





REIMAGINE WASTE
 BIOPRODUCTS - BIOCHEMICALS - BIOFUELS
 WARM Workshop, Nov. 15-16, 2023, Raleigh NC

Current State of MSW and Recycling Management



November 2023
 By Brad Kelley, Senior Project Engineer
 Gershman, Brickner & Bratton, Inc.

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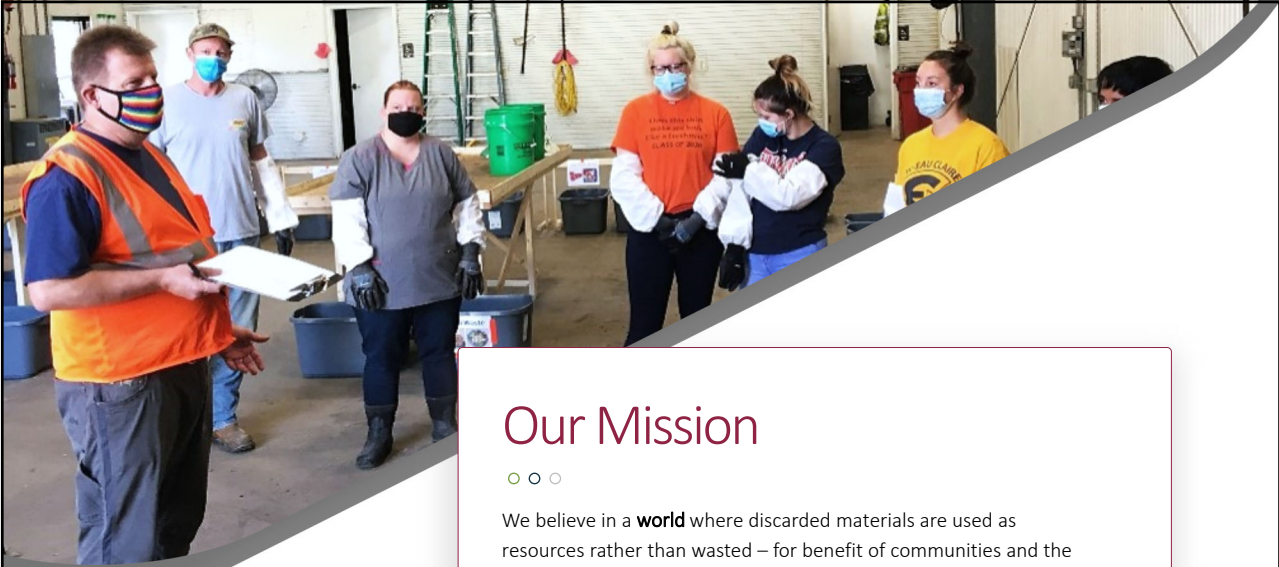
Today's Agenda

- ○ ○
- Introduction to GBB
- State of Disposal in the US
- MSW Composition
- Processing of MSW in the US
- Circular Material Management
- FCIC
- Alternative Collections
- Q&A

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Our Mission

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We believe in a **world** where discarded materials are used as resources rather than wasted – for benefit of communities and the environment. **Both today and far into the future.**



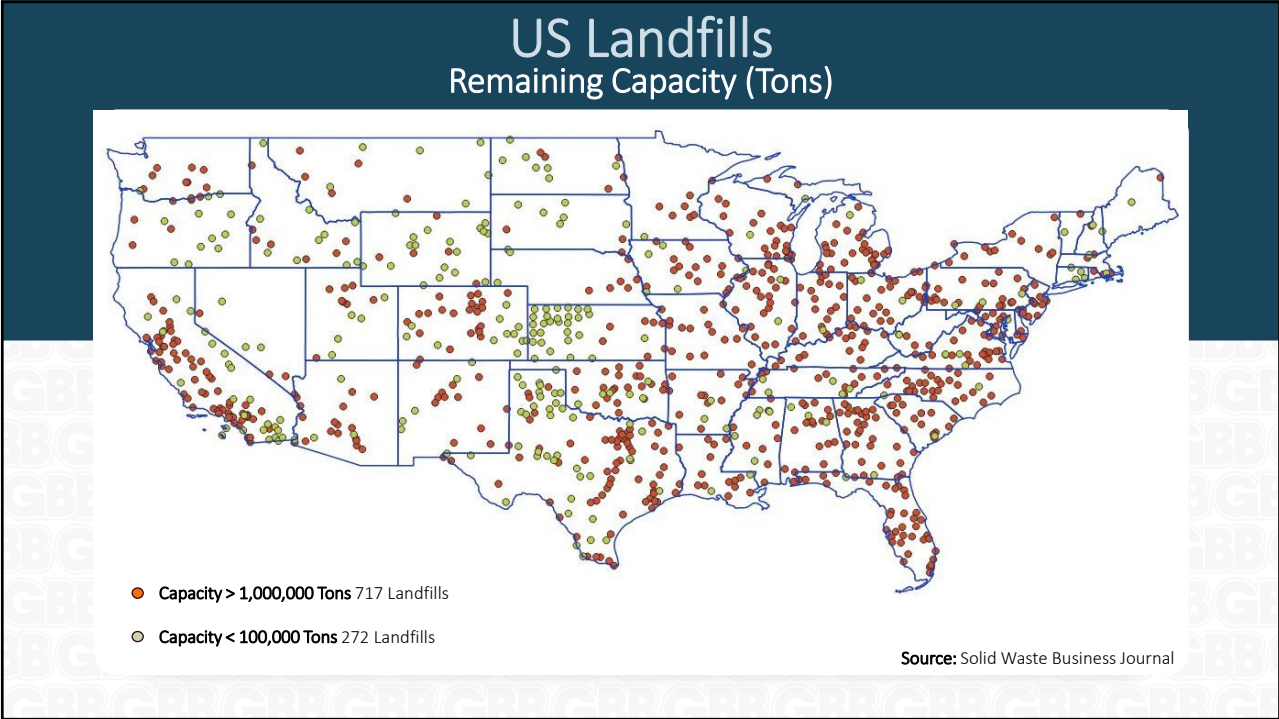
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State of Disposal in the Continental US

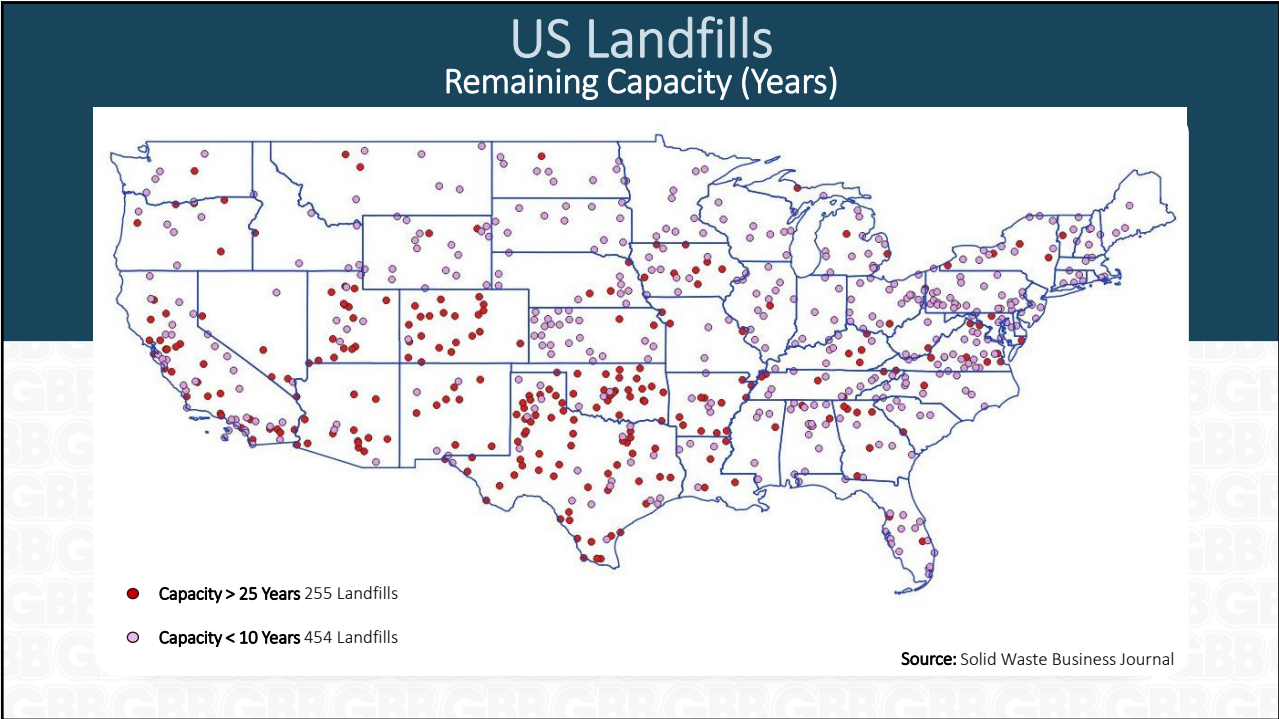
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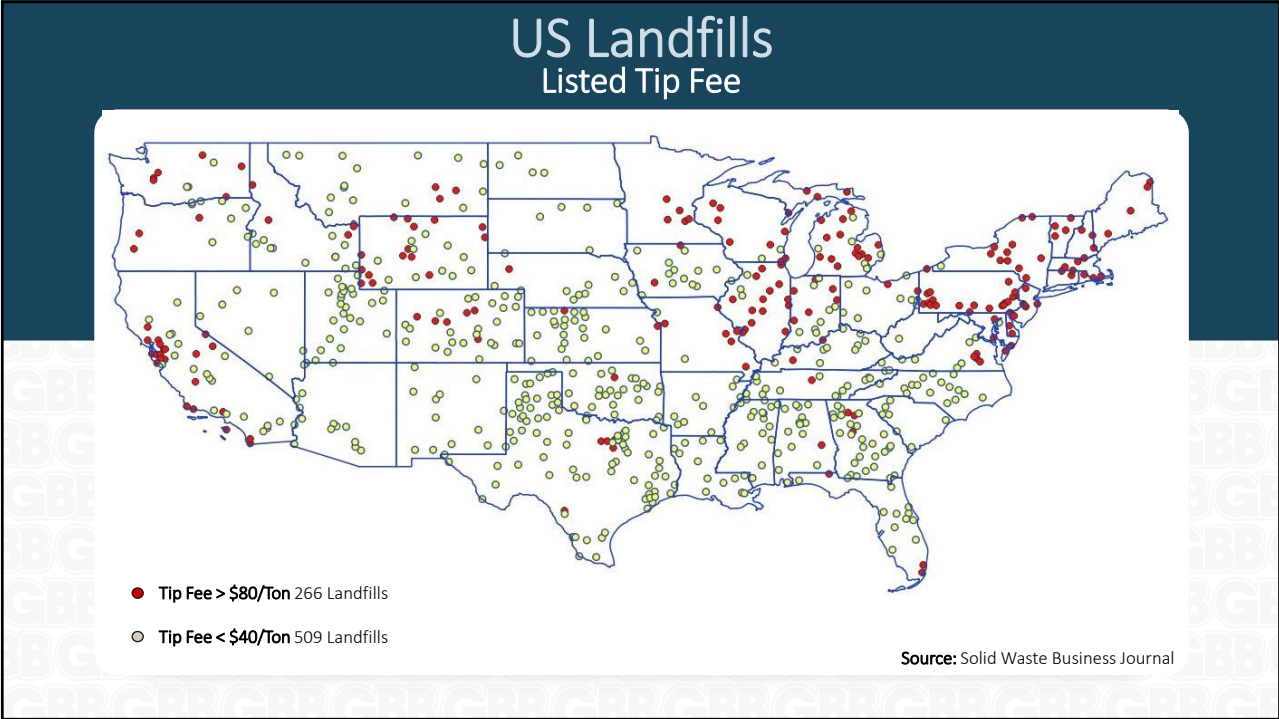
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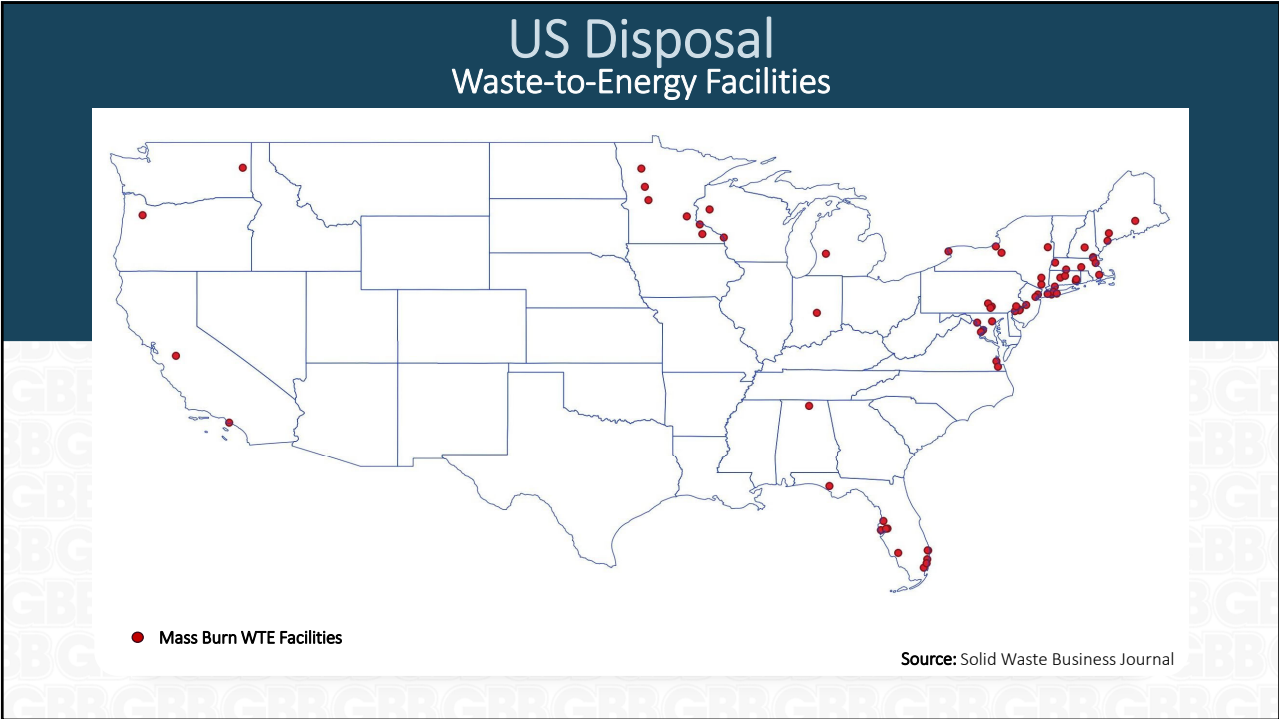
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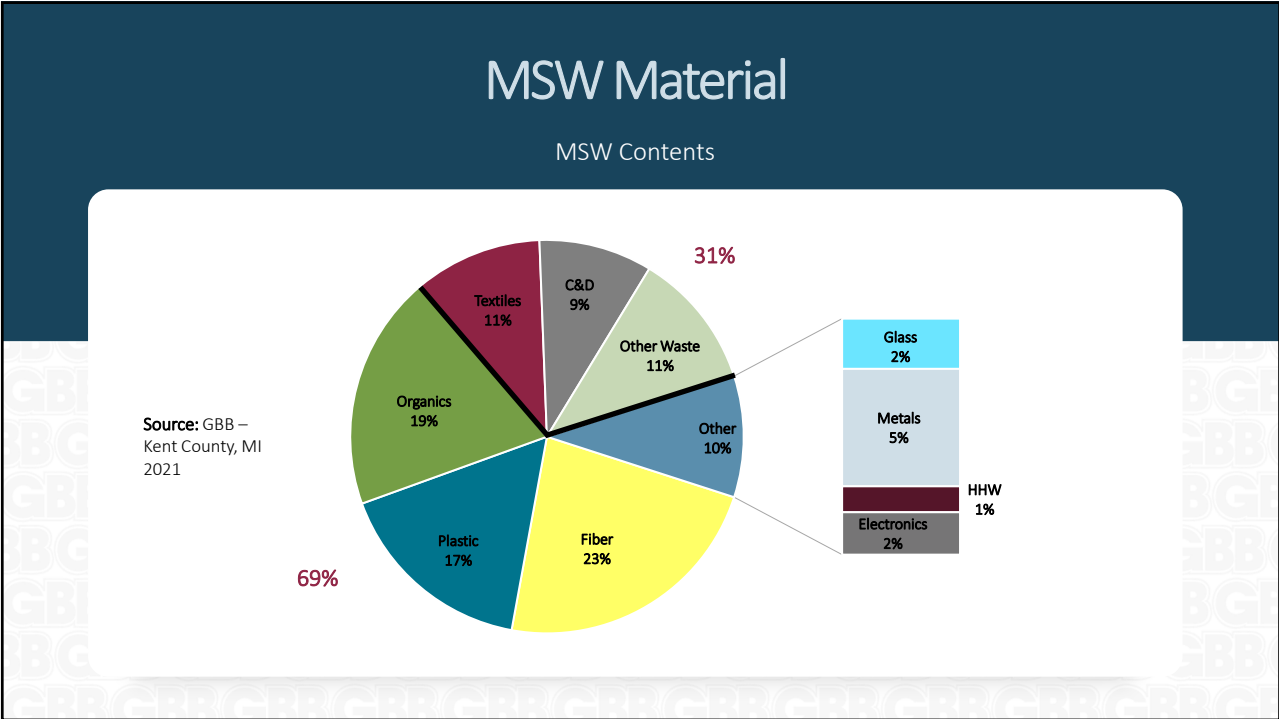
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MSW Material



Source: FCIC



Source: GBB – Kent County, MI 2021

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MWPf – Utah

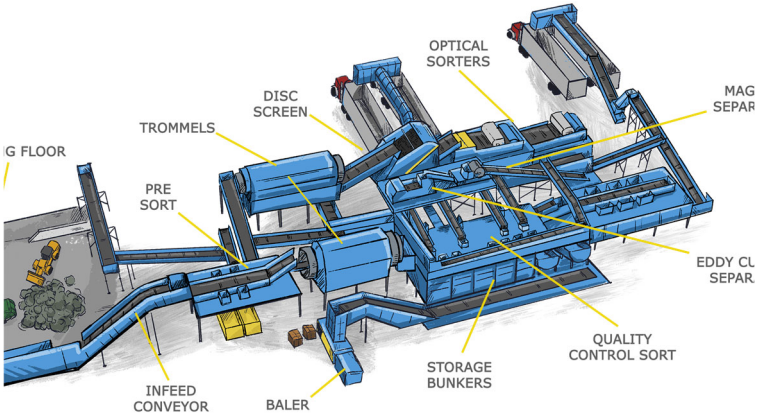
(40 TPH – 10% Diversion)

WASATCH
INTEGRATED
waste management district


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Modern MWP Process

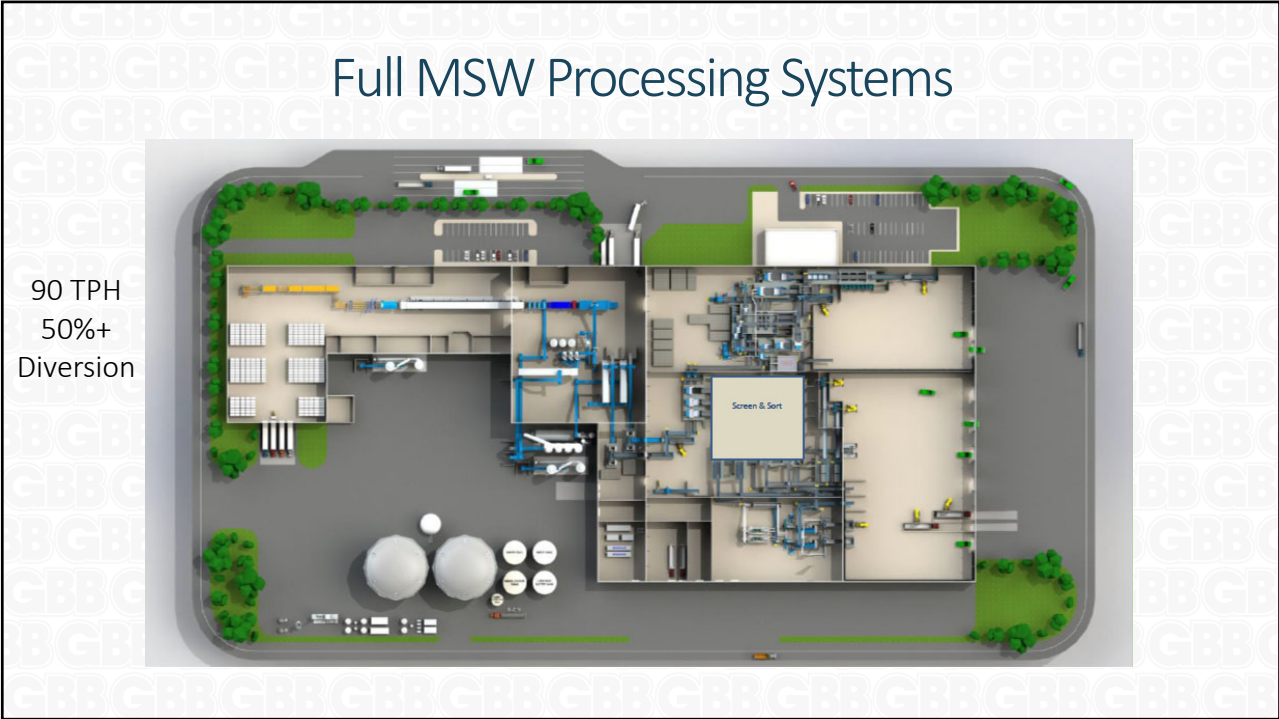
- Web videos posted to website (Construction, operations, etc.)
- Tours / Virtual Tours to Students / Education Center
- www.wasatchintegrated.org



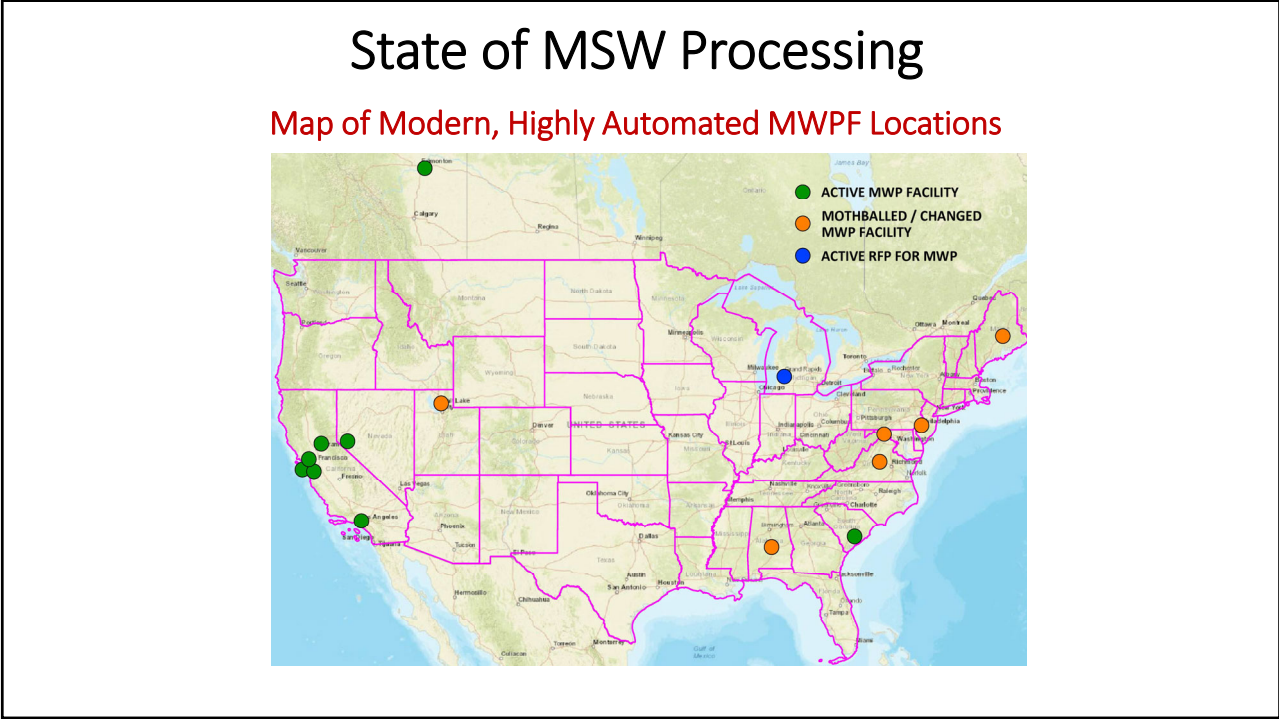
Stylized System Layout



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Processing Outputs

Potential Streams and Final Products from MWP

- Reuse/Repurpose of original container (rare)
- Mechanical Recycling (Metals, OCC, PET, HDPE, etc..)
- Coal/Biomass Replacement Fuel (RDF/SRF)
- Other Fuel (Aviation, Ethanol, etc)
- Chemical Components for Packaging Reuse
- Renewable Building Products



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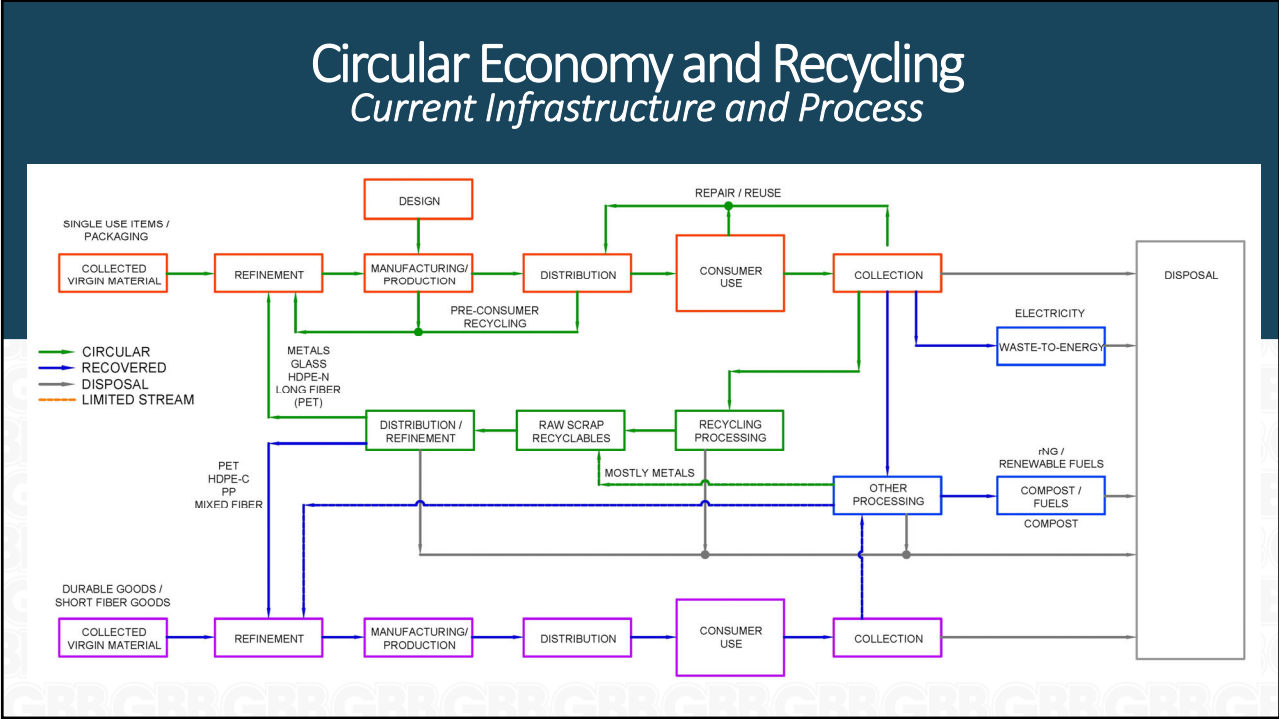
Circular Economy & State of US Processing

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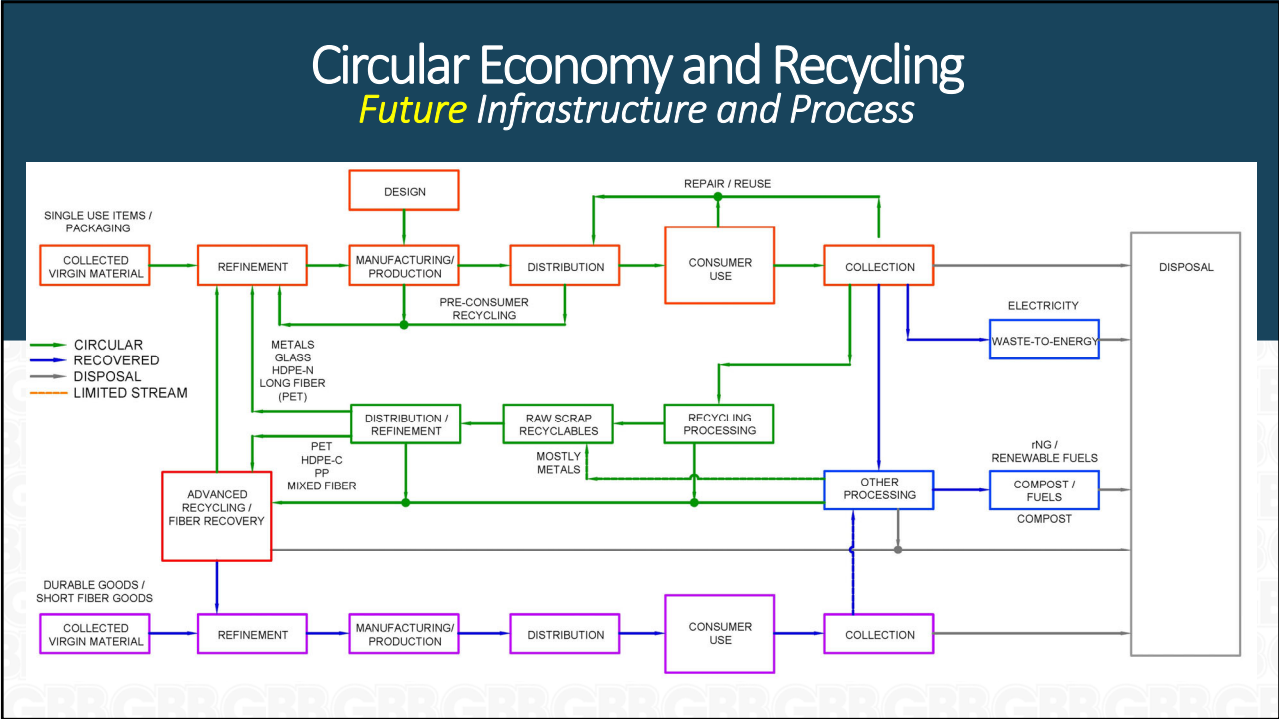
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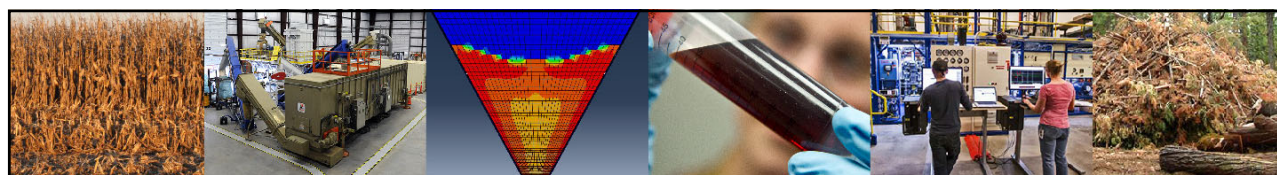
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Feedstock-Conversion Interface Consortium (FCIC)

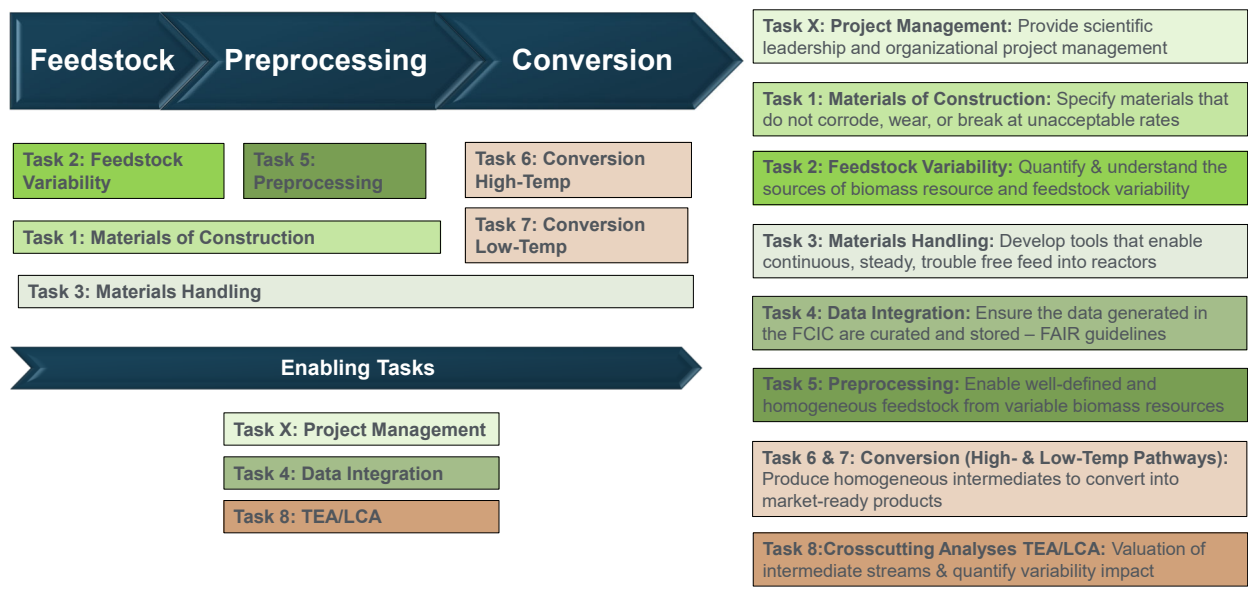
Bioenergy Technologies Office (BETO)

Edward J. Wolfrum, Ph.D.
Principal Investigator

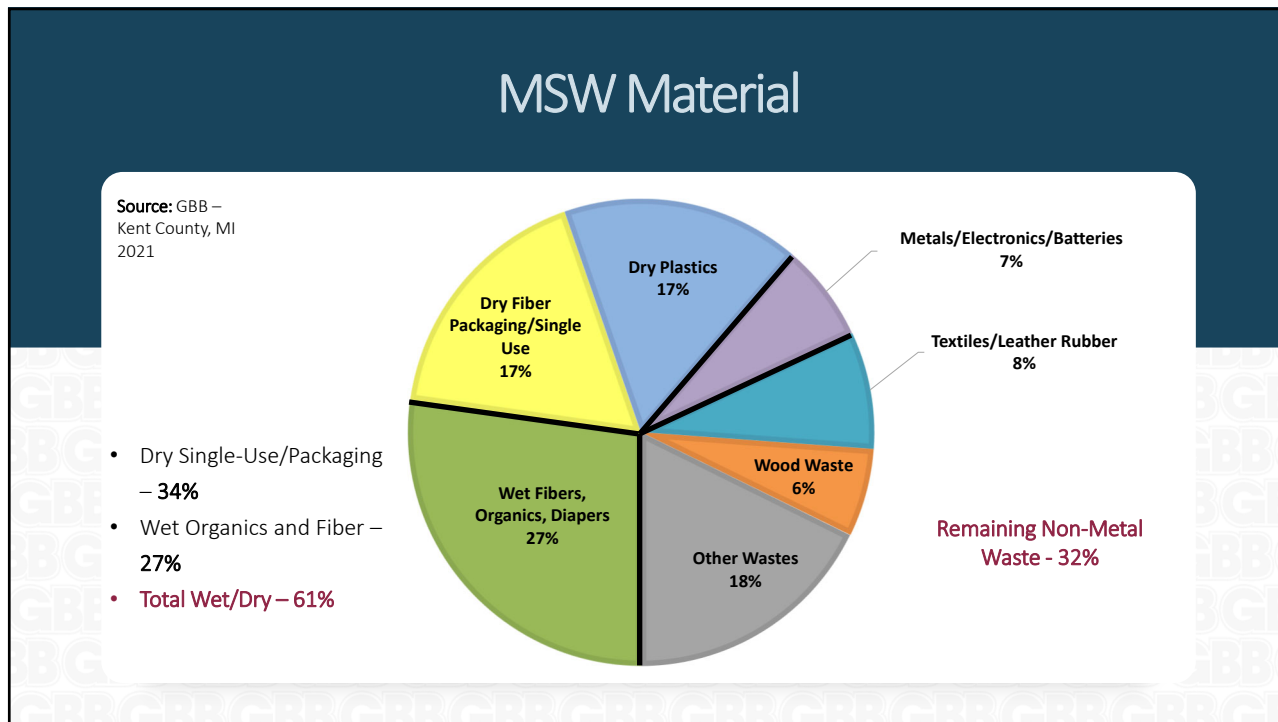


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FCIC Task Organization



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Wet – Dry Collections



- Dry Packaging and Wet Organics and Packaging (single-use) are collected weekly
 - Dry Fiber and Plastics
 - Dry Metals
 - Wet/Compostable Fiber
 - Organics & Diapers
- Other Residue Collected Monthly
 - Other Recycling Possibilities (Wood, textiles)
 - Can be Processed like C&D
- Produces an Easier to Process Feedstock
- Is Easier for Consumers to Understand
- Collection Costs are not Greatly Increased



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Contact Information



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