



RECYCLING MARKETS UPDATE

The Midwest Glass Market

National Recycling Coalition – Recycling Markets Development

November 7, 2018

Presented by Daniel VanKorn

Strategic Materials, Midwest Sourcing Manager

Agenda



- Who is Strategic Materials? Our Commitment to the Midwest
- What we do
- Why Glass Works in the Midwest
- Opportunities for the Future



Strategic Materials

About Us



Strategic Materials

About Us

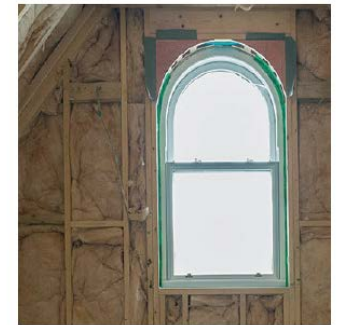
- Largest footprint in North America, with nearly 50 plants, from Sarasota, FL to Seattle, WA.
- Market leader for glass recycling; more than 100 years of experience.
- We recycle nearly **3 million tons of glass** a year into a variety of applications.



Container



Abrasives



Fiberglass



Fillers



Highway Bead



Plastic



Specialty

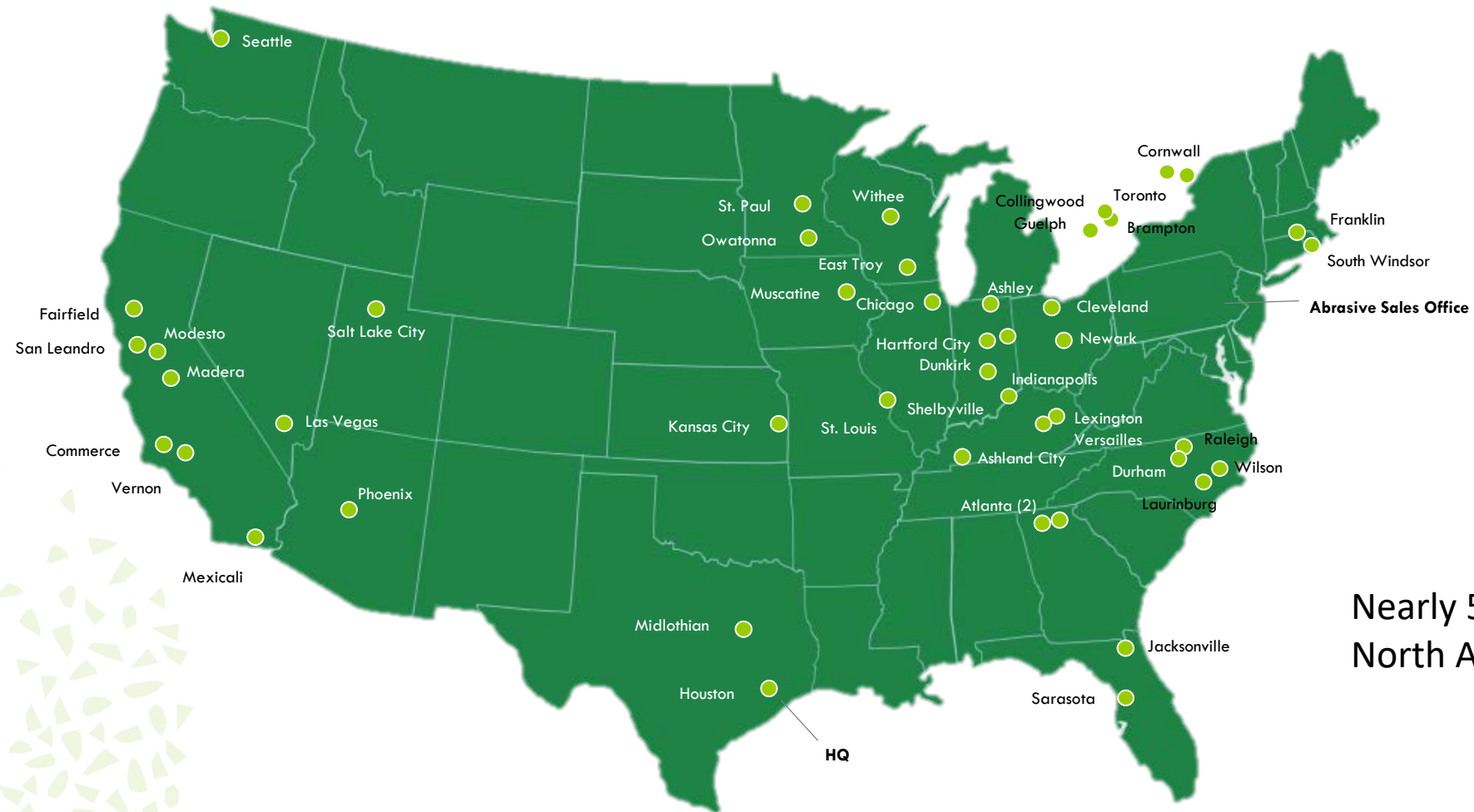
Our Commitment

Midwest Investment



Strategic Materials

Footprint



Nearly 50 facilities in
North America

Delavan, WI Plant

Footprint



- Commissioned November 2017
- 125,000-square feet
- 15 Acres
- Doubled processing capacity of decommissioned East Troy plant
- Processing approximately 10,000 tons of glass per month



Delavan, WI Plant

Customized for efficiency



The plant was custom engineered by Strategic Materials to provide improved operational flexibility



Delavan, WI Plant

New Technology



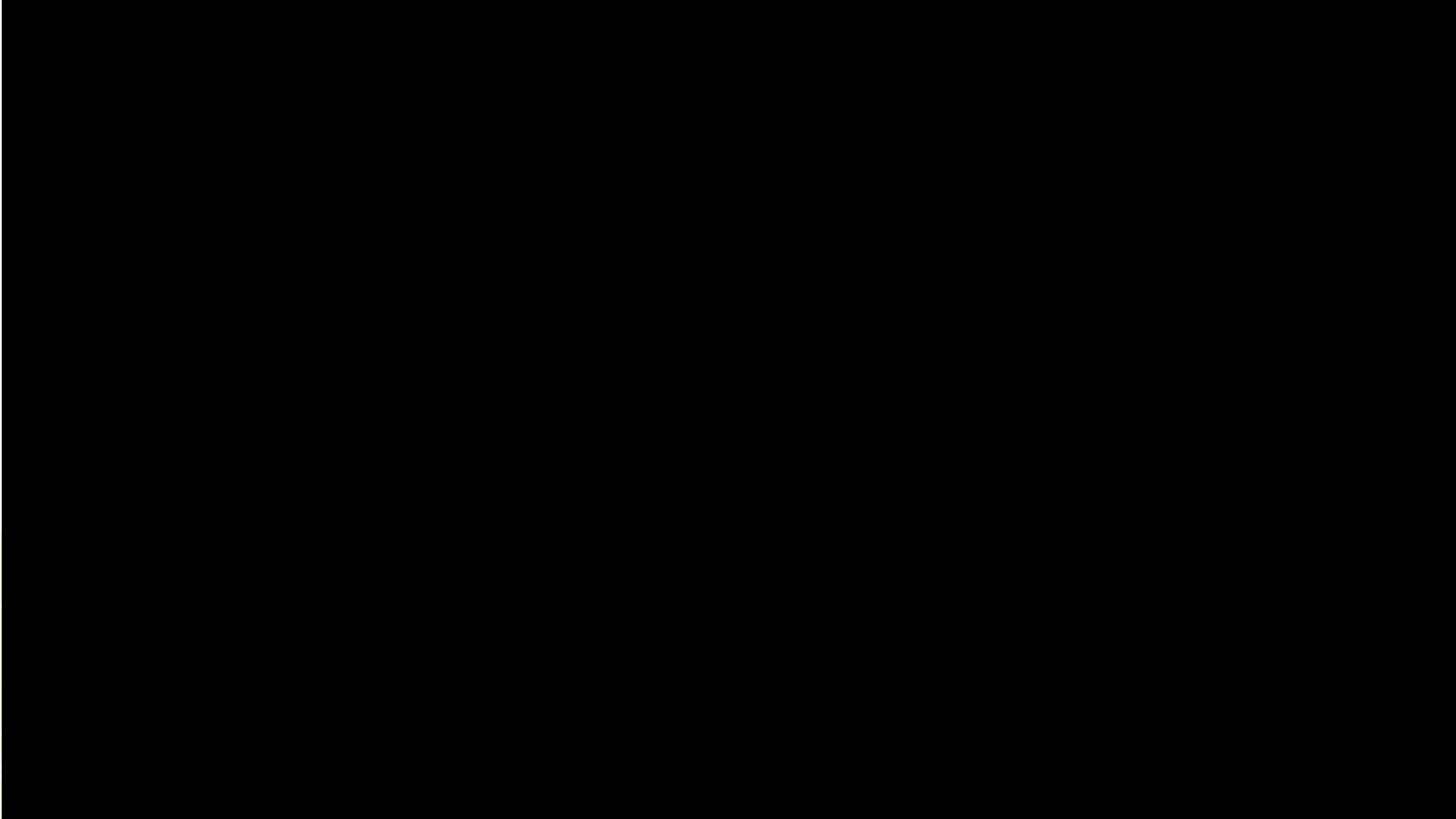
- State-of-the-art sorting technology deployed - 14 optical sorting machines
- Updated screening capabilities



Product Life Cycle | Glass

Dem-Con Educational & Public Outreach Video

SMI St. Paul, MN



Why is Glass Sustainable?



- Glass is a sustainable, versatile, cost-saving material.
- Glass never wears out and **can be recycled forever.**
- **One 6-pack of recycled beer bottles produces** enough fiberglass insulation to fill a standard wall cavity.
- **Using recycled glass to manufacture new glass products requires 30% less energy** than does manufacturing glass from virgin materials.



Glass Value?

Material Recovery Facility (MRF)



(\$\$\$) Negative Value



\$\$\$ Positive Value

Did You Know?



- **Recycled glass demand** is more than current supply in the container glass and fiberglass insulation industries.



Why Glass Recycling Works in the Midwest



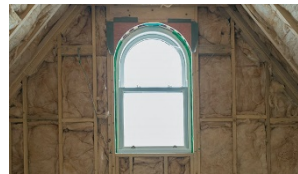
Why Glass?

End Markets

Glass Containers



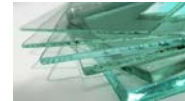
Fiberglass



Why is recycled glass used?

- ✓ Saves on energy & CO₂ emissions
- ✓ Increases throughput
- ✓ Extends furnace life
- ✓ LEED credits (fillers and insulation)
- ✓ It is chemically inert, safe packaging
- ✓ It is ocean-friendly

Flat Glass



Fuyao Glass America Inc.

Highway Bead



Glass is likely the most stable commodity in the stream for the past 5 years. All these benefits positively impact the local economies through job support.

Midwest's Viability



Midwest based End Markets

Existing glass recycling infrastructure

Legislation – Some states have laws promoting glass recycling

Corporate stewardship – ZERO Landfill Initiatives

Public Mindset

Midwest Statistics



- In **2018 Strategic Materials has processed approximately 600,000 Tons** of Midwest based MRF glass, plate and bottle glass.
- Where did the glass end up? (Approximately)
 - 65% Container glass
 - 25% Fiberglass
 - 5% Other End Markets

Our Challenges and Future Opportunities

Preserving Glass Recycling



Market Challenges In the Midwest



- **Single Stream Quality** – MRF Glass often times requires clean up; medical waste and batteries continue to cause operational stress
- **MRF Maintenance** – Due to the abrasive nature of glass, handling equipment requires continuous maintenance
- **Logistics for new Supply** - Increased freight range equals increased cost
- **Freight Haulers and Drivers** - There currently is a shortage of haulers that are willing to pick up new hauls due to a shortage of qualified drivers
- **Myths in the Marketplace** – Inaccurate messaging related to glass recycling

Debunking Myths

What have you heard about glass?



CLAIM

FACT

Broken glass cannot be accepted



✓ We accept broken glass

Mixed color glass cannot be accepted



✓ We accept mixed color glass

Glass must be washed & cleaned



✓ Labels & organics clinging to glass present no problem

Glass contaminates other recyclables



✓ Single-stream contaminates every material in the bin. Proper layout, sequence & processing at the MRF maximizes value for all streams

Glass cannot be recycled due to China's SWORD policy



✓ This is not true. Glass is produced and recycled domestically

Glass has no value and belongs in the landfill, or the value of glass has gone down



✓ Glass has value, and can be maximized with proper process or equipment. Glass value is variable. The amount of garbage has increased, which hurts glass value

There are no end markets for glass



✓ End markets include container, fiberglass insulation, highway bead & more. Demand exceeds supply in many areas

Future Opportunities



- Municipalities
- MRF Glass Clean-up Projects
- End Market demand for higher recycled glass volumes
- End Market demand for higher quality recycled glass



Questions?



Want to become a supplier or have questions?

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Thank You

