

**Recycled Fiber, Plastic, and Glass Grant Program
Cycle 3, Fiscal Year 2018–19
Submitted Application Listing**

Applicant Name	County	Requested Funds	Project Summaryⁱ	Priority Populations Benefits Claimed by Applicantⁱⁱ
Aemerge, LLC	San Bernardino	\$1,500,000	Acquire, install, and operate steam turbine to produce offset electrical power. The steam is produced by the anaerobic thermal conversion of medical waste plastics into alternative natural gas which is then combusted to produce the steam. All equipment and systems except for the turbine and interconnections are already installed and ready for this final step in producing electrical power.	Yes
Allegiant Commodities Company	Orange	\$2,951,754	Proposing a PET processing facility to sort, grind, wash, and resell an intermediate commodity called PET Flakes. The project I call Allegiant Commodities Company.	Yes
Al's Plastics	Los Angeles	\$2,912,697	<p>This is a project to upgrade the machinery on our existing reprocessing line to allow us to reprocess an additional 15,000 tons annually of Low Density Polyethylene and High Density Polyethylene plastic scrap, diverting it from landfills.</p> <p>We would be upgrading our current single-motor 6” plastic extruder to a dual-motor 8” plastic extruder, upgrading our water ring pelletizing system to a larger and more efficient underwater pelletizing system, and upgrading our melt filtration system to avoid downtime</p>	No

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			<p>when cleaning the filters and upgrading our cascade/degassing extruder to allow for better degassing and higher throughput.</p> <p>During the reprocessing process there is minimal material waste. The 15,000 tons of plastic scrap would be reprocessed into 15,000 tons of plastic resin and any contaminated material and plastic cleaned off of our screen packs would get granulated and used in our lower end reprocessed resin. This plastic resin is the intermediate commodity that we sell to companies in the plastics industry to be used instead of virgin plastic resin to make a finished product.</p> <p>These upgrades would allow us to improve the quality of our post-commercial and post-consumer resin and attract more customers from new industries that demand top quality material to replace their usage of new virgin resin with reprocessed resin.</p>	
Andros Engineering Corp.	San Luis Obispo	\$2,874,000	Closed Loop wash line and repelletizing system for Agricultural Films, primarily drip tape.	Yes
BioCellection, Inc.	San Mateo	\$3,000,000	<p>GreenWaste Recovery, Inc. (GreenWaste) and BioCellection Inc. (BioCellection) began a partnership in 2016 along with the City of San Jose through a pilot program to process hard to recycle plastics.</p> <p>GreenWaste is a privately-owned collection and material processing company located in San Jose,</p>	Yes

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			<p>CA that has been widely recognized as one of the most innovative resource recovery companies in the United States. BioCellection is a privately-owned chemical recycling company located in Menlo Park, CA that has invented a technology to turn Polyethylene (PE) residuals into valuable commodity chemicals. Founded with the goal to help local jurisdictions and MRFs reach high diversion on plastics without using energy intensive processes or generating low-grade fuels and carbon emissions. BioCellection is enabling the California recycling industry to access new market opportunities for currently non-marketable plastics. The GreenWaste MRF is permitted to process up to 3,500 tons of material per day and currently processes material for over forty jurisdictions. If awarded this grant, BioCellection and GreenWaste will be installing new equipment in the Municipal Solid Waste (MSW) MRF to recover unmarketable plastics, and BioCellection will install its first Demo Unit at one of GreenWaste's facilities located at 610 E. Gish Road. The partnership would reduce greenhouse gasses by diverting material that would end up in landfill and could process unmarketable plastics into essential chemical intermediates with existing markets.</p>	

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CarbonLITE Industries, LLC.	San Bernardino	\$3,000,000	<p>We propose to establish a new sort, wash, and process line at our Riverside facility to reclaim up to 6000 tons per year mixed plastic containers #3-7. Some of these materials currently enter our facility as contaminant in PET bottle bales, and we landfill up to two 53 foot trailers daily. Our need for mixed plastics recovery, both in our facility and more generally in the secondary materials market, has moved us to seek equipment to produce mixed copolymer resin pellets to sell to manufacturers.</p>	Yes
Envision Plastics	San Bernardino	\$2,940,000	<p>Envision Plastics is a High Density Polyethylene (HDPE) plastic recycler in Chino, CA. Currently, it processes more than 45,000,000 pounds of HDPE bottles and containers in a year. Envision Plastics has FDA approval to produce food grade recycled HDPE products from recycled HDPE plastics. In addition, Envision Plastics owns a patent for "process of producing PCR pellets" (US Patent 9,028,734 B2).</p> <p>The grant project will involve installing a series of equipment that can produce devolatized PCR HDPE, recycled AG film, rPP, r-LLDPE, and r-LDPE grade from recycled polyolefin CRV containers, as well as agricultural films (AG films) generated in California. The equipment we would like to add including a grinder, wash line system, washed flake drying/mixing equipment, and devocalization equipment to produce food grade and devolatized recycled HDPE, PP, AG</p>	Yes

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			<p>film, LLDPE, and LDPE resin that will be sold to plastic product manufacturers.</p> <p>By the year 2028, it is estimated an additional 17,520 tons of material will be diverted from the landfill. With a 20% waste factor, Envision Plastics will produce 14,016 net tons per year of recycled feedstock. Using the CalRecycle draft GHG calculator, the result is 59,154 (MTCO₂e) total FPG GHG emission on reductions and 60,362 (MTCO₂e) total GHG emission reductions.</p>	
FDS Manufacturing	Riverside	\$2,987,564	Find new end-products for post-consumer recycled (PCR) plastics to address the closing of the Asian market to accept PCR.	Yes
Ionobell	Santa Clara	\$3,000,000	<p>Ionobell is a startup that makes high performance battery materials from post-consumer recycled plastics. Our process is flexible and can use different materials as feedstock, allowing us to focus on waste plastics that are most problematic for recycling and disposal, including PET clamshells, mixed plastics #2-7, and films. GreenWaste Recovery will be our MRF feedstock source, though additional sources may be brought on as we move into higher volume production or as the materials market changes. Our environmental goals with this project are to reduce GHG emissions and also to help build a circular economy where waste streams are transformed into</p>	Yes

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			valuable technical resources and green chemistry principles are applied by design.	
Netafim	Fresno	\$2,011,647	<p>Netafim Irrigation, Inc./PHX Recycling is proposing a vertically integrated closed-loop recycling solution for farming operations within the Central Coast region. Netafim's proposal entails capacity expansion of an already established and successful recycling operation that has existed since 2012.</p> <p>The vertically integrated recycling operation begins by collecting used irrigation tubing from the Central Coast of California and transporting it to Netafim's existing recycling facility in Fowler, CA. At the recycling facility, the irrigation tubing is shredded, washed, and pelletized before being transported to Netafim's manufacturing facility located in Fresno, CA; 13 miles from Fowler. At the manufacturing facility, the recycled HDPE pellets are blended with other resins and extruded into new irrigation tubing that is sold to growers. Once this newly manufactured tubing reaches end of life, it will be collected by Netafim and re-enter the recycling process.</p>	Yes

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Regents of the University of California, Berkeley	Alameda	\$1,740,097	The UC Berkeley Recycling Research Facility Project will take place at UC Berkeley's Richmond Field Station in Building 280A. Beginning Fall 2019, Cal Zero Waste will discontinue sending all of campus recycling waste to Republic Services, the current campus waste processor, and begin to transfer waste to the project team and UC Berkeley Recycling Facility. After Fall 2019, the team will process more of campus recycling waste, allowing for all materials that are recycled on campus to be developed into end products for campus educational programs. We will be employing mechanical recycling methods in order to reduce the environmental impact of our recycling program, as well as creating more value from waste resources.	Yes
Roplast Industries	Butte	\$2,478,014	Roplast, located in the Oroville RMDZ, manufacturers retail/grocery bags from recycled PCR. A challenge to increasing the PCR in our raw materials is the ability to adequately remove the ink from the raw materials. This proposed project is to acquire a CADEL Deinking system. A tested, innovative technology that will remove ink and allow Roplast to begin processing LDPR PCR waste sourced from materials that would otherwise go to landfill. 2,500 tons of LDPE waste will be diverted as a result of this process.	Yes

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Shark Glass Recycling West, LLC.	San Bernardino	\$1,283,401	<p>There are approximately 30 million registered vehicles in CA, and they all have windshields. It's estimated that nationwide 5% (CA estimate is 4%) of windshields are damaged each year. The requested grant will assist with the establishment of a windshield recycling facility in CA. The facility will source post-consumer damaged windshields and building glass which is currently sent to landfills. The damaged glass will be diverted from landfills and recycled by separating the glass from the PVB (Polyvinyl Butyral) interlayer. Approximately 87% of the windshield is glass that will be utilized by CA fiberglass insulation manufacturers to make new building insulation. It is estimated that 1 ton of GHG emissions are reduced for every 5 tons of recycled glass used in the manufacturing process. 8% of the windshield is the PVB interlayer, which will be sent to a Shark Solutions company in Lavonia, GA for reprocessing into useable raw materials that replace PVC (Polyvinyl Chloride) in carpet tiles that are sold in CA. The remaining 5% is waste from production, but any metal or rubber that can be harvested for recycling will be.</p> <p>Shark parent company has invested significant funds into the business already and has made a strong commitment to its success.</p>	Yes

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VSP Labs, Inc.	Sacramento	\$264,790	Material from grinding eyeglass lenses from a plastic disk result in shavings, with a non-toxic liquid used for lubrication. Some liquid is extracted through gravity but the remaining product results in over 850 tons of material from two facilities that are put into landfill each year. We will add a machine that will compact the material extracting 90% of the liquid and forming a hard briquette. These will be put into boxes and transported to a facility approved by the EPA, that “Carbonizes” the briquettes in a system that accomplishes endothermic gasification of the waste without combustion, resulting in over 95% elimination of the material and reduction of GHG.	Yes

ⁱ Project summaries are extracted from the submitted application and have not yet been approved by CalRecycle. Contents in these summaries may be revised based on CalRecycle’s evaluation.

ⁱⁱ This column indicates if a priority population benefit is claimed by applicant. Benefits claimed and may be revised based on CalRecycle’s evaluation.