



Summit for Recycling
&
Rocky Mountain Composting Symposium

Plastics Pollution Reduction: Circular Cleveland

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About Me

- Trade journalist for 15 years covering industries such as pesticides, manufacturing, agriculture, occupational health and safety (OSHA) and waste/recycling
- B.S. in Journalism - Ohio University 2009
- Circular Cleveland Ambassador
- Cuyahoga County Recycling Ambassador

Overview of Plastics

- In Delaware, customers are stealing plastic shopping baskets at the expense of small business owners. Plastic bag ban started July 1. ([Delaware Live](#)). This is also happening in [New Jersey](#).
- In the summer of 2021, Connecticut removed black plastics from the list of items their recycling programs will accept. This includes black plastic products specifically branded with the recyclable emblem. ([Hartford Courant](#))
- A multi-stakeholder group in Minnesota is working to create a circular economy for flexible film in the upper Midwest. MBOLD's aim is to provide stakeholders a means to get these materials back in the form of a new product that meets their specs, keeping film recycled locally and in use. ([Waste360](#))
- 93 percent of Florida residents and 97 percent of the state's municipalities believe that regulating single-use plastics is necessary. ([88.5](#))
- Rhode Island's governor just signed a statewide plastic bag ban ([HB7065](#)), It will go into effect one year after the Department of Environmental Management issues enforcement standards or on Jan. 1, 2024, whichever comes first. ([Waste Dive](#))

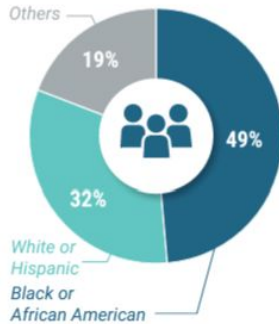
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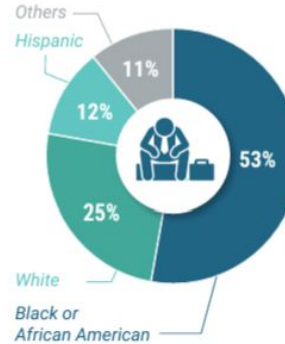
LIFE IN CLEVELAND



Cleveland's residents

The Diversity of Cleveland's residents is: Black or African American (**48.7%**), White or Hispanic (**32.2%**), and Others (**19.1%**)

Source: *Data USA*



33%

Poverty rate

Living in poverty:

The poverty rate in Cleveland is **32.7%**. Black or African American (**53%**), White (**24.8%**), Hispanic (**11.5%**), Others (**10.7%**)

Source: *Data USA*



Cleveland is the largest city on Lake Erie, one of the five lakes of the Great Lakes. The **Great Lakes** are the **largest freshwater system in the world.**

Source: *Michigan.org*



Cleveland was ranked in 2021 the **6th** worst city for asthma sufferers

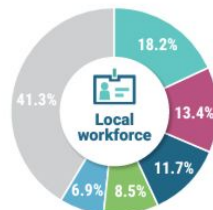
Source: *Asthmas Capital*

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EMPLOYMENT AND EDUCATION

In 2019, Cleveland's workforce was estimated at **163k workers**.



- Health Care & Social Assistance
- Retail Trade
- Manufacturing
- Accommodation and Food Services
- Educational Services
- Others



13,023
Degrees in 2019

Student population:

55% Females ♀ ♂ 45% Males

Most popular majors:

- 14% Liberal Arts & Sciences
- 5% Business
- 4% Nursing

Source: Data USA

Key sectors in Cleveland



20% Metal product suppliers and end-users

Cleveland alone counts **44** of the 200 largest Northeast Ohio metal product suppliers and end-users.

Source: Teamneo



370
Food processing & manufacturing establishments



29%
Employment growth

There are more than **370** food processing and manufacturing establishments in Northeast Ohio which makes the food and agriculture industry among Ohio's top industries. Between 2007 and 2018, the sector has seen a **29%** employment growth.

Source: Make it Cleveland



vs



x1.5 Industries produce more food waste than households

In 2018 in the U.S., industries have produced more than **1.5** times the amount of food waste produced by households.

Source: EPA

The Circular Cleveland Program

“Designated by the Ellen MacArthur Foundation as an inclusive circular city, Cleveland is the first city to explicitly prioritize inclusive and equitable community engagement as a priority in driving the creation of the roadmap, ensuring that all recommendations apply to the lives and livelihoods of Cleveland residents.” - Circular Cleveland Roadmap

- Builds upon the city's Climate Action Plan and its 2021-25 Cleveland Comprehensive Environmental Plan which was published shortly after racism was declared a public health crisis in the city
- Main collaborators/drivers are the City of Cleveland, [Cleveland Neighborhood Progress](#) and [Neighborhood Connections](#).
- The initiative is being funded by a \$476,000 grant from the Robert Wood Johnson Foundation - part of a larger \$3 million program meant “to bring the most impactful ideas from across the globe to U.S. cities to address the intertwined issues of health, equity, and climate change.”

What does a sustainable future look like for Cleveland?

- the need for physical infrastructure to process resources
- increased incentives through financial regulations and educational processes
- insight into available materials
- collaboration to develop concrete tools for including circular strategies in construction efforts.

Focus Areas - 1. Circular Manufacturing

“Industry in Cleveland has a large impact on resource consumption (approx. 7,160,000 tons a year), extensive waste production (approx. 520,779 tons), pollution and CO2-emissions (around 55% of all CO2-emissions of Cleveland). We must work with the local industry sector to decrease the impact of existing industries, as well as attract new industrial actors that function in line with the earth’s ecological boundaries.”

- Circular Cleveland Roadmap

Circular Manufacturing - Plastics Pollution

“In addition to metal production, Northeast Ohio is a significant part of the state of Ohio’s polymers and related materials manufacturing base and value chain, with major brands like the Goodyear Tire and Rubber Company, Lubrizol, and PPG, as well as associated academic programs and centers of excellence like Case Western Reserve University and the University of Akron. The sector is strongly fossil fuel dependent and must transition to produce cleaner, recyclable materials. Northeast Ohio companies and higher education institutions can lead the way.”

Circular Manufacturing - Goals

GOAL 1: STIMULATING CIRCULAR PROCUREMENT STRATEGIES

(Co-)fund/subsidize and promote impact assessments on current industrial activities and procurement (e.g. CO₂-emissions, waste, energy, air and water toxicity).

GOAL 2: DEVELOP SYNERGIES & CASCADING FLOWS

Bring together local industries and institutions with high waste flows (e.g. metal and food manufacturing, water treatment plants) in roundtable worksessions to advance circular innovation and organization.

Focus Areas - 2. Remediating Pollution

“Cleveland’s industrial history and its current manufacturing activities resulted in extensive polluted areas. The city was ranked the 6th worst city for asthma sufferers in 2021, and extensive elevated blood lead levels in children (10.7% of children born in 2012).The health of citizens and the biodiversity of the region must be addressed as a priority when envisaging a circular future.”

Remediating Pollution - Goals

GOAL 1: REMEDIATING POLLUTED AREAS IN CLEVELAND

- Use nature-based solutions to remediate and regenerate the most polluted areas
- Track pollutants in Cleveland's air, water, and soils and target actions based on this data.

GOAL 2: TRANSFORM POLLUTED AREAS AND VACANT LANDS TO INCREASE THEIR VALUE FOR THE RESIDENTS AND THE CITY

- Turn public vacant lands into green community assets.
- Support residents in governing collective green spaces.
- Financial support of Community Land Trust

GOAL 3: ENSURE A NON-POLLUTED ENVIRONMENT FOR RESIDENTS

- Lead paint remediation

Focus Area - 3. Circular Built Environment

“The circular built environment sector consumes an extensive amount of impactful resources including raw materials (119,000 tons). These building materials used annually in the city emit more than 20,000 tons CO₂-equivalent of embedded emissions and the sector is responsible for about a third of annual global greenhouse gas emissions. Apart from reducing the impact from local industries, stimulating green building and energy efficiency is the single largest leverage point for decreasing Cleveland’s CO₂-emissions.”

Circular Built Environment - Goals

GOAL 1: PROMOTE CIRCULAR BUILDING AND CONSTRUCTION PRACTICES ACROSS THE SECTOR

- Adopt circular building, renovation and demolition standards
- Create and implement building deconstruction policy.
- Incentivization: Slowly introduce procedural benefits like expedited permitting for those projects which can demonstrate the use of circular criteria.
- Adopt circular criteria in public bid guidelines for new developments.

GOAL 2: PROMOTE THE HIGH-VALUE PROCESSING AND EXCHANGE OF MATERIALS AND RESOURCES

Focus Area - 4. Getting More Value from Resources

“The city’s existing goals and objectives around the stimulation of local food production and waste reduction are complemented with a special focus on circularity. The key objective of this focus area is to increase the value generated by products and materials, such as consumption goods and organic waste. This is especially relevant in Cleveland, where many residents across the city live in food insecure neighborhoods or live without access to healthy food.”

Getting More Value from Resources - Challenges

RECYCLING

In 2020, the city's recycling contamination rate reached 68%. Subsequently, the city was unable to secure a bid and ended its residential curbside recycling program. The program is now back as of June 2022 on an opt-in structure.

MIXED WASTE

The majority (56%) of waste produced in the region is minimally separated and is processed as mixed waste which is all landfilled. The City's policies focus mostly on end-of-life management rather than on reduction based approaches (output rather than input).

ORGANIC WASTE

Food is one of the largest material flows consumed by households across the City, with a yearly quantity of 413,600 tons of food consumed by households in Cleveland, from which 33,950 tons are collected in the mixed waste and only 3,900 tons are composted.

E-WASTE

Electronics are a relatively small portion of the total waste produced, but show a high potential for value recovery and reuse to bridge the deep digital divide.

Getting More from Resources - Goal 1

REDUCE THE CONSUMPTION OF RESOURCES AND THE GENERATION OF WASTE

Minimize the use of non-recyclable packaging materials.

Promote and support the use of reusable containers for local restaurants (e.g. New York City reusable tupperware - **Just Salad**) and small businesses through education campaigns, the implementation of incentives, and by working through trade associations.

Provide funding for adopting (certified) compostable single-use containers across food establishments city-wide where reusable containers are not an option.

Pilot program throughout the city

Getting More from Resources - Goal 2

BUILDING A CIRCULAR LOCAL FOOD SYSTEM

Decrease the amount of food waste in Cleveland by connecting and supporting local organizations focused on redistributing food surplus and promoting the use of food redistribution applications.

Promote the use of food rescue initiatives which connect surplus food to people facing food insecurity.

Start collaborations with institutions to stimulate the purchase of excess food.

Require food businesses to donate/share/sell or otherwise divert their excess edible food from landfill to local organizations.

Leverage urban food production to transform city-owned vacant lands into valuable community assets.

Getting More from Resources - Goal 3

EXTRACT VALUE FROM WASTE MATERIALS (NUTRIENT RECOVERY, RECYCLING, RECOVERING)

Promote reuse, repair, sharing, and recycling programs and businesses.

- Set up or support existing repair and learning exchange cafes, community centers and spaces that facilitate material exchange.
- Remove or reduce local taxes on second hand goods and circular activities like repair services to incentivize reuse.
- Incentivize or support companies to guarantee the right to repair
- Implement a Pay-As-You-Throw scheme in the city for grocery stores and restaurants

Getting More from Resources - Goal 3

EXTRACT VALUE FROM WASTE MATERIALS (NUTRIENT RECOVERY, RECYCLING, RECOVERING)

Pilot and scale innovative circular technologies within the city to extract the most value from resources (e.g. high-quality organic waste processing, biomaterials manufacturing from feedstocks) and evaluate, replicate and scale-up existing initiatives.

- Incentivize residents and businesses to compost their organic waste.
- Facilitate the collection of by-products from local businesses to use as a feedstock for local innovators and entrepreneurs.
- Provide tax incentives to local businesses aligned with climate goals to prioritize and monetize food waste diversion.
- Develop a transparent participatory budgeting program and set up initiatives to inform residents about and engage them in the program.

Getting More from Resources - Goal 3

EXTRACT VALUE FROM WASTE MATERIALS (NUTRIENT RECOVERY, RECYCLING, RECOVERING)

- Develop a transparent participatory budgeting program and set up initiatives to inform residents about and engage them in the program.

Develop a scheme of participatory budgeting across themes in which community members allocate money to projects and programs (e.g. green space implementation). Work with the community to answer local needs and stimulate participation in the program.

Why Collaboration is Key

- Fortifying supply chains and sustaining the local economy for years to come
- Building relationships and networks
- Sharing institutional knowledge to solve challenges and advance efforts
- Getting the community to participate on a grassroots level is the first step to enhancing quality of life - while high-level touch is expensive, it can be done if there is significant movement across all stakeholders

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Organization	Project Name	Location/ Neighborhood	Description of Project/Initiative	Amount Awarded
Africa House International	Reuse, Repurpose, and Recycle Art Fair	Hough	Opportunity for older artists to lead a series of art making sessions which focus on reusing, recycling and repurposing materials that would have been thrown or given away.	\$3,000
Ben Franklin Community Garden	Renew the Earth	Old Brooklyn	Purchase of a compost spreader/maker for Ben Franklin Community Garden. Compost bins will be open to the community and compost can be used by individual gardeners to improve their plots and harvests.	\$3,000
Clean Garbage Recycling	Don't Throw That Away! Campaign	Tremont	Weekly/bi-weekly service to collect and recycle scrap metals, small appliances, and other materials from Tremont residents (ducts, copper pipes, toasters, hot water tanks, rechargeable batteries, phones, etc.).	\$2,711
Cleveland Sews	Cleveland Sews the NFL Draft	Cleveland	Repurposing material recovered from the NFL Draft into sustainable products while training and empowering underemployed sewists. Materials will be used to create supply kits for community-based sewing education programs.	\$3,000
Design for Life	A Better Tomorrow	Lee Harvard	Collection, refurbishment, and resale of furniture to keep it out of landfills. Includes training of youth and young adults by experienced furniture makers on how to repair and restore items.	\$3,000
Food Not Bombs	Transportation Rehab	East Side of Cleveland	Repairing deteriorated and broken-down vehicles during interactive community workshops to educate residents on how to perform basic repairs on their own vehicles. Repaired vehicles will be used to distribute food throughout the community.	\$3,000

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Harvard Square Center	Waste Not	Mt. Pleasant	Canning fruits and vegetables from the community garden to keep them out of the landfill, and using scrap tires from the neighborhood to improve composting capacity for food that cannot be canned.	\$3,000
Helping Hands Development Corporation	A Circle of Blessings	Glenville	Redistributing donations of new clothing, furniture, toys, car parts, household goods and appliances from large companies to residents in Greater Cleveland.	\$3,000
Oh Sew Powerful	Creating Sustainable Connections	Lee Harvard	Program to engage multi-generation participants in the intertwined issues of health, equity, and climate change, through creative reuse of common household items like silverware and toilet paper rolls.	\$3,000
Old Brooklyn Recycles	Access and Awareness Campaign	Old Brooklyn	Distributing information at community events, providing recycling bins throughout the neighborhood, and working with local partners on composting efforts to make recycling and environmentally sustainable choices more accessible to a larger demographic of people in the neighborhood.	\$2,060
R HUB	King's Closet	Downtown	Providing underserved individuals and families with a monthly unique shopping opportunity offering gently used clothing along with other items for men, women and children at no cost to them.	\$3,000
SOS Initiatives	Food Solutions	SE Cleveland	Collection and distribution of nutritious cooked & frozen food donated from local restaurants to families and individuals in need. In 2020, SOC redistributed 24.6 tons of food to families in need during the COVID-19 pandemic.	\$3,000

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Urban Green Farmer's Cooperative	Nourish Our Citizens Now!	Cleveland	Building and maintaining composting sites at members' agriculture sites to reduce food waste and increase food production.	\$3,000
Vicki's Home	Becoming	East Cleveland	Supporting youth in creating their own lines of clothing by reusing fabric from old clothes, bedsheets, and other pieces of fabric. Clothing items developed will be showcased and distributed, free of charge, to children and youth in the neighborhood in need of clothing.	\$3,000



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Note: All information provided in this presentation can be found in the Circular Cleveland roadmap.

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