



Building a Cleaner *Memphis* for All

ANNUAL REPORT 2022

ABOUT CLEAN MEMPHIS



Our Mission

Educating youth, engaging leadership, and empowering communities to sustain a cleaner Memphis.



Our Vision

Engaged Communities. Sustainable City. A Better Memphis.



Our History

Clean Memphis was founded in 2008 to foster a cleaner and greener Memphis. We work to inspire Memphians to be environmental stewards grounded in civic responsibility. In 2020, Clean Memphis developed a strategic plan, using research from other peer cities, to build the beginning stages of a zero waste, circular economy in Memphis and Shelby County. We engage leadership with data to drive policy change that supports sustainability in Memphis, empower community leaders with resources and tools to beautify their neighborhoods, and implement comprehensive environmental education programs in schools and restaurants. Our goal is to build a more sustainable Memphis for all.





A WORD FROM OUR EXECUTIVE DIRECTOR

I am grateful for the opportunity to work with such incredible colleagues, board members, and community partners who share a passion for making Memphis a clean and healthy city.

In 2022, we conducted a strategic planning process to focus on the implementation of a zero waste, circular economy in Memphis and Shelby County. Through extensive research of other cities and strategies as well as feedback from partners, we developed and refined a clear focus for our work: *Clean Memphis will advocate for Memphis and Shelby County to implement a zero waste, circular economy plan and provide education and training for stakeholders to ensure its success.*

We recognize that cities have succeeded in becoming cleaner and greener by addressing their solid waste issues more broadly, treating litter as leakage from an inefficient system. Through investing in a waste characterization study funded by the city and county, we can establish better goals around zero waste practices and explore economic development opportunities from specific waste streams. We successfully advocated for this funding in 2022. We have also begun working with Memphis Shelby County Schools and Memphis International Airport on reducing food waste thanks to our partnership with Natural Resources Defense Council (NRDC). Food waste and packaging comprise more than 30% of our solid waste stream. This partnership provides technical support, data analysis, and policy recommendations that help us create a more sustainable future through better resource management.

Moreover, through our education initiatives and cleanup events using the Litterati app, we are teaching students about environmental stewardship while gathering invaluable data regarding material type and brand of litter found in communities. Using artificial intelligence and machine learning, the Litterati app provides us with information that can be used towards effective intervention strategies going forward. We also know that environmental education provides many benefits to students. A recent analysis from Stanford University found clear evidence that environmental education significantly improves critical thinking, problem solving, self-esteem, and civic engagement in K-12 students. Not only are our students excited to learn, but they also see themselves as part of an ecosystem and recognize their agency to make change.

Finally, we have created a series of community engagement opportunities that provide a unique and educational experience for participants. These events socialize the concept of zero waste and highlight the value of food and sustainable practices.

I am so encouraged by what this work has accomplished so far, and as I look ahead, I am truly excited by how much further we can all go together!

Janet Boscarino
Executive Director

THANK YOU TO OUR FUNDERS

Our work is made possible through generous contributions from our donors and funders.

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AutoZone
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FedEx
Georgia-Pacific Cellulose
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Nike
Sylvamo

Foundation and Nonprofit Organizations

BlueCross BlueShield of Tennessee Community Trust
Ebert-Leblanc Family Foundation
Natural Resources Defense Council
Panorama Global Fund
Papa John's Foundation
Tennessee State Parks Conservancy
Thomas Briggs Foundation
Turley Foundation
Whitehaven Elementary School

Government

City of Memphis
Memphis Light Gas and Water
Shelby County Commission
Tennessee Department of Transportation
Tennessee Valley Authority
U.S. Environmental Protection Agency

Individual

Mark Biery
Blalock/Quinlen Family Fund
Nora Boone
Janet Boscarino
Wight F. Boggs
Linda Brashear
Community Foundation of Greater Memphis
Marie Dennen
Leann Edwards
Les Edwards
Get Green Recycleworks
Ryan Hall
Bailey Hodges
Jonathan Hottinger
Hayes Leslie
Rebecca Phillips
Kathleen Quinlen
Marion Quinlen
Heidi Rupke
Nicholas Salvaggio
Cheryl Stemmer
Johanna Thompson

BUILDING THE NEXT GENERATION OF ENVIRONMENTAL STEWARDS

Education is the foundation for building lifelong stewardship and civic engagement. Our education team provides experiences that bring abstract environmental concepts to life, particularly in how they impact our local community. Through energy and water conservation activities, food and other waste audits, and data collection around litter, school facilities and grounds provide an ideal ecosystem for our students to explore and learn.

Our curriculum is differentiated by grade, which allows us to connect with the entire student body. Programming is provided bi-weekly with the same students, allowing us to build on concepts through time.



Our Impact

3,991

STUDENTS TAUGHT IN-CLASS CURRICULUM, K-8

7,500

IN-CLASS INTERACTIONS WITH STUDENTS

619

STUDENTS ATTENDED FIELD TRIPS

1,500

BOOKS DISTRIBUTED

Environmental topics explored:

- Energy conservation and alternative energy
- Water conservation, water quality, storm water, and the Memphis Sand Aquifer
- Pollution prevention and litter abatement
- Zero waste and circular economy
- Food waste, recycling, and composting
- Human impacts on the environment
- Healthy ecosystems



Book Clubs

Literacy instruction is a key focus for students in early grades. To meet this need, we launched 2nd and 3rd grade environmental book clubs. Our education team carefully curated a series of seven books that are environmentally themed and culturally appropriate. The book clubs last the entire school year with guest readers and supporting activities to drive key learnings and vocabulary. Students are given the books at the end of the year to build their own home libraries. In 2022, over 1,500 books were distributed to students.

We also launched a 5th grade novel study featuring the book *The Last Wild*. We were able to distribute 150 novels to students, who found the dystopian environmental tale deeply engaging.



Field Trips

In 2022, Clean Memphis hosted nine field trips to local state parks: T.O. Fuller State Park and Shelby Forest State Park. 247 students—85% of whom self-identified as never having been on a hike before—were able to get out into nature and have a real experience with animals from the park ecosystems. Park rangers enhanced our visits with talks about the local ecosystems and led our students on hikes in the parks.





Professional Development

In addition to the hands-on programming our education team delivers, we also provide professional development opportunities to existing teachers and teacher candidates to strengthen their environmental science IQ. Our Director of Education hosts a three-day bootcamp that provides teachers with access to local experts around topics such as climate change, water conservation/quality, solid waste systems, and much more. Teachers receive valuable curriculum and supplies they can utilize in their own classrooms and gain a better understanding of how to connect these topics to their respective content areas. Our Pre-Service Teacher Bootcamp is a partnership with the University of Memphis Department of Education and helps new teachers gain foundational knowledge and skills relevant to the environment.



Food Waste Audits

Data collection and research are important parts of student learning. In 2022, we engaged students in the critical issue of food waste. Students learned about global food issues and the negative economic, social, and environmental issues of food waste. Students led food waste audits in their own school cafeterias to determine what food is being wasted and the quantity. The students also conducted surveys of their classmates to gain a better understanding about why a certain food wasn't eaten. The data and survey results were compiled and shared with Memphis Shelby County Schools Nutrition Services, resulting in menu changes, share tables for uneaten fruit, and a new food donation policy.





STRENGTHENING HOMEGROWN RESTAURANTS THROUGH SIX STEPS OF SUSTAINABILITY

Project Green Fork contributes to a sustainable Mid-South by helping reduce environmental impacts, with a focus on strengthening homegrown restaurants.

Every year, the restaurant industry loses more than 100 million dollars to food waste costs. 29% of the waste we produce is organic material that can be composted. 75% of the American waste system is recyclable, but we only recycle about 30% of it. Project Green Fork was founded in 2008 to address these issues. PGF certification requires completing six steps.



STEP

- 1 Use of Sustainable Products
- 2 Sustainable Waste Management Practices
- 3 Use of Green (Non-toxic) Cleaners
- 4 Efficient Water & Energy Consumption
- 5 Plan for Food Donation
- 6 Healthy Environmental Context

Results

To date, PGF members have:

- Recycled over **1.50 TONS** of plastic, glass, and aluminum
- Recycled over **2.8 MILLION GALLONS** of paper and cardboard
- Prevented more than **HALF A MILLION GALLONS** of food waste from entering a landfill

Project Green Fork certified restaurants and establishments:

A. SCHWAB TRADING CO.
ANOTHER ROADSIDE
ATTRACTION
BAR DKDC
BEAUTY SHOP RESTAURANT
BEDROCK EATS
CAFE ECLECTIC
CENTRAL BBQ
CHARLIE VERGOS
RENDEZVOUS
CHEFFIE'S

CITY & STATE
CITY SILO TABLE & PANTRY
COMEBACK COFFEE
CORDELIA'S MARKET
CURB MARKET
DA GUILTY VEGAN
DORY
ECCO ON OVERTON PARK
FARM & FIG
FEAST & GRAZE

FELICIA SUZANNE'S
FRATELLI'S CAFE
FUEL FOOD TRUCK
GOOD FORTUNE CO.
GRIND CITY BREWING
HUEY'S MIDTOWN
INSPIRE COMMUNITY CAFE
JUICE BAR
LIBRO AT LAURELWOOD
MCEWEN'S

MEMPHIS MADE BREWING
MEMPOPS
MUDDY'S BAKE SHOP
NAPA CAFE
OTHERLANDS COFFEE BAR
RP TRACKS
SALT | SOY
TAMBOLI'S
TREZEVANT MANOR
TSUNAMI



CELEBRATING SUSTAINABLE RESTAURANTS AND ESTABLISHMENTS

Loving Local celebrates our Project Green Fork chefs, brings awareness to our mission, and inspires attendees to support our sustainable restaurants.

In June 2022, we hosted Loving Local at The Ravine in The Edge District. Chefs from Tsunami, Dory, Salt | Soy, and Da Guilty Vegan prepared small bites using local ingredients. More than 200 attendees learned about the six pillars of sustainability our establishments practice and ways to practice sustainability in their homes. Nearly 200 pounds of waste materials were diverted from our landfill to be recycled and composted.



Our Impact:



94%

waste diversion from landfill to recycling and composting



94.5 lbs

of recyclable materials diverted from the landfill to recycling



74.5 lbs

of organic material diverted from landfill to composting





REDUCING FOOD WASTE BY 50% BY 2030 THROUGH SOURCE REDUCTION, FOOD RESCUE, AND COMPOSTING

While up to 40% of food in the U.S. goes uneaten, up to one in five Shelby County residents experiences food insecurity. Directing perfectly nutritious surplus food to individuals and organizations who need it fulfills three worthy objectives: caring for community members, reducing adverse environmental impacts of food in landfills, and saving money. Through new donation partnerships—like the one we set up between the Memphis International Airport and a local food pantry—we build more resilient and sustainable local systems.



Food Rescue

In partnership with Innovate Memphis, we completed an extensive assessment of last mile organizations (organizations that work directly with people experiencing food insecurity). Through a survey, site visits, and stakeholder meetings, we developed a picture of some of the ways food moves through our city and where additional needs are still unmet.

To encourage more donors to divert surplus food to last mile organizations, we partnered with the Shelby County Health Department to create a brochure about safe food donation. By educating donors about liability protections and outlining simple procedures for keeping food safe, we are working to remove barriers to additional food rescue.

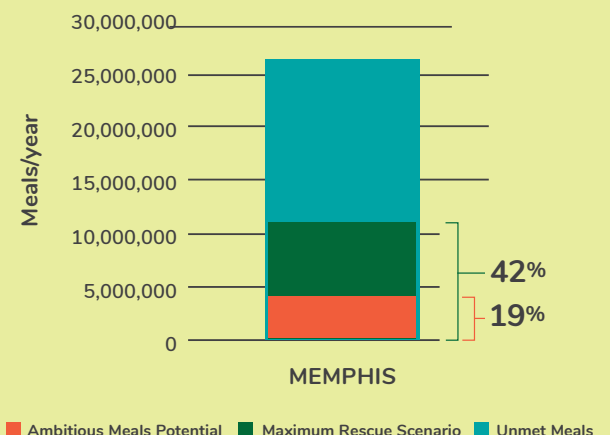


"The Midsouth Food Bank is our main resource and it frequently fluctuates in what foods are available. This fluctuation makes it very difficult to plan for amounts of nutritious food we are able to provide our guests. Gleaning from stores, restaurants, and farmers is incredibly useful."
- A respondent from our LMO survey

How many people experience food insecurity?



Comparison of Ambitious Potential for Food Rescue and Unmet Meals





A Case for Compost

In August, the MFWP coordinated with the Tennessee Department of Environment and Conservation to offer a free webinar titled “A Case for Compost.” Experts spoke about legal, practical, and environmental considerations for using this valuable resource to amend soil, prevent stormwater run-off, and enrich the health and aesthetics of local environments. More than 30 attendees from throughout the state participated in this virtual seminar. The success of this collaboration lays the groundwork for future partnerships with the state and local governments.



Source Reduction

Though the most difficult to measure, the strategy of source reduction has the potential for the highest impact in reducing food waste. To that end, we have focused on public awareness campaigns through social media and zero waste events. Our Instagram page, 901savethefood, offers practical tips on how to store food for optimal freshness and how to up odds and ends deliciously. Our public events socialize practices of green dining through small plates, food donation practices, and zero waste stations.



More than
16,432 lbs
of rescued food donated
by MFWP and its
partners to nonprofit
organizations



More than
30
participants in an
online seminar “A
Case for Compost”



Extensive landscape
assessment to
better understand
local feeding
organizations



A safe donation brochure
scheduled to reach
3000
local restaurants



Love Food Hate Waste Memphis

In April 2022, we hosted our inaugural food waste awareness event—Love Food Hate Waste Memphis—in partnership with the Tennessee Department of Environment and Conservation.

More than 200 attendees joined us at Memphis Made Brewing to sample beer made from rescued bagels and to learn about the issue of food waste and its myriad solutions from several local partner organizations. Attendees also learned food-saving recipes from Dr. Carol Silkes, Associate Professor at University of Memphis, Kemmons Wilson Culinary Institute, and her students.



Our Impact:



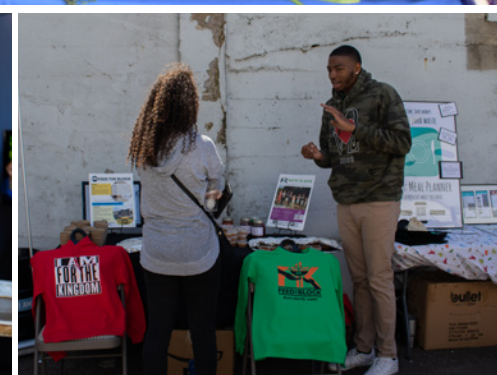
97%
waste diversion from
landfill to recycling
and composting



20 lbs
of food donated
to local feeding
program



200+
attendees



Reharvest Memphis

A CULINARY EXPERIENCE TO RETHINK FOOD WASTE

Reharvest Memphis is a unique, immersive event highlighting the delicious connections between sustainability and food. Local chefs prepare creative, surprising hors d'oeuvres using surplus ingredients gleaned from grocery stores and markets.

In November 2022, Clean Memphis hosted nearly 200 friends, partners, and supporters at Grind City Brewing Company. Attendees mingled with the chefs and learned about their restaurants' sustainability practices while enjoying cocktails and specialty cider made from surplus apples and other fruit.



Our Impact:

**97%**

waste
diversion from
landfill to
recycling and
composting

**56 lbs**

of recyclable
materials
diverted from
the landfill to
recycling

**50 lbs**

of organic
materials
diverted from
the landfill to
composting

**20 lbs**

of surplus
food donated
to a local
last mile
organization





Memphis Transformed
Community Partnership for a Vibrant City

ACCELERATING AND AMPLIFYING EFFORTS TO MAKE MEMPHIS A CLEANER, GREENER CITY

Memphis' litter problem is part of a much larger environmental sustainability challenge: how to reduce Shelby County's annual waste production of 1.7 million tons of waste. Memphis Transformed is a progressive campaign that propels the city toward a zero waste circular economy through education, outreach, and community activation. Ultimately, our purpose is to engage civic stewards in projects that build a brighter, more vibrant Memphis.



Data-driven solutions with Litterati technology

Over the past two years, litter pollution has grown by more than 200%, and we are committed to understanding the nature of this shift to better effect lasting change. Litterati is a digital tool that uses AI and machine learning technology to identify and categorize litter data. In Memphis, our citizens have helped us collect more than 40,000 pieces of litter and data using the Litterati tool. This data enables Clean Memphis, and our partners, to create better intervention and messaging strategies. In 2023, we will use this tool and data in two target neighborhoods to create a more comprehensive litter and waste reduction plan.



Our Impact:



400+
Litterati data collectors participated in cleanup events



16,000
pieces of litter are recyclable materials



10,800+
pieces of litter are single-use plastic materials



3,400
pieces of litter are cigarette butts or tobacco-based products

ENGAGING THE COMMUNITY, AMPLIFYING THE GOOD

Studies show that citizens are more likely to become engaged stewards after participating in community events and projects. Over 800 Memphians and partners attended our litter pickup events and community beautification projects in 2022, removing more than 10,000 pounds of litter from our streets and neighborhoods.



Our Impact:



10,174 lbs

**of litter picked up
during events and
projects**



1,000+

**hours invested
by our volunteers
and corporate
partners**



800+

**citizens
volunteered
and served their
community**



500+

**trees planted
during our
Tree Day
campaign**



30+

**events and
projects organized
and supported by
our team**



Every year, we partner with the Tennessee Environmental Council for Tennessee Tree Day - an effort to plant 1,000,000 native trees in Tennessee by 2025. Last year, we purchased and gave away more than 500 tree saplings to be planted in Shelby County.



We partnered with NIKE and a few park partners—Overton Park Conservancy, Memphis River Parks, Memphis Parks and Neighborhoods, Shelby Farms Park—to produce a series of Litterati activation events throughout the spring and fall months. In 2022, more than 200 citizens participated in 901 Love Where You Live, removing 6,000 pieces of litter from our parks and neighborhoods.



Our partners at Downtown Memphis Commission and City of Memphis Public Works helped us deliver an engaging litter cleanup series to the community last fall. We removed over 6,600 pieces of litter throughout several Downtown neighborhoods including the Central Business District, South Main, South City, Uptown, and Edge District.

MEET THE TEAM



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Executive Director



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