

## Andela Products showcases glass recycling facility



Andela Products, Ltd., (APL) a manufacturer of glass crushing machinery, is in the process of setting up a glass crushing operation to showcase their equipment. "It was an obvious thing for our company to do as the next step," Cynthia Andela said. APL has been selling integrated glass pulverizing systems for some time. Building an entire plant was "a natural evolution," according to Andela.

"We now have equipment in place," Andela said. The plant will be up and running by the end of the year, and the end product will be available during the first quarter of next year.

The glass for the crushing operation will come from the Oneida-Herkimer Counties' solid waste management facility, and it is material that used to be landfilled rather than recycled.

Andela said she expects to handle 10,000 tons of material per year at this facility, making it both a showcase for APL's machinery, and also a separate profit center for APL.

The profit factor proves a point: the glass that comes out of MRFs doesn't have to be "bottom-feeder" material; it can emerge as clean, high-end landscaping material, as well as other product. Andela said, "It takes a liability issue and turns it into profitability."

Andela explained that this complete system solves several problems associated with reclaiming glass from municipal waste streams. “We want to show people the plant, so they can see how it works,” she said. “They haven’t seen a prototype that takes it from soup to nuts.”

“If you show them the raw material,” Andela explained, “it can have paper, bits of organics,” which makes it unappealing to potential end-users. But with APL’s process, “It’s going to be sanitized.”

“People don’t like to do washing,” Andela said, and one of the reasons is the discharge from the washing systems. APL’s plant has solved that problem with a system that will take the dirty water, clean it and recirculate it. The operation will have as close to zero discharge as possible and the water that is discharged will be “clean enough to water your lawn,” she said.



Even more appealing, from the end-user’s standpoint, is that there are no sharp edges to worry about. Those edges are removed during the process that tumbles, rather than crushes the glass. It gets tumbled again during the washing process, and again during screening. During all of those steps, the glass rubs against itself. “Like beach glass, but a lot faster,” Andela said.

After a final drying process, the product is ready to be bagged in fifty-pound bags or one-ton super-sacks. The super-sacks fit on a 4x4x4 pallet. “You can still put it on a pallet and ship it,” Andela said.

APL is planning on selling two separate products. The finest material, good for sandblasting or use as a sand substitute for other applications, will be called “White Beauty.” Larger pieces, like fine gravel, will be called “Sun Stone,” and Andela anticipates a good market for it as a high-end landscaping material.

She said that a similar product is being imported from Thailand. “We’ve got bottles going into landfills, and we’re buying this from overseas,” she said. But it proves the point that there is already a market for the product.

“Sun Stone makes a wonderful mulch,” Andela said, noting that it’s ideal for dry areas. It keeps the moisture in the soil and also reflects light, which helps plant growth.

Another plus is that the material doesn't fade, so the color a consumer buys is the one they will always have.

"The nice thing about Sun Stone is that it's heavy," Andela said. Unlike light mulches like bark or wood chips, you can use a leaf blower, or rake through it without any problem. "It just stays put; it doesn't wash away."

On the other hand, it's not a consumable product, "The downside is that people buy it, and it will last for a hundred years," Andela said. But there are other uses that are consumable, such as sandblasting. Andela explained that natural sand produces hazardous dust, but glass sand does not, because it has been fired.

Mixed-colored glass will be available first, but Andela noted that as color-separated glass comes in, they set it aside for special runs. Sorting colors may come later. She noted that green glass, which is the least desirable for recycling into new bottles, may end up being the most desirable for landscaping. "It will look great on a driveway," she said. She also predicted that mixed green and brown will be popular for landscaping.

Andela envisions these systems being used by partnerships between public and private entities. "The public entity wants it, but the private entity runs the business and markets it." In some cases, the municipality will do it all, she said.

A mid-sized system will handle 10,000 tons per year, which Andela estimates would be enough for a couple of small cities or a medium-sized city. "It's like an urban mine," she said. "The MRF just keeps generating the glass."

Andela's plant is a modular setup, with four shipping containers used in lieu of buildings. Andela said, "When somebody sees it, and they say 'I want one of those,' we can provide it as a kit."

"It's really exciting," Andela said. "I think it's going to turn around the glass recycling market."

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