

How Do I Start Recycling Glass?

Presented
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Sources of glass: - how much, what kind, and how will it get to your recycling location?

A. How much waste glass is available? What recycling programs are in place now? Can separation and collection programs be set-up for consumers, restaurants, businesses, etc.? Who would set these programs up and provide the service (at a fee) to place containers for the glass and bring them to the recycling center?

B. Types of glass that can be accepted:

- * Bottles, plate glass, mixed color glass, and also ceramics.
- * The glass may contain some non-glass residual.



Location:

Where can you locate the machine? Any permits needed? Is it available and convenient for people and businesses to bring you glass?

Need a concrete pad and three phase power. A bunker to drop-off the glass, and a loader to pick up and put in the surge hopper.

The GP-Mini and GP-MegaMini are hand fed or fed with a barrel or small box tipper.

The large systems include a surge hopper for loading the systems.



Location:

Can be located outside, but good if there is a rain/sun roof, and windbreak.

Not very noisy. The glass being deposited in the bunker or surge hopper is the loudest intermittent noise.

Dust is controlled with a misting system. The glass dust is not crystalline silica or have any negative impact on your health.

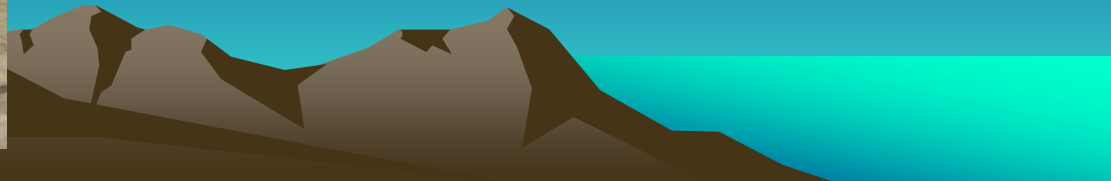


Technology – The Andela Glass Pulverizer or Crusher Systems will process all types of glass, no sorting or pre-cleaning needed, and the finished product is a crushed sand cullet, or glass sand and aggregates with rounded edges.

Andela Products offer a full line of crushers, pulverizer, trommel screens, conveyors and hoppers. The individual components are put together to make a turn-key system for each customer to their operational parameters. The systems are designed to make a crushed glass cullet, a glass “stone”, or glass sand.



Technology Options



Funding:

Can you get community support and funding to make this possible? Private donations? Grants? Loans? Investors? Leasing options are available. Incorporate into the existing or new recycling system.



Markets:

Sell the pulverized glass as sand or aggregate in your community. Implement a “scoop your own” program. The community will pay \$5.00 - \$10.00 a 5 gallon bucket and bring it back for their home projects (landscaping, glass mulch, play sand, etc.).

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- Mulch for various landscaping applications. It is attractive and never rots or breaks down – long lasting.
- Glass sand retains moisture on the particle surfaces. It holds the moisture below the surface and is available of the plant's roots.
- Glass mulch keeps insects, slugs and other pests from coming up to the plants. It also never fades or rots. (long lasting)
- Glass is an insulator, so it creates an insulated layer of mulch to protect the plant's roots from extreme temperatures.
- Mix glass sand with compost to make a soil blend that includes organics nutrients from the compost and filtration and water retention rom the glass sand.



- Amorphous silica – it is safer to use than regular sand (see attached)
- Filtration aggregate – it is angular sand, but not sharp. The water flows through it faster than natural aggregates. (Pipe bedding, septic filter sand etc.)
- Fine glass particles are a substitute for Diatomaceous Earth (DE) It has the same chemical structure as DE and is an organic pesticide. (The fines glass dust sucks the moisture out of insects)
- Concrete products - use only the sand size, and make a stronger concrete product
- Construction sand or aggregate replacement in any building or construction applications.



Marketing Opportunities & Challenges

- Connect with the public
- Partner with private construction & landscaping companies
- Keep price competitive
- Project specs & requirements are necessary for its usage



The Glass Recycling Alternative

- Prices for Alternative Markets:
 - \$0 - \$10 Bulk Aggregate
 - \$20 - \$30 Specialty Aggregate (some marketing required)
 - \$150 - \$1,000 / ton Glass Abrasives, Water filtration, & Colored Landscaping (requires additional processing/marketing- i.e. cleaning, drying, bagging, screening, coloring)



Final Thoughts

Material Availability and Cost

Quality Product

Community Involvement

www.andelaproducts.com

