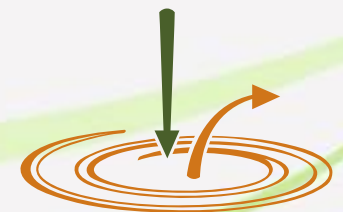


Emerald Coast Utilities Authority

Biosolids Composting Facility

**2016 R.F.T.E.S.
Visual Submission**

Nominated by Kessler Consulting, Inc.

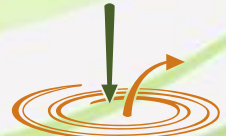


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ECUA's Mission Statement

The Mission of the Emerald Coast Utilities Authority is to promote the quality of life of the Emerald Coast by providing water, wastewater, and sanitation services in an effective and efficient manner.

ECUA provides water and wastewater services to Escambia County residents and collects garbage, recyclables, and yard waste from Escambia and Santa Rosa County residents.



Organics Management Approach

Biosolids

- Generates 120 tons of biosolids per day.
- Was heat drying or land applying its biosolids.
- These techniques were expensive - about \$35/ton of biosolids.

Yard Waste

- Collects about 26,000 tons of residential yard waste every year.
- Was paying \$27.69/ton to dispose of yard waste in Escambia County's landfill.

ECUA needed and wanted to identify a more cost-effective and environmentally-responsible solution.



Compost Facility Development

- **September 2010:** Central Water Reclamation Facility (CWRF) opens
- **2011:** Study conducted to determine feasibility of a compost facility at the CWRF
- **2014:** Plans developed for the compost facility
- **August 2014:** Compost facility receives permit from the FDEP, construction commences
- **October 2015:** First test windrows are constructed
- **November 2015:** Employees receive US Composting Council's (USCC) compost operator training
- **December 2015:** Full scale operation commences

Facility Description

- Located adjacent to the CWRF – to maximize operational efficiency
 - No need to transport biosolids
 - Isolated from neighbors
- Total site is 24.5 acres
- Current weekly capacities:
 - 400 tons of biosolids
 - 500 tons of yard waste
- Already in the process of doubling facility capacity

Location



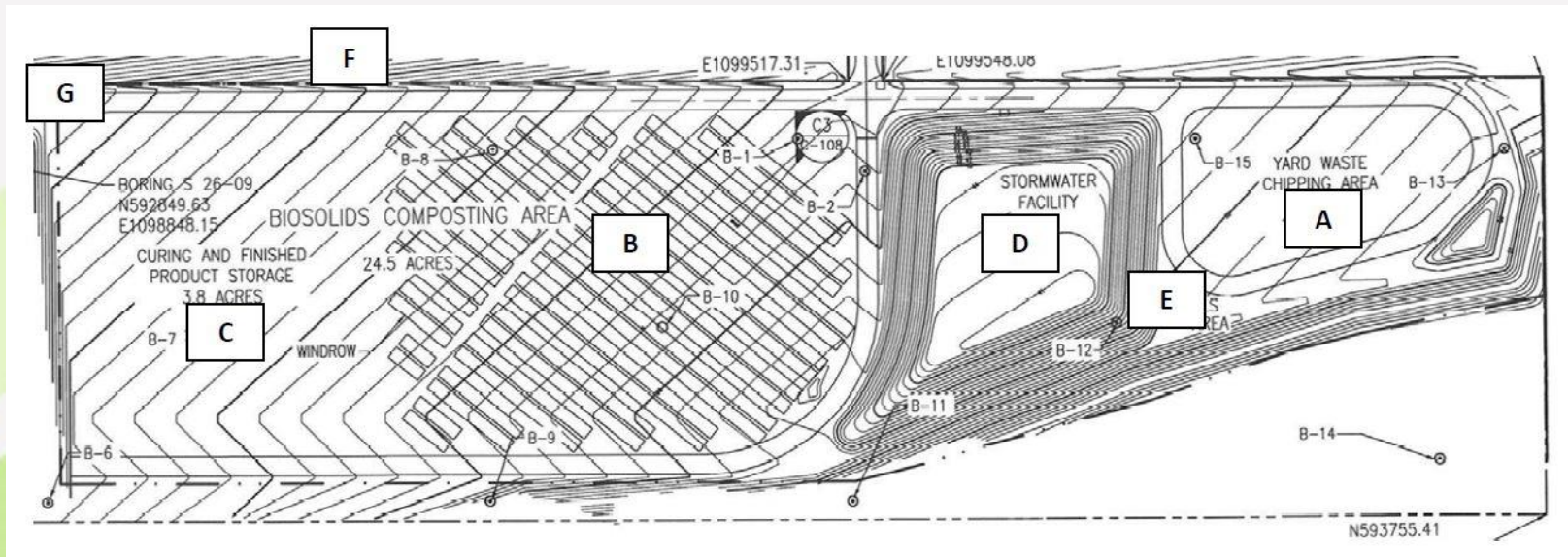
CWRF

Compost
Facility

Address: 2980 Old Chemstrand Rd.
Cantonment, FL 32533

Site Plan

- A) Grinding Area
- B) Active Compost Area
- C) Curing and Compost Storage Area
- D) Stormwater Facility
- E) Lift Station
- F) Perimeter Berm
- G) Entrance Road

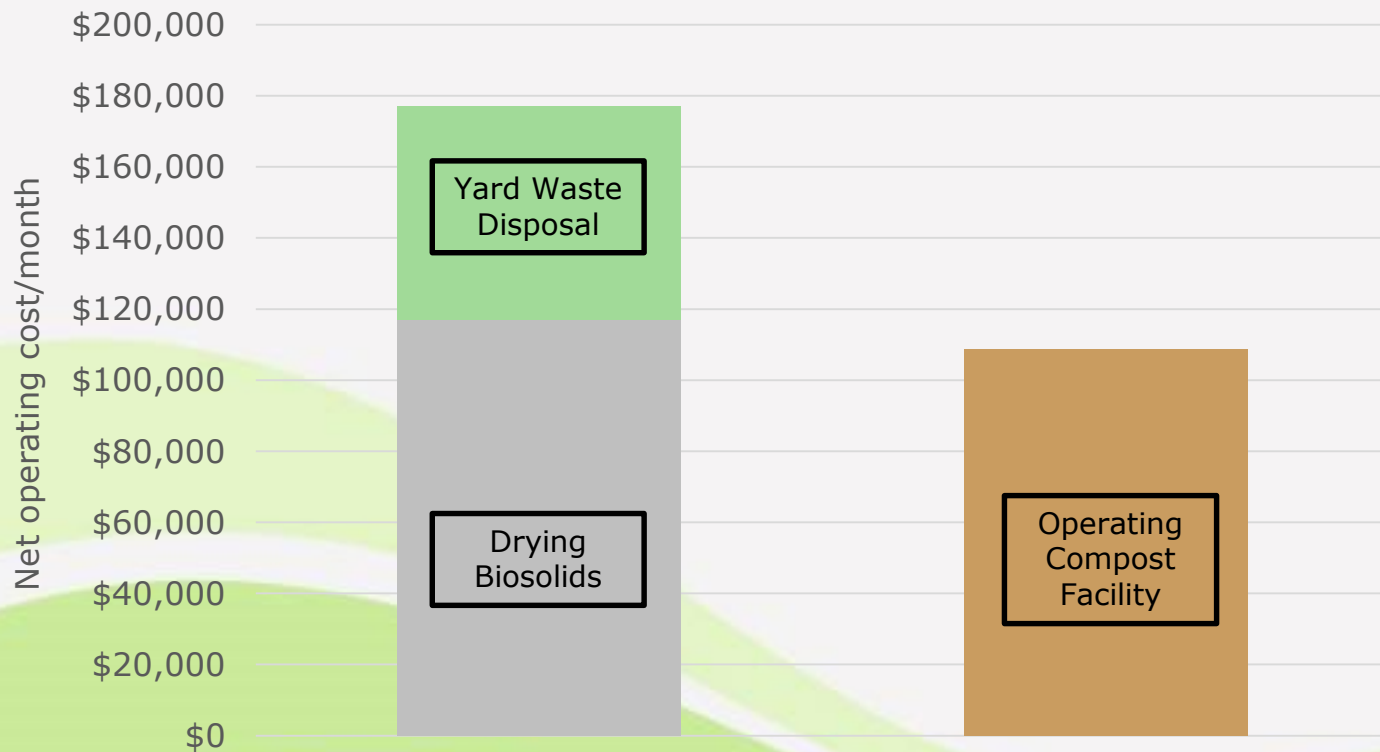


Compost Method

- Modified Static Aerobic Pile (MSAP) composting method
 - Utilizes a microbial inoculant to simulate a hybrid of the turned windrow and static aerated pile methods
 - A capping layer insulates inoculant allowing the windrow to cook from the inside out.
 - Requires significantly less turning than traditional windrows
- Benefits include:
 - Cost savings
 - Reduced odors
 - Space efficiency
 - Beneficial microorganisms

Operational Cost Savings

Composting saves nearly \$70,000 per month.



Net operating cost is operating costs minus revenue from sale of dried biosolids or compost.

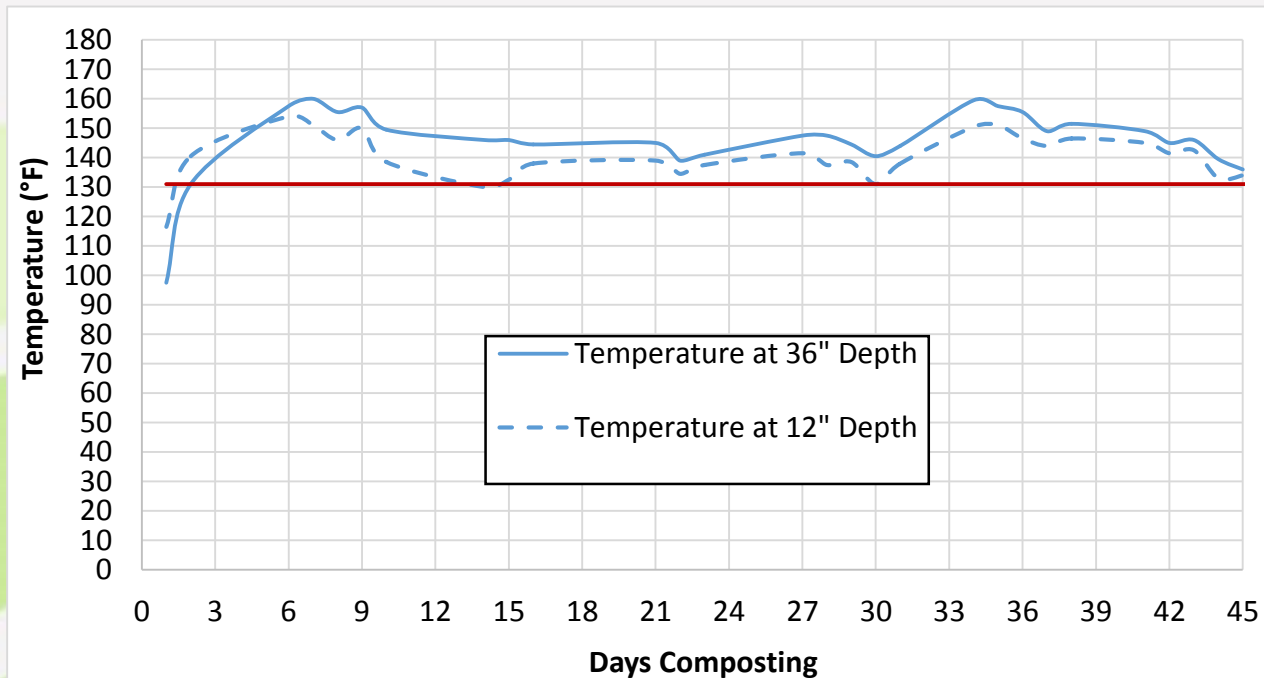
Regulatory Compliance

Compost meets all requirements of Florida's biosolids compost regulations.

- Pathogen reduction: Temp and test
- Vector attraction reduction: Temp
- Class AA parameters: Temp and test
- Monitoring: Temp and test
- Distribution: Reporting

Temperature Monitoring

- Temperatures monitored with remote sensing thermometers.
- To meet state requirements, must be over 131°F for 3 consecutive days at 12" depth and for 15 consecutive days at 36" depth.
- ECUA has consistently met this, as depicted below.



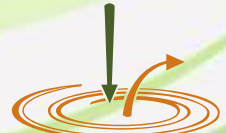
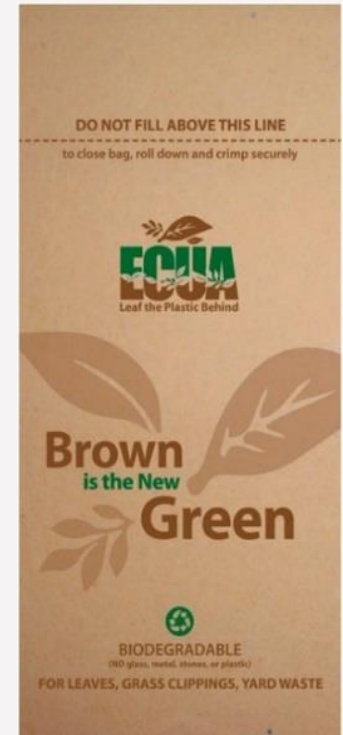
USCC® STA® Registered Facility

- Compost is certified under the USCC's Seal of Testing Assurance (STA) program.
- The STA program is a compost testing, labeling, and information disclosure program.
- ECUA's compost is tested monthly at certified labs.
- Tests for nutrients, heavy metals, pathogens, and agronomic properties.
- Results are made available to end-users purchasing or using the material for quality control and utilization purposes.



Reducing Contamination for A Cleaner Product

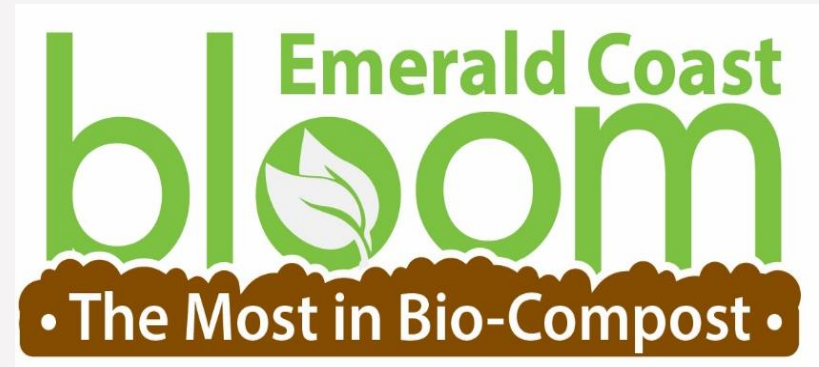
- High quality compost starts with a clean feedstock.
- Launched “Brown is the New Green” campaign.
 - Encourage customers to use paper bags or reusable containers instead of plastic bags for yard waste.
- Launched a year ahead of the startup of the compost facility.
- Designed and produced 72,000 bags.
- Bags distributed at local retailers and community events.
- Successful usage by residents.



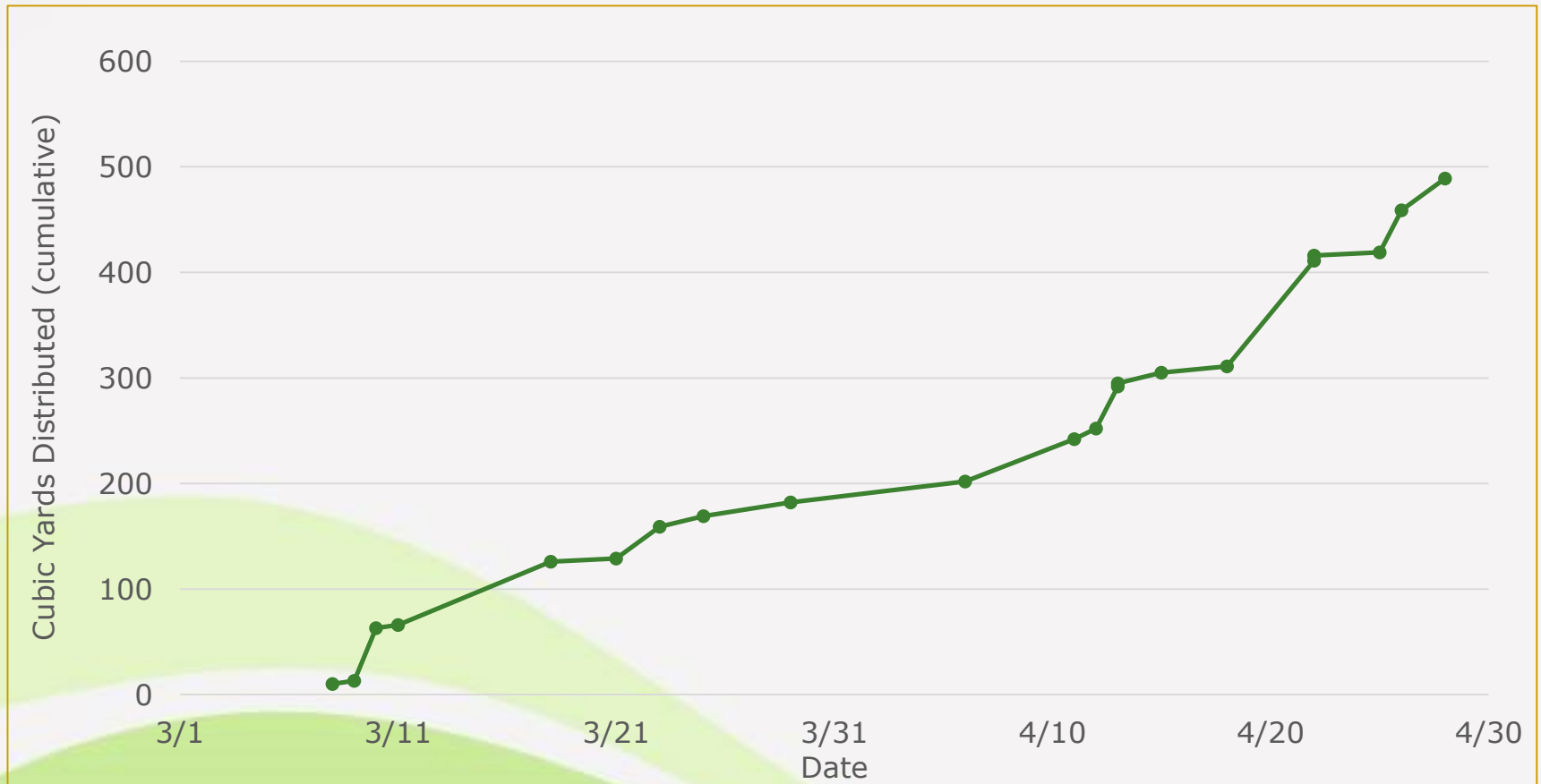
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Compost Marketing

- Compost is branded and marketing as *Emerald Coast bloom- the Most in Bio-compost*
- Working with a number of local end-users and trial partners:
 - Nurseries
 - Landscapers
 - Sod farms
 - Retail locations
 - Community gardens
 - Athletic fields



Compost Distributed in 41 Days



Total Cubic Yards: 489

Thank you!



Prepared and submitted by
Kessler Consulting, Inc. for ECUA



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Media Portion: Supplemental Photos and Video

Ground yard waste ready to be mixed with biosolids for composting



Windrows during active compost



ECUA's screener is used to separate fine material (finished compost) from larger, uncomposted material (overs). The screen also removes any lightweight, inorganic material, such as plastic film.



Screened, finished compost ready for distribution



Attendees at the open house for end users view a presentation on ECUA's compost process



Open house attendees watch ECUA's compost turner in action



Open house attendees get an up-close look at a windrow in active composting.



Overhead view of the Compost Facility (ECUA's Central Water Reclamation Facility is in the background)



Please click on the image below to link to a short video walkthrough of ECUA's biosolids composting facility.

