

Initial Review of Certificate of End Use & Traceability Data, 2020

Summary of submitted traceability data and online review of company information
relative to sustainability and international markets

7/21/2020

Report Summary

GreenWaste of Palo Alto hauls all recyclables collected in the City of Palo Alto to its sister company's facility, the GreenWaste Materials Recovery Facility (MRF), in San Jose. At the GreenWaste MRF, initial processing is conducted on the single stream recyclables collected throughout the region. In this process, GreenWaste separates all materials by commodity type and removes contamination. GreenWaste then sells the separate commodities to brokers and/or secondary processors.

GreenWaste Recovery, in cooperation with the City of Palo Alto, is seeking supplementary information on the life-cycle of the materials Palo Alto collects for recycling. The ultimate goal is for the City of Palo Alto to have a better understanding of the final disposition of these materials, and therefore guide their materials management program. GreenWaste Recovery and GreenWaste of Palo Alto staff worked in coordination to obtain supplementary marketing, processing, and disposal information from GreenWaste's primary purchasers. The following table summarizes materials sorted by commodity types, the location of secondary processing (if applicable) as reported by GreenWaste's primary purchasers, and the percent of material (by weight) each commodity represents.

Product Specifications:	Primary Purchasers/Countries (for material types covered in this report)	2019/20 Actual MRF Tonnage	% of Overall Material	Palo Alto % of MRF (est. 10.5%)
Aluminum Cans	n/a (not covered in this report)	1,395.37	0.89%	146.51
Aluminum Foil/Scrap	n/a (not covered in this report)	326.42	0.21%	34.27
Ferrous/Tin	n/a (not covered in this report)	3,157.20	2.01%	333.40
Glass, Commingled	n/a (not covered in this report)	36,420.04	23.14%	3,824.10
Note on Plastic	GreenWaste's goal is to maximize material processed domestically, however, GreenWaste is dependent on demand for materials, and domestic demand is very low. Domestic mills give preferential capacity to post-industrial material rather than post-consumer material.			
Plastic, HDPE	<u>Berg Mill</u> : International <u>Envision Plastics</u> : North Carolina & California <u>Newport CH International</u> : International	5,517.40	3.51%	579.33
Plastic, PETE	<u>Berg Mill</u> : International <u>CellMark</u> : International & Domestic <u>Newport CH International</u> : International	4,135.69	2.63%	434.25
Rigid Plastic	<u>Berg Mill</u> : International <u>Newport CH International</u> : International	2,064.14	1.31%	216.73
Film Plastics	<u>Berg Mill</u> : International <u>Newport CH International</u> : International	202.56	0.13%	21.27
Note on Mixed Paper	Mixed Paper is directed to Primary Purchasers based on the following qualifiers: Pricing • Quality of Material • Country's Specifications (hard mix, soft mix, etc.) • Country's designated allocation (GreenWaste must diversify where materials are sent in order to keep product moving)			
Mixed Paper	<u>Berg Mill</u> : International <u>CellMark</u> : International & Domestic <u>Newport CH International</u> : International <u>Fibre Trade</u> : International <u>OGO Fibers</u> : Thailand, Vietnam, Indonesia, Korea, Malaysia, Taiwan	36,864.00	23.43%	3,870.72
Old Corrugated	<u>Berg Mill</u> : International <u>CellMark</u> : International & Domestic <u>Fibre Trade</u> : International <u>Newport CH International</u> : International <u>OGO Fibers</u> : Thailand, Vietnam, Indonesia, Korea, Malaysia, India <u>Super Link Plastic</u> : Vietnam, Korea, Thailand, Indonesia, Malaysia	58,158.70	36.96%	6,106.66
Scrap Metal	n/a (not covered in this report)	8,985.71	5.71%	943.50
E-Waste	n/a (not covered in this report)	136.75	0.09%	14.36

As shown in the above table, paper and cardboard make up the greatest tonnage processed and marketed by GreenWaste Recovery. It should be noted that the mixed paper tonnage has decreased from the previous year – this is largely due to the stricter quality standards and less mixed paper meeting those standards. Meanwhile OCC (cardboard) tonnage has increased, and that is largely the result of increased shipping/home deliveries as a side effect of COVID-19.

Berg Mill is the primary recipient/purchaser of GreenWaste’s processed recyclables, however, the actual quantity directed to Berg Mill changes every month as all movement is dependent on pricing and bookings available. Overall, GreenWaste’s primary purchasers continue to be hesitant to provide details regarding the life-cycle of the materials they buy because this data set often includes proprietary information. Markets must exist in order for recycling to occur, and GreenWaste and its purchasers need to protect the markets they have. The economics of recycling makes traceability, and this research, challenging. Per the GreenWaste Recovery MRF Manager, many material types are predominately processed domestically, however, mixed paper continues to predominantly be processed offshore.

In order to ensure that all materials leaving the MRF are in proper condition to be recycled, GreenWaste focuses on ensuring clean, contamination-free commodities. GreenWaste completed an upgrade to its single stream recyclables line (the line on which Palo Alto’s materials are processed) in May of 2019. The upgrade included the installation of six new optical sorters designed to reduce contamination and produce cleaner, higher quality recovered recyclables. More specifically, these optical sorters improve the quality of mixed paper and newsprint by repelling plastic away from paper using infrared lasers. These lasers identify the various types of plastics that inadvertently end up mixed in the paper stream and recover them based on their unique resin type. Both the paper and plastics are separated, sorted, and then baled. Then again in February of 2020, GreenWaste performed another upgrade to the facility. Two Max-AI systems (one featuring two sorting units) were installed and programmed to identify specific material types and extract anything that does not belong in the stream. The first unit removes non-HDPE contamination and the second unit selects HDPE-natural. By ensuring a clean product, GreenWaste gains a strong position in the market, and reduces the risk of downstream issues.

The role of the GreenWaste MRF is to separate material by commodity type, however, GreenWaste is always seeking innovative technology that more broadly advances the recycling field. GreenWaste Recovery has been in a public-private partnership with BioCellection and the City of San Jose to develop chemical processing methodologies for film plastic. This process upcycles the plastic by breaking it down to its basic elements, which are the building blocks for new, more durable plastics. By participating in new technology in this fashion, GreenWaste is investing in the development of domestic processing opportunities.

In order to expand the scope and success of the traceability work detailed in the report, GreenWaste of Palo Alto and the City of Palo Alto have discussed potential next steps. The discussion has included research into technological advancements, including GPS trackers, to understand where material is actually ending up. GreenWaste staff participated in discussions with the Ecology Center in Berkeley, which partnered with Basel Action Network’s Earth Eye to deploy GPS units in bales. When GreenWaste Recovery has explored this option with brokers, it has become clear that 1) brokers do not want these units in their bales, and 2) bales may be sent back to the sender (from the ultimate purchaser) if a GPS tracking unit is found (which come at a great cost).

GreenWaste of Palo Alto has also worked with GreenWaste Recovery to identify more domestic markets for paper and plastic, which would provide greater assurances regarding the ultimate disposition of the material, and would also ensure that the processing adheres to the United States’ environmental

standards. Domestic markets are generally more expensive than international markets, and GreenWaste Recovery would need to act very quickly in order to secure a space with a domestic processor should space become available. In October of 2019, GreenWaste Recovery secured a domestic mill for Palo Alto's mixed paper. Securing this space for paper processing was dependent on approval from Palo Alto City Council.

CellMark Inc. (Novato, CA)

CellMark submitted partial traceability data for a number of materials it purchases from GreenWaste, including cardboard, mixed paper, newspaper, office paper and PET plastic.

CellMark is a brokerage and its purchasers are secondary processors. The secondary processing includes pulpifying (for paper products), and chipping, washing, and pelletizing (for plastic products). Per CellMark, all its purchasers follow their respective countries environmental laws and policies. CellMark ship materials to domestic and international locations. Per the Cellmark website, CellMark ships to facilities in North America, Europe, South America, the Caribbean and Asia (www.cellmark.com/recycling/).

Per the CellMark website, CellMark participates in initiatives to ensure global sustainability. CellMark comments on its sustainability via its CSR webpages (<https://www.cellmark.com/ideas-values/sustainability-csr/>):

“CellMark recognizes that a healthy environment is fundamental to our business. As such, we respect and comply with local legislation and environmental regulations in our global operations.”

“CellMark is a member of the National Association of Chemical Distributors (NACD) and as such, is committed to product stewardship and responsible distribution in every phase of chemical storage, handling, transportation and disposal.”

“We do not ship any restricted material, for example dual-use goods, without proper permit... Each employee is encouraged to share the Code of Conduct with our business partners. We expect them to acknowledge and respect it in the context of their own particular culture.”

(<https://www.cellmark.com/wp-content/uploads/2015/11/CellMark-Code-of-Conduct.pdf>)

CellMark’s [2019 Annual Sustainability Report](#), published in May 2020, highlighted receiving a Silver status in the Eco Vadis supply chain audit. The audit investigates four core areas: Labor & Human Rights, Environment, Ethics, and Sustainable Procurement (<https://ecovadis.com/ratings/>).

An internet search resulted in a pertinent article posted on July 2, 2019:

Park Falls paper mill likely to reopen soon after month-long closure

An agreement between the company and its major customer, CellMark, was approved Monday in Price County Court. It lays out terms of payment by CellMark and allows the mill to pursue an additional loan for operation.

The mill has been idle for about a month after abruptly shutting down in early June. DeMarb said the shutdown happened after CellMark didn't make a payment to the mill.

(<https://www.wifw.com/storydetails/20190702130051/park-falls-paper-mill-likely-to-reopen-soon-after-monthlong-closure>)

Berg Mill Supply/Classic Fibres (Los Angeles, CA)

Berg Mill did not submit any traceability data, but did provide basic information about the company. Berg Mill purchases a number of materials from GreenWaste, including HDPE, Cardboard, Film Plastic, Mixed Paper, Mixed Plastic, Mixed Rigid Plastic, Newspaper, Office Paper, PET Clamshells, and PET.

Berg Mill Supply is a brokerage. Berg Mill elected to not complete the traceability form as to not provide proprietary data. Berg Mill provides general data on its website about the destination of its exports. Per the Berg Mill Supply website: (<https://bergmill.com/about/where-berg-mill-ships/>)

“Berg Mill Supply Co., Inc. redirects waste from material recovery facilities (MRF) in the United States to end users in international locations, where the material is processed and a new material is produced.”



A blog posted by Berg Mill on December 2, 2019, stated the following:

“But it isn’t just China’s import restrictions that have caused a downswing in mixed paper value. The market started taking a dive after the U.S. economic downturn in 2010, nearly a decade ago. The good news is that new international markets are opening for U.S. mixed paper, for example India, where U.S. Corrugated, a box manufacturer that uses recovered fiber, is opening a plant in the coming months.”

(<https://bergmill.com/2019/12/02/turning-over-a-new-leaf-in-paper-recycling-with-ai-technology/>)

A blog posted by Berg Mill on August 12, 2019, stated the following:

“With no global regulations against these exports, it is poor and developing nations that will end up paying the price for cleaning up after the U.S.... For recycling to flourish to its full potential, we must process our recyclables in domestic, modern factories that are designed to properly shelter toxins from workers and the environment.”

(<https://bergmill.com/2019/08/12/your-recycling-may-not-be-going-where-you-think/>)

A blog posted by Berg Mill on June 10, 2019, stated the following:

“While recent news in recycling has been discouraging due to China’s National Sword and other foreign imported scrap bans, Berg Mill is ever committed to keeping your recyclables moving... Ultimately, domestic recycling has the potential to become superior to importing scrap both economically and environmentally.”

(<https://bergmill.com/2019/06/10/recycling-challenges-bring-opportunities-for-growth/>)

An internet search resulted in a pertinent article posted on June 3, 2018:

According to leading US recycling firm Berg Mill Supply, “all grades of plastic have seen a major shift to secondary markets” from 2016 to 2017, when China’s import restrictions came to light. In that period, Malaysia took in five times more polyvinyl chloride (PVC), while Vietnam more than doubled imports of polyethylene terephthalate (PET).

<https://www.channelnewsasia.com/news/singapore/china-bans-plastic-waste-whats-next-for-recycling-in-singapore-10281026>

Fibre Trade Inc. (Burlingame, CA)

Fibre Trade did not submit traceability data but did provide basic information about the company. Fibre Trade purchases several materials from GreenWaste, including mixed paper, newspaper, office paper, and cardboard.

Fibre Trade both pulpifies paper and is a brokerage. Per its website, Fibre Trade is a direct exporter of recovered paper, pulp and mineral products from the USA, Europe, Australia, New Zealand and Japan to affiliated paper mills all over the world. (<https://www.fibretrade.net/>)

An article in Recycling Today published on October 24th, 2016 illustrates Fibre Trade's engagement in the paper industry, stating that a staff member served as the specifications committee chair for Paper Stock Industries. (<https://www.recyclingtoday.com/article/pprc-2016-psi-paper-specifications-rates/>)

Newport CH International (Orange, CA)

Newport CH International did not submit traceability data but did provide basic information about the company. Newport purchases cardboard and mixed paper from GreenWaste.

Newport both manufactures products and is a brokerage. Per its website, Newport focuses on the purchase and direct export sale of recyclable paper, plastics, as well as agricultural products. The following statement is made on the Newport CH International website.

“For the past 10 years, the Journal of Commerce has consistently ranked Newport CH as one of the United States’ top ten exporters.” (<http://newportch.com/>)

The Newport CH International website also lists two ISO certifications that the company has received, 1) ISO 9001: The international standard that specifies requirements for a quality management system (QMS), and 2) ISO 14001: the international standard that specifies requirements for an effective environmental management system (EMS). (<http://newportch.com/about-us/credentials-affiliations/>)

An internet search resulted in a pertinent article posted on December 3, 2019:

Signals point to all-out recycled fiber ban in China

“We’re diversifying, we’re going to try to maximize our sales to other countries,” said Jimmy Yang, CEO of Newport Beach, Calif.-based Newport CH International, a major broker of recovered fiber to China. “We’re expecting volume to drop, that’s just reality – we enjoyed great markets for the past 20 years, and maybe things are going to change now.”

At the meeting, officials told the companies to anticipate lower import license volumes during the fourth quarter of this year, said Yang, whose business has at times moved up to 90% of its fiber to China. He noted Chinese officials said a ban is coming in 2021 for all paper grades except newsprint, which could continue to enter the country for newspaper production.

(<https://resource-recycling.com/recycling/2019/12/03/signals-point-to-all-out-recycled-fiber-ban-in-china/>)

An internet search resulted in a pertinent article posted on April 3, 2019:

China's recyclers look at Latin America, Caribbean

Hamilton Wen, director of the plastics division at trading firm Newport CH International LLC in Orange, Calif., said in a panel at the conference that recyclers face complex questions as they analyze where it makes business sense to recycle and also react to governments worldwide limiting imports of scrap.

“It’s definitely cheaper in these other countries, but how long are they going to let you do it,” he said. “I think eventually, end game, it probably will come back here [to the United States]. Whatever we’re creating probably we should recycle it here”... added that the business case can make it too expensive to do some types of recycling in higher-cost countries.

(<https://www.plasticsnews.com/article/20190403/NEWS/190409967/china-s-recyclers-look-at-latin-america-caribbean>)

An internet search resulted in a pertinent article posted on February 28, 2018:

Exporters talk Chinese ban’s operational and financial impacts

Newport CH International, like many exporters, has made dramatic operational changes since the ban impact started to spread. The company acts as a broker, so it tries to find markets offering the

best price and stable demand. For the past 20 years, that has consistently been China, Wen said. The only variation was where inside China the company would send the material.

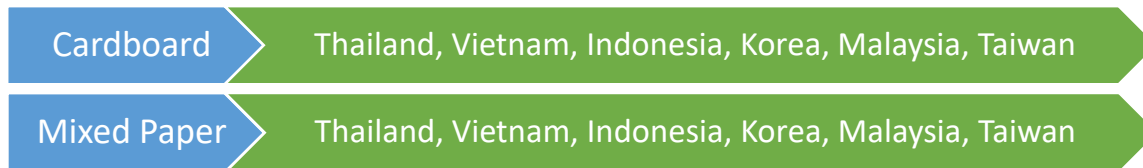
“Now, that’s completely off the table as far as scrap, so we’ve had to completely reshift, and look for new markets basically anywhere in the world,” Wen said. “Places we’ve never looked for previously, but now we’re having to travel to look for processors, look for end users. It’s pretty much a complete upheaval of our entire plastic brokerage business.”

Wen said there are not enough end users to handle all the material on the market, so they are able to demand higher quality, whereas it used to be a seller’s market. Wen predicts markets will develop for low-grade plastics, although they will take time to develop. He said there is already a little more demand coming back for the materials as a result of market development that’s taken place since the ban, and that further development is currently underway.

OGO Fibers (Ontario, Canada)

OGO Fibers submitted partial traceability data for the mixed paper and cardboard it purchases from GreenWaste. OGO Fibers elected to not provide additional traceability information as to not share proprietary data and place them at risk at losing customers.

OGO Fiber is a brokerage and its purchasers are secondary processors. The secondary processing includes pulpifying. OGO Fibers has confirmed that the material is never double brokered and all the material goes directly to an overseas mill with a direct order. Following is a diagram showing to which countries the materials are sent.



Per its website, OGO Fibers has received ISO 9001 certification (for quality management system) and holds both AQSIQ and CCIC licenses. (<http://www.ogofibers.com/ps>)

An internet search shows that OGO Fibers is a Journal of Commerce Top Exporter (number 100). The article, posted on May 25, 2020, in which this information appears discusses the challenges of both trade policy uncertainty and asymmetrical market conditions between international and domestic transportation modes. (http://www.joc.com/maritime-news/top-100-us-importer-and-exporter-rankings-2019_20200525.html)

Envision Plastics (Chino, CA)

Envision Plastics is a leading recycler of HDPE plastics and supplier of Post Consumer Resin (PCR). Envision purchases HDPE from GreenWaste and washes and pelletizes the material. Envision lists six different products that it creates from recovered plastic: Ecoprime®, Natural Color, Mixed Color, Oceanbound Plastic, Prisma®, and Deodorized.

Envision Plastics is headquartered in Reidsville, North Carolina and has a West Coast plant in Chino, California. Envision's parent company, Altium Packaging (previously Consolidated Container Company) includes "Act with Integrity and in Compliance" as one of its core values. (<https://altiumpkg.com/why-altium/our-guiding-principles/>)

Envision Plastics OceanBound Plastic recycling program aims to remove 10 million pounds of plastic before it enters the ocean at "At Risk Zones" defined by areas within 50km of coastline, with a focus on communities lacking formal waste collection. According to their FAQ webpage on the program, Envision Plastics works with partners "to professionalize the collection stream, collect this plastic, and manufacture it into usable products." (<https://envisionplastics.com/oceanbound-plastic/>)

Super Link Plastic (Oakland, CA)

Super Link Plastic submitted partial traceability data as well as basic information about the company. Super Link purchases cardboard from GreenWaste. Super Link provided more Secondary Purchaser information than in the previous year's data collection.

Super Link is a brokerage. Per its website, Super Link sources scrap plastic, cardboard, mixed paper, e-waste, and other recyclables from post-industrial, post-commercial and post-consumer waste streams. Super Link Plastic disclosed cardboard exports are sent to secondary brokerage in Vietnam, Korea, Thailand, India, Indonesia, and Malaysia. Per Super Link, all processing occurs in facilities following local environmental laws and policy. Per the Super Link Plastic, Inc. webpage the material is sent to Hong Kong and China for processing. (<https://www.superlinkusa.com/faq.php>)

No further pertinent information was found on this company and/or its exports via a simple internet search.