

August 27, 2012

Phase 3, Monterey County, Survey of Current and Potential Feedstock and Recycled Content Usage within the Central Coast Recycling Market Development Zone



Prepared for:
**Central Coast
Recycling Market
Development Zone**

Prepared by:

INTELLIWASTE, INC.
Solid Waste Management Consultants

1683 Novato Blvd, Suite 7B,
Novato, CA 94947

This page left blank intentionally for double sided printing.



August 27, 2012
Via Email

Ms. Normandy Rose
Zone Administrator
Central Coast Recycling Market Development Zone
3220 Southside Road
Hollister, CA 95023

Subject: Phase 3, Monterey County, Survey of Current and Potential Feedstock and Recycled Content Usage within the Central Coast Recycling Market Development Zone

Dear Ms. Rose:

In accordance with our Agreement, IntelliWaste, Inc. (IntelliWaste) is pleased to present Phase 3 (Monterey County) of our survey of current and future feedstock and recycled content usage within the Central Coast Recycling Market Development Zone (CCRMDZ). We have continued to conduct our survey for Monterey County after completing the work (Phase 2) for San Luis Obispo County. A decision is pending as to whether the survey warrants continuing the work for Santa Cruz County – the other member of the CCRMDZ.

The purpose and goal of this survey was to:

- 1) To identify and survey manufacturers that currently use recycled materials to manufacture new products within the CCRMDZ as to their ability to increase their use of recovered materials.
- 2) To identify manufacturers not currently using recycled materials to manufacture new products within the CCRMDZ as to their ability to use recovered materials.
- 3) To provide a report of findings to the CCRMDZ specifically for Phase 3, Monterey County.

While the term “manufactured” is used throughout this survey report, we have also included agricultural, building, and construction companies as part of the group of companies we contacted. These non-manufacturing industries can and do use recycled feedstock post-consumer materials as part of their industry practice.

To accomplish these purposes and goals, IntelliWaste performed the following tasks:

TASK 1:

Identified manufacturers from publicly available databases using available sources specifically for Monterey County. We developed a list of the industries most likely to have recycled product feedstock requirements.

TASK 2:

Contacted the candidate manufacturers and conducted a telephone interview to discuss the company’s raw material usage and feedstock requirements. We developed a work paper profile for each company using the Internet. In addition, we asked basis questions from each company regarding the type of business they are engaged in. Once we obtained this information, each company profile consisted of: the company name; interviewee name; telephone number; number of company employees; type of industry by SIC code; recycled content type and usage; equivalent raw material source and usage; current material usage (raw and recycled) by weight; future plans to substitute and incorporate local recycled materials into their manufacturing process; and other pertinent information.

TASK 3:

Identified current material generator flow pathways of recycled feedstock within Monterey County to determine where materials are moving from and to. Where feasible, we determined a weight-based judgment of these material types and usage.

TASK 4:

Identified recycling/reuse/options in Monterey County for recycled feedstock materials. We discuss the present recycling/reuse conditions within Monterey County and present findings regarding recovery and reuse of harder to recycle materials by area industries. When applicable, we also recommend how certain materials may be made more readily available to end users.

RECYCLED FEEDSTOCK MATERIALS

Feedstock is defined as raw material required for an industrial process. Recycled feedstock is further defined as material that has been previously recycled that can again be used as basis feedstock or reused in a primary manufacturing process. While the basic definition is applied to manufacturing processing, we have further expanded the term to include agricultural industries that use organic products such as compost. The following recycled feedstock materials are known to be used in various manufacturing and agricultural processes.

- Metals such as copper, aluminum, and steel
- Plastics
- Construction and Demolition Materials (C&D) such as concrete, aggregate, and rock
- Glass
- Wood and organic materials such as compost
- Tires

In the case of recycled feedstock as a raw material, the likely target customer is an industrial manufacturer who would be willing to test, reformulate, and retool (if necessary), to use the recycled feedstock. Depending on the process and the end product, either a percentage of recycled feedstock can be used in a formulation, or when technically feasible, 100% recycled-content feedstocks are used. The recycled-content feedstock must have some measurable benefit; e.g., more efficient production, better product performance or aesthetics, more flexible delivery, or lower cost.

MONTEREY COUNTY MANUFACTURING EMPLOYERS

Company Name	Business Type	Employees
Acme Awning	Window Accessories	1-50
Aliano Iron	Metal	1-50
Coastal Fabrication Co	Metal	1-50
Chemical Lime Co	Industrial Minerals	50-99
Converted Organics of Ca LLC	Fertilizer and Compost	1-50
Dal-Tile	Ceramics	N/A
Delta Rubber Co	Industrial Equipment	1-50
Pro Pack Systems Inc	Packaging	N/A
Robert Mann Packaging Inc	Packaging	N/A
Sutton Ag Enterprises	Agriculture Equipment	N/A
A & S Metals	Construction and Demolition	N/A
Don Chapin Company	Construction and Demolition	1-50
Randazzo Enterprises Inc	Wood Recycling	50-99
Cranford, Inc	Fertilizer and Compost	1-50

This list of contacted manufacturers is derived from a larger list of more than 300 businesses located in Monterey County. It should be noted that this final list of manufacturers does not reflect the State of California Employment Development Department’s list of the largest employers in the County, which indicates that the manufacturing section industry in Monterey County is a relatively small sector in the County as a whole.

LIST OF SURVEY QUESTIONS

For each company contacted, IntelliWaste prepared a specific list of questions to inquire about recycled feedstock usage (post-consumer) either current or for potential use in the future. Depending on the initial response from the manufacturer, some or all of the questions were posed as part of the interview process. Some interviewees wished not to have their name published for a variety of reasons in order to participate in the survey. Given the nature of their response and in keeping with the spirit and goals that the CCRMDZ maintains in conducting this survey, future follow-up can be made at the address and phone number referenced. The interview questions included:

FEEDSTOCK SURVEY QUESTIONS

1. What type of feedstock material(s) do you use?
2. How many pounds or tons of recycled feedstock do you use per year?
3. What are some of the advantages of using recycled vs. raw or virgin material?
4. What are the disadvantages?
5. What was one of the primary reasons your company decided to engage in using recycled material.
6. Were government subsidies or tax benefits a decision in using recycled materials?
7. How much recycled feedstock material comes from San Benito, Monterey, San Luis Obispo, and Santa Cruz counties?
8. Do you produce waste from your recycled material?
9. Where does most of your recycled material come from?
 - Curbside
 - Manufactured recycled material
 - Processed
10. Do you recycle the waste?
11. Do you plan to expand or abandon the use of recycled feedstock material within the next 5 years?

During the interview process, we provided information regarding the CCRMDZ program and encouraged manufacturers to explore future usage of recycled feedstock and post-consumer materials into their product specifications.

PROFILE OF COMPANIES CONTACTED IN MONTEREY COUNTY

The following presents a profile of each of the companies contacted as part of this survey. In some cases, no representative from the company called back, and thus the information presented is preliminary and to be confirmed in the future.

Acme Awning
210 N Main St, Salinas, CA
Phone number: 831-372-3539 | Contact: Gail, Owner

Acme Awning manufactures both commercial and residential awnings and shade solutions. The company currently employs six people, making it a small manufacturing company. Acme uses galvanized steel and textiles in raw form. Raw materials are used because, according to the owner, recycled materials are not available. Once these raw materials are used in the manufacturing process, scrap metal and textile waste is produced. This waste is then recycled. The owner expressed interest in pursuing the use of recycled feedstock in the future if presented with durable and affordable material options.

Aliano Iron
172 Castroville Rd #183, Salinas, CA
Phone number: 831-394-3992 | Contact: Dale, President

Aliano Iron is a fabrication and welding company that began in 1990. They specialize in custom structural and ornamental iron for residential and mid-sized commercial projects. The company currently employs 6 people.

Steel is the main product used in the company's manufacturing process, which they get from steel mills around the country in order to have a mill certification. This steel is made from a mixture of raw and recycled steel in order to be both cost effective and strong. The steel scraps that are produced as waste from the manufacturing process are then sold to local recycling centers. Because of the strength of raw steel, the company's president does not believe the company will pursue the use of recycled feedstock materials in their manufacturing process in the future.

Coastal Fabrication Co
755 Redwood Ave, Seaside, CA
Phone number: 831-394-7315

Coastal Fabrication Co is a full service welding and custom fabrication company that specializes in quality fabrication for residential construction projects. They offer a range of services such as structural steel, ornamental fabrication, custom construction, and custom machining. The company currently employs 8 people.

The company uses stainless steel, aluminum, and other types of metals that are purchased from steel mills that use both recycled and raw materials. Because of government standards that the company must meet, the company chooses steel that is strong enough to be sellable. The steel scraps that make up the waste produced during the manufacturing process are sold to local recycling centers. The company is not interested in pursuing more sustainable methods to replace its current manufacturing process.

Chemical Lime Co
11771 Old Stage Road, Salinas, CA
Phone number: 831-449-9117 | Contact: John, Production Manager

Chemical Lime Co is a mining company that specializes in extracting and processing dolomite limestone. They then sell the processed limestone to businesses for many uses, including but not limited to road construction, car glass, and golf course sand. The company currently employs approximately 70 people.

The company's production manager, John, stated in an interview that the mining process includes extracting the limestone directly from a local hillside. Thus, only raw materials are used rather than recycled materials. During the manufacturing process, fine limestone is produced as waste, which is reclaimed and placed back on the hill from which it was extracted. The company then places topsoil and grass on top of the limestone waste so that it can be absorbed back into the hillside. Because of the nature of Chemical Lime Co's use of a natural resource, John stated that the company will be unable to turn to using recycled feedstock material at this time.

Converted Organics of Ca LLC
31677 Johnson Canyon Rd, Gonzales, CA
Phone number: 831-675-8600 | Contact: Walter, General Manager

Converted Organics of Ca manufactures organic liquid fertilizer, while also providing vertical farming and wastewater treatment services. To create their organic liquid fertilizer, the company uses food waste like lettuce, meat, and vegetables gathered from restaurants and grocery stores, as well as waste from fish plants. According to the General Manager, food scrap waste is a better fertilizer than whole food. Furthermore, it is a very available and affordable resource for the company to use. The company employs eight people to accomplish this.

The company does not produce much waste from the manufacturing process. Everything, including water, is reused in the next process. However, about 10 percent of the food scraps they obtain are contaminated. Anything the company finds within the food scraps that they cannot use in the manufacturing process is sorted out and recycled, if possible. After hearing about the different options available to expand their use of recycled feedstock, the company expressed strong interest in pursuing additional recycled feedstock options. The company processes an estimated 10,000 tons of materials and converts the materials into liquid fertilizer.

Dal-Tile
485 Victor Way # 7, Salinas, CA
Phone number: 831-758-9473 | Contact: Steve, Manager

Dal-Tile manufactures ceramic tiles for commercial and residential use in their manufacturing facilities spread throughout the country.

The company actively pursues production methods which are sustainable. The company avoids the use of raw materials, and instead, over 97 percent of the products they manufacture contain post-industrial recycled materials. One of the biggest components of the tiles they manufacture is a by-product which comes from the manufacturing process of the roofing industry, which typically is disposed of as waste. The company also recycles and reuses the solid materials and water that are used in their own manufacturing process. While Dal-Tile is already engaged in the use of recycled feedstock materials, the manager of the Monterey County branch expressed that the company may potentially be interested in continuing to build on this by pursuing additional usage of recycled feedstock.

Delta Rubber Co
1090 Harkins Rd, Salinas, CA
Phone number: 831-757-6261 | Contact: Bob, Shop Manager

With 5 employees, Delta Rubber manufactures conveyer belts and hydraulic hosing. The company orders conveyer belt material from around the world and then assembles and cuts it into belts. The materials comprising the conveyer belts include rubber, PVC, and RMV, among other materials. No materials are gathered from local manufacturers.

According to Bob, the shop manager that we interviewed, one of the primary reasons the company uses these materials is because they are easily accessible. Conversely, he is unaware of any manufacturers that can provide them with recycled conveyer materials that they can use. While the company does not use recycled feedstock materials in their manufacturing process, Bob did indicate that the scraps that are produced as waste from the process are recycled. The company is interested in potentially pursuing the use of recycled feedstock.

Pro Pack Systems Inc
1354 Dayton St # A, Salinas, CA
Phone number: 831-771-1300 | Contact: N/A

Pro Pack Systems specializes in customized packaging. When we contacted the company, they declined to answer our questions regarding the company's use of recycled feedstock materials.

Robert Mann Packaging Inc
340 El Camino Real S # 40, Salinas, CA
Phone number: 831-783-3140 | Contact: Juan, Superintendent

Robert Mann Packaging is a full-service cardboard box and corrugated carton manufacturer for the product, strawberry, floral, and seafood packing industries. The company provides bags, inserts, and boxes for industrial use. The company uses raw materials that are intentionally renewable, recyclable, and biodegradable when possible. The company contact, Juan, who is the superintendent, declined to participate in an interview.

Sutton Ag Enterprises
746 Vertin Ave, Salinas, CA
Phone number: 831-422-9693 | Contact: Bob, President

Sutton Ag Enterprises manufactures farm equipment and bird control products. The president of the company, Bob, refused to participate in an interview to discuss the company and its use of materials.

A&S Metals
1184 Broadway Ave, Seaside, CA
Phone number: 831-633-3379 | Contact: Stan, Owner

A&S Metals is a full service scrap metal recycling, demolition, and concrete aggregate crushing contractor. The company purchases and recycles scrap metals such as car bodies, appliance, batteries, and construction and demolition materials. The owner, Stan, declined to answer our questions regarding their manufacturing process.

Don Chapin Company
560 Crazy Horse Canyon Road, Salinas, CA
Phone number: 831-449-4273 | Contact: Jeff, Dispatcher

Don Chapin Company is a full general engineering company that supplies high quality ready mix concrete products to the central coast. The company defines itself as a concrete and base rock processor. Sand, gravel, powder cement, water, and fly-ash are the materials that are utilized in the manufacturing process. The sand and gravel are taken from a local quarry, and the cement is purchased from mills in Southern California. Each of these materials, save for the fly-ash which is a cement by-product, is raw. However, the interviewee, who is a dispatcher within the company's ready mix division, stated that the company occasionally uses recycled materials like broken concrete and asphalt that has been broken down into base-rock. This occasional use of recycled feedstock began within the past year because of an increase in customer demand to have a certain percentage of recycled products.

The company's manufacturing process does produce waste, which they break down and either reuse or sell to others. The company employs 25 people within the ready mix division, and approximately 200 in total. According to the company representative, the

company would be very interested in expanding their use of recycled feedstock material in their manufacturing process. The representative indicated that John Lacaze, his supervisor, would be the person to contact to discuss options for feedstock growth.

Randazzo Enterprises, Inc.
13550 Blackie Rd, Castroville, CA
Phone number: 831-633-4420 | Contact: Cindy, Administration

Randazzo Enterprises is a wood waste recycling facility where wood from demolition and land clearing projects is processed into chips and sold to co-generation plants. The company, which employs approximately 60 people, breaks down sites that need to be demolished and sorts through the materials, which are sent to either their demolition yard or their salvage yard. The salvage yard makes sellable items available to the public, while the demolition yard is where metal and concrete are sorted from wood and construction and demolition debris. The company sends the metal and concrete to recycling centers, while the wood and construction debris is put through their wood chipper to create different products. One of these products is a planting mix, which is made available to the public. In this way, the company utilizes every piece of material they have, and the waste that is produced from the wood manufacturing process is reused. Cindy, the interviewee, stated that because of the nature of the company's work in demolition, the company has employed all recycled feedstock materials in its business and will continue their reuse of post-consumer recycled materials into the future.

Cranford, Inc.
P.O. Box 7597, Spreckels, CA
Phone number: 831-455-2227 | Contact: Jay, President

Cranford is a manufacturer in Spreckels, California, that produces and sells bulk and granulated compost, lime, and other agricultural nutrients. The company uses green waste, manure, and produce they obtain from local facilities, which they then use to manufacture compost. From the manufacturing process, no waste is produced that cannot be reused. We interviewed Jay, Cranford's president, who informed IntelliWaste that the company currently employs four people. Because the company currently uses materials that are already waste or post-consumer materials, the company is maximizing its use of such material and does not contemplate the use of raw materials.

SUMMARY PROFILES OF COMPANIES CONTACTED FOR THE RECYCLED FEEDSTOCK SURVEY

The table below summarizes each manufacturing company that was contacted for this survey.

Business Name	Address and Phone Number	Contact Person	Type of Recycled Feedstock	Comments
Abcon Products	7697 Highway 1, Watsonville, CA 831-728-7363	T.J., Operations Manager	Plastic resin bottles	Company representative extensively uses recycled feedstock materials in its manufacturing process.
Acme Awning	210 N Main St, Salinas, CA 831-372-3539	Gail, Owner	None	Company is interested in exploring the expansion of their use of feedstock materials.
Aliano Iron	172 Castroville Rd #183, Salinas, CA 831-394-3992	Dale, President	Steel that is a mixture of raw and recycled material	Company is not interested in pursuing recycled feedstock usage.
Coastal Fabrication Co	755 Redwood Ave, Seaside, CA 831-394-7315	N/A	Steel that is a mixture of raw and recycled material	Company is not interested in pursuing recycled feedstock usage.
Chemical Lime Co	11771 Old Stage Road, Salinas, CA 831-449-9117	John, Production Manager	None	Company representative sees no recycled feedstock applications.
Converted Organics of Ca LLC	31677 Johnson Canyon Rd, Gonzales, CA 831-675-8600	Walter, General Manager	Food waste	Company is interested in expanded use of feedstock materials.
Dal-Tile	485 Victor Way # 7, Salinas, CA 831-758-9473	Steve, Manager	Ceramic, glass, metal	Company is interested in expanding use of feedstock materials.

Phase 3, Monterey County, Survey of Current and Potential Feedstock and Recycled Content Usage within the Central Coast Recycling Market Development Zone

Business Name	Address and Phone Number	Contact Person	Type of Recycled Feedstock	Comments
Delta Rubber Co	1090 Harkins Rd, Salinas, CA 831-757-6261	Bob, Shop Manager	None	Company is interested in exploring the expansion of their use of feedstock materials.
Pro Pack Systems Inc	1354 Dayton St # A, Salinas, CA 831-771-1300	N/A	N/A	Company is not interested in pursuing recycled feedstock usage.
Robert Mann Packaging Inc	340 El Camino Real S # 40, Salinas, CA 831-783-3140	Juan, Superintendent	N/A	Company is not interested in pursuing recycled feedstock usage.
Sutton Ag Enterprises	746 Vertin Ave, Salinas, CA 831-422-9693	Bob, President	N/A	Company is not interested in pursuing recycled feedstock usage.
A&S Metals	1184 Broadway Ave, Seaside, CA 831-633-3379	Stan, Owner	N/A	Company is not interested in pursuing recycled feedstock usage.
Don Chapin Company	560 Crazy Horse Canyon Road, Salinas, CA 831-449-4273	Jeff, Dispatcher	Occasional use of concrete and asphalt	Company is interested in expanding use of feedstock materials.
Randazzo Enterprises, Inc.	13550 Blackie Rd, Castroville, CA 831-633-4420	Cindy, Administration	Wood	Company extensively uses recycled feedstock in its business model.
Cranford, Inc.	P.O. Box 7597, Spreckels, CA 831-455-2227	Jay, President	Food waste	Company extensively uses recycled feedstock in its business practices.

**IDENTIFY CURRENT MATERIAL GENERATOR FLOW PATHWAYS OF RECYCLED FEEDSTOCK WITHIN MONTEREY COUNTY (PHASE 3) TO
DETERMINE WHERE MATERIALS ARE MOVING FROM AND TO.**

Based on this survey, the recycled feedstock used by manufacturing and agricultural companies in Monterey County is generated both inside and outside the CCRMDZ area. Companies that use post consumer organic materials tend to derive those materials locally, while the plastic feedstock company uses post-consumer plastic feedstock materials from both inside and outside the County. We were not able to accurately determine the weight (tons) of recycled feedstock used by Monterey County companies since nearly all respondents felt that the information was proprietary. One company uses approximately 10,000 tons per year of post-consumer food waste for conversion into liquid fertilizer.

IDENTIFY RECYCLING/REUSE OPTIONS IN MONTEREY COUNTY (PHASE 3) FOR RECYCLED FEEDSTOCK MATERIALS.

This section discusses the present recycled feedstock conditions within Monterey County (Phase 3) and presents findings regarding recovery and reuse of harder to recycle materials by area industries. When applicable, we also recommended how certain materials may be made more readily available to end users.


- Total manufacturing activities in Monterey County employs approximately 42,879 agricultural workers, and 21,020 manufacturing/industrial employees based on current 2010 data from the Association of Monterey Bay Area Governments (AMBAG).
- Based on SIC codes, principal manufacturing companies in Monterey County include growers, shippers, and horticultural specialty; vehicle parts and accessories; auxiliary parts; plastic manufacturing scrap metal storage/reuse; construction & demolition recycling; and composting.
- A majority of the manufacturing companies interviewed involve assembly of pre-made parts and items, many of which are prepared under strict specifications. Therefore, the potential use of recycled feedstock into their manufacturing process is either limited or not feasible at this time.
- The use of raw feedstock of any material type for manufacturing in Monterey County includes plastics, organic materials (wood recycling and composting), and construction and demolition recycling.

- Plastic materials, especially PET that are derived of 100% post- consumer recycled content, are being used more than in the past. Other companies that do not use 100% post-consumer plastics say they use up to 30% recycled content on a regular basis. Film plastic used principally in agricultural situations is being recycled by most companies assisted by the incentive of higher commodity pricing for petroleum related products.
- We located one company in Monterey County that uses C&D materials as recycled feedstock for reuse (Don Chapin Company).
- Organic waste is composted in Monterey County at several facilities including one small specialty, organic certified facility and another company that converts food waste into liquid fertilizer. Organic materials generated in Monterey County from curbside residential and commercial sources were not considered in this survey. These materials are tracked separately by local jurisdictions and regulators and not sent to manufacturers for local or domestic reuse.

* * * * *

IntelliWaste appreciates the opportunity to assist the CCRMDZ with this important survey project. If you have any questions, please feel free to contact me at 415-898-6121, or by email at intelliwaste@yahoo.com.

Very truly yours,
IntelliWaste, Inc.



Bruce J. Murphy
Managing Principal

This page left blank intentionally for double sided printing.