

AGRICULTURAL PLASTIC RECYCLERS

AEIPLUS, INC

GRANT PRIORITY PROJECT: EXPANDING PLASTIC PROCESSING CAPACITY IN RESPONSE TO GLOBAL MARKET CHALLENGES



BACKGROUND

AEIPLUS, Inc. is a recycling business that offers farmers an alternative to landfilling their plastic waste. With a 120,000 square-foot facility in Belmont, the company recycles agricultural plastics such as mulch films, irrigation tubing, nursery containers and twine. AEIPLUS picks up plastic directly from farms and hauls the material to the Belmont facility for sorting and processing. Contaminants like dirt and sand cling to the plastics, and must be removed to produce a high quality material and reduce shipping costs. After removing all dirt and sand, AEIPLUS shreds the plastic and sends it to an international business partner for pelletizing. Ultimately, the plastic pellets are manufactured into new products like pipes and bags.



PROJECT DETAILS

Recycling agricultural plastics can be challenging due to the difficult and time consuming process of removing contaminants. AEIPLUS was awarded a \$30,000 grant from the Recycling Business Assistance Center (RBAC) to purchase equipment specifically designed to remove dirt and sand from agricultural mulch film and drip tape. This equipment has enabled AEIPLUS to quickly and efficiently remove contaminants, thereby increasing the marketability and profitability of these hard-to-recycle plastics. The company estimates that the new machinery will create 10 new full-time jobs and divert an additional 3,000 tons of plastic from landfills annually.

AEIPLUS, Inc. will purchase a sand remover to clean agricultural film for recycling.

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END PRODUCT

Pellets – to manufacture containers and packaging

BACKGROUND

Bromley Plastics Corporation has operated as a plastics recycler in North Carolina for more than 40 years. Located in Fletcher, the company recycles plastic waste from post-industrial and post-consumer sources like textile manufacturers and soda bottling companies. The company's recycling process involves chopping and shredding materials like polypropylene, polystyrene and nylon. Once the materials have been chopped to the appropriate size, they are blended with additives to create plastic compounds that meet unique specifications of injection molding companies and other manufacturers. With the recycled material, Bromley Plastics' customers create new products like plastic containers and packaging.

PROJECT DETAILS

In 2007, the Recycling Business Assistance Center (RBAC) awarded Bromley Plastics a \$20,000 grant to purchase a small-scale chopper/shredder. The machinery is still in operation today and serves as the first step in the size reduction process. In 2018, Bromley Plastics received another RBAC grant for \$40,000 to purchase a larger chopper/shredder for secondary processing. The new machinery will increase productivity, eliminate downtime and allow the company to process more recovered plastics. Bromley Plastics anticipates adding six full-time jobs and increasing processing capacity by 33 percent to recycle an additional 7,500 tons of plastic annually.

Bromley Plastics will purchase a chopper/shredder that will increase recycling capacity by 33 percent.

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BACKGROUND

Brunson Recycling Corporation is a plastics recycler located in Marion. Since 1985, it has recycled a variety of different post-industrial plastics including home furnishings, PET plastics and PVC. From the medical manufacturing sector, Brunson recycles PVC and HDPE plastic film both in rollstock and loose film form. The recycling process involves initial size reduction, contamination removal and chopping into a regrind form. Brunson Recycling sells the regrind to domestic manufacturing markets that ultimately produce new items like lawn and garden products, tubing and flooring.



PROJECT DETAILS

Brunson Recycling currently diverts more than 2,000 tons of medical plastic from landfills each year. With a \$20,000 grant from the Recycling Business Assistance Center (RBAC), Brunson Recycling purchased an industrial-grade guillotine shear designed for cutting large quantities of plastic. Without this specialized equipment, the size-reduction process is inefficient and costly, requiring the use of hand-held power tools that pose safety hazards for the employees. With the shear, the company has a greater capacity to process HDPE and PVC film as well as other post-industrial plastics. This new machinery mitigates the safety hazards associated with the recycling process and enables the company to process an additional 425 tons of hard-to-recycle plastics each year. Currently employing 12 full-time workers, it is estimated that the new machinery will create six new full-time positions.

Brunson Recycling will purchase a guillotine roll shear to process HDPE and PVC films.

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POLYVINYL CHLORIDE (PVC) RECYCLERS

COMMERCIAL PLASTICS

GRANT PRIORITY PROJECT: EXPANDING PLASTIC PROCESSING CAPACITY IN RESPONSE TO GLOBAL MARKET CHALLENGES



BACKGROUND

Commercial Plastics Recycling was founded in 1996 and has facilities in Newton, N.C. and four other states on the east coast. Commercial Plastics collects damaged PVC pipes and other materials from contractors, waste haulers, and pipe producers in North Carolina and surrounding states. The company uses heavy-duty equipment to grind and shred these plastics into small flakes. Commercial Plastics then removes all metals and other contaminants from the plastic flakes, and then sells them to manufacturers that produce items like PVC pipes, automotive fabrics, plastic containers and other packaging products.

PROJECT DETAILS

Commercial Plastics Recycling was awarded a \$20,000 grant from the Recycling Business Assistance Center (RBAC) to purchase a pipe grinder that will enable the Newton facility to process larger PVC pipes. Commercial Plastics was previously limited to sourcing materials from small-scale contracting and installation projects. The addition of the grinder provides much needed local capacity to process industrial grade pipes from large-scale construction and demolition projects, and local government suppliers. This equipment will create two new full-time jobs and enable Commercial Plastics to increase PVC recycling by more than 1,000 tons annually.

Commercial Plastics Recycling will purchase a pipe grinder to recycle PVC pipes from construction and demolition projects.

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RIGID PLASTIC RECYCLERS

ENVIROVISION TECHNOLOGIES

GRANT PRIORITY PROJECT: EXPANDING PLASTIC PROCESSING CAPACITY IN RESPONSE TO GLOBAL MARKET CHALLENGES



BACKGROUND

Envirovision Technologies is located in Gastonia and has been recycling post-industrial and post-consumer plastics since 2011. The 82,000 square-foot facility collects materials like waste containers, crates, pallets, spools and pipes from local governments, waste hauling companies and zero waste companies throughout the United States. Envirovision Technologies separates plastics based on properties, grinds the material into small flakes, and washes the flake to be sold to plastic manufacturers that make products like carts, wheels, packaging, pipes and containers.



PROJECT DETAILS

With a \$40,000 grant from the Recycling Business Assistance Center (RBAC), Envirovision Technologies will purchase an industrial grade wash line to clean and separate post-industrial and post-consumer plastics. Prior to receiving this grant, Envirovision Technologies used outside contractors to clean materials. With the ability to perform this task on-site, the company will gain more control over material quality with lower processing costs. Envirovision Technologies will be able to prepare plastics like intermediate bulk containers, drums and ethylene bales to meet China's new import standards. The grant project will help Envirovision Technologies recycle an additional 1,800 tons of plastic every year, with the potential for even more diversion through toll services.

Envirovision will purchase a wash line to recycle more post-industrial and post-consumer plastics.

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HIGHCUBE, LLC

GRANT PRIORITY PROJECT: EXPANDING PLASTIC PROCESSING CAPACITY IN RESPONSE TO GLOBAL MARKET CHALLENGES



BACKGROUND

HighCube, LLC is located in Durham and has been recycling expanded polystyrene (EPS) - commonly known as Styrofoam - since 2016. HighCube sources EPS from pharmaceutical, technology, re-packaging and distribution companies in North Carolina. Once the EPS is transported to the company's facility, it undergoes a two-step size reduction process. HighCube uses the EPS particles to create its proprietary Meristone, a lightweight slab made of 90% recycled EPS and concrete materials. The Meristone slabs are then used to create eco-conscious furnishings. By creating high-value products from the waste material, HighCube extends the weeks-long lifecycle of EPS to a decades-long lifecycle.

PROJECT DETAILS

END-USE MANUFACTURERS

The Recycling Business Assistance Center (RBAC) awarded HighCube a grant for \$21,067 to purchase two shredding machines for primary and secondary size reduction of EPS. Before getting this machinery, the initial size reduction process was labor-intensive and limited daily production. The new equipment has automated the shredding process, reduced safety hazards and greatly increased the volume of EPS processed on a daily basis. With the increased capacity, HighCube plans to source EPS from 50 local businesses to divert an additional 45 tons of EPS from landfills every year. As the processing capacity of HighCube grows, the company hopes to expand throughout the state and the nation.

HighCube will purchase two shredders to recycle expanded polystyrene into finished goods.



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Pelican Packaging

Pellets – to manufacture automotive parts, fabrics and injection molded components

BACKGROUND

Pelican Packaging Company has been recycling post-industrial plastic waste since 1996. Each year, the company processes more than 30,000 tons of plastic films, bags, rigids, foams and other waste materials produced by manufacturers throughout the eastern United States. When materials arrive at the facility's loading docks, company employees carefully inspect and sort them for processing. Pelican Packaging shreds, granulates, pelletizes and bales plastics based on client specifications. Once the materials are prepared, the company sells them to domestic manufacturing markets that make products like automotive parts, fabrics, plastic cutlery and injection molded components.

PROJECT DETAILS

Pelican Packaging has increased its processing and production outputs every year since 2015. In 2017, the company recycled more than 31,500 tons of plastic and nearly met its processing capacity. The Recycling Business Assistance Center (RBAC) awarded Pelican Packaging a \$40,000 grant to purchase additional processing equipment including a baler. This new equipment has enabled the company to collect an additional 1,500 tons of post-industrial plastic waste from manufacturers each year. With a higher capacity, Pelican Packaging intends to add new waste streams to its business model, provide more raw materials to plastic manufacturers and help clients save money by diverting more waste from landfills.

Pelican Packaging will purchase a baler to recycle more post-industrial plastic.

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END PRODUCT

Re pla

Regrind – to manufacture plastic lumber and construction materials

BACKGROUND

Plastic Materials, Inc. started recycling rigid plastics, films, foams, bubble wrap, and other hard-to-recycle plastics in 2008. Plastic Materials works with manufacturers in North Carolina to plan and implement recycling programs for post-industrial waste streams. When plastics arrive at the company's loading docks, employees use forklifts to unload and move materials to the different processing lines in the recycling facility. Plastic Materials then shreds, densifies and cleans the plastics so they can be sold to manufacturers with unique product specifications. Some of Plastic Materials' recycling customers also buy recycled feedstock from the company, creating an efficient and sustainable supply chain loop. With these recycled plastics, manufacturers produce plastic lumber and other construction and building materials.

PROJECT DETAILS

Following China's recent adoption of stricter import standards, higher volumes of hard-to-recycle plastics have become available for companies like Plastic Materials. The Recycling Business Assistance Center (RBAC) awarded Plastic Materials a \$17,120 grant to help the business purchase two new forklifts. The new forklifts have allowed the company to unload incoming materials while continuously operating its recycling machinery at full capacity. The grant project will help Plastic Materials divert an additional 560 tons of plastics from landfills for a total annual diversion of 3,480 tons.

Plastic Materials will purchase two forklifts to increase recycling capacity and productivity.



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END-USE MANUFACTURERS

ROLL-TECH, LLC

GRANT PRIORITY PROJECT: EXPANDING PLASTIC PROCESSING CAPACITY IN RESPONSE TO GLOBAL MARKET CHALLENGES



BACKGROUND

Roll-Tech, LLC has been recycling plastic and rubber since 1996. The company consumes recycled rubber from scrap tires and recycled plastics from bottles to make new products. More than 70 percent of the recycled feedstock is sourced from North Carolina. The company screens incoming materials for metals and other contaminants, and then uses injection molding technology to create new rubber and plastic goods like wheels, tires, bumpers and tiles. Roll-Tech sells these products to customers that manufacture products like hand-trucks, carts and garbage bins.

PROJECT DETAILS

Roll-Tech has received a series of grants from the Recycling Business Assistance Center (RBAC) in the past. The company currently diverts approximately 400,000 used tires and 500 tons of plastic from landfills each year. As a number of Roll-Tech's competitors in China have been shut down, the company has experienced an increased demand for its wheel and tire products. In 2018, the RBAC awarded Roll-Tech with a \$16,780 grant to purchase new injection molding equipment. With the new machinery, Roll-Tech plans to divert an additional 414 tons of rubber and 97 tons of plastics from landfills each year. This equipment will enable the business to keep up with market demands and manufacture a total of 276,000 wheels and tires each year.

Roll-Tech will purchase equipment to manufacture wheels using recycled plastic and rubber.



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BACKGROUND

Verity Recycling in Asheboro has collected and processed hard-to-recycle plastics since 2011. Verity sends trucks to collect materials like agricultural films, nursery pots and rigid plastics from nurseries and local governments throughout North Carolina. Once the materials reach the company's facility, they are processed and compounded based on the end user's specifications. The plastics are then sold to manufacturers throughout North America where they are made into new agricultural and lawn-and-garden products.

PROJECT DETAILS

In past years, the Recycling Business Assistance Center (RBAC) has awarded Verity a series of grants to help the business purchase equipment, expand markets, and increase recycling capacity. In 2018, the RBAC awarded Verity with a \$30,000 grant to purchase a box truck to increase collection of agricultural plastic. Before purchasing the truck, Verity only collected materials from large scale suppliers and was unable to serve smaller nurseries that did not produce truckload quantities. With the new vehicle, Verity is able to efficiently serve smaller nurseries in North Carolina and recycle an additional 220 tons of hard-to-recycle plastics that would otherwise end up in landfills.

Verity Recycling will purchase a box truck to recycle more agricultural plastics.

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