



# Relmagine Trash

Our Journey Toward Zero - 2022

# Kent County Department of Public Works



*Recycling & Education Center*



*South Kent Landfill*



*Waste-to-Energy Facility*



*North Kent Transfer Station*

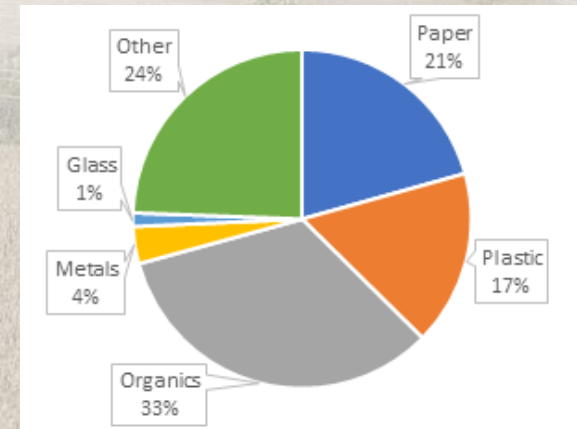
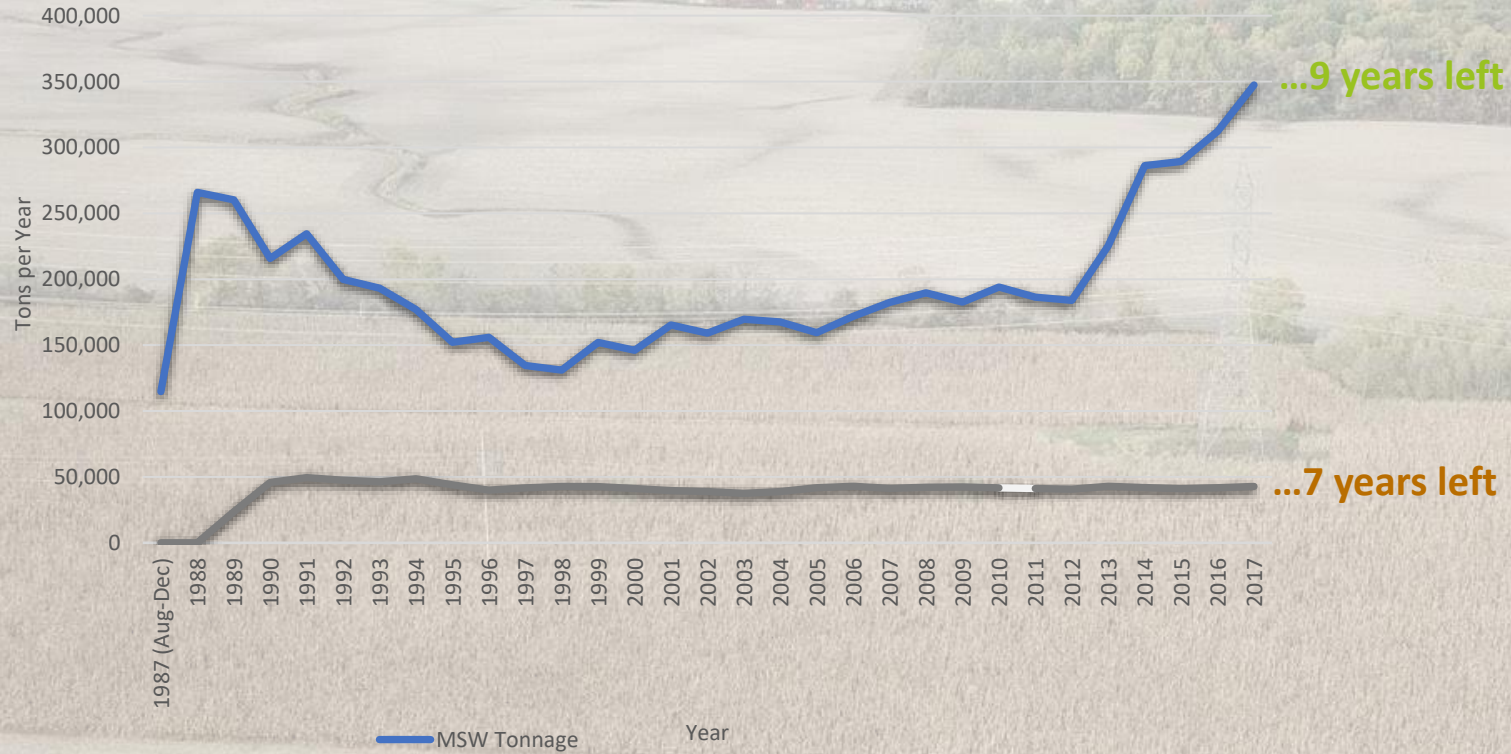


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# South Kent Landfill Tonnage (MSW and Ash)





# Landfilling 2 million CY3 every year



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# Landfilling is a waste



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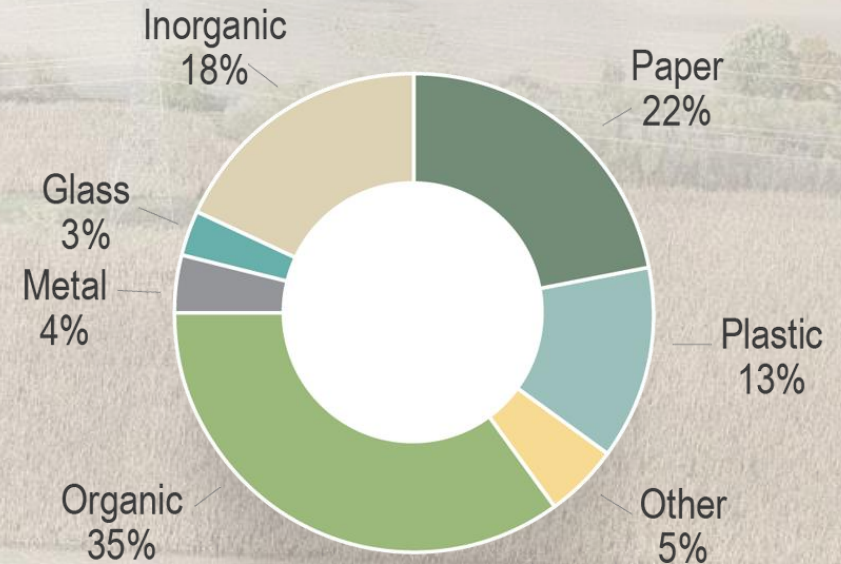


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# 2015: WMSBF Waste Characterization Study



Kent Municipal Solid Waste  
Composition (mean % by weight)



Source: West Michigan Sustainable Business Forum  
2016 Michigan MSW Valuation Study. [wmsbf.org/msw](http://wmsbf.org/msw)


**2016: Landfilling will not be our legacy.**


**2020**


**REDUCE LANDFILL WASTE**  
**20% by 2020 | 90% by 2030**

**2030**

# CURBSIDE RECYCLING ACCESS\* IN KENT COUNTY

 Access to Curbside Recycling

 Potential Access to Curbside Recycling

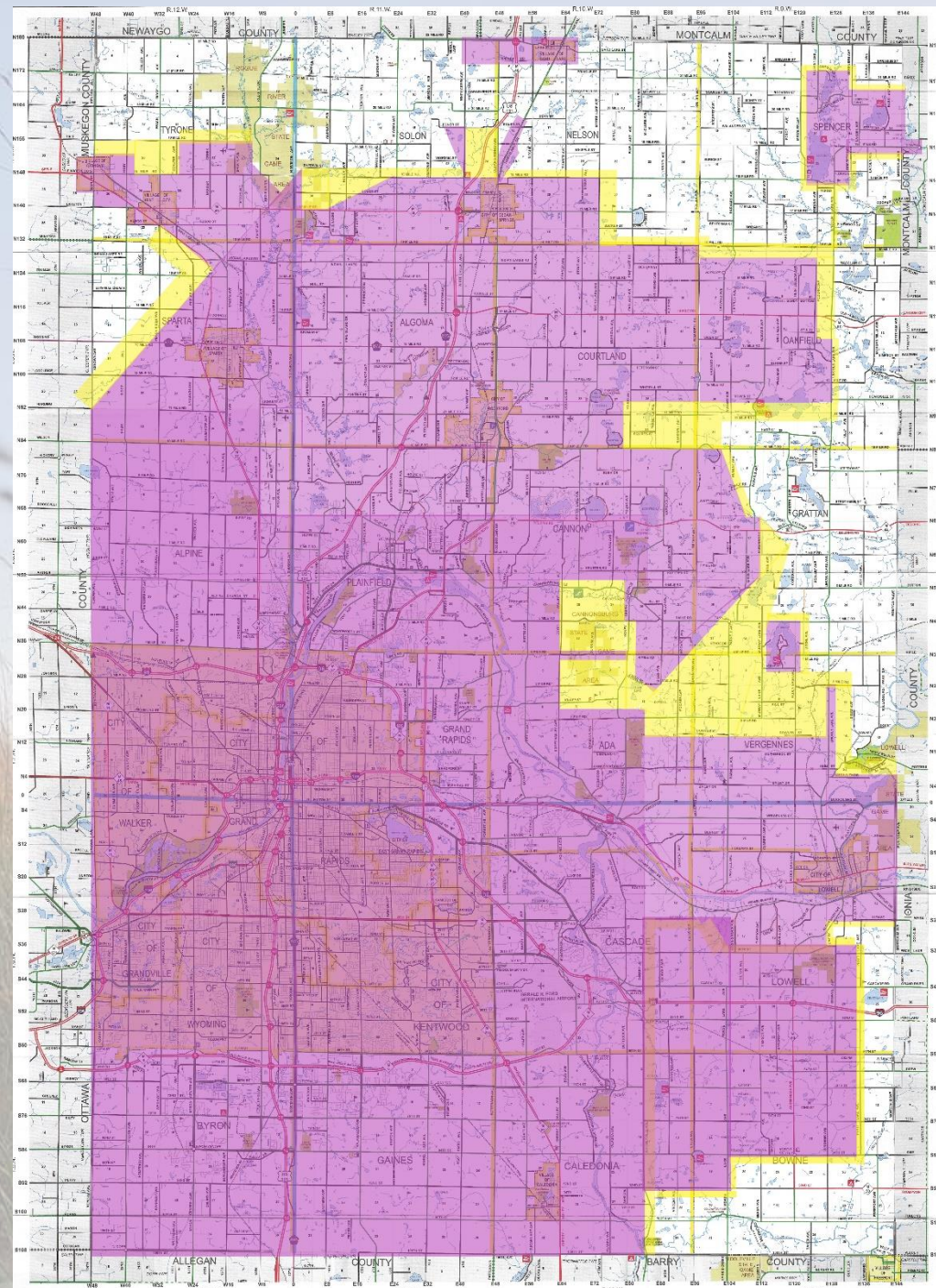
 No Access to Curbside Recycling

\* **"Curbside Recycling Access"** refers to recycling programs that serve individual households by collecting recyclables in bins or carts at the residence.

Typically these programs do not include multi-family facilities in excess of four units per building and the resident must place the bin or cart along a public street.

There may or may not be a fee or tax associated with this service.

(Definition based on information from The Recycling Partnership)



# Most recyclables still end up in the trash

Only 25% of residential recycling in Kent County is collected & sorted into commodities.

The remaining 75,000 tons are thrown away annually.



# 2021 Waste Characterization Study

465,000 tons of processible waste  
generated in Kent County annually.

16% of this waste is Single Stream  
Recycling material.

Kent County Department  
of Public Works

2021 Municipal Solid Waste  
Characterization Study



March 2022

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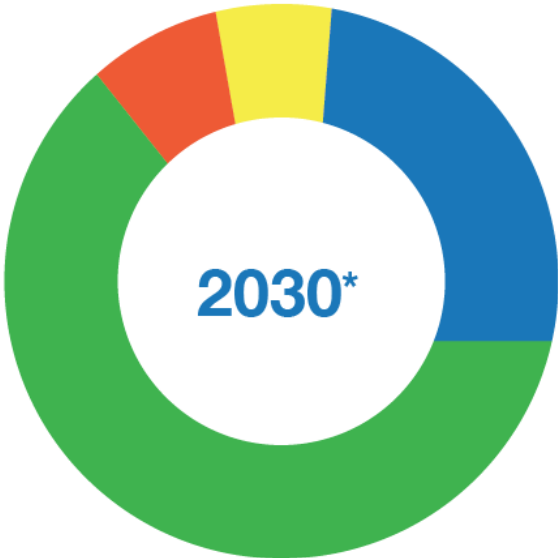
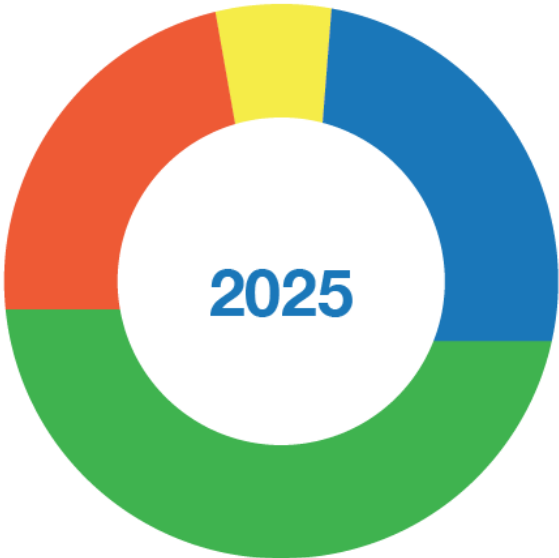
Prepared by:

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# Percentage Breakdown of Kent County Municipal Solid Waste by Destination



- Single Stream Recycling
- Landfill
- Sustainable Business Park
- Waste-to-Energy

\*Potential to capture non-MSW currently leaving the system or that can't be processed - construction waste, organics, bulky items.

# 2022 Waste Characterization Study

Kent County Department  
of Public Works  
2021 Municipal Solid Waste  
Characterization Study



March 2022



1M tons of commodities to  
be recovered from waste  
stream over next 25 years.

**\$300M value.**

(metal, plastic, glass, paper and old  
corrugated cardboard)



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# Sustainable Business Park - how we got here:

## 2016

- Waste characterization study
- Goal: Reduce landfilled waste by 90% by 2030
- Roadmap to “re-imagine trash” approved – includes *Resource Recovery Park* concept

## 2017

- Sustainable Business Park Master Planning Process

## 2018

- SBP Master Plan approved
- Three-year moratorium on expanding SKL

## 2019

- Business Development
- Infrastructure Analysis
- Alternatives Analysis

## 2020/2021

- Anchor Tenant RFP Issued
- Evaluation & Finalist selected
- Grants and Allocations

## 2022

- Project Development Agreement approved

# Anchor Tenant Procurement Process

9 RFP responses

5 shortlisted

2 finalists

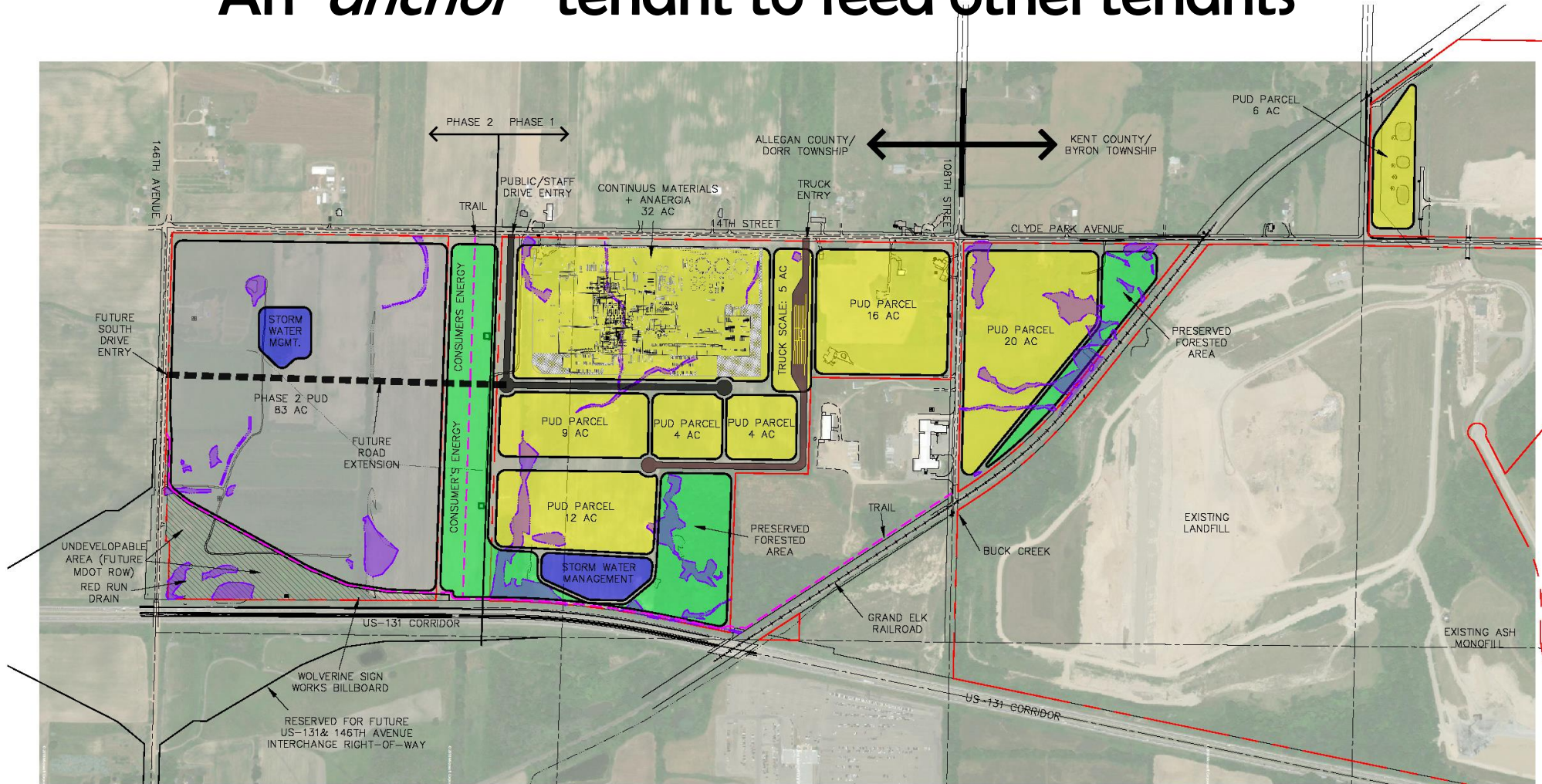


## RFP Evaluation Team:



- Finalist interviews
- Site Tours
- Financial Analysis
- Risk Analysis
- MEDC Staffing and Investment
- Final Selection

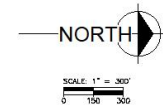
# An 'anchor' tenant to feed other tenants



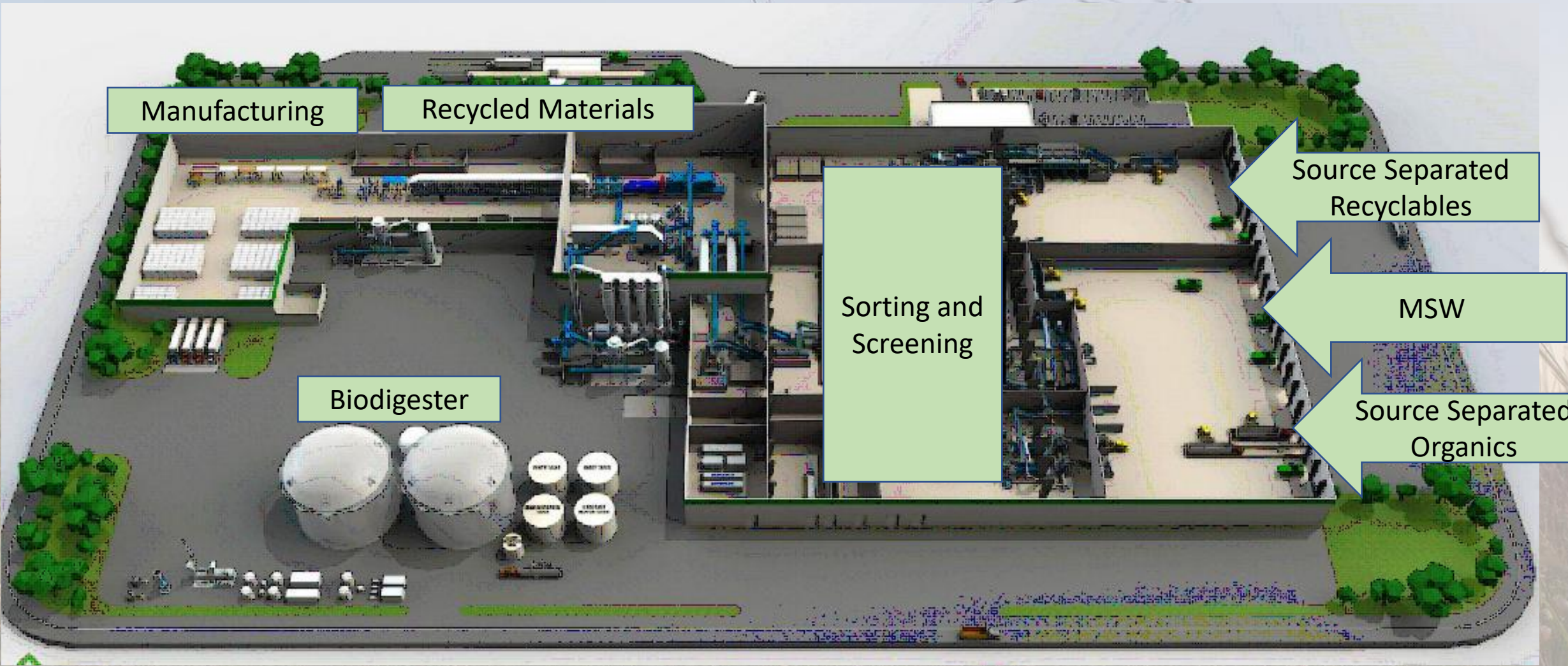
- POTENTIAL SYSTEMS**
- PHASE 1 PUD
  - PHASE 2 PUD
  - DEDICATED/PRESERVED OPEN SPACE
  - FUTURE/RESERVED FOR MDT RIGHT-OF-WAY
  - STORMWATER MANAGEMENT AREA
  - REGULATED WETLAND AREA (7.8 ACRES)
  - PUBLIC/STAFF ROADWAY
  - TRUCK TRAFFIC ROADWAY

CONCEPTUAL PLAN

THE LAND USE AND LAYOUT INDICATED IS CONCEPTUAL IN NATURE



# Continuus Materials +



# 60% Landfill Diversion + Outputs:



**Roof  
Coverboard**



**Fertilizer**



**Renewable  
Natural Gas**



**Recyclable  
Commodities**

# Continuous Materials Process Overview

Continuous develops, manufactures and sells premium building products using a proprietary process to upcycle waste that would otherwise be landfilled

## SCALABLE MANUFACTURING PROCESS

Waste Arrives



Receive unsorted municipal solid waste (MSW) and recycling residuals

Materials Separated



Automated separation to recover paper and plastic

Feedstock Prepared



Paper and plastic are blended, dried and amended (biocide, binders) per product specifications

Everboard Made



Feedstock is pressed using heat and pressure; facers are added as needed; Everboard cut to size and tested per spec

# Roof Cover Board Is A High Performance Product

Roof cover board provides a durable layer under the membrane that protects the insulation while enhancing the overall strength and performance of the roof

## TYPICAL SINGLE-PLY ROOF COVER BOARD INSTALLATION



1. Membrane - waterproof layer
2. Adhesive - adheres membrane to cover board
3. Roof Cover Board - strength; durability
4. Fasteners and Plates
5. Insulation - energy efficiency
6. Metal Roof Deck – supports insulation

# Everboard Has Proven Performance with Multiple Customers

Everboard has been successfully supplied in over **200** commercial roofing installations.



### Retail / Office

Logos for Retail / Office customers: Target, H-E-B, Staples, NAPA, IBM, AT&T, and Keurig.

### Warehouse / Data Center



Logos for Warehouse / Data Center customers: Amazon, Pepsico, Americolo, Guardian Storage, Cisco, and a blue cube logo.

### Manufacturing

Logos for Manufacturing customers: Kraft Heinz, Conagra Brands, GE, Raytheon Technologies, MC, Schreiber, Pepsi, PCA, and WestRock.



# Public-Private Partnership

	<u>Public</u> 	<u>Private</u> <b>Continuous Materials</b> +  <small>Breaking Barriers to Sustainability</small>
Investment	\$70M	\$280M
Phase One Infrastructure	\$19M	-

	General Obligation Bonds	Revenue Bonds
Issuer	Kent County	Kent County via DPW Enterprise Fund
Pros / Cons	Lowest transaction cost and interest rate (Current 25-Yr. AAA tax exempt: 1.40%)	Higher transaction cost and interest rate (Current 25-Yr. Single A tax exempt: 1.6%)
Repayment	All County revenues	DPW system revenues
Debt Service difference		\$100,000 more than GO bonds

Systemwide Tipping Fee Estimate	\$76/ton
*Impact to Curbside Cost for Processing Estimate	+ \$3.10/mo

\*tipping fee increase only

*As we think forward about the future of managing municipal solid waste, we cannot perpetuate it's simply okay to throw resources away by landfilling them.*



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*We make decisions everyday what we're "throwing away" no longer has value. While it may be cheaper today, the reality is our current approach to manage trash by burying it in the ground creates externalities. We have a choice. There is a path. We can recapture the value of what is deemed garbage destined for landfill.*



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*We're proving out that we can recapture resources to drive economic development, job creation, private investment, technology and renewable energy - making the best use of these resources and protecting the environment for future generations.*



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