



United States Business Council  
for Sustainable Development



Materials  
Marketplace

# materials marketplace

## Great Lakes Circular Materials Roundtable: Post-Industrial Organics

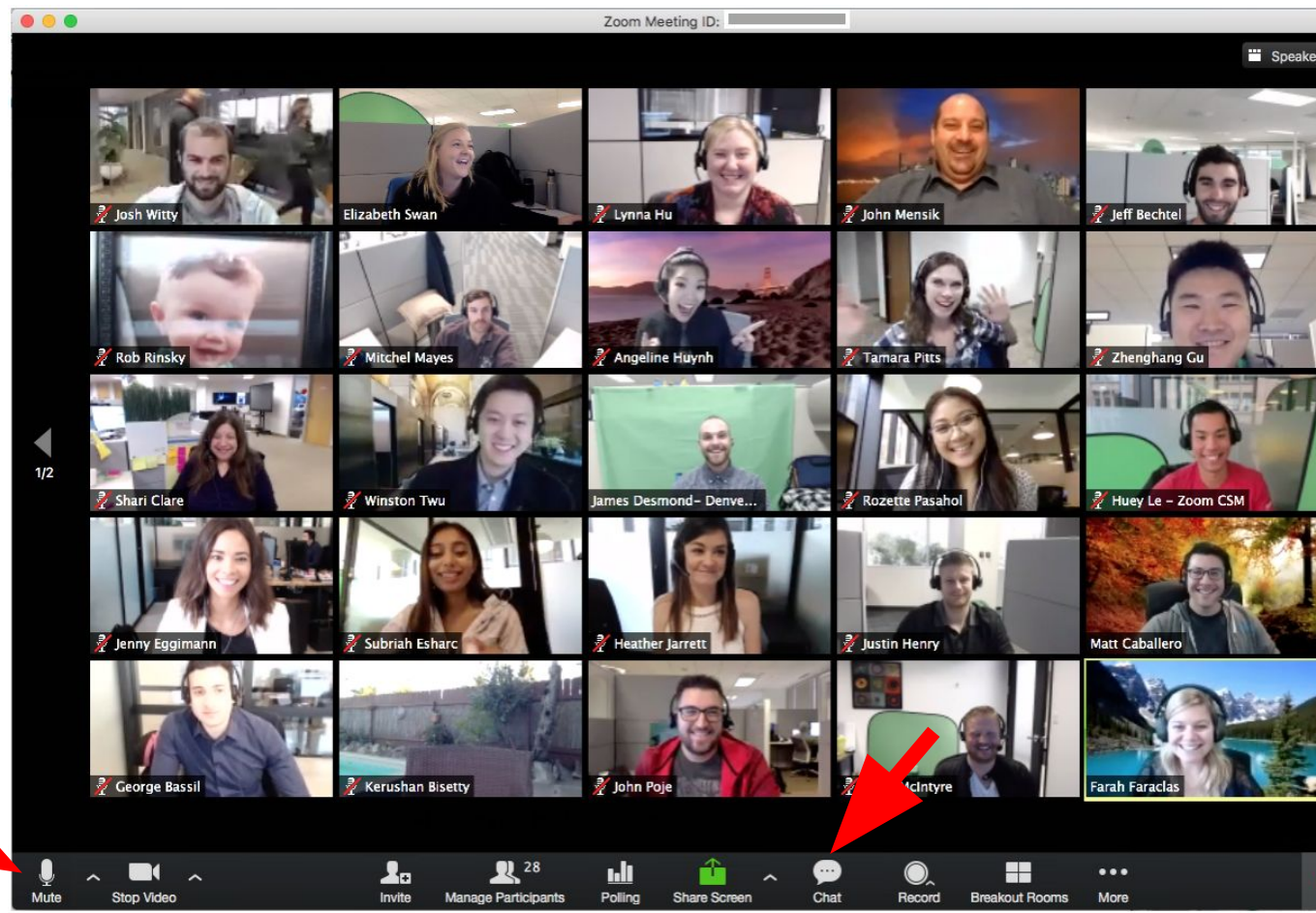
October 27, 2020

## Zoom Etiquette

Direct all questions to Kara Wright (US BCSD) in a **private chat**. She will work with you to resolve technical issues and collect content-related questions for the Q&A session following presentations.

Sending a private chat message? Double check it's going to your intended recipient.

Kindly **mute** your audio when not speaking and call other attendees by name when you're ready to pass the speaking baton to another participant.







# Working Together to Drive Circular Economy in the Great Lakes Region



United States Business Council  
for Sustainable Development



MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY



COUNCIL OF THE GREAT LAKES REGION

BUILDING OUR FUTURE TODAY

Discover. Connect. Influence.



Materials  
Marketplace



# Roundtable Agenda

## 10:30 to 11:10am - Welcome & Presentations

Event organizers and program sponsors will welcome guests. Speakers from the Materials Marketplace network will provide a brief overview of the post-industrial organics challenge and outline some promising applications and use cases. Use the Zoom chat box to ask questions for a brief Q&A session following the presentations. **Speakers include:**

- Erik Petrovskis, *Meijer*
- Roger Cargill, *Schupan*
- Todd Wilson, *Perfect Circle Recycling*
- Mike Nicholson, *Denali Water Solutions*
- Chad Antle, *BioWorks Energy*
- Cliff Walkington, *My Green MI & Hammond Farms*

## 11:10am to 12:10pm - Breakout Sessions

Building on the morning presentations, attendees will be divided into breakout groups for facilitated discussion. Groups will brainstorm solutions and recommend professional connections.

## 12:10pm to 12:30pm - Next Steps

Outcomes from the breakout session discussions will be captured as actionable next steps for post-industrial organics processing and will be distributed to attendees.

## Objective

*Connect businesses and organizations in the Great Lakes to brainstorm solutions, recommend professional connections and commit to actionable next steps for post-industrial organics processing.*

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## Resources

- Materials Marketplace login:  
[go.materialsmarketplace.org](https://go.materialsmarketplace.org)
- Ohio Materials Marketplace:  
[ohio.materialsmarketplace.org](https://ohio.materialsmarketplace.org)
- Michigan Materials Marketplace:  
[michigan.materialsmarketplace.org](https://michigan.materialsmarketplace.org)
- Ontario Materials Marketplace:  
[ontario.materialsmarketplace.org](https://ontario.materialsmarketplace.org)





## Who's in the Room?



**Tell us more! In the Zoom chat, tell us your name, location, organization, and a brief statement about why you are attending this Virtual Roundtable - including where your company or organization fits into the above categories.**

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**Erik Petrovskis**  
*Meijer*

# Organics Recycling at Meijer

October 27, 2020

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**meijer**



# Purpose-Based Sustainability

Enriching lives in the communities we serve



Environmental compliance



Local & sustainable products



Carbon footprint reduction



Waste reduction

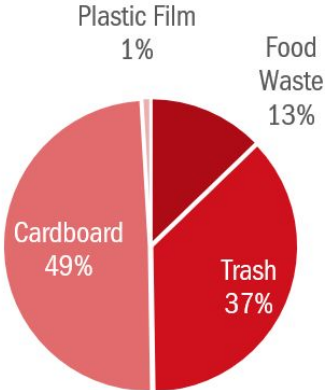


Responsible growth

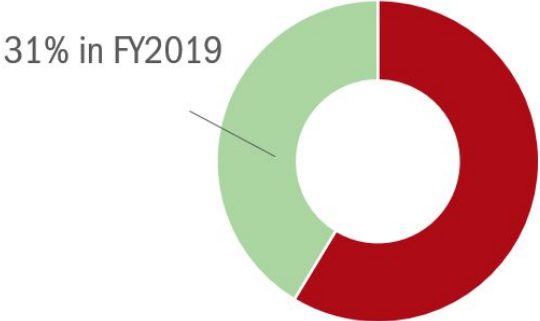


# Retail Food Waste

2019 RETAIL WASTE FOOTPRINT

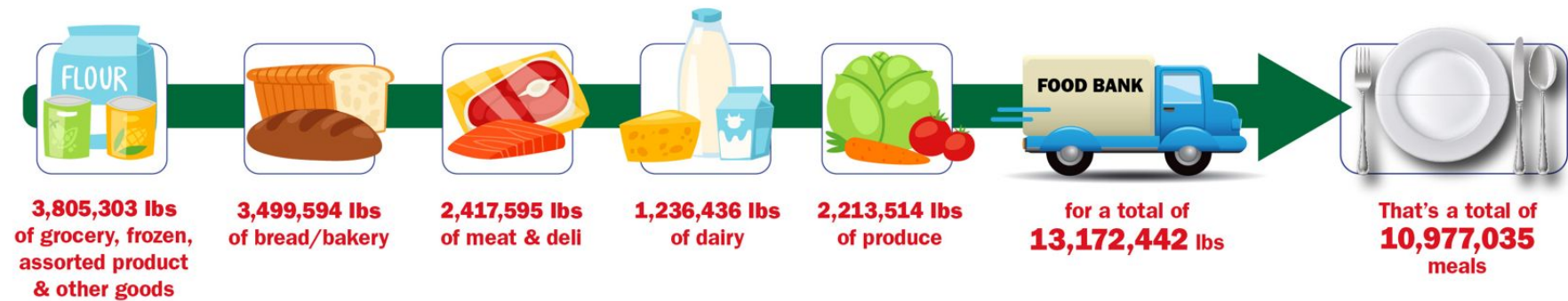


Food Waste Diversion in Retail



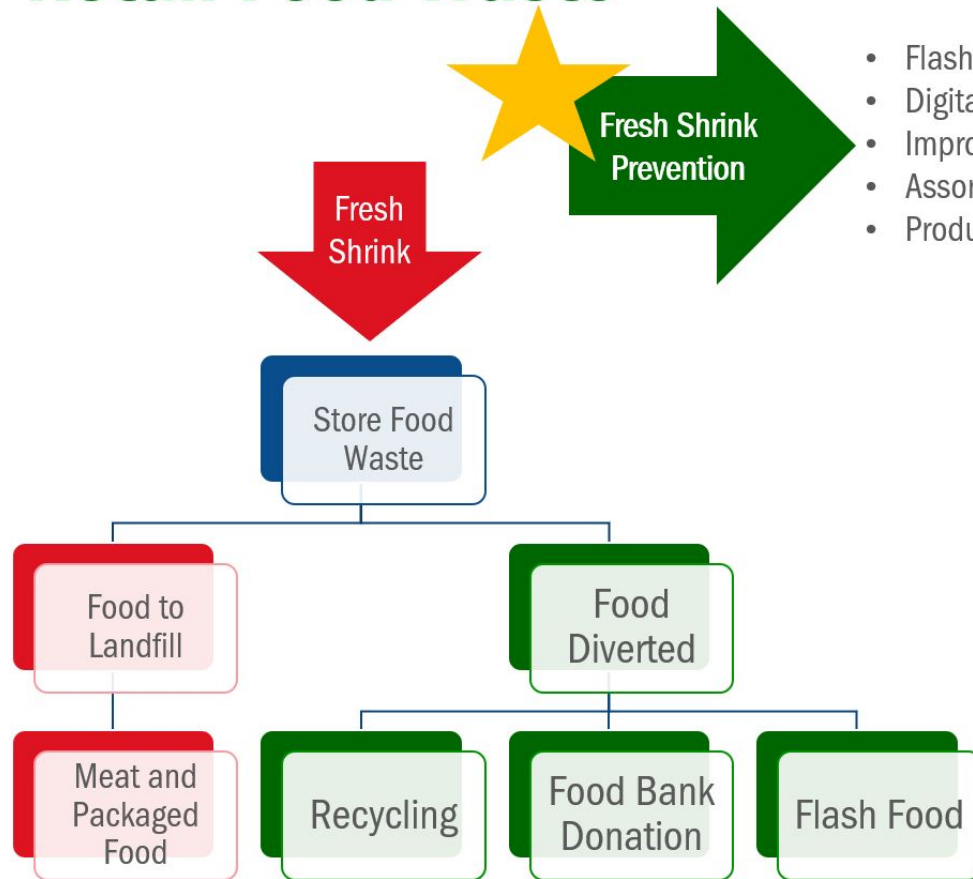
# Food Bank Donations

## FOOD RESCUE In 2019 Meijer stores donated...





# Retail Food Waste



- Fresh Shrink Prevention
- Flash food
- Digital order book
- Improved ordering
- Assortment changes
- Product repurposing



# Manufacturing Food Waste

Middlebury Central Kitchen



Lansing Fresh Assembly



Holland and Tipp City Dairies



97% landfill-free

m.

meijer







# Roger Cargill

## *Schupan*

# Schupan Recycling

Schupan Recycling is the largest independent processor of used beverage containers in the nation. Our facilities process aluminum, PET plastic and glass for Michigan's largest grocers and wholesalers.

Schupan buys aluminum and plastic beverage containers from sources nationwide. With over 25 years of experience in the UBC market

In partnership with reverse vending machine maker TOMRA of North America, UBCR LLC is the collection and transportation arm of Schupan Recycling.



# Our Current Services

Schupan Recycling started managing out of date and out of specification commodity as a value added service to our beer wholesalers. Which started by the pallet load and now is by the truck load.

Our current methods:

- *Requires considerable amount of labor*
- *Heavy lifting and repetitive work that can result in an injury.*

Many of our oncoming loads are unprepared and mixed requiring additional processing steps. In addition we charged by the case and the industry charges by the ton.









# Where We Are Now

★ Applied for an EGLE grant and were successful!

What that means for Schupan Recycling:

- *Purchasing equipment that can manage the volume of material*
- *Efficient and safer process*
- *Converting from cases to pounds*
- *Processing tubs in addition to pallets*
- *Dealing with our waste as a commodity*



# Now



# Current Challenges

The work is incredibly hard on people on top of an increasingly difficult labor market



Pop and beer contain high amount of BOD's, phosphorus and PH issues. This results in ever increasing waste water treatment expenses.



Doing the Right Thing... was using this material as a source of energy not a waste by product.



# Future

Mechanizing the process to *increase efficiency* and reduce the potential of employee injury.

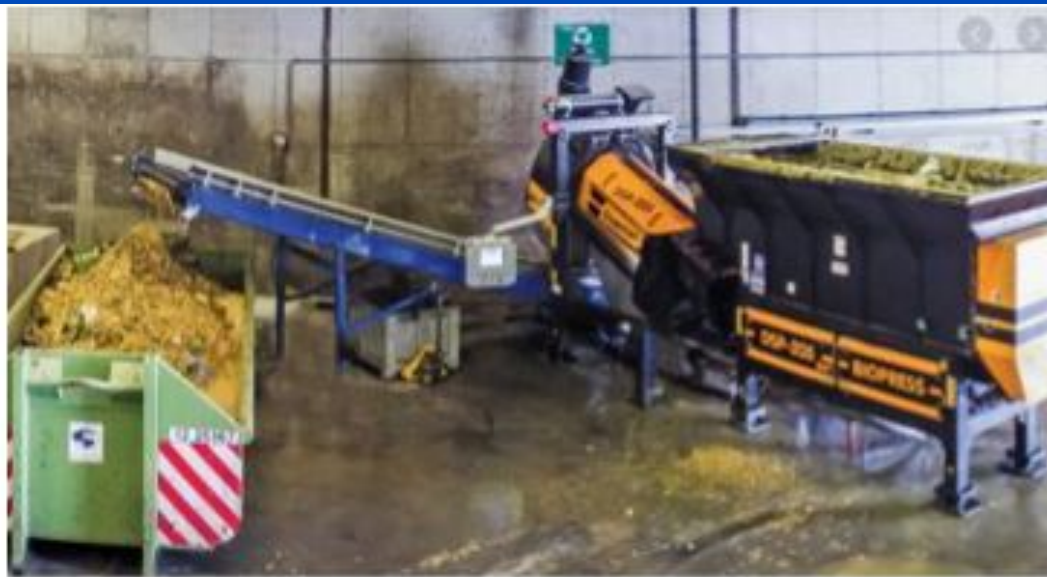


Venture outside of our traditional products and we will increase by at least *four times* without leaving the beverage industry.



We can increase it by *ten times* by offering our services to a wider range of products.

# Technology



# Moving Forward

Schupan Recycling will continue to advance our operation with the help of the EGLE grant



We will continue to look outside of our lane for material that works within our system



We will continue to manage the whole product not just the packaging as a commodity.

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**Todd Wilson**

*Perfect Circle Recycling*





# Revolutionizing Food Waste Recycling

We provide food destruction solutions that result in environmental and economic benefits to you and our community. We're able to process a variety of materials and products while creating a sustainable, circular system producing renewable energy, animal nutrition, biofuel, and fertilizer - all from common food waste.



Every year thousands of pounds of trash goes to landfills and incinerators



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**Mike Nicholson**  
*WeCare Denali*





# Materials Marketplace Roundtable October 27, 2020

# Key Customers

We are proud to serve the following:



<b>Compost Management Project References</b>				
<b>Client</b>	<b>Compost Services</b>	<b>Type/Technology</b>	<b>Status</b>	<b>Tons</b>
City of Ann Arbor, MI	Contract Operations	Windrow	Current	14,000/YR
City of Grand Rapids, MI	Contract Operations	Windrow	Start Dec 20	20,000/YR
City of Phoenix, AR	Contract Operations	ASP	Current	52,000/YR
Fellsmere, Florida	Owner-Operator	ASP	Current	90,000/YR
New York City, NY - DSNY	Contract Operations	Windrow, Agitated/Aerated Bay & Gore	Current	75,000/YR
New York City, NY - DSNY	Contract Operations	SSO	Current	25,000/YR
Rockland County, NY	Contract Operations	Agitated/Aerated Bay	Current	30,000/YR
Burlington County, NJ	Contract Operations	Agitated/Aerated Bay	Current	50,000/YR
Toledo, Ohio*	Contract Operations	Land Application	Current	50,000 YR
* Ohio Operation				





# Windrow Facility

Grand Rapids, MI



- Denali Selected February 2019
- Collaboration with Design Engineer
- Construction September 2019-2020
- Begin Operations January 2021
- 20,000 Tons Annual
- Registered with EAGLE
- Denali Responsible for Operations, Maintenance and Product Distribution
- Merchant Capacity and Product Sales with Revenue Share to the City



# Windrow Facility

Ann Arbor, MI



DSNYC, NY







# SSO Depackaging Facility





# Locations: Composting Base

## Compost Delivery Locations



### WeCare Denali Compost Facilities



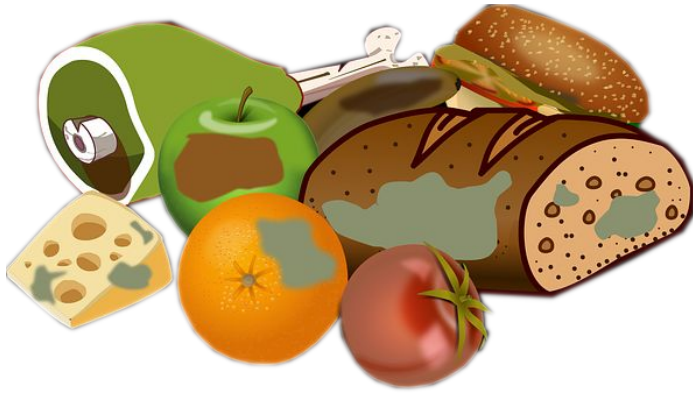
WeCare Organics distributes compost products from compost facilities across the country.

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**Chad Antle**

*BioWorks Energy*

# Food processing waste recycling







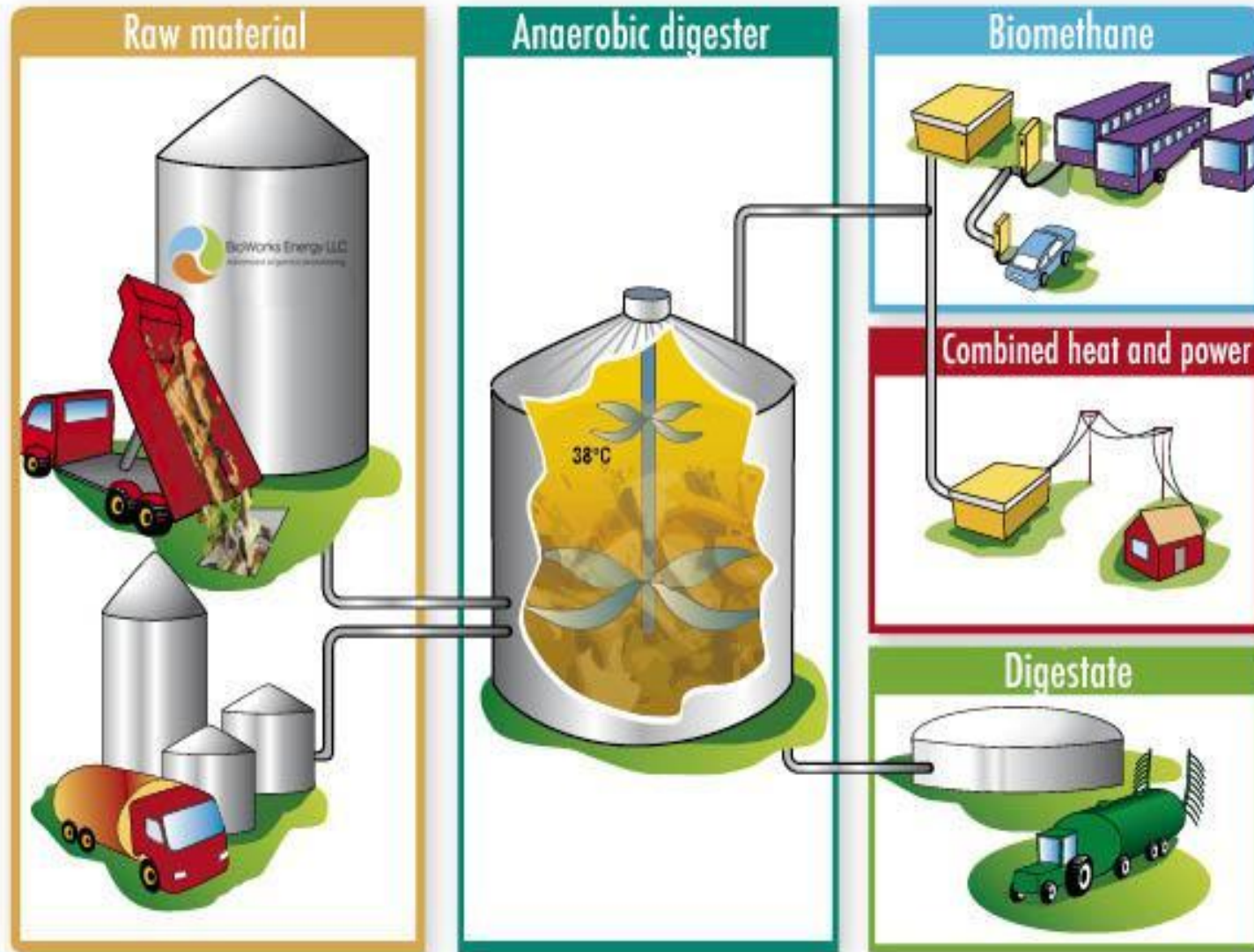
## Production Experience:

- Over 50 years of digester technology
- 10 years of commercial biogas production experience (locally) – Flint, MI
- 24/7 operations

## Comprehensive substrate experience within:

- Biogas from **Wastewater Treatment Plants**
- Biogas from **Industrial Organic Wastes** (Slaughter house, food waste, etc.)
- Biogas from **clean organic substrate** (Ethanol stillage, etc.)
- Farm biogas from **manure and crops**

# Principle description of biogas production





1 ton<sub>TS</sub> manure  
170 Nm<sup>3</sup> CH<sub>4</sub>  
1 700 kWh



1 ton<sub>TS</sub>  
carbohydrates  
420 Nm<sup>3</sup> CH<sub>4</sub>  
4 100 kWh



1 ton<sub>TS</sub> proteins  
510 Nm<sup>3</sup> CH<sub>4</sub>  
5 000 kWh



1 ton<sub>TS</sub> fat  
960 Nm<sup>3</sup> CH<sub>4</sub>  
9 400 kWh





- *Reduces organic load to local or onsite treatment – less energy demand*
- *Debottlenecks existing waste treatment processes and allows for increase food production*
- *Produces renewable energy – off set of current electrical and or natural gas costs.*
- *Allows for “green” branding*
  - *Carbon neutral process – better than composting*
  - *Key role in obtaining landfill free facilities*





# Substrate Experience

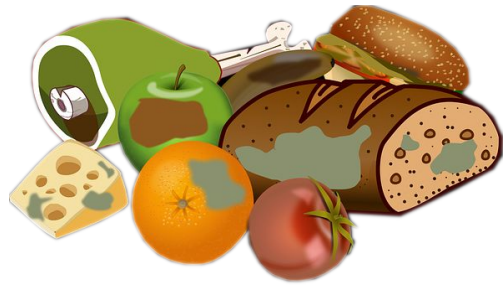
- Slaughter house waste
- Dairy products and waste (chocolate, milk, butter milk, cheese, milk powder etc)
- Sludge from WWTP
- Stillage from ethanol or breweries
- Mycelium from pharmaceutical industry
- Glycerol
- Waste from biodiesel production
- Vegetables
- Pickle and Pepper waste
- Fish waste
- Corn, grain, wheat, ensilage, etc
- Food waste from household
- Waste from food industry
- Manure (cow, pig, poultry etc)
- Alcohols
- Fats











- Bioworks provides:**
- Collection and hauling of waste
  - Waste processing for liquids, solids, and packaged food wastes



**BioWorks Energy – a one stop shop for food waste processing needs**



**Food Waste Collection**

## Bioworks food waste collection

- Focused on Southeast, Bay Region and Central Michigan
- 60 miles radius from Flint
- Cost structure is based on pickup frequency and weight/volume of waste







BioWorks Energy LLC  
Advanced organics processing

Chad L. Antle, P.E.  
Cell (740) 972-2499  
[chad.antle@bioworksenergy.com](mailto:chad.antle@bioworksenergy.com)

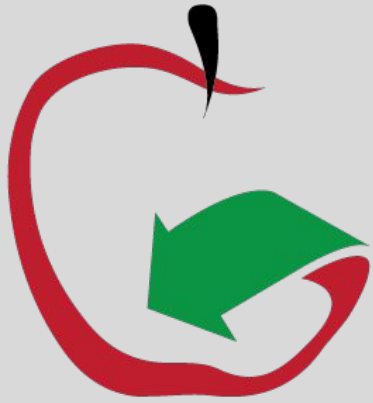


BioWorks Energy LLC  
Advanced organics processing



**Cliff Walkington**

*My Green Michigan &  
Hammond Farms*



**MyGREEN**  
MICHIGAN  
*Food Scrap Management*











# Breakout Sessions

You'll now receive a notification to move into a breakout room, where you'll have the opportunity to share your challenges, brainstorm solutions and recommend professional connections. Capture notes and next steps as follows:

	General Notes	Insights to Take Back	People & Companies to Connect With	Action Items on the Materials Marketplace
Shared Challenges				
Solution Provider(s)				
Other Enablers				



# Networking Hour: Post-Industrial Organics

*Friday, Oct. 30 11:00 am - 12:00 pm ET*

*with* FINITE  
PHOENIX 

Register at: [michigan.materialsmarketplace.org](https://michigan.materialsmarketplace.org)





# Thanks for participating!

Thanks for joining us in today's discussion. We'll send out a brief recap via email in the next week or two, but in the meantime, here are some things you can do to continue the momentum:

## Set up an account on the Materials Marketplace

If you don't already have an account, getting started on the Materials Marketplace only takes a few minutes. Visit one of the program websites and click "**get involved.**" Our tool will ask a few questions, and then someone from our team will send you an invitation to join.

## Create listings for available or wanted materials

Once your account is set up, you can create **wanted** or **available** listings of all kinds on the Materials Marketplace from your mobile device or computer. Listings are the best way to create visibility for your challenge or solution - include a couple of good photos to make them stand out!

## Connect with other users on the Materials Marketplace

Search within your geography and materials parameters, and send a message through the platform if you see something of interest. The other party will receive a notification in their inbox, and our teams will be monitoring the conversation in case something stalls out.

## Important Links

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- Michigan Materials Marketplace:  
**[michigan.materialsmarketplace.org](https://michigan.materialsmarketplace.org)**
- Ontario Materials Marketplace:  
**[ontario.materialsmarketplace.org](https://ontario.materialsmarketplace.org)**

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## Contact Us

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- **Twitter:** @usbcsd