## Pennsylvania Resources Council GLASS RECYCLING INITIATIVES



Presented by Ashley DiGregorio Recycling Markets Program Manager

#### **Our Mission**



Education & Outreach

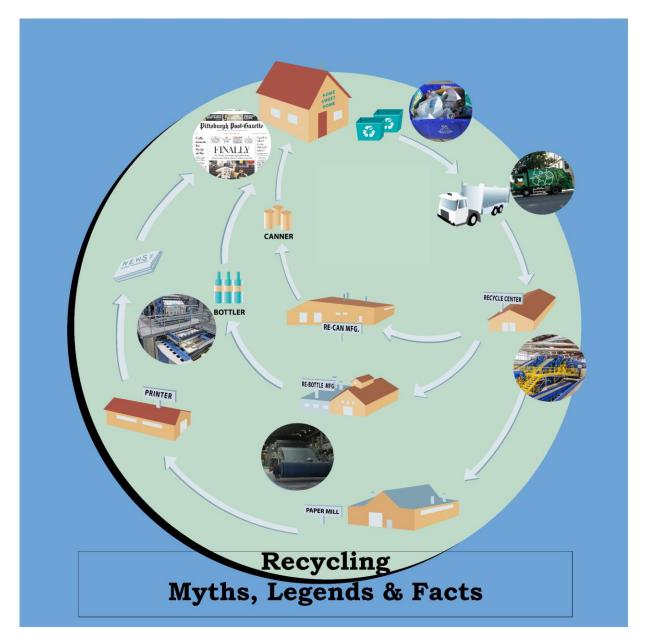
To lead and promote individual and collective action to prevent waste and conserve Pennsylvania's environmental resources for each generation.

Zero Waste Technical Assistance Collection Events











#### Pittsburgh: Glass Recycling Timeline

Goodbye, glass: Recycling changes take effect in the South Hills

Harry Funk | Jan 21, 2019 Updated Jun 11, 2020 | 🗣 0



Source: The Almanac: South Hills Community News

#### Most Popular

#### Articles |

- Shared experience of widowhood form bond for Peters couple
- Supporters participate in local ver annual March for Life
- Agreement paves way for Washing System vaccination site in Peters
- . Carrot Top

#### Almanac Quic

When do you think is the mos



#### **Brief Context**

- PA Act 101 of 1988: The Municipal Waste Planning, Recycling and Waste Reduction Act
  - Single-Stream Movement

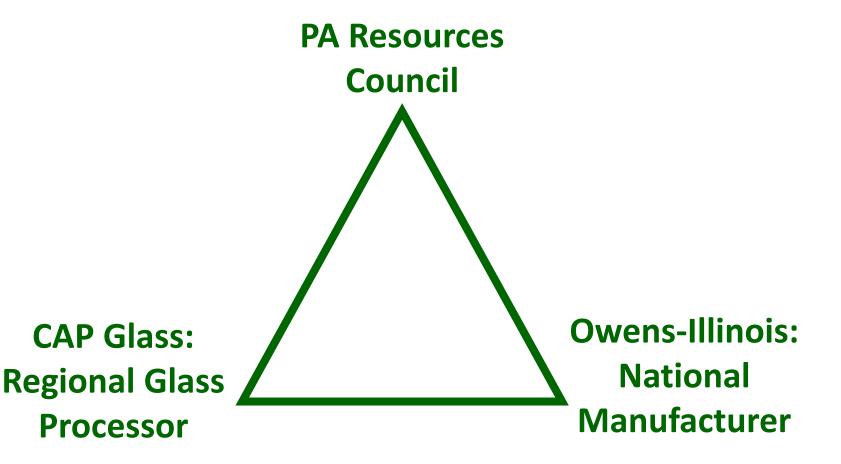


#### PRC's interventions

- Source-separated drop-off focus
- Event-based collections
- Our Vision: Regional glass drop-off network
- Our Approach: Turnkey program coordination

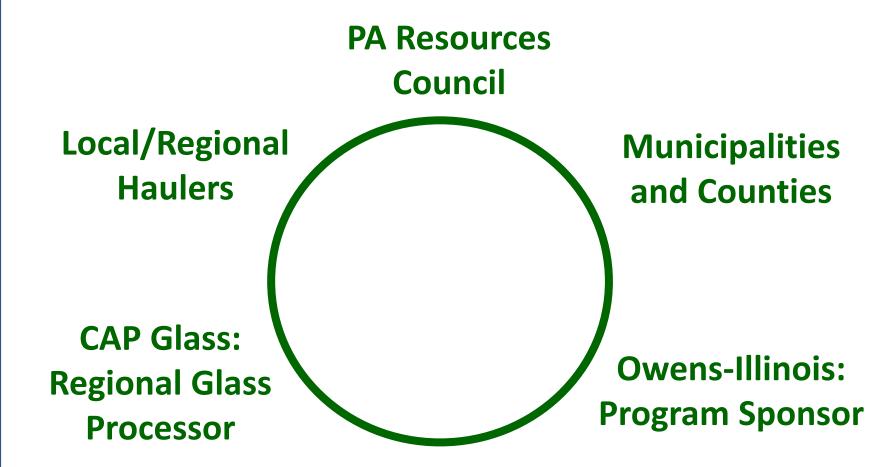


#### The Players Involved





#### The Players Involved





# Debunking Myths and Building Partnerships

"It's China's fault"

"There's no market for glass"

"Our contracts cost the same, but our services are disappearing"

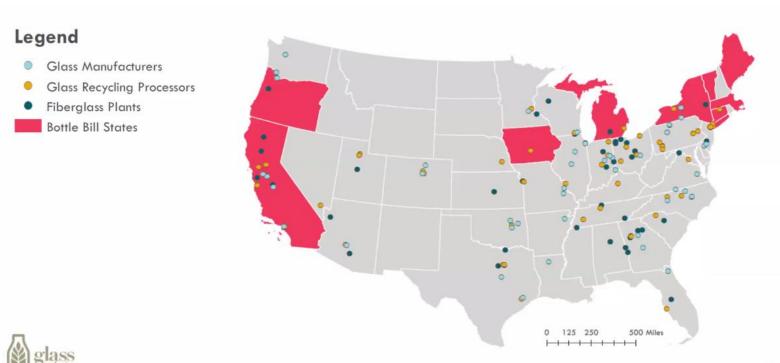




#### **U.S. Glass Infrastructure**

"Recycled glass markets are strong and remain mostly price stable."

Lynn Bragg, president of the Glass Packaging Institute in Arlington, Virginia\*



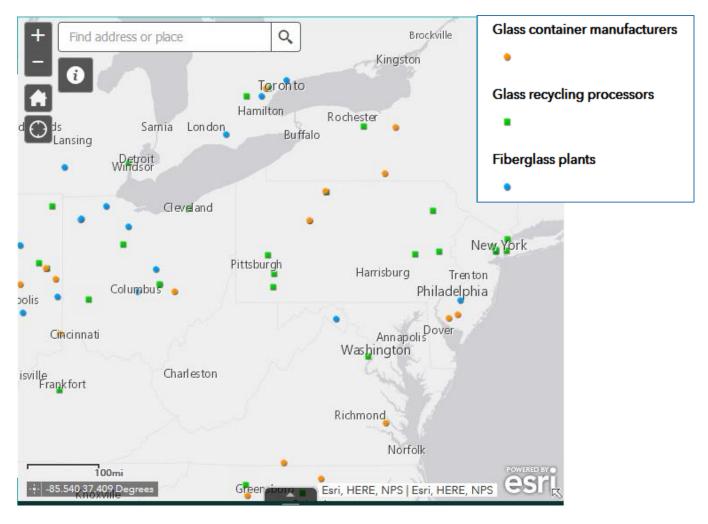
\*AmericanRecycler.com, 2016. "Market for recycled glass remains strong despite challenges."

Image Source: Glass Packaging Institute, The Recycling Markets Outlook Forum webinar hosted by NRC, EPA and Renew, April 30, 2020



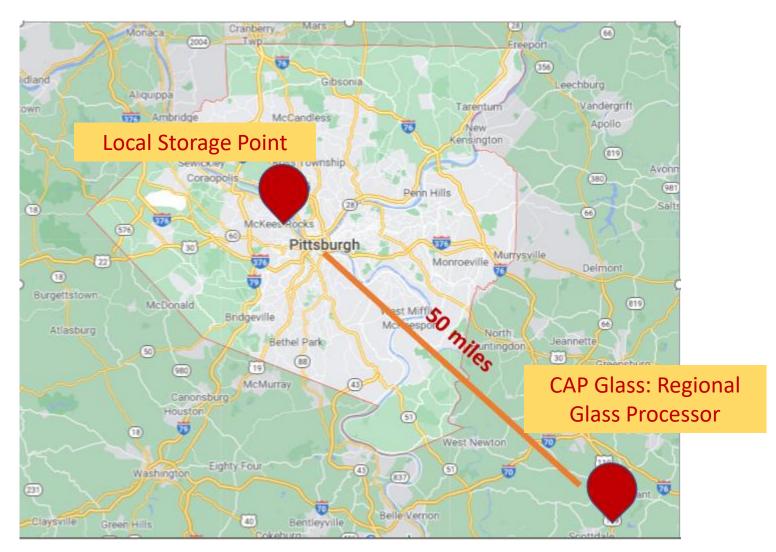


#### **Regional Glass Industry**

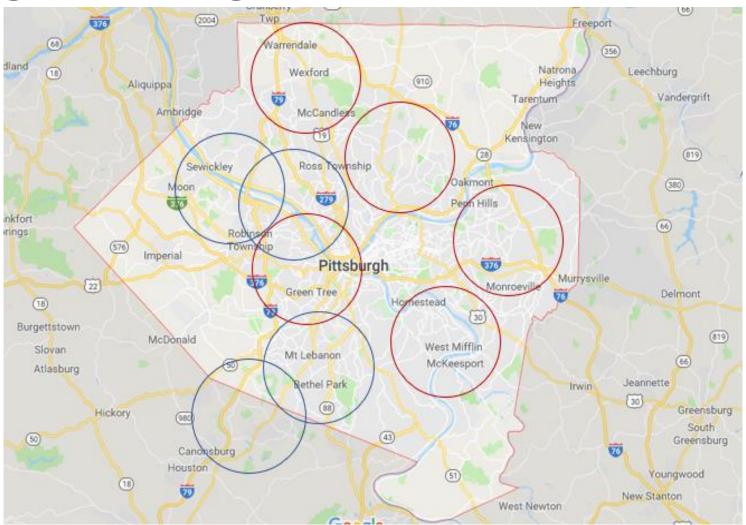




#### Regional Glass-"Shed"

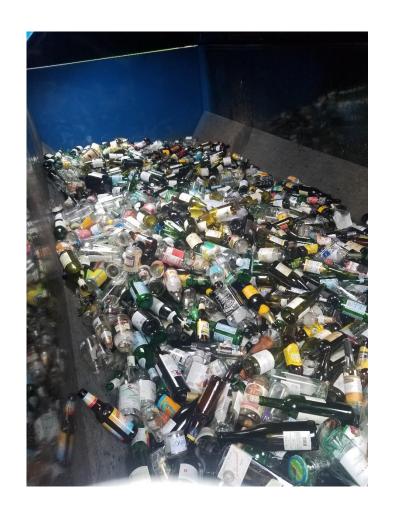


#### **Regional Program Locations**



#### **PRC's Program Elements**

- Multi-sector partnerships
- Technical assistance and capacity building
- Equipment and supplies
- Educational and outreach materials and messaging
- Turnkey delivery: coordinating logistics





#### Regional Infrastructure



#### Source: City of Harrisburg

#### Storage "bunkers"

- Key locations in the Pittsburgh metro area
- 20 25 ton hauls



# PRC's Glass Recycling Program

Pop-up events

**Traveling Bin** 

**Permanent Sites** 



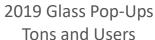


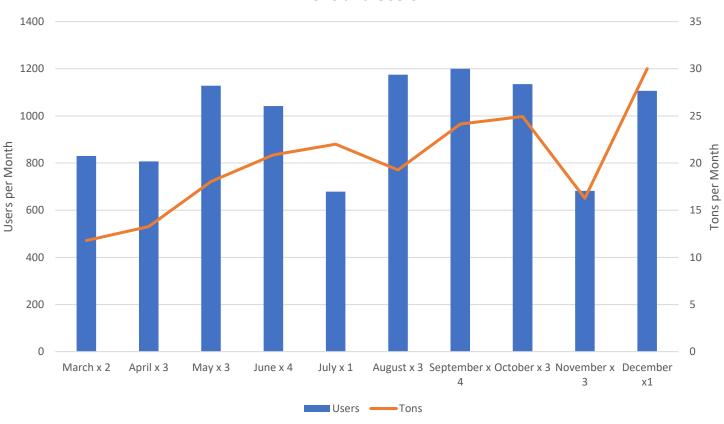
#### **Pop-Up Collection Events: 2019**





## Regional Consumer Demand for Service







#### **Traveling Bin: 2020 - 2021**

#### **Basic Model**

- Week-long "Rental" Model
- Saturday through Thursday

#### **Benefits**

- Immediate solution
- Semi-permanent

#### **Drawbacks**

- Easy to implement with fewer resources
- Cost comparison(?)
- More monitoring-intensive



#### **Equipment Utilized**

- Roll-Off Container
  - 25-yard roll-off
  - Roofed container
  - 4 6 tons, mixed glass

- Scale and Scope
  - 2019: One container
  - 2020: 2 6 containers
  - 2021: 10 and counting





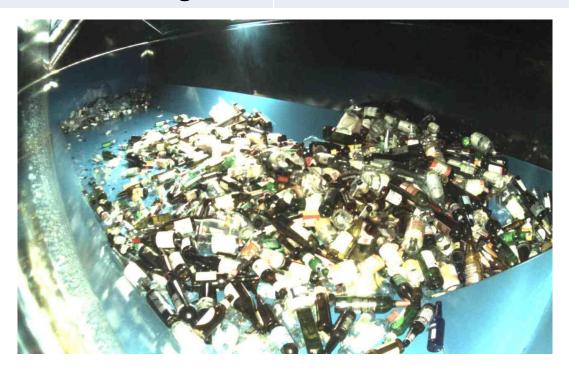


#### **Internal Cameras**

Remote

Cameras and Subscription Service	
monitoring	Contamination tracking

On-demand hauling "Peace of mind"







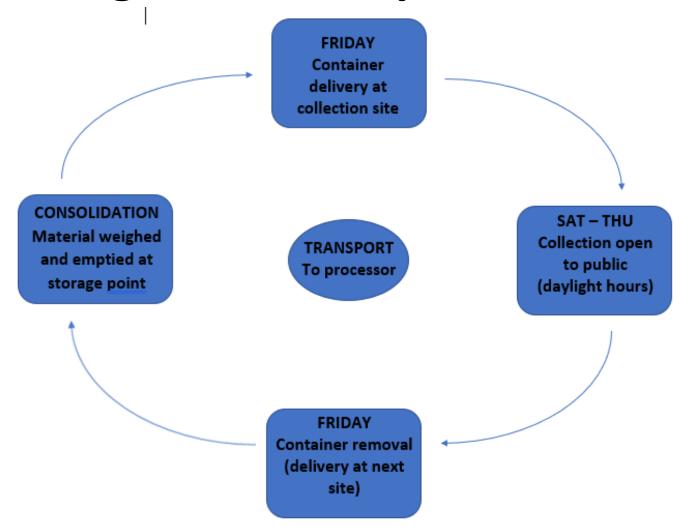
#### **Traveling Bin**

Program Development	<b>Education and Outreach</b>
<ul> <li>Location ID</li> <li>Container Delivery</li> <li>Transportation of material</li> <li>Reporting</li> <li>Invoicing</li> </ul>	<ul> <li>Print and digital</li> <li>In-person*</li> <li>On-site signage</li> </ul>
Maintenance and Monitoring	Program Pilot
<ul><li>Container upkeep</li><li>Contamination</li><li>Servicing</li></ul>	<ul><li>Program evaluation</li><li>Scaling up</li></ul>





#### **Traveling Glass Bin Operations**



#### **Outreach: In-Person to Remote**





#### **Economic Considerations**

- Job creation and tax revenues\*
- Supply chain
  - 25-30% PCW recycled content
  - Up to 90% PCW possible
- Consumer preferences\*\*
- Impacts landfill tipping fees
- PA DEP 904 Recycling Performance Grant



<sup>\*</sup>US EPA, 2019. Advancing Sustainable Materials Management: 2017 Fact Sheet.

<sup>\*\*</sup>SurveyUSA Recycling Counts, 2016. 1000 adults surveyed in all 50 U.S. States.





#### **Collection Methods and Infrastructure**

PRC is a champion for source-separate recycling.

"The '90s called. They want their recycling back."

"Removing glass from other material is like unscrambling an egg."

Single-stream

Source-separated





#### **Setting Up Sites for Success**

#### Moving from this...



#### **Setting up Sites for Success**



#### **Setting Up Sites for Success**

- Site Visibility
- Location Upkeep and Traffic
- Education and outreach distribution
- Outlets for non-glass materials
- Monitoring and maintenance
- Contamination threshold



#### **Permanent Sites**

#### **Benefits**

- Permanent, long-term solution
- Contact-free, self-serve
- No service disruption
- Regional network

#### **Frequency of Service**

As needed





# **Getting Started**The Easy Stuff

Education, Outreach, & Engagement



Hauling Partner









# **Getting Started**The Trickier Stuff

**Capital Equipment** 



**Site Operations** 





#### **Additional Partnerships**

- Owens-Illinois Inc.
- CAP Glass
- Over 30 Western PA municipalities and other public entities
- Michael Brothers Hauling
- Boyd Roll-off
- Oxford Development Company
- KDKA Radio



#### **Additional Resources**

- Container Recycling Institute: <a href="https://www.container-recycling.org">www.container-recycling.org</a>
- Glass Packaging Institute: www.gpi.org
- Glass Recycling Coalition: <u>www.glassrecycles.org</u>
- Institute of Scrap Recycling Industries, Inc.: <a href="https://www.isri.org/recycling-commodities/recycled-glass">https://www.isri.org/recycling-commodities/recycled-glass</a>
- National Recycling Coalition: <u>www.nrcrecycles.org</u>
- Northeast Recycling Council: <u>www.nerc.org</u>







#### **Q&A**



#### **Contact**

#### **Ashley DiGregorio**

#### ashleyd@prc.org

www.prc.org

412-488-7490

828 W North Ave

Pittsburgh, PA 15233