities, and other venues that operate a commercial kitchen. They provide a subsidy that covers the cost of transitioning from single-use wares to reusables.

- 100% subsidy for reusables that do not contain virgin plastic, up to \$5 per item.

- 25% subsidy for reusables that *do* contain virgin plastic, up to \$1 per item.
- **Publicly-funded schools** will receive a subsidy that applies to the full cost of a reusable item.
- **Restaurants and for-profit entities** will receive a subsidy that applies to the price *difference* between the single-use item being replaced and the reusable item replacing it. For example, if you're replacing a 15-cent plastic cup with a \$4.00 stainless steel cup, the Plastic Free Restaurants subsidy would start with a baseline of \$3.85.

Learn more about applying for a subsidy [here](#).

## FINANCIAL CONSIDERATIONS: SWITCHING FROM SINGLE-USE TO REUSE



Even after factoring in increased costs for labor, equipment, and water/electricity usage, the results are in!

**Transitioning from Single-Use to Reusable Will Save You Money!**

### Ways to Save:

- Landfill hauling cost reduction
- No more single-use ware purchases
- Save on storage – no need to store months' worth of disposable wares
- Invest in a waste bin for your new reusables that includes a magnetic lid to prevent loss of reusable wares (if metal)

### Case Studies:

- **Palo Alto Unified School District** [saves \\$25,000 annually](#) after transitioning 12 elementary schools from single-use food ware to reusable (they use a central kitchen system).
- [Benjamin Franklin Elementary School](#) saves around \$5,700 annually.
- Read more case studies for schools and restaurants [here](#).

### Calculate savings:

- John Meyer, Executive Director of Plastic Free Restaurants has a tool that will help you calculate your break even and savings point. Please [contact](#) Plastic Free Restaurants if you'd like to use this tool for a larger order calculation.

## Suggested vendors short list:



**Trays and Utensils:** [Ahimsa](#)



**Cups:** [Greens Steel](#)



**Bowls:** [American Metalcraft, Inc](#)

*See a full list of recommended reusable ware vendors from the Center for Environmental Health [here](#).*

## **DISH WASHING AND REBATES**

One of the biggest barriers to going reusable is the dish washing and energy/water considerations. You may wonder if your current dishwasher can handle the increased washing needs. You may need to consider the cost to install an industrial dish machine and the staffing and labor costs associated with dish washing, as well as the increased energy and water usage costs.

- **The Center for Environmental Health** has a [Ditching Disposables Toolkit](#) that helps you think through these variables.
- [This video](#), while more California specific, is also helpful to think through water / energy usage, staff time, dish washing specifics, and more.

“Although It took some time for the staff to adjust to using the new dishmachine and to the new dishroom workflow, they were able to adapt and quickly became proficient the more they used the machine. The added time for washing all of the ware each day is only around 30 minutes, or \$1,550 per year. This is slightly offset by the time the custodian saves by not having to dispose of the compostable trays (~\$310 per year).”  
– [Benjamin Franklin Elementary Case Study](#)

### **Case Study:**

At 600-student Franklin Elementary School in California, the school’s payback period was four years. After that, they saw an annual savings of approximately \$7,511 per year. Staff people worked the dishwashing into their existing routine.

# Our Sorting Area



[Photo credit:](#) Franklin Elementary - Glendale Environmental Coalition, via the Center for Environmental Health

## Rebates for Energy Efficient Appliances

- [DTE Food Service Instant Discounts](#)  
DTE offers instant discounts on a wide range of ENERGY STAR-rated gas and electric food service equipment. Reach out to (617)440-5469 to learn more.

Saving is as easy as 1-2-3



[Find a participating distributor](#) using our locator tool.



Choose from qualifying energy-efficient models in our [discount pamphlet](#).



Receive your discount at the point of purchase.

- [Consumers Energy](#)  
Consumers Energy offers kitchen, refrigeration, and laundry Rebates.
  - It is worth calling to see if they will match other kitchen upgrades for an energy efficient dishwasher, or if dishwashers are already included in eligible kitchen appliances.
- **Does your municipal utility offer energy efficient appliance rebates?**

## RECYCLE

### CALCULATING AND COMMUNICATING THE CITY OF HOLLAND'S CARBON BENEFITS USING EPA'S WARM TOOL + GHG EQUIVALENCIES CALCULATOR

It is often hard to communicate emissions reductions in a way that is digestible to the public. Use the EPA's WARM tool and GHG Equivalencies Calculator to calculate and translate greenhouse gas emissions data.

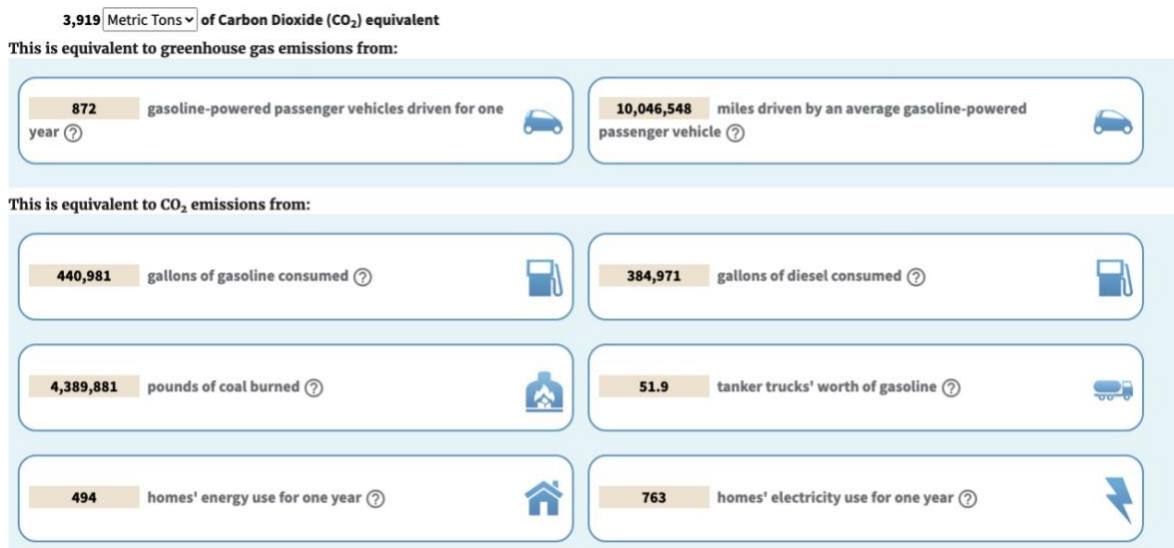
#### ENVIRONMENTAL PROTECTION AGENCY WASTE REDUCTION MODEL (WARM)

[Use the EPA's WARM Model](#) to calculate estimates of potential greenhouse gas reductions, energy savings, and economic impacts from multiple materials management practices.

- Input tons of material recycled by material type
- WARM will compare the Metric Tons of CO<sub>2</sub> Equivalent MTCO<sub>2</sub>E from the Baseline waste management practice (eg. landfill or incineration) to the Alternate waste management practice (eg. recycling)
- Along with a MTCO<sub>2</sub>E comparison, WARM will calculate energy saved in BTUs, the labor hours affected by the alternate management practice, and wages per ton of material using the alternate management practice ([anerobic digestion](#), [landfill](#), [compost](#), [recycle](#), [etc.](#))

#### GREENHOSUE GAS EQUIVALENCIES CALCULATOR

Once you have your MTCO<sub>2</sub>E saved from your alternate management practice, use the EPA's [Greenhouse Gas Equivalencies Calculator](#) and input your MTCO<sub>2</sub>E saved. The Equivalencies Calculator will translate Metric Tons of CO<sub>2</sub> Equivalent saved to something more digestible for your audience:



## RECYCLE

### EDITABLE COMMUNICATION MATERIALS

Holland rolled out their curbside recycling carts in April of 2021. We wanted to create positive communication materials for Holland residents that help them understand the impact of their recycling habits since the launch of Holland’s curbside recycling. **These communication materials seek to highlight the environmental and local economic benefits of recycling.**

### CANVA LINKS

Please use these editable Canva links if you’d like to replicate the language and design for your own community’s communications.

### Examples:



<a href="#">INSTAGRAM LINK</a>
Emissions to round trips
Carts with curbside plastics
West Michigan economy
Emissions to electricity usage
Recycling provides jobs

<a href="#">ONE-PAGER LINK</a>
Emissions to electricity usage
Emissions to round trips
Emissions to tree sequestration
Emission to gallons of gasoline
Recycling industry employment

<a href="#">FACEBOOK LINK</a>
Emissions to round trips
Carts with curbside plastics
West Michigan economy
Recycling provides jobs

**RECYCLE**  
**SPANISH RESOURCES**

According to the [Census Reporter](#), more than 24% of Holland’s population identified as Hispanic on the 2020 census and 16% of Holland residents recorded speaking Spanish as their primary language at home. **Curating culturally appropriate educational content is key to engaging with your residents. The links on the previous page include Spanish translations for each post as well as the one-pager, for purposes of replication.**

**Examples:**

**HOLLAND RECICLÓ MÁS DE 2.5 MILLONES DE LIBRAS DE MATERIALES EN 2022!**

esto evitó emisiones equivalentes a...

**EL CONSUMO DE ELECTRICIDAD DE 763 HOGARES DURANTE UN AÑO**

**SABÍA QUE**

¡Los botes de reciclaje de Holland están fabricados con un 35% de plásticos reciclados?

¡Los botes de reciclaje viejos o dañados se reciclan de nuevo en botes de reciclaje NUEVOS!

**¡EL RECICLAJE DIRECTAMENTE PROVEE MÁS DE 115 PUESTOS DE TRABAJO EN HOLLAND!**

El reciclaje mantiene materiales valiosos fuera del basurero y dentro de la economía. Disminuye a la cantidad de recursos naturales necesarios para la extracción y provee puestos de trabajo.

Aprender más en [recycleholland.com](http://recycleholland.com)

## **RECYCLE**

### **ARTICLE IN THE HOLLAND SENTINEL – MI SUSTAINABLE HOLLAND**

I interviewed an employee from Holland’s waste hauler, Republic Services. We used this interview in the MI SUSTAINABLE HOLLAND section of the Holland Sentinel newspaper. The idea is to help residents connect their recycling habits at home to real environmental and local economic impact.

See the article on the following pages and consider using these questions for your waste hauler.

## MISUSTAINABLE HOLLAND

# Holland Recycled Over 2.5 Million Pounds of Resources in 2022. Jack Brown Shares His Experience Working as Manager of Municipal Services with Republic Services, Holland's Recycling Hauler.

Holland Sentinel  
Katelyn Heflin  
USA TODAY NETWORK  
July 2023

Holland launched its residential curbside recycling cart program in April of 2021. In its first full year of operation, 2022, residents diverted over 2.5 million pounds of resources from going to the landfill by recycling. The City of Holland conducted an interview with Jack Brown, Republic's Manager of Municipal Services to highlight the impact recycling has on the environment and the local economy. Great job Holland and keep up the good work!

*Who are you and what is your role with Republic?*

- My name is Jack Brown, and I am the Manager of Municipal Services for Republic Services.

*How long have you worked in the Environmental Services industry?*

- I have worked in the environmental services industry for over 20 years.

*Are you from Holland?*

- I am from Western Michigan and have worked in and around Holland for most of my career in the industry.

*What interests you about recycling and what is your favorite part of your job?*

- Recycling is constantly evolving and is an important commitment for Republic



Services. Last year, we managed 8 million tons of recyclables, a which is heavier than 21 Empire State Buildings! We continue to make investments in recycling innovation and technology Republic Services is currently constructing the nation's first Polymer Center in Las Vegas, Nev., with a second center under development in the Midwest, which will process recyclable plastics from Michigan. Our Polymer Centers will help enable true bottle-to-bottle circularity. This means that when you place an empty water bottle in your recycling cart, it can recycled back into another water bottle, instead of being downcycled into a product like carpet or construction pipe.

- My favorite part of this job is working closely with the community leaders to bring the best ideas and value to the residents in the communities that we have the privilege of serving, like the City of Holland.

*What kind of an impact does your work have on the city of Holland?*

- I work closely with the City and Staff, primarily the DPW and Sustainability

Manager, Dan Broersma, to help identify ways that we can improve our service offerings to better align with the City and community's sustainability goals.

*Can you tell us a bit about the recycling system? Where do Hollands recyclables go? Where do they go after being sorted?*

- City of Holland's recycle material that is collected at the curb is processed at Republic Services Recycling Center, located at 60<sup>th</sup> St. in Laketown Township. The trucks' contents are then hand and machine sorted into the various commodities such as plastic, paper, cardboard. The recycle center processes approximately 6-8 tons of recycling per hour, utilizing a fiber sorting screen along with magnets to capture steel and aluminum. The plastics are then run through another sort line for final cleanup before being processed to be sent to the market. Plastics are converted to pellets or flakes to be recycled back into water/detergent bottles. Paper products are sold to a mill to convert to boxes or tissue. All material once separated is sold domestically and stay in or near the Midwest. The steel and aluminum material is sent locally to Padnos Recycling.

*Do you think recycling is important, why or why not?*

- Like the City of Holland, Republic Services is committed to creating a more sustainable world. Recycling plays an important role in doing that as it helps to reduce reliance on natural resources and contributes to the reduction of

greenhouse gases. Through our investments in infrastructure, like our Polymer Centers, we are helping advance circularity and keep valuable materials in the circular economy for the long-term.

*How can recycling in Holland improve? What would you like to tell the residents of Holland as it relates to recycling?*

- The most impactful way a resident can help improve recycling is to "Know What to Throw," only recycle:
  - Metal food and beverage cans
  - Paper
  - Cardboard
  - Glass bottles and jars
  - Plastic bottles, jugs and tubs

*Any closing thoughts?*

- Republic Services also has a number of recycling resources available at [RecyclingSimplified.com](https://www.RecyclingSimplified.com). We value our partnership with the City of Holland and will continue to work with the city and the community to create a more sustainable world.



Jack Brown  
Manger of Municipal Services, Republic Services

## RECYCLE

### EXPANDING RECYCLING TO MULTIFAMILY UNIT DWELLINGS

#### THE CASE FOR MULTIFAMILY RECYCLING

##### Equity in Access

[Three out of every five](#) multifamily households lack adequate access to recycling, and BIPOC populations are two times more likely to live in multifamily housing than white populations.

**30%**

Only 30-40% of multifamily units have access to recycling in the U.S.

[Icon credit](#)

##### Economic and Climate Impacts

In an interview with Matthew Naud with Resource Recycling Systems, he highlighted that there are 6.8 million metric tons of material that *could be* recycled in Michigan. In 2016, the West Michigan Sustainable Business Forum estimated that West Michigan alone disposes of \$52 million of recyclable material in local landfills each year. If we are not tackling multifamily unit dwellings, we are missing an opportunity. Additionally, recycling is an opportunity to reduce your community's carbon footprint. The EPA's [Waste Reduction Model \(WARM\) tool](#) will allow you to calculate the emissions of CO2 equivalent saved by the pounds of material recycled in your community.

As you consider the greenhouse gas impacts associated with materials management in your community, it is worth noting that the Biden Administration's Social Cost of Carbon is currently at [\\$51 per metric ton of carbon dioxide emissions](#). This cost can help you think through the additional positive benefits of emissions reductions through expanding into multifamily recycling. [What is the Social Cost of Carbon?](#)

## Biden 'social cost of carbon' climate risk measure upheld by U.S. appeals court

[Picture credit](#)

## POLICY

### **A Universal Recycling Ordinance**

Experts say that creating or amending your materials management ordinance to require universal recycling is a great first step to move into multifamily recycling. You can a) look at requiring all property managers to have a recycling plan in place, or b) start with requiring this for new builds.

*City of Orlando:*

**The City of Orlando added 21,491 multifamily units to their recycling program after passing changes to their solid waste code in 2019. [They diverted 1,110 new tons of recyclables from going to landfill!](#)**

Best practices include building in [tiered implementation](#), meaning larger properties with more tenants have to comply with the ordinance sooner. You can learn more about the City of Orlando's progress [here](#).

*City of Austin:*

The City of Austin's Universal Recycling Ordinance [requires multifamily recycling](#). Their website includes multiple resources for multilingual recycling communications and more. You don't want to miss giving it a look.

### **Emmet County's Solid Waste Ordinance Incentivizes Recycling**

While Emmet County's Solid Waste Ordinance **would not be considered "Starter" and is for a County audience rather than local government**, it is a **self-funded model** worth taking note of. Emmet County has a **Pay as You Throw** model. Each household and business pays waste disposal fees based on the volume they generate – making costs front and center for residents, which incentivizes recycling. The ordinance has a "flow control" provision that requires that all waste haulers use the county transfer station. In 2021, [11,127 tons of material were processed and marketed](#) for recycling through the Emmet County Recycling Center. To learn more, read [here](#).

**"This is a great benefit for the community, [providing jobs and services instead of spending money to bury these resources in a landfill.](#)"**

## **GRANTS**

### **The Recycling Partnership**

The Recycling Partnership is a non-profit that offers recycling insights, grant-funding, and expertise on recycling best practices. They are continuing to grow their grant funding targeted specifically at multifamily unit recycling, **with grants for public housing**, for example. Their grants typically last about a year and can range in amount. A Recycling Partnership multifamily recycling grant will:

- Help you build upon existing infrastructure and systems.
- Think through logistics.
- Consider adjustments and retrofits.
- Support education campaigns with effective and tailored messaging, info cards, signage, etc.
- Collect messaging metrics and track tonnage of recycling coming from the program.

#### **Take Action!**

- 1) Sign up to download The Recycling Partnership [Multifamily Recycling Toolkit](#) for tips and tools to implement and improve multifamily recycling.
- 2) Visit <https://recyclingpartnership.org/grants/> to review and inquire about all current recycling grant opportunities.

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### **EGLE**

The Department of Environment, Great Lakes, and Energy's **Infrastructure Grant will apply to multifamily recycling!**

#### **Take Action!**

- 1) [Contact](#) Tracy, Jeff, Devon, and Emily to learn more about the Infrastructure Grant
- 2) Keep an out for the next RFP coming early 2024
- 3) [Sign up](#) for the Eco Grants and Loans Listserv

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### **NextCycle Technical Assistance**

[NextCycle Michigan Technical Assistance](#) is funded by an Economic Development Association (EDA) Build to Scale grant and the State Department of Environment, Great Lakes, and Energy (EGLE).

- This program provides assistance for initiatives directed at supporting disadvantaged communities and businesses in advancing the circular economy in Michigan.
- [Visit this page and apply](#) for free technical assistance – up to \$5,000 in consulting services.

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### **Infrastructure Investment and Jobs Act (IIJA) & Inflation Reduction Act (IRA) Funding Tracker**

**Updated once per month on average**, this [incredible tracker](#) will help you as a local government identify funding opportunities relevant to Michigan and sustainability from the IIJA and IRA.

## **BEST PRACTICES AND OTHER CONSIDERATIONS**

- It is very important to have culturally appropriate communications.
- Working with public housing may be a good place to start.
- How do you fund your current materials management? How can you imbed multifamily units into that?
- How do you define multifamily?
- Who will benefit from expanding into multifamily recycling?
- Do landlords benefit from reduced landfill waste generated? Haulers and materials recovery facilities (MRF) from more material sales?
- Can you consider contract renegotiation with your waste hauler?
- What local markets exist for recycling? How can our MRFs keep materials local?
- Who wants to use recycled content locally?
- What technologies exist that could streamline processes (e.g. smart tech that alerts you when your compactor is full)?
- How can you design for multifamily unit recycling on the FRONT end? Can you incorporate this into new building codes?
- Can you think about **organics collection** as you build out your recycling efforts?
- It is key to continue to dedicate staff and resources to multifamily recycling after the grant period is over.
- You must have buy-in from property managers. Outreach and education is key. Because residents demand recycling, property managers have an incentive to offer this service.
- If you're not ready to move into multifamily recycling, you can consider starting with a drop-off location, which new Michigan legislation, [Part 115, will require](#).

## **EDUCATION MATERIALS**

### **City of Sunnyvale, California**

Please do not copy the below materials verbatim, but please feel free to use these titles and images as inspiration for your educational efforts. If you'd like to speak to Bailey Hall with the City of Sunnyvale, please reach out to me and I will connect you: [kheflin@umich.edu](mailto:kheflin@umich.edu)

More inspiration can be found [here](#).

Recycle the  
**Nice Nine**

Place these items in your recycling cart:



**1 Plastic Bottles**

Rinse containers, remove and recycle lids



**2 Glass Bottles/Jars**



**3 Aluminum and Steel Cans**



**4 Plastic Tubs**

Rinse containers, remove and recycle lids



**5 Newspaper & Magazines**



**6 Cartons**



**7 Paper**



**8 Cardboard**

Boxes must be broken down



**9 Paperboard**

No frozen food boxes

Avoid the  
**Dirty Dozen**

Keep these out of your recycling cart:



**1 Clamshells**

Hinged and lidded



**2 Plastic Wrap and Bags**

Recycle at retail stores



**3 Black Plastic**



**4 Ceramics/Glassware**

No cookware, serving dishes



**5 Hot and Cold Cups**

No cup lids or straws



**6 Egg Cartons**

No paper, plastic or foam



**7 Frozen Food Boxes**



**8 Padded Envelopes**



**9 Takeout Containers**

No paper, plastic or foam



**10 Food/Liquids**

Empty food/liquids from recyclable containers



**11 Foam**

No peanuts, packaging or food trays



**12 Propane Cylinders**

Recycle empty cylinders at SMaRT® Station



\*Communication material credit: Bailey Hall. Please do not copy language and colors verbatim

\*You MAY use the language of "Nice Nine" and "Dirty Dozen"

## **CONTACT**

### **PLEASE REACH OUT**

Please reach out with any questions regarding this report or if you'd like to simply chat about waste and circularity.

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