

# 2017 EXCELLENCE AWARD ENTRY



## CATEGORY

Recycling System

## ENTRANT

GreenWaste Recovery, Inc.

## ENTRY

GreenWaste Recovery, Inc., San Jose, California  
35-tph Single Stream System

## JURISDICTION

Santa Cruz County, Santa Clara County, Monterey County

## POPULATION

2.55 Million

## COST PER HOUSEHOLD

N/A (Private Venture)

## BUDGET

N/A (Private Venture)

## CONTACT

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**greenwaste**  
a brighter shade of green



## EXECUTIVE SUMMARY

GreenWaste Recovery, Inc's (GreenWaste) 35 ton-per-hour (tph) Materials Recovery Facility (MRF) is the result of increased demand to process both residential and commercial single-stream materials, as well as the company's goal to maximize the recovery and purity of end products.

The system, provided by Bulk Handling Systems (BHS) has exceeded all expectations, including throughput, recovery, purity and uptime. GreenWaste companies maximize value and diversion of the entire waste stream, processing C&D, organics through A.D. and composting, mixed materials and single-stream. This single-stream MRF, GreenWaste's newest and highest performing system, has redefined excellence. Featuring state-of-the-art technology, it's recovering 98% of recyclables while operating at 143% of its designed capacity. In the past 12 months, MRF revenues have exceeded costs by 12%. From 2010 to 2017, GreenWaste commodity sales have increased by 241%.

**50+**  
tons per hour

**34%**  
more throughput

**94%+**  
average process time

**98%**  
recyclables recovered

**1,552**  
solar panels

## PLANNING

Due to increased material quality standards and an influx of new and diverse material, GreenWaste identified the need to significantly increase its throughput capacity while improving the quality of salable commodities. GreenWaste has a history of collaboration with BHS. For more than a decade (2007 commission & 2008 SWANA Excellence Gold Award), GreenWaste has been successfully operating a two-line MRF designed and manufactured by BHS. Since that time, GreenWaste and BHS have partnered to implement significant innovations. BHS equipment and software are of the highest quality, and selecting BHS allows our team to operate familiar equipment with built-in redundancies (including the ability to stock like spare parts for wear items and having system optimization experts on hand to evaluate all equipment onsite).

As important as increasing capacity was the commitment to quality. At the time, Operation Green Fence was top-of-mind, and similar to today's National Sword, bale purity expectations were salient to design.

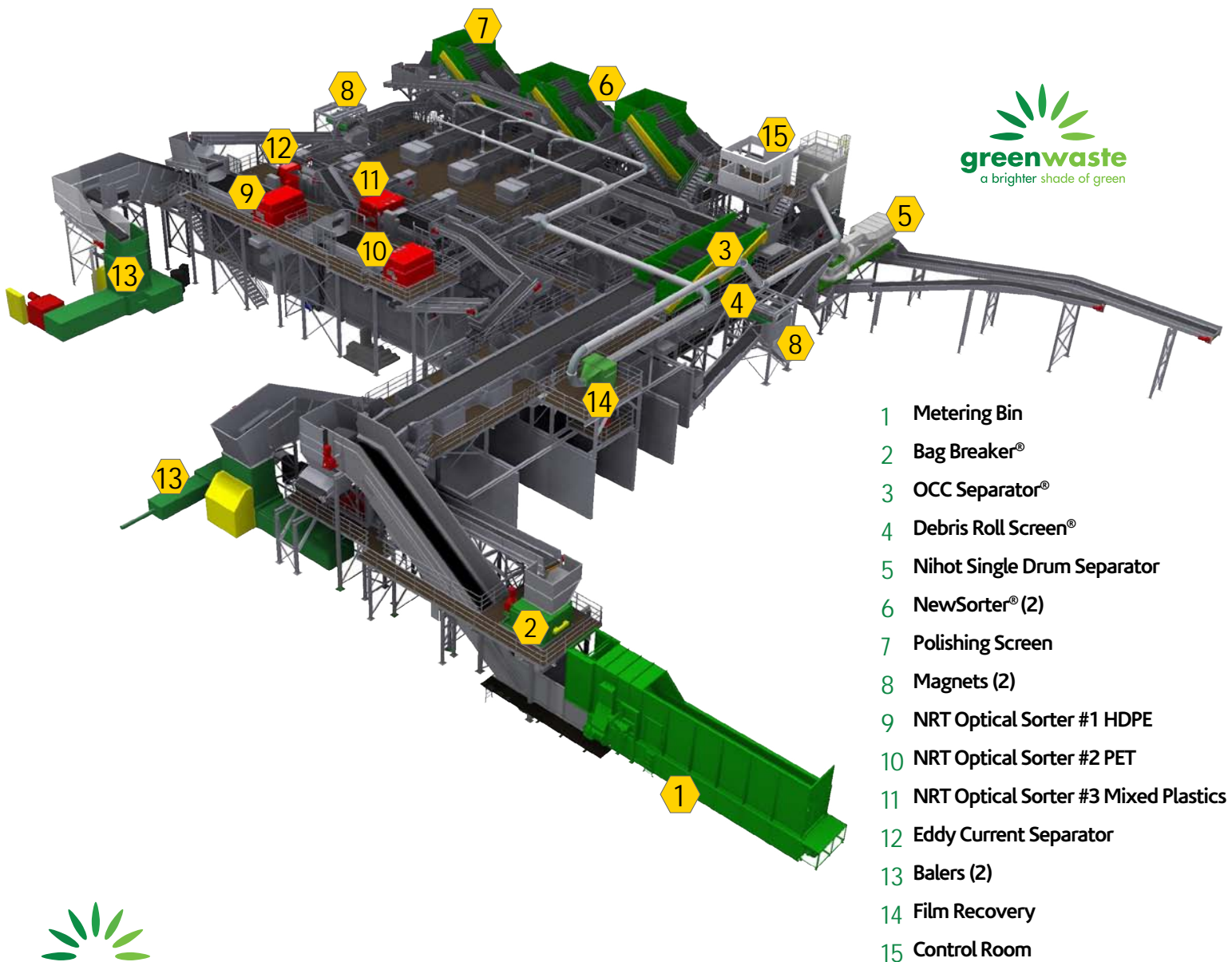
The ability to process more material was important to GreenWaste as it plays into the company's big-picture strategy; more throughput, increased diversion and higher quality end products would allow GreenWaste to seek out and procure more processing contracts with various jurisdictions. Recovery is important to GreenWaste and its customers and stakeholders, which include the local community and its legislators. What is unique about the GreenWaste system is that it was designed as a 35 tph system, but is currently processing 50+ tons of commercial and residential single-stream material per hour, which exceeds expectations by more than 43%.



## SYSTEM LAYOUT

GreenWaste's 130,000-square-foot MRF facilities are powered in part by 80,000-square-feet of power panels. The new single-stream system is housed in a pre-existing building. The layout is efficient, functional and safe. The main sorting level houses pre and post-sort areas as well as equipment access points and wide wrap-around walkways. The control cabin is located above this level, providing excellent visibility of the system and its employees.

State-of-the-art screen, air, optical and other technologies process 145,000 annual tons of commercial and residential single-stream recyclables to recover more than 98% of available commodities, including advanced technologies to aggressively target and recover plastic film and glass—materials that some processors actively avoid.



## STEP BY STEP

The system's robust infeed is designed to prepare the potentially troublesome material stream for effective downstream recovery. The commercial and residential loads include bagged material and a high glass content. A BHS Bag Breaker® opens bags without damaging commodities, while the hardened steel discs of the OCC Separator® and Debris Roll Screen® quickly remove glass from the system. The 2" minus glass-rich stream passes through a magnet to remove any metals before Nihot's Single Drum Separator (SDS) Glass Clean-up system removes glass from lighter materials, such as grit, bottle caps and shredded paper.

GreenWaste's screen line is more advanced than the company's previous systems. Wider NewSorter and Polishing Screens (144" instead of 96") process more material more effectively, and variable Inter-Face Openings (IFOs) and screen angles adjust with changing material streams and processing needs. The container line optical units eject bottles in flight, which effectively eliminates recovery loss from bottles rolling and increases the signal strength on the abundant thin-wall containers. To recover plastic film, a Nihot Rotary Air Separator pneumatically transfers film for baling.



**Metering Bin**  
Provides an even, steady flow of material into the system.



**Bag Breaker**  
Opens bags without damaging commodities



**OCC Separator®**  
Separates cardboard from paper, containers and fines; breaks glass.



**Debris Roll Screen® (under OCC Separator®)**  
Breaks glass and separates fines (including glass) from paper and containers

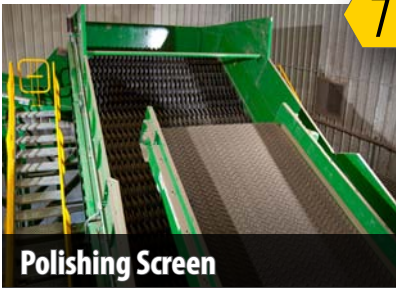


**Nihot Single Drum Separator**  
Separates glass from fiber fines



**NewSorters® (2)**  
Separates newspaper from mixed paper and containers

## STEP BY STEP



7

**Polishing Screen**

Separates into three fractions: mixed paper, containers, fines



8

**Magnets (2)**

Captures ferrous metals



9

**NRT Optical Sorter #1**

Uses near-infrared technology to separate HDPE plastics



10

**NRT Optical Sorter #2**

Uses near-infrared technology to separate PET plastics



11

**NRT Optical Sorter #3**

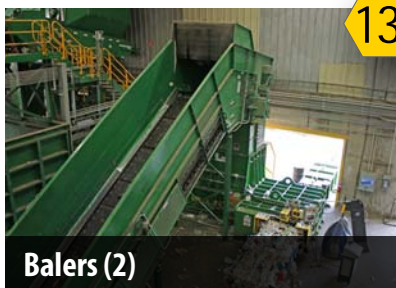
Uses near-infrared technology to separate mixed plastics



12

**Eddy Current Separator**

Separates aluminum cans from material stream



13

**Balers (2)**

Compresses final products into bales



14

**Film Recovery**

Plastic film is pneumatically conveyed to a Nihot Rotary Air Separator then stored in a bunker for later baling.



15

**Control Room**

Monitors and controls system including motors, electricity levels & speed. Provides operator an unobstructed overview.



## STATE-OF-THE-ART TECHNOLOGY

To reach throughput, recovery and uptime goals while processing a diverse range of commercial and residential single-stream materials, GreenWaste sourced the most advanced technology available. It is deployed abundantly and strategically with the flexibility to guarantee recovery for years to come.

### Commitment to Recovery

This system contains more technology than one would find in an average single-stream system, which allows GreenWaste to process a wider range of materials while capturing a very high percentage of recyclables. Glass and plastic film do not have to be collected separately or with special programs if the correct equipment is in place – GreenWaste is committed to processing these types of materials, and the right equipment is in place to ensure recovery with more than 90% uptime by effectively processing them.

### Controls

The controls system is the brains and nervous system of the MRF. Due to rigorous in-house testing, best-in-class equipment and expert design, BHS controls work from startup throughout the life of the system.

### Real Time Control, Connectivity & Reporting

The Supervisory Control and Data Acquisition (SCADA) provides operators the ability to control motors, electricity levels and speed manually or in pre-set automatic modes. GreenWaste can adjust shifts, modes and start-up time and electricity levels. Real-time information on tonnage (from GreenWaste's infeed scale), bale weight, uptime, faults, power usage and labor is provided.

This information is available on-demand and also automatically emailed in a daily report. Both GreenWaste and BHS experts use this information to track performance, analyze trends and further optimize the system and its operations. It's accessible for remote access and diagnostics for immediate service needs, and NRT Connect™ even sends automatic alerts to NRT's service team for attention.

### Mobile Control

The system controls are also operated by GreenWaste's supervisors with mobile tablets. For safety reasons, this is performed only for maintenance. The benefits of being able to control a piece of equipment while at the equipment's location allows the GreenWaste team to quickly service the system without having to communicate back-and-forth to the control room. As a safety precaution, if the tablet loses its signal or runs out of battery, power to the system is shutoff.



## ENVIRONMENTAL PROTECTION & IMPACT

Being “a brighter shade of green” is the GreenWaste philosophy in all areas of business and all aspects of operations. GreenWaste prioritizes sustainability and maximum resource recovery. As part of GreenWaste’s commitment to reducing the carbon footprint of collection operations, its new fleet of collection vehicles is fueled with either Compressed Natural Gas (CNG) or biodiesel (B20). The operations team and drivers minimize vehicle emissions and increase operational efficiencies by carefully and strategically routing vehicles, reducing vehicle miles traveled, and minimizing idle time.



80,000 square feet of solar panels power a third of the MRF's electrical needs

GreenWaste is recognized as a leader in creative and innovative waste diversion through the recovery of recyclable and organic materials from the waste stream. In addition to its diversion efforts, sustainable green principles are woven into all aspects of GreenWaste’s business. GreenWaste has developed and implemented a company-wide Environmentally Preferable Purchasing Policy, and has received or is actively pursuing Green Business Certification at all eligible locations. GreenWaste is also certified as Climate Registered, having voluntarily and openly reported its carbon footprint through The Climate Registry in past years. GreenWaste publicly reports all greenhouse gas (GHG) emissions in order to reveal the climate impact of collection and processing operations, and to help develop strategies towards becoming a more environmentally sustainable company.

**Water Conservation:** GreenWaste’s state-of-the-art biodigester at the GreenWaste MRF processes all wash water prior to discharge to the sanitary sewer. GreenWaste’s older wash pad did not require replacement; however, the system was upgraded to ensure the wash pad operations were not impacting the local water treatment plant and, ultimately, the San Francisco Bay. GreenWaste’s wash pad and biodigester ensure that zero pollutants are discharged from its washing operations.

## RECYCLING PROGRAM IMPACT & MERITS

GreenWaste prioritizes its “highest and best use” philosophy to its own business practices and encourages subcontractors to adopt and implement the same philosophy. As an environmentally responsible and sustainable company, GreenWaste works to find highest and best use solutions for recyclable materials and organics, donates to reuse centers, prefers to market materials domestically, and gives preference to these markets in order to reduce the carbon footprint of shipping commodities internationally, thereby also supporting the local economy.



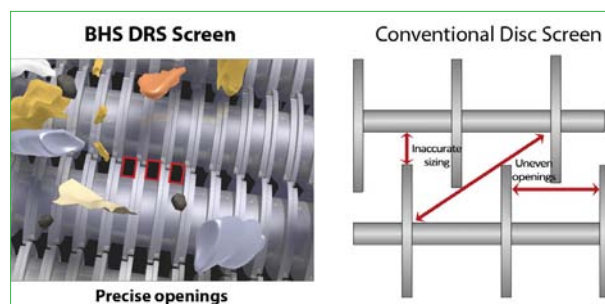


## USE OF EQUIPMENT & TECHNOLOGY

This system deploys state-of-the-art sorting technology—since the last system BHS supplied to GreenWaste, the company has committed to innovation and development of its technology. As experienced operators, this has allowed GreenWaste to push the system to its limits, operating the 35-tph designed system at 50-tph and above (143% designed capacity) while maintaining more than 90% uptime, 98% recovery and increased levels of product purity. Many of the system’s advanced features have been discussed to describe the design and layout—this section will further explain the most important technologies.

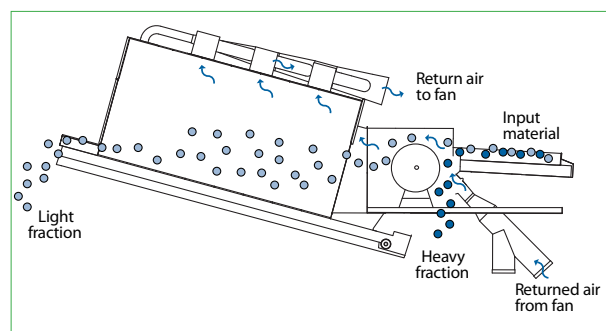
### BHS Tri-Disc™ Technology

Proprietary BHS Tri-Disc technology is the foundation of the five screens in this system, and responsible for separating OCC, news, mixed paper, containers and glass-rich fines. The Tri-Disc’s unique shape creates a precise IFO for consistently accurate sizing. The aggressive, wavelike agitation imparted on material provides a high degree of sorting efficiency in a relatively small and energy-efficient footprint. Patented gear timing and variable speed drives clear any potential jams and allow for fine-tuning for various processing needs. Hardened steel discs of the OCC Separator and the DRS quickly break and remove glass from the system. Uniquely, Tri-Discs on NewSorter and Polishing Screen quickly move fiber up and over the screens, while a ballistic effect will send even flat bottles tumbling down.



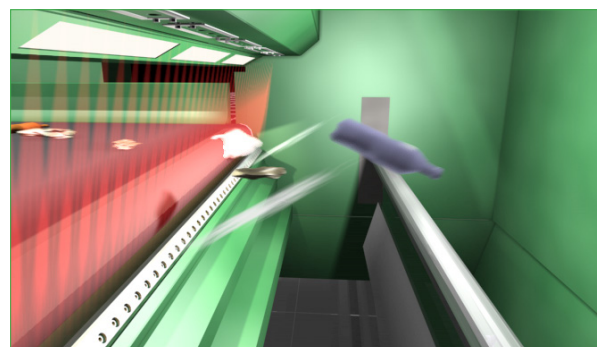
### Nihot Air Density Technology

During the company’s 70-year history, Nihot has mastered air separation. The SDS 650-i at GreenWaste had widespread success in markets throughout the world and is the leading solution for producing a highly-marketable glass product. The equipment is extremely flexible, allowing operators to fine-tune separation to meet their needs. The equipment is different in that it uses suction to pull lighter materials into the expansion chamber, creating a steady, even flow of air across the material width. In a closed loop, air is recirculated and dust filtered, promoting a clean working environment. In addition to the unit’s precise and flexible separation, it is extremely dependable and requires almost zero maintenance.



### NRT Optical Sorting

NRT invented In-Flight Sorting® technology, which detects and ejects materials in flight. This is hugely advantageous, eliminating loss due to bottle roll and conveyor belt interference, while also enabling transmissive detection. Transmissive detection, whereby containers pass between the light source and detection source, provides a 100x stronger signal than reflective detection. Transmissive detection, combined with PET Boost™ allows GreenWaste to accurately detect and eject full-label containers,

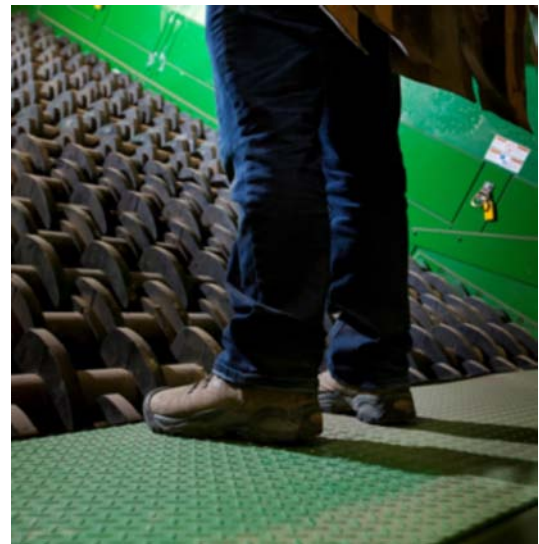


*(Technology video links are on Page 15, Supplemental Information)*

## EQUIPMENT: SAFETY FIRST

BHS' Product Development Manager, Jim Webb, is a member of the American National Standards Institute (ANSI) Z245 Accredited Standards Committee as well as two subcommittees, including 245.41, responsible for "Facilities for the Processing of Commingled Recyclable Materials – Safety Requirements." BHS not only follows OSHA and the more stringent ANSI requirements, but is a change leader and driving force for increased safety. The latest safety improvements are featured prominently in this system including:

- The system was designed with the safety of maintenance workers in mind. The screen angles are adjustable during operations to maximize performance, but in maintenance mode, they automatically lock in place at the lowest incline, providing the safest screen deck possible. There is also a 900-square-inch rear access door and platform which automatically declines into place to provide a safe spot to stand and store tools, as well as multiple accessible anchor points.
- Ergonomic sort stations and conveyors allow sorters to slide material, rather than lifting over a flat edge; extra-large bins eliminate material jams.
- Auto-close gates on ladders and protective cages at every applicable location – OSHA safety standards require cages on ladders above 20 feet – at GreenWaste, ladders are caged at 12 feet and higher.
- Platforms and walkways feature continuous handrails. Wide platforms provide wrap-around access to equipment and safe exit routes.
- Guards cover all rotating shafts on drive and non-drive sides and all conveyors below 7 feet are guarded. All conveyor 'nip points' are guarded.
- Electrical panels are accessible for diagnostics without opening the doors, limiting exposure to the electrical system. Controls feature NEMA 12 safety enclosures with 3-phase indicators on outside panels.
- Emergency stops to all conveyors are strategically located throughout the plant within 3-feet of a manned station. Emergency stops meet or exceed ANSI standards.
- Disconnects for every motor are located in easily accessible areas. All doors to equipment feature interlocks that will stop equipment and trigger an alarm if a door is opened during operations.
- Climate-controlled control room is located above sorters and has excellent visibility of operations.



## WORKER HEALTH & SAFETY

GreenWaste enforces an established Health and Safety Program to ensure all workers operate in safe working environments. GreenWaste strives to remain in full compliance with all worker safety and California Occupational Safety and Health Administration (OSHA) requirements. In addition to the Health and Safety Program, in which the Operations Manager and MRF Supervisors regularly perform worker safety and compliance inspections, qualified safety consultants provided by GreenWaste's insurance company are periodically retained to review procedures and provide detailed inspections of facilities and equipment. Recommendations from these inspections are implemented to reduce any potential threat of worker injury.

### Safety & Training Program Outline

New employees are required to read and show comprehension of the GreenWaste Employee Handbook; Safety Policies & Procedures Manual Injury and Illness Prevention Program (IIPP).

Once the new employee completes initial training and has demonstrated a thorough understanding of GreenWaste's safety training documents, the employee's supervisor conducts an evaluation and daily assessment to ensure all of the safety procedures are followed.

Managers and supervisors hold mandatory monthly safety meetings to discuss various OSHA topics and how to prevent incidents and accidents.

All required safety postings and signage are displayed in employee areas, and include miscellaneous safety reminders, upcoming safety events, and employee rights/benefits information.

### Equipment safety considerations

All equipment meets all ANSI and OSHA safety requirements. In addition, the GreenWaste MRF contains various safety features including continuous handrails; walkways & platforms, emergency stops (buttons and pull cords); equipment access/guarding and lockout/tagout procedures. For more, see Equipment Safety on Page 9.



## MEASURING SUCCESS

The GreenWaste Single Stream system is exceeding expectations in several key areas:

- The projected recovery rate for the new Single Stream system was 80%. We are achieving a **98% recovery rate** for single-stream recyclables.
- The system is producing **cleaner, more marketable products** (plastics no longer contaminate the mixed paper line).
- Throughput for single-stream recyclables is 50+ tph, **43% higher than the system design of 35 tph**.
- During the past 12 months, MRF revenues have **exceeded costs by 21%**.

GreenWaste is a private company and ROI specifics are not available. By all accounts, this system is performing well ahead of pro-forma performance expectations. From 2010 to 2017, GreenWaste commodity sales have increased by 241%. The average revenue per ton sold of recyclable commodities is \$166.74. Despite running the system well above the engineered capacity, the system is producing high quality and marketable recyclables which is now as important as ever (more on this is available in the Recycling Today feature linked [here](#) and in the appendix). With the onset of China's Operation Green Fence and later National Sword, in which China is implementing higher standards on imports of recycled material, GreenWaste has maintained a steady outflow of material. Standing the test of time, the single-stream system has shown remarkable processing capacity. The chart to the right has been pulled from the SCADA system and GreenWaste's infeed scales. Process downtime relates to the system's availability. Downtime relates to stoppages relating to the equipment and system, rather than operational downtime which relates to meetings and breaks overextending, for example.

Year	Average Process Downtime	TPH
2015	6.30%	47.3
2016	4.30%	48.64
2017	6.10%	56.8

Below are excerpts from third party Sloan Vazquez LLC's report to the City of San Jose. [Link to Report.](#)

- *The maintenance practices for this plant are outstanding.*
- *The structure is well lit, well ventilated, and readily accommodates easy access for maintenance and housekeeping.*
- *Container post-sorters (after the magnet, eddy-current separator, and optical sorters) creating high-quality plastic, aluminum, and tin/steel products for domestic and export markets.*
- *Because of the effectiveness of the MRF processes and systems, outbound commodities are consistently clean, with minimal prohibitives, outthrows or other contaminants.*
- *The GreenWaste MRF sortline is processing 45 (+)tons per hour, which exceeds the manufacturer's designed capacity. Currently deploying 30 sorters (28 sortline +two floor), the plant is processing at a rate of 3,000 pounds per sorter per hour, which is at the high end of industry standard. Product quality, even while operating at 45 TPH, is above average.*

## CUSTOMER SERVICE

GreenWaste MRF customers include jurisdictions, schools, and other haulers. We foster customer service in several ways.

### Onsite educational room and tours:

GreenWaste Environmental Outreach Coordinators (EOC) give presentations and provide tours of the GreenWaste MRF to promote recycling awareness and goodwill and educate the community and current and prospective customers on how their recyclables are processed.

### Waste audits are performed per contracts and per request at the MRF

Material and residue percentages are accurately allocated to each jurisdiction or customers based on audits conducted prior to processing their material. GreenWaste has a scale system (registered with the Santa Clara County Department of Weights and Measures, regularly maintained to ensure reliability and proper function), database, and operational procedures in place to appropriately allocate to each customer. Jurisdictional representatives are invited to participate in and/or oversee the audit for their area(s). The entire MRF is shut down, so that only that jurisdiction's materials are run through and the resulting material allocation and residue percentages are tracked, recorded, and applied until the next audit is performed. Otherwise, a customer's residue is based on tonnage percentage and the entire MRF's residue rate is applied.

GreenWaste has held long-term processing contracts with its customers. Exceptional recovery rates and an ability to accept various and increased amounts of materials has generated customer satisfaction for many years.



## PUBLIC ACCEPTANCE & COMMUNITY OUTREACH

GreenWaste provides detailed and interactive tours of its MRF. The GreenWaste educational center is ideal for accommodating younger children and educating them about the GreenWaste MRF. The center is modeled after a classroom and is located next to the processing buildings. Visitors are provided with personal protective equipment (PPE), including hard hats, safety vests, and ear and eye protection, and are advised ahead of time to wear comfortable, close-toed shoes. The tour guides communicate with visitors throughout the processing buildings via headsets. Visitors are briefed prior to the tour about safety, and are encouraged to ask questions and interact with the tour guide during the tour.



Additional public outreach is performed under GreenWaste collection contracts. The MRF is incorporated into all pieces in order to educate the serviced communities about what happens with the materials they place out for collection. Outreach materials include: newsletters, posters, recycling guides, the GreenWaste website, social media, tabling and sponsoring of community events, library readings, school presentations, kids coloring and activity books, and participation in educational programs. GreenWaste seeks to inspire environmental stewardship in future generations and recognizes the powerful role that schools play in promoting awareness and fostering an environmental agenda within local communities. GreenWaste EOCs conduct site visits to schools and businesses to encourage participation in recycling programs, perform waste audits, and customize their program to fit their needs. Additionally, for schools, a GreenWaste recycling truck and driver participate in presentations. Students view the truck from the driver's perspective, ask questions, and learn about the importance of recycling and composting.



## FACILITY CLEANLINESS & AESTHETICS

GreenWaste must comply with minimum standards and conditions of its Solid Waste Facility Permit, Special Use Permit, and all other State and local laws. Building floors, equipment, and all entrances and exits are cleaned daily to prevent litter, off-site migration of waste materials, and the propagation of flies, rodents, and other vectors. An **Odor Impact Minimization Plan** has been in place for many years. All operations occur indoors, and there is an odor control misting system installed throughout the buildings and over the bunker areas. All local and State requirements regarding odor control measures, personnel health and safety, and sanitary facilities are met or exceeded.

**GreenWaste's Dust Minimization Plan** includes an overhead misting system and manual water spray. Mitigation measures are implemented, including:

- All loads must be covered;
- A street sweeper is used daily around facility;
- 5 mph speed limits are enforced on site.

# SUPPLEMENTAL INFORMATION

T&E Committee: 12/07/2015  
Rev: (4) 4  
Attachment B

## MRF Equipment Condition Report and Evaluation of MRF Operations

### Material Recovery Facilities Serving the City of San Jose

Presented to:  
**City of San Jose**

Submitted by:  
**Sloany AZQUEZ, LLC**  
Municipal Solid Waste & Recycling Advisors  
3002 Dow Avenue, Suite 118  
Tustin, CA 92780  
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November 30, 2015

[LINK TO MRF REPORT](#)



## QUALITY UNCOMPROMISED

GreenWaste Recovery's new single-stream materials recovery facility provides the San Jose, California-based recycling firm with a higher throughput and consistent quality.

Ricardo Lopez had one goal in mind for a new single-stream materials recovery facility (MRF) at GreenWaste Recovery Inc. Lopez, the MRF manager for the San Jose, California-based recycling firm, wanted to increase throughput to keep up with additional material, while at the same time maintain high quality.

Lopez for GreenWaste Recovery, he didn't have to look hard for a partner to help him achieve those goals. The company had been running a two-line system for single stream and mixed waste from Eugene, Oregon-based Bulk Handling Systems (BHS) since 2008.

"The system that BHS installed was a 3D-ton system, however I am able to exceed 47 tons per hour."

—Ricardo Lopez, GreenWaste Recovery

GreenWaste Recovery's new single-stream materials recovery facility provides the San Jose, California-based recycling firm with a higher throughput and consistent quality.

GreenWaste Recovery's new single-stream materials recovery facility provides the San Jose, California-based recycling firm with a higher throughput and consistent quality.

[LINK TO ARTICLE](#)

### MRF of the Month

#### GreenWaste Material Recovery Facility

It operates in the heart of Silicon Valley, home to high-tech computer companies, software manufacturers, space research institutions and even technology museums. So it makes sense the GreenWaste Material Recovery Facility would utilize advanced technologies in the recovery of residential and commercial materials.

"By investing in the best technology available we are able to stay at the forefront of recycling," Frank Weigel, GreenWaste Recovery's chief operating officer, stated in a press release. "We are able to capture a very high percentage of incoming materials that will be used to create new products. This system is another step forward in our commitment to maximize landfill diversion rates."

The 140,000-square-foot MRF in San Jose, Calif., uses three lines to sort materials: one single-stream line and two recovering materials from municipal solid waste. It expects to

**Technical Specifications**

**GreenWaste Material Recovery Facility**

**Location:**  
San Jose, Calif.

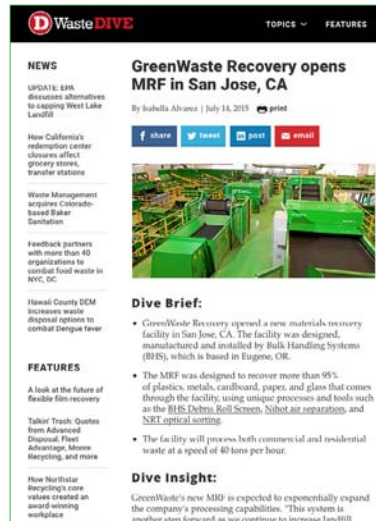
**Start-up date:**  
July 2008 for mixed-waste processing lines, July 2015 for single-stream line

**Number of processing lines:**  
One single-stream and two mixed-waste lines

**Throughput:**  
145,000 tons expected for single-stream line in 2016

**Residue rate:**  
5 percent for single-stream line, 20 percent for mixed-waste lines

[LINK TO ARTICLE](#)



**Waste Dive** TOPICS FEATURES

### GreenWaste Recovery opens MRF in San Jose, CA

By Isabella Alvarez | July 14, 2015

GreenWaste Recovery opened a new materials recovery facility in San Jose, CA. The facility was designed, manufactured and installed by Bulk Handling Systems (BHS), which is based in Eugene, Ore.

The MRF was designed to recover more than 95% of plastics, metals, cardboard, paper, and glass that comes through the facility, using unique processes and tools such as the BHS Drum Roll Screen, Nihot air separation, and NRT optical sorting.

The facility will process both commercial and residential waste at a speed of 40 tons per hour.

**Dive Brief:**  
GreenWaste Recovery opened a new materials recovery facility in San Jose, CA. The facility was designed, manufactured and installed by Bulk Handling Systems (BHS), which is based in Eugene, Ore.

The MRF was designed to recover more than 95% of plastics, metals, cardboard, paper, and glass that comes through the facility, using unique processes and tools such as the BHS Drum Roll Screen, Nihot air separation, and NRT optical sorting.

The facility will process both commercial and residential waste at a speed of 40 tons per hour.

**Dive Insight:**  
GreenWaste's new MRF is expected to exponentially expand the company's processing capabilities. "This system is another step forward as we continue to increase landfill

[LINK TO ARTICLE](#)



**Waste Management World** Tuesday, 2016-04-19, 22:39 | Subscribe to our newsletter

### 40 TPH materials recovery facility (MRF) opened in San Jose

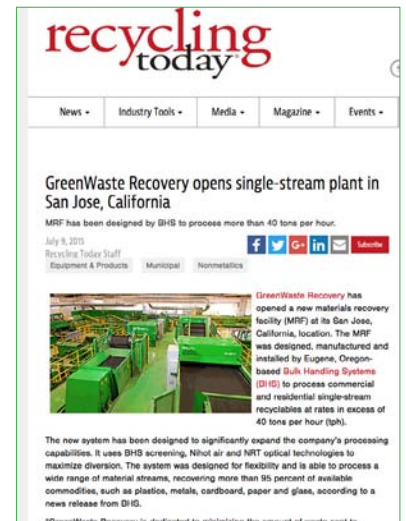
Municipal solid waste company GreenWaste Recovery has opened a new materials recovery facility (MRF) at the company's San Jose facility, California.

**You may also be interested in this**

AL387m Purchase Brings 750,000 New Customers  
SUEZ Acquires Australian Waste & Recycling Firm Perthwaste  
70 Year Old Hidden Environmental Taint Over  
Southwest Waste & Recycling Firm Sinks Group Expands with Acquisition  
Revenues from Waste Rise Despite Strong Headwinds  
Waste Posa ZSNG Results - Revenue Up to Almost to ZSNG

The technology package includes a BHS Bag Breaker to open bags from commercial sources without damaging commodities, a Nihot Single Drum Separator to recover glass, BHS 144" wide adjustable-angle screens with rear access, and NRT Pet Boost to maximize the recovery of wet and thin-walled PET plastics. The system is also designed to recover plastic bags using air and anti-wrap screen technologies.

[LINK TO ARTICLE](#)



**recycling today**

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### GreenWaste Recovery opens single-stream plant in San Jose, California

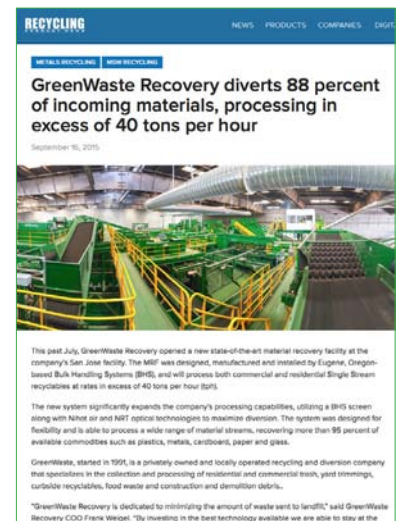
MRF has been designed by BHS to process more than 40 tons per hour.

July 9, 2015  
Recycling Today Staff  
Equipment & Products Municipal Nonmetals

GreenWaste Recovery has opened a new materials recovery facility (MRF) at its San Jose, California, location. The MRF was designed, manufactured and installed by Eugene, Oregon-based Bulk Handling Systems (BHS) to process commercial and residential single-stream recyclables at rates in excess of 40 tons per hour (TPH).

The new system has been designed to significantly expand the company's processing capabilities. It uses BHS screening, Nihot air and NRT optical technologies to maximize diversion. The system was designed for flexibility and is able to process a wide range of material streams, recovering more than 95 percent of available commodities, such as plastics, metals, cardboard, paper and glass, according to a news release from BHS.

[LINK TO ARTICLE](#)



**RECYCLING** NEWS PRODUCTS COMPANIES DIGIT

### GreenWaste Recovery diverts 88 percent of incoming materials, processing in excess of 40 tons per hour

September 16, 2015

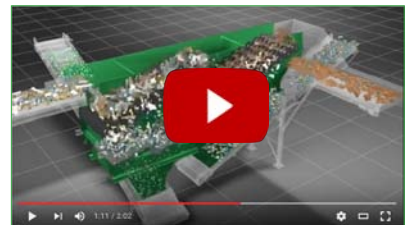
This past July, GreenWaste Recovery opened a new state-of-the-art materials recovery facility at the company's San Jose facility. The MRF was designed, manufactured and installed by Eugene, Oregon-based Bulk Handling Systems (BHS), and will process both commercial and residential Single Stream recyclables at rates in excess of 40 tons per hour (TPH).

The new system significantly expands the company's processing capabilities, utilizing a BHS screen along with Nihot air and NRT optical technologies to maximize diversion. The system was designed for flexibility and is able to process a wide range of material streams, recovering more than 95 percent of available commodities such as plastics, metals, cardboard, paper and glass.

GreenWaste, started in 1997, is a privately owned and locally operated recycling and diversion company that specializes in the collection and processing of residential and commercial trash, yard trimmings, curbside recyclables, food waste and construction and demolition debris.

"GreenWaste Recovery is dedicated to minimizing the amount of waste sent to landfill," said GreenWaste Recovery COO Frank Weigel. "By investing in the best technology available we are able to stay at the

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