Great Lakes Circular Material Roundtable A Regional Approach to Glass Recycling

Increasing Supply and Use of Recycled Cullet for Container Manufacture

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January 2021





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ass Recycling Foundation (GRF) is a 501c3 non-profit organization formed to provide and raise funzed and targeted assistance, demonstration and pilot projects that address gaps in the glass recysupply chain across the United States.

Help us by making a donation to the Glass Recycling Foundation:



AMERICANS SAY "YES" **TO GLASS RECYCLING**

of the U.S. population have recycling programs available for glass beverage bottles

A BETTER

ENVIRONMENT

of all glass containers were recycled in 2015





bottles

Most glass customers and

suppliers are within 300 miles







1 ton of carbon dioxide is reduced for every 6 tons of recycled container glass used in manufacturing

10% INCREASE 😂

A relative 10% increase in recycled glass reduces:



particulates nitrogen oxide sulfur oxides





U.S. GLASS CONTAINERS ARE A \$5.5 BILLION INDUSTRY = 18,000 JOBS



The weight of glass bottles has been reduced by

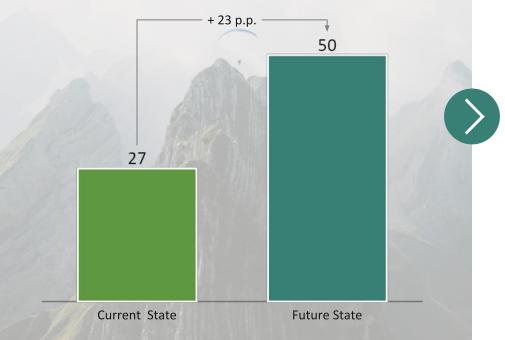
over the past 30 years

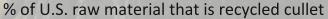
Transportation accounts for

of a packaging material's total carbon footprint



How can we get to 50% recycled cullet in containers in the next 10 years?







Define the starting point



Design solutions for archetypal geographies



Synthesize U.S. strategy and roadmap

CHALLENGES to glass recycling span the entire value of ain and recovery process...

- 1 Consumers lack incentive to recycle if inconvenient; opt-in/subscription models lead to low participation
- 2 Rising MRF fees (\$100+/ton) and pressure from waste management industry have caused some municipalities to remove glass
- from curbside entirely
 Lack of recycling
 mandates and high
 contamination cause
 significant portion of
 materials
 to be disposed directly to
 landfill

- Low tipping fees for many MRFs (as low as \$9/ton) incentivize sending glass to landfill
- 5 Lack of processing capacity in certain areas creates limited glass demand and
- 6 little incentive for MRF pense presence of fiberglass investments markets in some areas reduces potential supply for more circular glass
- 7 containers Geographic gaps between cullet supply and end markets require long hauling distances over 200 miles
- 8 Low prices for virgin materials (in some areas, average 20% lower than cullet) reduce demand for cullet



...and are exacerbated by local specificity required for effective solutions, preventing a 'one size fits all' approach nationwide

Midwest Region: Mi, IN, IL, WI, OH

Legend

Current GPI Members

- Ardagh Glass
- ♦ Gallo Glass Co.
- ▲ O-
- Rocky Mountain Bottle Co.
- Strategic Materials, Inc.
- Glass Manufacturers
- Glass Recycling Processors
- Fiberglass Plants
- Bottle Bill States
- Target Region

