Blau Road Farm Composting Site

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vivaria ecologics

meet vivaria

vivaria's mission is to re-imagine food systems and how we approach food waste to create a more efficient, equitable, and cleaner future. ***Recapture waste, revitalize the soil, renew our world.***

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Site Location

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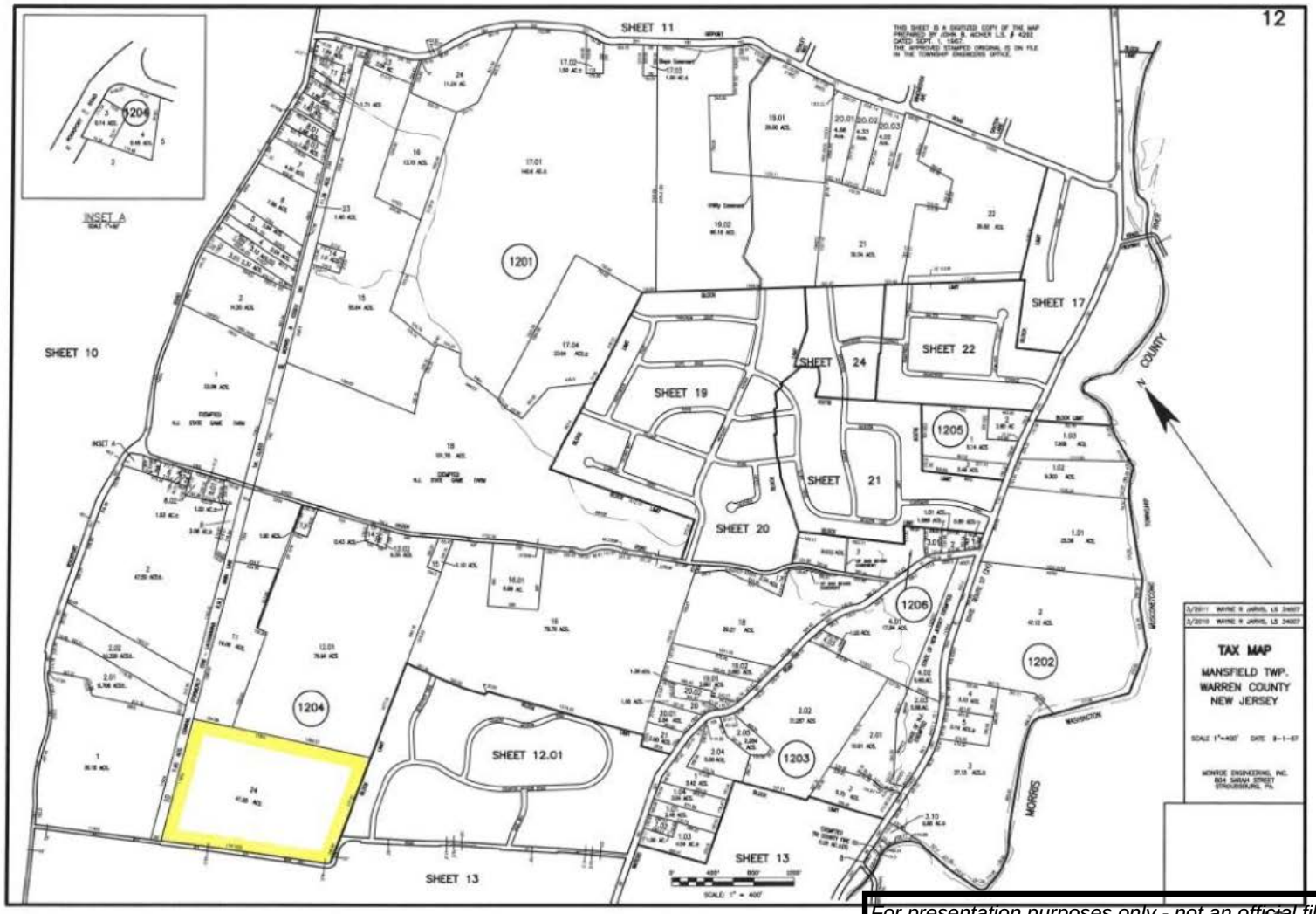
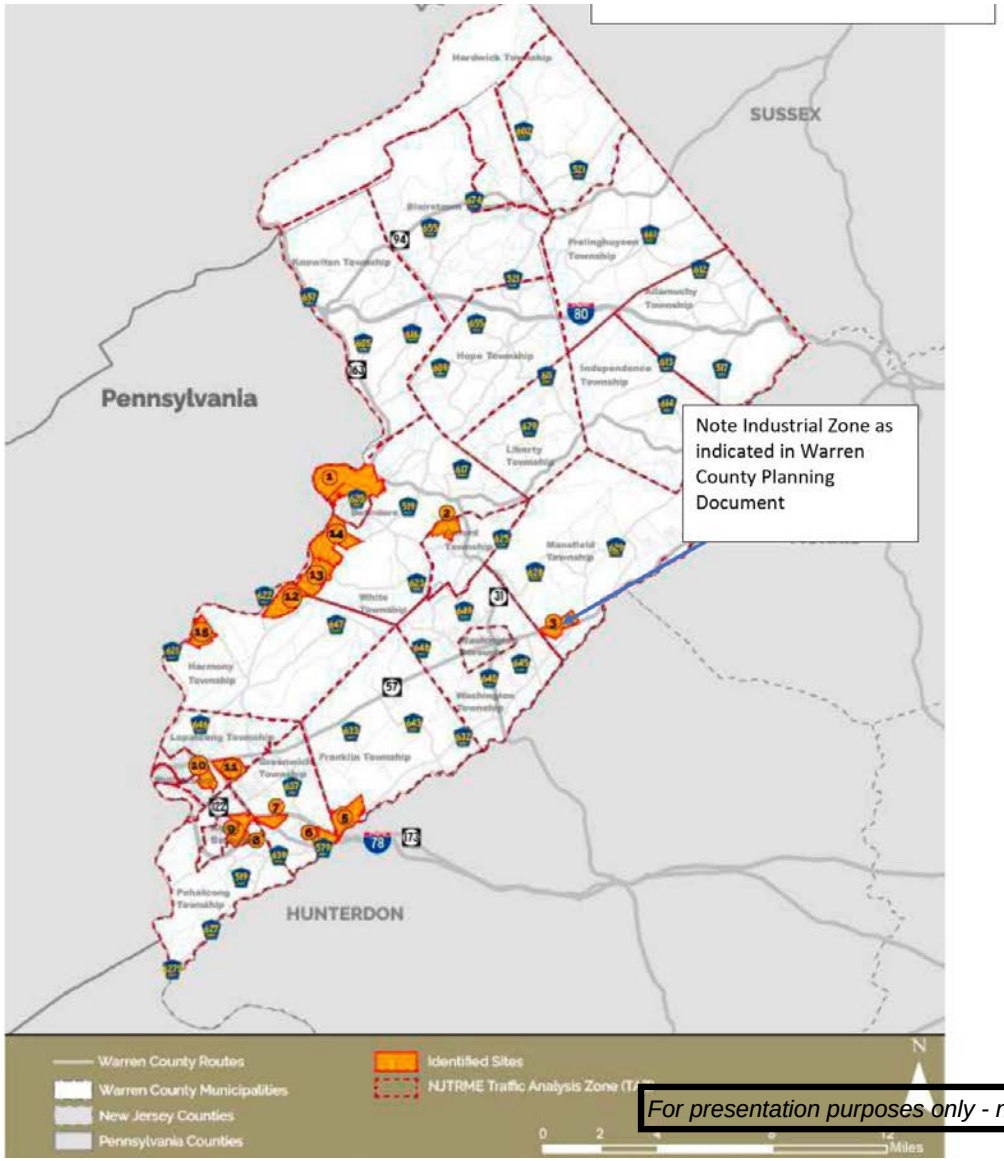
Tax Map

The site is zoned for industrial use.



Industrial Zones



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Project Overview

Our Vision

Filling an Unmet Need in Warren County

New food waste regulations in New Jersey require large producers of food waste to recycle food scraps. Currently, Warren County and the surrounding region do not have the needed capacity to meet food waste reduction targets.

Preserving Agricultural Heritage

The Blau Road Farm has been in our family since the 1960's and has remained a working farm since. Mansfield is home to a number of farms and beautiful open space. Our goal is to create new economic value while preserving agricultural heritage with a composting facility and farming operation.

Economic Development

Composting and food scrap recycling provides a low-impact, economic development opportunity.

Food Scrap Recycling Need

State law requires entities that produce over 52 tons of food waste per year separate and recycle their food waste. A detailed analysis identified only those generators located within Warren County and included those that generated 104 tons per year, twice the amount required for them to utilize a facility located within 25 miles of the Applicant's site. ***This data thus severely underestimates the need for this facility.***

Food Waste Generators in Warren County	Location Count	tons/wk/loc	tons/wk	tons/yr
Restaurants	1	4.0	4.0	208.0
Grocery Stores	5	6.0	30.0	1,560.0
Grocery Stores	2	12.0	24.0	1,248.0
Colleges & Universities	1	10.0	10.0	400.0
	9	32.0	68.0	3,416.0

For College/University, used estimate of only 40 weeks to account for breaks and summer.

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Site Design

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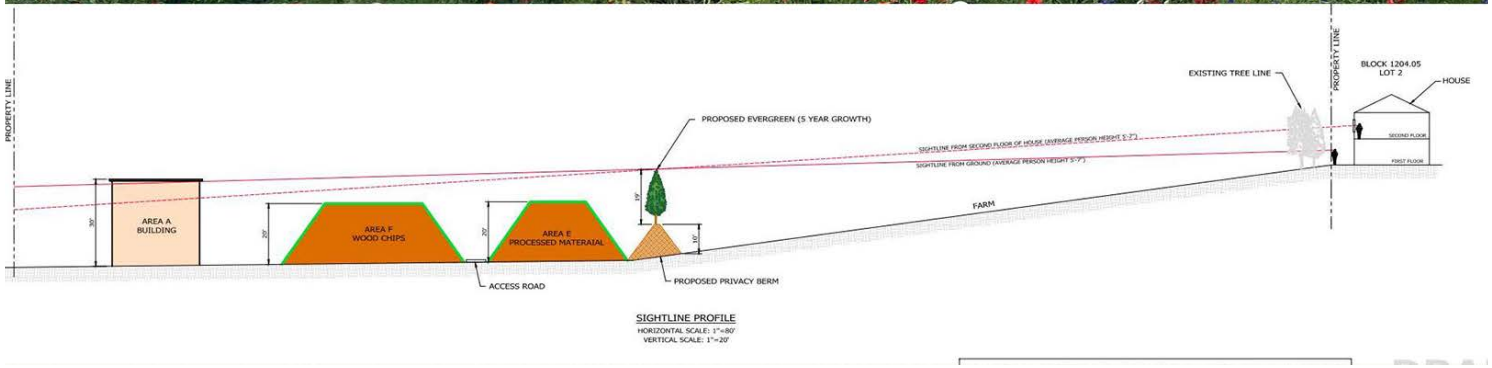
Aerial Site View 1

Aerial Site View 2

Sightline & Example Berm

Features a berm that will include evergreens and native wild flowers.



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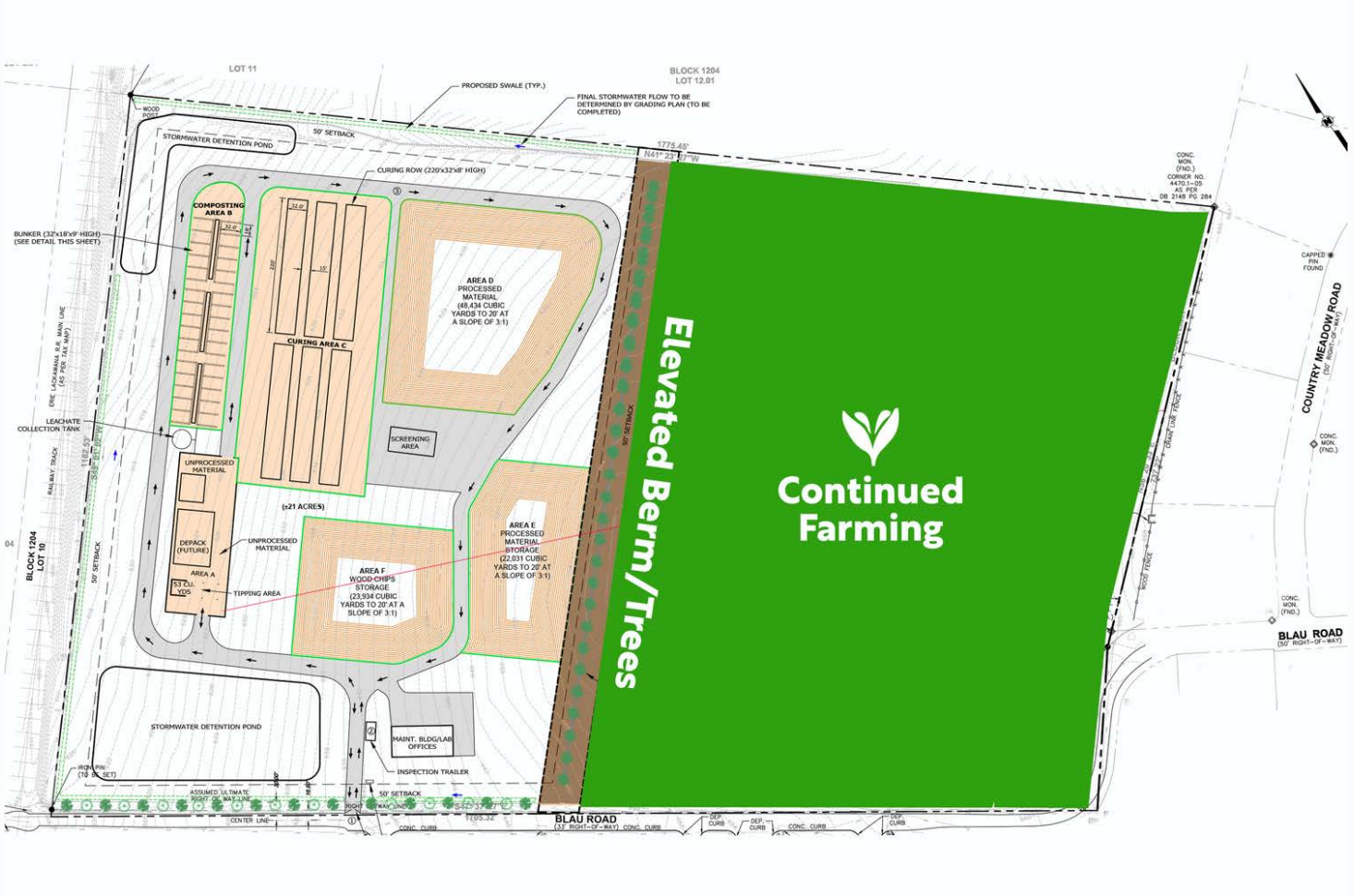
Preliminary Site Map



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Distance from Residential Area

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Traffic Maps

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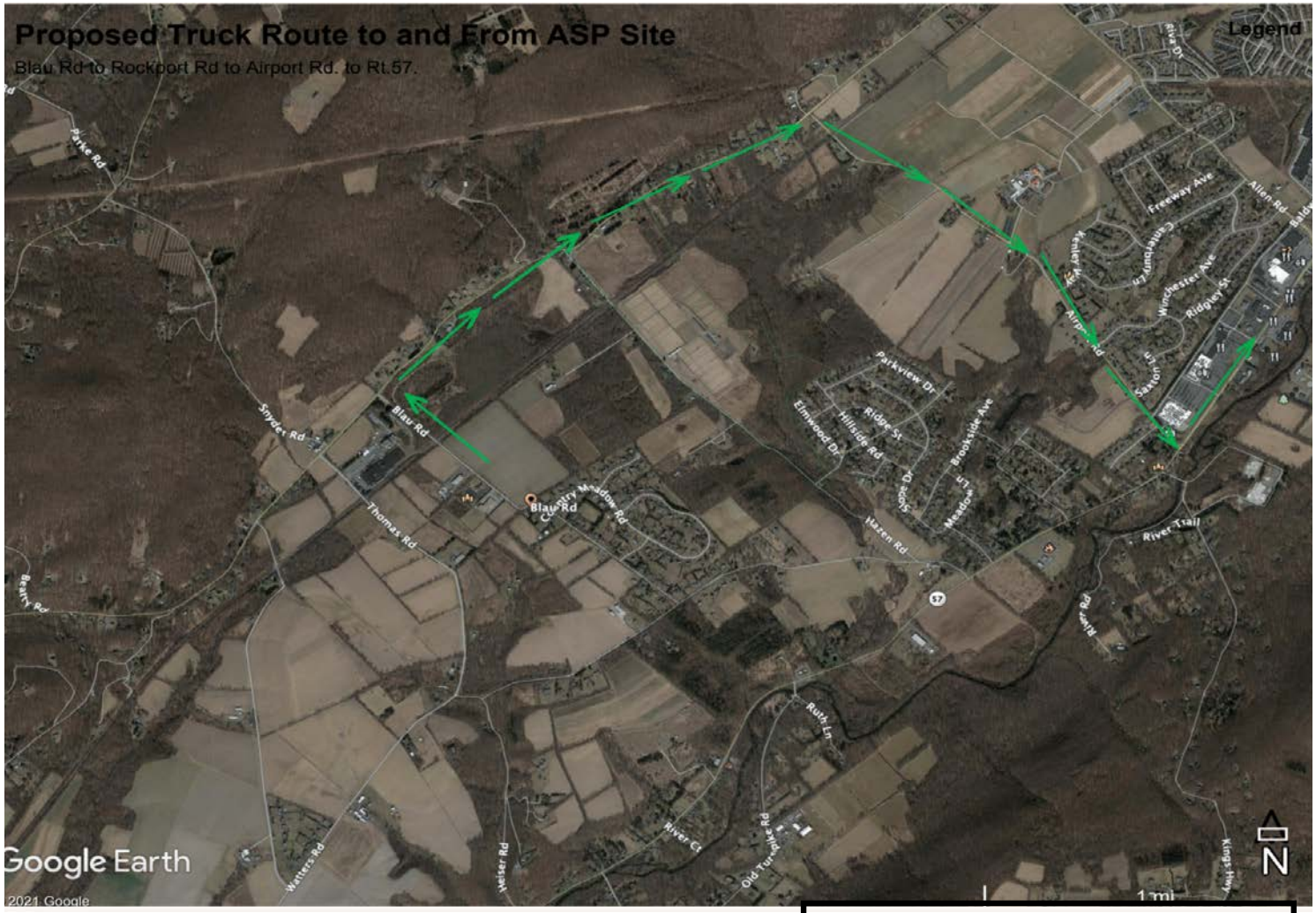
Truck Route

Trucks will arrive and depart via municipally designated truck routes that service other nearby industrial uses.



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Traffic Study Results

A traffic impact study conducted by Dynamic Traffic shows that facility have no material impact on levels of service.

Future Levels of Service

Intersection	Direction/ Movement		AM PSH		PM PSH	
			No Build	Build	No Build	Build
Route 57 & Airport Road	EB	L	D (43)	D (45)	D (44)	D (45)
		R	B (18)	B (18)	B (18)	B (17)
	NB	LT	A (4)	A (4)	A (3)	A (4)
	SB	T	A (3)	A (3)	A (4)	A (4)
		R	A (1)	A (1)	A (1)	A (1)
	Overall		**A (5)**	**A (5)**	**A (4)**	**A (6)**
Rockport Road & Airport Road	WB	L	b (11)	b (12)	b (13)	b (14)
		R	a (9)	a (9)	a (10)	a (10)
	SB	LT	a (8)	a (8)	a (8)	a (8)
Rockport Road & Hazen Road	WB	L	b (10)	b (11)	b (15)	c (15)
		R	a (9)	a (9)	a (10)	a (10)
	SB	LT	a (8)	a (8)	a (8)	a (8)
Rockport Road & Blau Road	WB	LR	a (10)	a (10)	b (11)	b (11)
	SB	LT	a (8)	a (8)	a (8)	a (8)
Blau Road & Site Driveway	EB	LT	-	a (8)	-	a (8)
	SB	LR	-	a (9)	-	a (9)

a (#) - Unsignalized Intersection Level of Service (seconds of delay per vehicle)
A (#) - Signalized Intersection Level of Service (seconds of delay per vehicle)

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Operations & Technology

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1

Sealed Trucks Arrive

Food scraps are screened to ensure compliance with standards then sent to the tipping area, where food scraps are immediately mixed with wood chips.

2

Food Scraps are Moved to Outdoor Bins

Food scraps are mixed covered with a bio-layer (wood chips) that reduce the risk of odor escape.

3

Piles are then Aerated

Aeration (ASP Technology) eliminates the need to turn the piles over, which further reduces the risk of odors. ASP technology allows for a faster composting time.

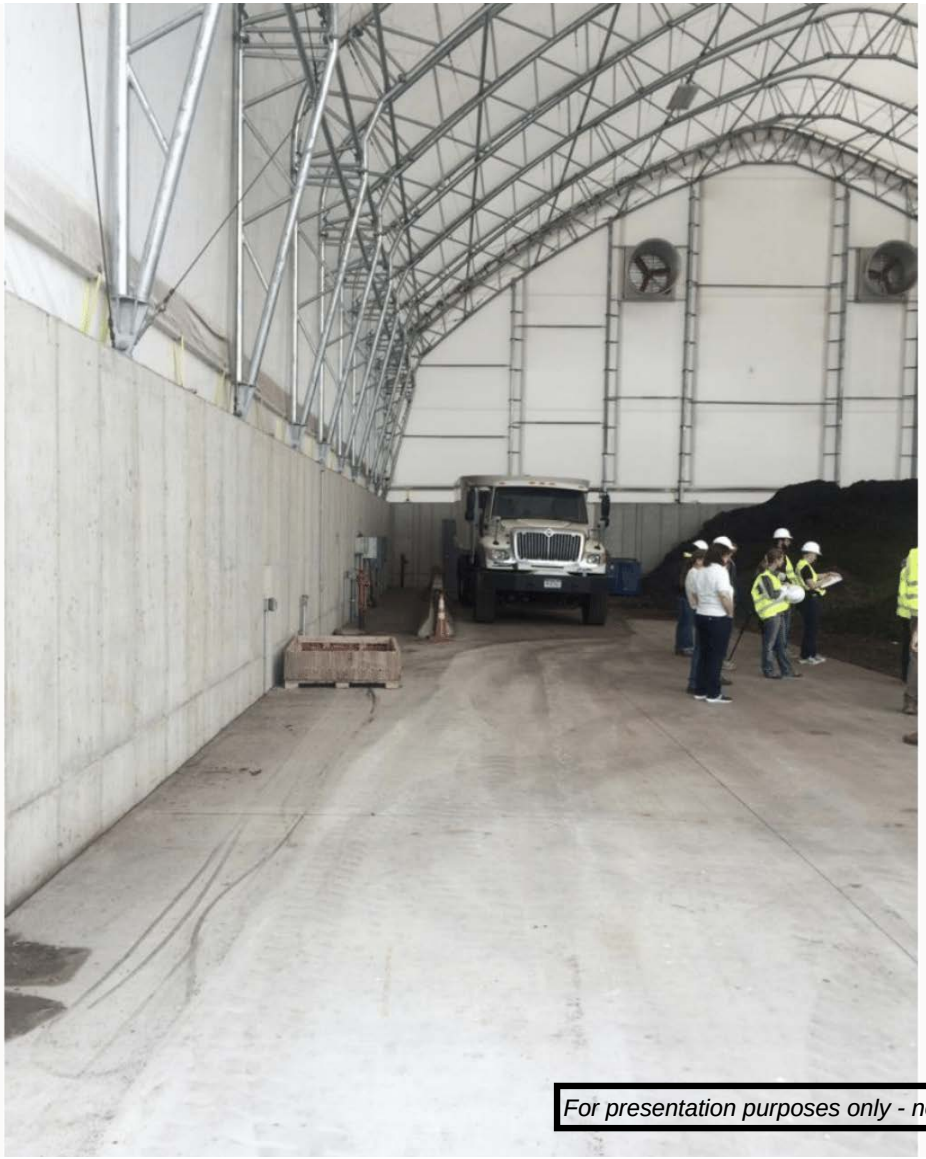
4

Compost is Distributed for Agricultural and Landscape Use

The compost is shipped off site

Summary of Process

Example of Tipping Area



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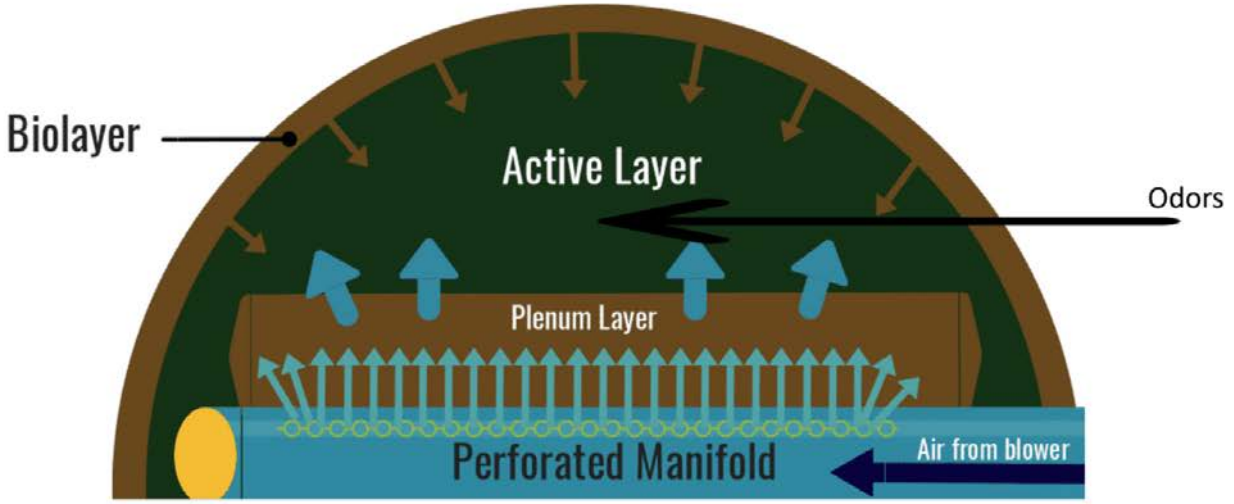
How Biolayers Work to Reduce Risk of Odor

Odors are adsorbed by the woodchips



1. Air exits perforations in manifold
2. Air slowed & diffused by plenum layer
3. Air promotes aerobic composting in active layer
4. Biofiltration layer traps heat and prevents odor escape

The Biolayer is made of Woodchips and acts as a BioFilter

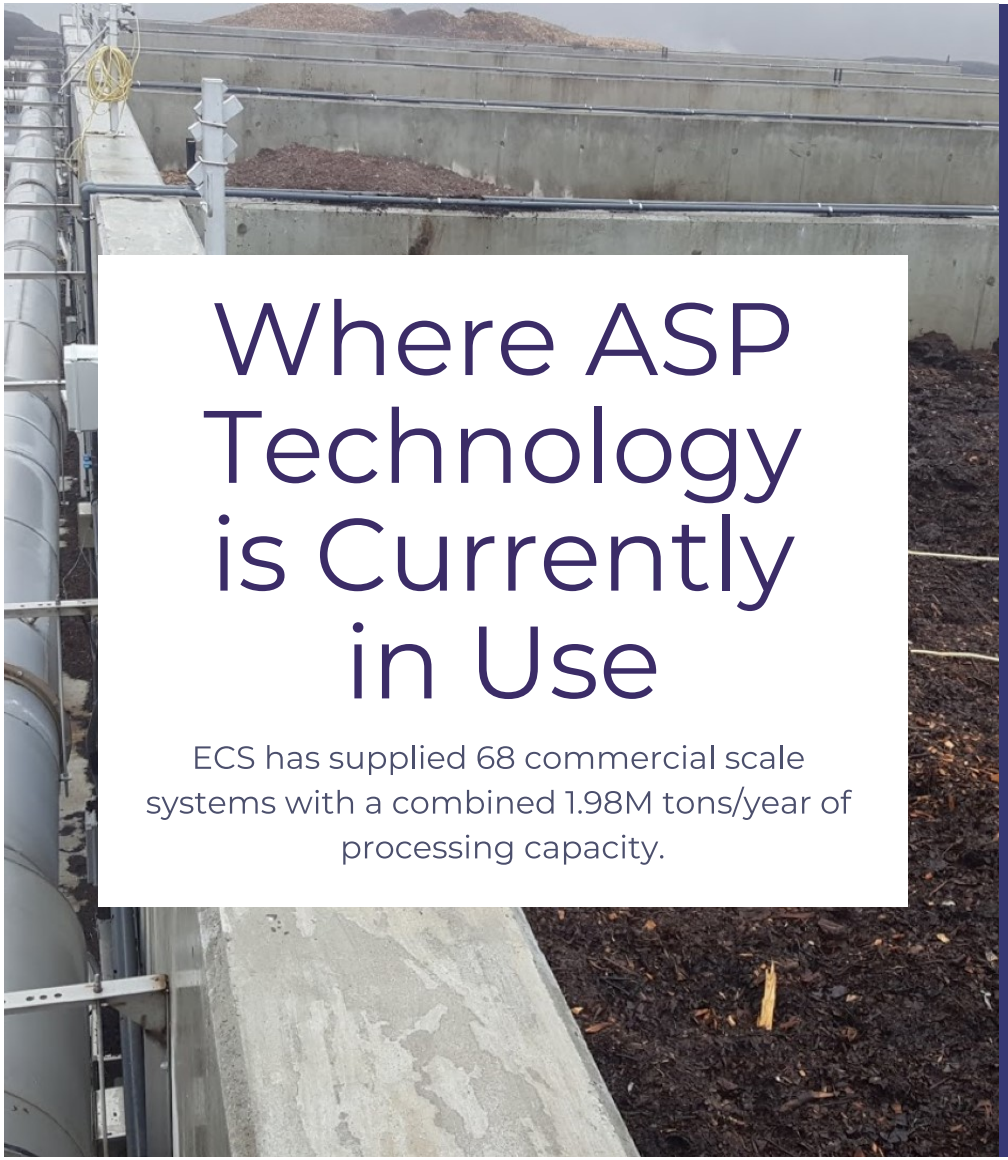
From Urban Worm

Proven Innovation: Aerated Static Pile Technology

- **The aeration system distributes air through the biomass to enhance composting conditions. All process air exhausts through a bio-layer (woodchips).**
- **Optimized process conditions drive faster composting while generating minimal odors and other regulated air emissions.**
- **Our proposed system will feature dynamically controlled aeration with a wide range of air delivery rates required to keep oxygen and temperature at Best Measurement Practice levels throughout the pile.**
- **Compost will be kept in outdoor concrete bunkers (example left).**

Aerated Static Pile Technology Advantages

- **Excellent volatile organic compound (VOC), greenhouse gas (GHG), and odor control using site-built bio-layers and surface irrigation.**
- **Ability to process feedstocks at irregular loading rates**
- **Compact site footprint which minimizes contact water impact**
- **More efficient process.**
- **Automated controls to record temperatures.**



Where ASP Technology is Currently in Use

ECS has supplied 68 commercial scale systems with a combined 1.98M tons/year of processing capacity.

- **Freestate Farms - Manassas, VA**
- **Napa Recycling and Waste Services - Napa, CA**
- **West Coast Waste - Madera, CA**
- **Howard County, MD**

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