

**Growstones™**

A New Mexico Original!

**Earthstone®**



**A Quick Primer on Glass Recycling**

Earthstone®

- > Only about 28% of all glass bottles and jars are now recycled.<sup>3</sup>
- > Every two weeks Americans dispose of enough glass bottles and jars to fill up two tall skyscrapers. All of these jars are recyclable! □
- > A modern glass bottle would take 4000 years or more to decompose – and even longer if it's in the landfill.<sup>2</sup>
- > Recycling just one glass bottle saves enough energy to light a 100-watt light bulb for four hours, power a computer for 30 minutes, or a television for 20 minutes.<sup>3</sup>
- > Glass containers come in four different colors: clear, blue, brown and green; glass must be separated by color to ensure that new glass is not created from a mix of colors. Earthstone does not have to separate the recycled glass by color to produce our products. □
- > Glass makes up about 8% of America's municipal waste. □

Sources:

1. The Earthworks Group Recyclers Handbook. ([www.cityofraleighwood.org](http://www.cityofraleighwood.org))
2. [www.recycling-education.com/recycling-fact.html](http://www.recycling-education.com/recycling-fact.html)
3. Glass Packaging Institute <http://www.gpi.com/recycle-glass/environment/>
4. [www.gpi.org/glassresources/education/](http://www.gpi.org/glassresources/education/)



**From This:**



**Earthstone® Growstones**

**360 degree sustainable Company**

**Waste** - Zero waste AND we divert waste out of overflowing landfills to make our value added products

**Recycle** - Products made of 99% waste glass - "Trash to Cash"

**Energy** - Carbon negative by converting a greenhouse gas (methane from the landfill) to energy to power our kilns

**Pollution Control/Health** - Many of our products take the place of toxic chemicals that cause air pollution and health concerns

**Transportation** - Regional and replicable model cutting down on transportation

**Water** - No water used to make product. Future product - water filtration technology

**Land Use** - Products replace strip-mined materials. Save land because saving landfill space

**Lifestyle** - Products that work designed to improve the lives of our consumers!

**Beyond Sustainable to Restorative!**

**Company History**

- Earthstone founded in 1993 as an alternative solution to pumice products and as a way to recycle glass from America's landfills.
  - Produces consumer products sold to national retailers
- Growstone formed in January of 2008 in Santa Fe
  - Growstone LLC acquired a license, IP, and related 'know how' from Earthstone for a proprietary manufacturing method for the production of foamed glass material that can be cost effectively used in a variety of horticultural and agricultural applications as a growing substrate.
- Because of the City of Albuquerque's foresight and national leadership role in recycling, in April 2009 Growstone and the City of Albuquerque reached an agreement to place Growstone's initial plant at the Cerro Colorado landfill site and obtain its recycled glass component directly from the landfill.
  - Growstone - Cerro Colorado facility opens July 1, 2010
- Growstone will divert up to 12,000 tons (24 million pounds) of glass annually
- Growstone to buy from The City of Albuquerque natural gas to run the plant by converting methane from the land fill
- The manufacturing of Growstone product requires no water.

**Earthstone®**

**Earthstone Consumer Products**

Effective, Profitable, and Earth Friendly

**Earthstone®**

**Current Earthstone Retailers**

**Earth Friendly Products**

**Growstones™**

**Grow with us™**

## Growstones are the Perfect Growing Medium:



- Holds an even ratio of air to water
- Is easily flushed and re-wets easily after being completely dehydrated
- Is reusable
- Sterile, no weed seeds or disease spores
- Is lightweight and easy to work with both indoors and out
- Made in the USA

## Growstone - New Markets:

### Green Roofs and Vegetated Walls

- Growstone's light weight, superior water retention properties, and strength make it a promising alternative to other green technology building materials



Vegetated Wall – suitable for interior or outside wall

## Growstone - New Markets:

- Aquaculture  
There are multiple types of Biofilters used for aquaculture applications. Most are made from polyethylene and are expensive
- Filtration  
Earthstone EFM (engineered filtration media) can be used as a structural substrate and coated with ion exchange resins. Uncoated, it is still naturally compatible against most acids used to remove pollutants or contaminants in common water filtration applications. Filtration applications in the petrochemical industry and nuclear waste processing are also being investigated.
- Building Industry  
Earthstone EGA (engineered green aggregates) is a green technology building material that offers light weight, bulk density and a high surface area for use as an aggregate and as a substrate.