

ReBuild with Glass Plan

Turning Recycled Glass into Local Resilience

A Massachusetts Initiative to Transform Waste Glass into Infrastructure, Climate Resilience, and Ecosystem Restoration

Executive Summary

Massachusetts communities collect thousands of tons of recycled glass every year, yet much of it cannot be remanufactured into new bottles due to contamination and color mixing. As a result, municipalities often pay significant costs to landfill, transport, or stockpile glass that has little market value.

At the same time, cities and towns face growing infrastructure challenges from flooding, culvert failures, coastal erosion, and habitat degradation. They are also paying increasing costs for sand, gravel, and fill materials needed for restoration and public works projects.

ReBuild with Glass is a voluntary statewide initiative that transforms waste glass into a valuable local resource. By processing recycled glass into sand and aggregate, communities can reduce disposal costs, support climate-resilient infrastructure, restore ecosystems, and strengthen local economies.

The Problem

Today, municipalities often pay to dispose of glass despite residents doing the right thing and recycling.

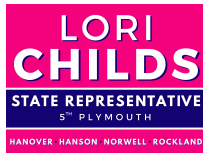
Challenges include:

- Rising recycling and disposal costs
- Limited markets for mixed-color glass
- Dependence on mined sand and gravel
- Increasing flooding caused by undersized culverts
- Coastal erosion and salt marsh loss
- Rising costs for ecological restoration projects

Communities are effectively paying twice:

1. To dispose of glass.
 2. To purchase materials for infrastructure and restoration projects.
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The Opportunity



Processed recycled glass can safely substitute for traditional materials in many applications, including:

Infrastructure

- Culvert replacements
- Stream crossings
- Road and drainage projects
- Public works construction

Ecological Restoration

- Salt marsh restoration
- Coastal resilience projects
- River restoration
- Dam removals
- Habitat enhancement projects

Municipal Uses

- Fill material
- Aggregate
- Engineered sand products

Instead of viewing glass as waste, Massachusetts can treat it as a local building material.

Goals

ReBuild with Glass aims to:

- Divert non-bottle-grade glass from landfills
 - Reduce municipal disposal costs
 - Lower demand for virgin sand and gravel
 - Support climate adaptation projects
 - Restore ecosystems and wildlife habitat
 - Create local jobs
 - Strengthen the circular economy
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Implementation Plan

Phase 1: Statewide Assessment (Year 1)

The Executive Office of Energy and Environmental Affairs (EEA), MassDEP, DER, and MassDOT will conduct a statewide study to evaluate:

- Current glass disposal volumes
- Existing processing capacity
- Equipment and infrastructure needs
- Potential project locations
- Cost comparisons with traditional materials
- Environmental and engineering requirements

The study will identify opportunities for regional processing centers and partnerships.

Phase 2: Pilot Projects (Years 2–3)

Launch voluntary regional pilot programs using processed glass in:

- Culvert upgrades
- Flood mitigation projects
- Marsh restoration
- River restoration
- Dam removals
- Coastal resilience projects

Performance metrics will include:

- Cost savings
 - Construction performance
 - Flood reduction benefits
 - Habitat restoration outcomes
 - Transportation emissions reductions
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Phase 3: Standards Modernization (Years 2–4)

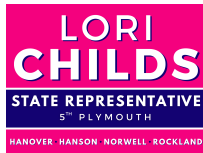
Review and update state standards where appropriate to allow recycled glass materials in:

- Public works projects
- Ecological restoration
- Coastal resilience efforts
- Transportation infrastructure

The Commonwealth will establish clear performance and safety criteria.

Phase 4: Municipal Participation (Years 3–5)

Communities may voluntarily participate by:



- Partnering with approved processors
- Purchasing recycled glass materials
- Integrating glass-derived products into local projects
- Developing regional partnerships

Potential incentives include:

- Technical assistance
- Grant preferences
- Climate resilience funding support

Economic Benefits

ReBuild with Glass can:

- Reduce municipal disposal expenses
- Lower infrastructure costs
- Reduce transportation expenses
- Create local manufacturing jobs
- Generate demand for regional processing facilities

Environmental Benefits

The initiative will:

- Reduce landfill use
- Lower emissions from transportation
- Reduce mining impacts
- Improve flood resilience
- Restore habitat and biodiversity
- Support climate adaptation goals

The Bottom Line

ReBuild with Glass turns a costly waste stream into a local asset.

Rather than paying to dispose of recyclable glass, Massachusetts communities can use it to strengthen infrastructure, reduce flooding, restore ecosystems, and save taxpayer dollars.

ReBuild with Glass: Turning Recycled Glass into Local Resilience.