# Organic Material Management Report

Initiative Launch Through Pilot Composting



## August 2019

Prepared by: OC Waste & Recycling 601 N. Ross St., 5th Floor Santa Ana, CA 92701 www.oclandfills.com













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Making Orange County a safe, healthy, and fulfilling place to live, work, and play, today and for generations to come, by providing outstanding, cost-effective regional public services.



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## OCWR Organic Material Management Report

### **Executive Summary**

California leads the nation in environmental legislation based on initiatives designed to protect people and natural resources. Recycling is among these initiatives. However, recycling no longer means bottles, cans and newspapers. The newest legislation expands recycling to the diversion of organic waste – materials that come from living things, largely plants and food.

Orange County is a primary target of this legislation, AB 1594 and SB 1383. Haulers bring the greatest volume of processed greenwaste to OC's landfills of any county in the state. Most of the greenwaste is used in landfill operations. Prior to the legislation, OCWR could accept it for free, and the cities that generated received diversion credit. That goes away in 2020.

In 2016 OC Waste & Recycling (OCWR) established a strategic initiative to create and implement an organic material management plan. The plan understands that the infrastructure required for processing as opposed to landfilling organic waste is grossly insufficient; the number of facilities would need to more than double, at minimum, to meet statewide organic waste diversion mandates.

Given OCWR's role as the regional leader, the strategy of the plan is to contribute to the local infrastructure, and the tactic is to build a composting operation at all the OC landfills. In 2017, each site launched composting pilot projects through which OCWR is gaining expertise in composting and in co-locating organic waste solutions at the County operated landfills.

This report chronicles the activities of the OCWR Organics Management Initiative from inception through the first year of the pilots. It documents the roadmap leading to the engineering design, permitting, operational planning, and stakeholder engagement necessary to expand the pilot projects to commercial scale that will provide a regional solution for the County and Cities to meet the new organics diversion mandates.



Screened finish compost produced at Capistrano Greenery Pilot Project at the Prima Deshecha Landfill supports the State's goal to transform organic waste into a renewable resource.

#### A summary of the plan and the findings and recommendations of the committee includes the following:

- 1. Budgetary Planning
- 2. Proposed Facility Conceptual Plan Development
- 3. Permitting and Environmental Analysis
- 4. Construction of Commercial Scale Facilities



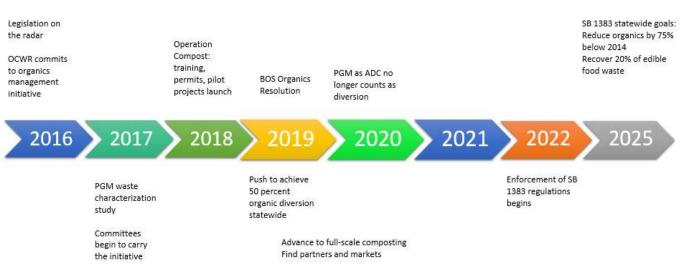
### 1. Introduction

OC Waste & Recycling (OCWR) is pursuing the development of organic processing facilities at each of the County's three active landfills in response to new legislation that intends to increase the recycling of organic waste and decrease greenhouse gas emissions from landfills. As a leader in providing waste management services, OCWR has the resources to develop organic processing facilities that will contribute to a regional solution to process organic waste and find end markets within the County.

This report provides a comprehensive overview of the completed, in-process and planned activities to develop an organics infrastructure that will serve the residents and businesses of Orange County. It covers the period of time from the active launch of the strategic initiative through the completion of the composting pilot projects – January 2017 through August 2019. With the success of the pilot projects, potential opportunities exist for OCWR to transform the pilot projects into larger scale commercial operations at each of the landfills that will provide an alternative for the use of organic green waste into compost material.

"As a leader waste management resources, OCWR has the resources to develop organic processing facilities to contribute to a regional solution..."





OCWR's timeline for implementation of organics management to help Orange County jurisdictions meet statewide goals as mandated by SB 1383.

#### Figure 1: OCWR Organics Timeline



## 2. Background

OC Waste & Recycling's 2014-2019 Internal Strategic Plan identified the development and implementation of an organic material management plan in response to recent legislation.

Historically, California is known for its progressive stance in leading the nation to establish policies to protect the environment, including the management of solid waste and climate change. Jointly and collectively the state, local governments and private industries have worked to develop an extensive material collection infrastructure and have implemented effective programs to achieve a statewide diversion rate greater than 50 percent (AB 939). In 2006, California enacted the Global Warming Solutions Act, which established the nation's first law to report and reduce greenhouse gas (GHG) emissions. Over the years GHG emission reductions and recycling efforts have merged as studies have shown that increased recycling leads to a decrease in greenhouse gas emissions.

At the time of this report publication, the Department of Resources Recycling and Recovery (CalRecycle) was in the formal rulemaking process to finalize regulations for SB 1383, which was signed by then governor Jerry Brown in September 2016. SB 1383 establishes methane emissions reduction targets in a statewide effort to reduce emissions of short-lived climate pollutants (SLCP) in various sectors of California's economy and infrastructure. The bill codifies the California Air Resources Board's Short-Lived Climate Pollutant Reduction Strategy, established pursuant to SB 605 (Lara, Chapter 395, Statutes of 2014).

SB 1383 identifies methane emissions resulting from the decomposition of organic waste in landfills as a significant source of GHG emissions contributing to global climate change. Organic materials – including waste that can be readily prevented, recycled or composted – account for 35 percent of California's overall waste stream. Food waste accounts for approximately 17-18 percent of total landfill disposal statewide. SB 1383 establishes organic waste reduction targets that include:

- 1. By 2020, reduce organic waste disposal to 50 percent below 2014 levels;
- 2. By 2025, reduce organic waste disposal to 75 percent below 2014 levels;
- 3. By 2025, recover at least 20 percent of edible food that is disposed.

#### Organics & Diversion Legislation at a Glance

- AB 939 Establishes statewide recycling targets
- **AB 341** Establishes a statewide recycling goal of 75% by 2020; commercial businesses must recycle
- **AB 1826** Commercial businesses must recycle organic waste
- **SB 1383** Establishes GHG emissions reduction targets
- **AB 1594** PGM used as ADC counted as disposal
- **AB 876** Jurisdictions must develop a 15-year plan for organics recycling capacity

In addition, other waste related legislation was adopted in California to address organics recycling, including:

- AB 1594 (Williams, Chapter 719, 2014) eliminated the diversion of processed green material (PGM) used as alternative daily cover (ADC) at a landfill starting on January 1, 2020.
- AB 1826 (Chesbro, Chapter 727, 2014) required commercial businesses to arrange for the recycling of organic waste beginning on April 1, 2016. Local jurisdictions were also required to adopt an organic waste recycling program after January 1, 2016. AB 1846 was adopted to support AB 341 which was signed into law in 2011 which established a statewide recycling goal of 75 percent by January 1, 2020. To achieve this commercial businesses were required by January 1, 2012 to arrange for commercial recycling services.
- AB 876 (McCarty, Chapter 593, 2015) required each jurisdiction to include in its annual report to CalRecycle a plan to develop an organics recycling capacity over a 15-year period starting on August 1, 2017.



Based on figures by CalRecycle, approximately 22.9 million tons of organic waste was sent to landfills in 2014. In accordance with SB 1383, by 2020, 11.5 million tons of organic waste must be diverted from landfills. By 2020, that number increases to 20 million tons, allowing only 5.7 million tons of organics to be landfilled. See Figure 2.



#### Figure 2: Statewide Disposal of Organic Waste

Projected Organics Recycling Capacity Needed? 2020 Additional (+/-)10 Million TPY 2025 Additional (+/-)20 Million TPY (growing each year thereafter)

Figure 3 provides a graphical overview of the legislative timeline of the new mandates as described above.

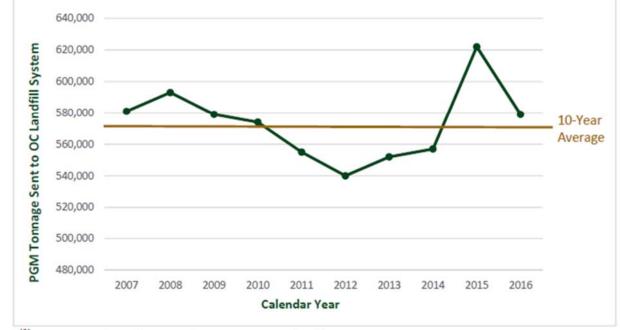
To achieve the mandates of SB 1383, CalRecycle estimates that between 75 to 100 new or expanded compost and anaerobic digestion facilities, each with an average annual throughput of 60,000 tons of material (i.e., 200 tons per day), would be needed in the state to process the amount of organic materials to be diverted. Other reports estimate as many as 200 new facilities are needed. About half of those would need to be located within the South Coast Basin, which is home to the state's primary generators of greenwaste. According to CalRecycle, California's existing organics infrastructure consists of approximately 180 composting facilities (of which 25 are permitted to accept food waste) and 14 digesters, many which are co-located at waste water treatment plants. The estimated cost for the State to implement SB 1383 is \$20.9 billion dollars between 2019 and 2030 which includes developing and expanding organic waste management infrastructure, enforcement, education and outreach, and reporting. Based on this investment, the State expects an economic benefit of \$17 billion over the same time frame.



## 3. Overview of Organic Waste Usage at Orange County Landfills

Within Orange County, a significant volume of greenwaste is received at the landfills in the form of alternative daily cover (ADC). Processed ADC is also used for the framing of tarps and beneficial reuse at the landfill for erosion control on its perimeter slopes.

As shown in Figure 4, from 2007 to 2016, Orange County landfills received an average of 570,000 tons of processed green material systemwide. The majority of the processed green material is sent to the Olinda Alpha Landfill, followed by Frank R. Bowerman (FRB) Landfill, and Prima Deshecha Landfill (Figure 5).





<sup>(1)</sup> From 2016 CalRecycle Disposal Reporting System (DRS) Destination Report.

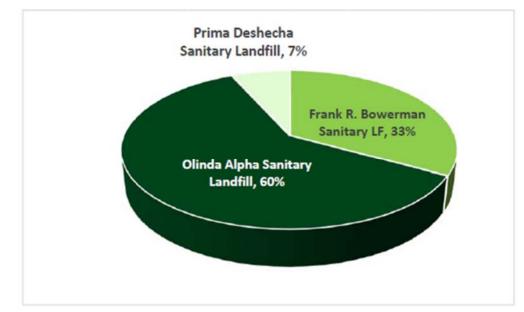
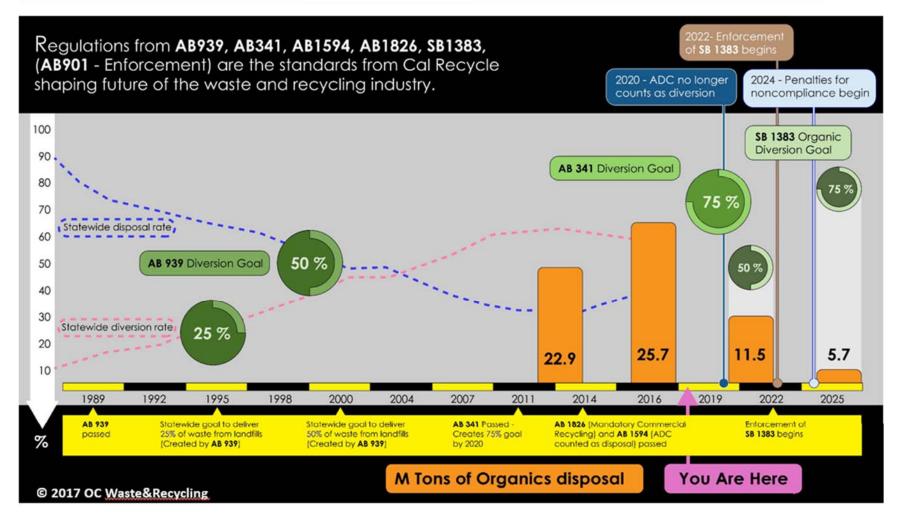


Figure 5: Percentage of PGM Tonnage Sent to Orange County Landfills by Destination - CY 2016





29 Years of increasing regulations; 2 years for a Solution; 2 years Enforcement; 2 years Penalty



Based on statewide figures, the usage of PGM as ADC is concentrated within urban centers, primarily the metropolitan areas of the Bay Area and Southern California as shown in Figure 6. With its mediterranean weather, Southern California enjoys year round moderate temperatures which leads to consistent generation of greenwaste. Orange County uses more PGM for ADC than any other California County followed by San Diego and Los Angeles Counties. The quantity of processed green material received in Southern California is shown in Figure 7.

Figure 6: PGM Usage as ADC at California Landfills (2012)



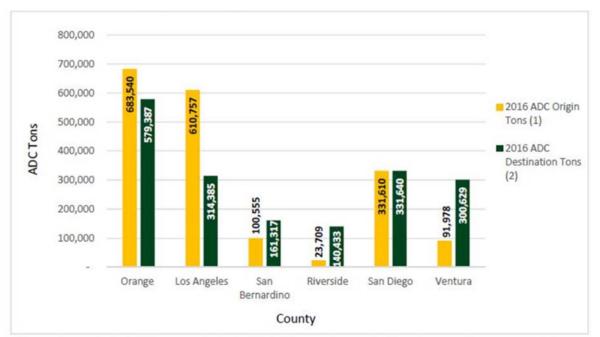


Figure 7: PGM as ADC Usage in Southern California

(1) From CalRecycle DRS Origin Report for 2016. "Origin" means the jurisdiction where the ADC was generated.
 (2) From CalRecycle DRS Destination Report for 2016. "Destination" means the county where the ADC was beneficially used at landfills.







**Processed Green Material (PGM)** - OCWR currently uses PGM as Alternative Daily Cover (ADC), for erosion control, or mixing with biosolids for odor control at the 3 active landfills.

#### Daily Allocations by Site -PGM Used as ADC

Annually, Orange County landfills has allocated 621,368 tons of greenwaste to be received. Olinda and FRB use the majority of the greenwaste as ADC. Prima uses greenwaste for odor management and erosion control. Current PGM as ADC allocations are:

**Olinda** 836 tpd (38 loads)

**FRB** 1,056 tpd (48 loads)

Prima 132 tpd (6 loads)

**TOTAL** 2,024 tpd (92 loads)

The origin of the high volume of processed green material used as ADC traces to AB 939. This material, which haulers chip and grind prior to landfill delivery, currently counts as diversion for cities' compliance with AB 939. However this diversion will sunset starting in 2020, when greenwaste used as ADC will be counted as disposal. This mandate will affect diversion rates for each of Orange County's 34 cities and each of OCWR's three active landfills' daily permitted tonnage as specified in the Solid Waste Facility Permits. Current PGM as ADC allocations are indicated in the callout box on this page.



# 4. Organization of Strategic Initiative Implementation — Preparing for Action

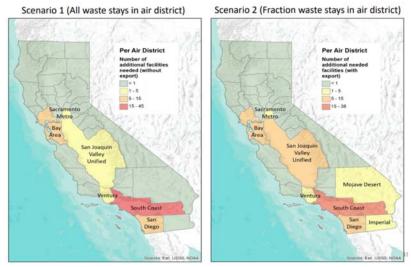
## 4.1 Organics Management Committee Development & Activity

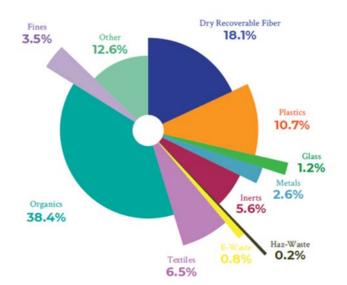
Early in 2017, OCWR leadership launched formation of an Organics Management Committee to address the department's Organics Management Initiative Plan. The committee was charged with evaluating options to manage the PGM received as ADC. These options would be discussed with Orange County cities and the haulers as alternatives for managing the greenwaste in order to continue receiving diversion credit. Early in the discussions, it was evident that the cities and majority of the haulers would be looking to the County to develop a regional solution given the current lack of infrastructure and space constraints. Figure 9 depicts the number of new organics management facilities needed to manage organic wastes in the state. The urgency of the situation further challenged the committee. The window of time between bill passage and enforcement is exceedingly short, compared to the challenge of building an unfunded infrastructure and operation from scratch.

The Organics Management Committee started from the ground up by commissioning several site assessment studies, market analysis and rate structure studies to better understand the conditions within Orange County to potentially site and operate a facility and market compost products. These studies included:

- Renewable Technology Implementation Plan (RTIP), Tetra Tech BAS (includes a waste characterization study, Figure 9)
- Processed Green Material Diversion Study, HF&H
- Flow Control Provisions of Orange County Solid Waste Franchise Agreements, HF&H
- Environmental Siting Analysis of Greenwaste Composting Facilities, LSA
- Feasibility and Market Studies for Organics Processing, Noble Resources Consulting

Figure 8: Number of New Organics Management Facilities Needed per Air District, With and Without Export of Organic Wastes





#### Figure 9: RTIP Waste Characterization Study Summary



#### 4.1 Organics Management Committee Development & Activity (continued)

These studies are located on the OCWR shared drive at <u>S:\_No\_Auto-Delete\\_South\_Region\Strategic Initiative Organic</u> <u>Management\2. Organic Management Resources\A-E Composting Studies</u>

Copies of the reports can also be obtained via email by contacting Ruth Wardwell, Strategic Communications Manager at <u>ruth.wardwell@ocwr.ocgov.com</u>.

Collectively, these studies established the baseline conditions of the existing organics infrastructure in Orange County and potential opportunities for OCWR to further expand the infrastructure, particularly feedstock utilized as ADC. The studies confirmed the need for additional organics processing facilities that could be potentially co-located at Orange County landfills, which accounts for available space among their assets. Funding would come from tipping fees for the disposal of greenwaste. Markets are available in Orange County but would need to be developed in collaboration with cities, public agencies, residents and businesses.

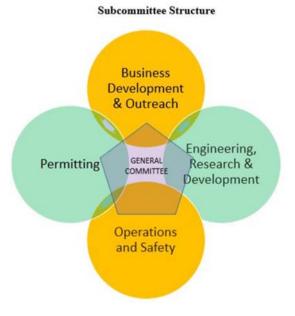
To date the majority of the compost produced in Orange County is from source separated organic waste from landscaping companies. This material is ideal for compost feedstock. It consists of scrubs, trees, and other cellulose material, and because it is separated from the waste stream it is clean, uncontaminated landscaping debris. Conversely, PGM converted into ADC is primarily from residential curbside pick-up that typically is contaminated with refuse, dirt, metals and plastics that must be removed prior to being used as compost feedstock. No facility in Orange County has been able to utilize contaminated greenwaste as compost feedstock. This presents the opportunity to both contribute to a regional solution and enter the organics processing market without competing against other processors in the County.

#### 4.2 Subcommittees Development and Activity

To implement the massive scope of work required to address the initiative, subcommittees were formed. This step broadened the participation of OCWR staff throughout the department.

OCWR launched the Organic Management Subcommittees on December 13, 2017. The subcommittee approach established working groups that would focus on specific tasks needed to further advance the development of the initiative. Participating staff members were given the opportunity to explore ideas and formulate strategies that would support the development of an organics infrastructure, including siting at the landfills. The work would include market development, engineering research, project development, permitting, operations, and safety. Team members of the General Organic Management Committee served as subcommittee leads to identify project tasks and report back to the General Committee on the status of deliverables. Details of the subcommittee structure and activities are included in Appendix B.

## Figure 10: General Organics Management Committee & Subcommittee Structure





#### 4.3 Facility Tours

The Organics Management Committee toured a number of composting facilities throughout Southern California to understand site design requirements, processes, technologies, equipment and compost markets. Committee members visited:

- City of Bakersfield Mt. Vernon Composting Facility
- City of Los Angeles Griffith Park Composting Facility
- City of Los Angeles Lopez Canyon Environmental Center
- Tierra Verde Industries Eco-Centre, Irvine
- Burrtec West Valley Recycling & Transfer, Fontana
- Inland Empire Regional Composting Facility, Rancho Cucamonga
- Miramar Greenery, City of San Diego
- El Corazon Composting Operation, Oceanside
- Evergreen Nursery, Oceanside

These tours provided first hand experience to observe and interview facility operators on the different types of composting facilities, feedstock types and industry challenges. Each facility was unique and has found a compost market niche. In the majority of the facilities visited, the primary revenue source is tipping fees. The end product was either sold or given away for landscaping or agricultural purposes.







OCWR staff visited various existing compost facilities using different technologies. **Top left**: a windrow pile turned with a SCARAB. **Top right**: a covered aerated static pile. **Bottom**: a conventional windrow pile.



#### 4.4 Processed Greenwaste Characterization

Since the inception of AB 939, usage of PGM as ADC has been widely accepted within California for both daily landfill operations and to help municipalities comply with diversion. In Orange County, the producers of PGM are private haulers who have franchise agreements with municipalities to collect residential and commercial refuse. The greenwaste collected is brought to a materials recovery facility (MRF) or organics processing facility, where it is sent through a trommel and or screener to remove contaminants (i.e., non-greenwaste materials) and reduced in size. Processing and hold times at the MRF are typically less than 48 hours to prevent unintentional composting of the PGM. The end product is a brown, earthy material, which is six-inch-minus, fibrous and woody.

However, not all green waste is created equal. Some is not considered as quality feedstock for purposes of creating compost that can be marketed and used for soil enrichment. For example, many composting facilities do not accept palm fronds since they are very coarse, difficult to biologically breakdown and can get caught in machinery from the fiber strands. One of the critical questions is whether PGM received at the landfills can be used as feedstock for composting. To gauge the quality of the PGM received, in November 2017, OCWR conducted a PGM characterization study to gauge the quality of the potential compost feedstock. The goals of the study were to determine:

- Types of greenwaste present in the PGM loads
- Contamination levels
- Physical characteristics such as particle size, color, odor and density
- If any additional pre-processing of the material was needed prior to being used as compost feedstock

The greenwaste evaluated came from CR&R, Tierra Verde Industries (on behalf of Waste Management), and Republic Services. Once samples of the PGM were received, it was sorted, weighed, assessed for its physical characteristics. General observations from the study indicated some level of contamination ranging from two to 20 percent. In addition, while the PGM loads contain woody material suitable for composting, there were other types of material such as street sweeping debris, palm fronds, and palm roots that may be less desirable. This preliminary evaluation indicated that while some of the feedstock could potentially be used as compost feedstock, some additional pre-processing would be required to reduce the contamination levels and to increase the nutrient value. The details of the analysis are included in Appendix C.



**Left**: Typical residential curbside greenwaste. Greenwaste must be sorted to separate out any contaminants. **Right**: Finished compost is free of trash and contamination.



## 5. Pilot Projects

#### 5.1 Overview

On March 27, 2018, OCWR launched 92-cy pilot composting projects at each of the three landfills sites. The purpose of the pilots was to serve as a "realtime lab" that enabled employees to learn how to conduct composting operations. It also served to test the feasibility of the County launching a commercial-scale operation to contribute to a regional solution for managing organic waste.

Initial steps included regulatory agency approval/compliance, analysis of environmental and community impacts, training, safety protocols, siting and construction of compost area.

The pilots opened a door for OCWR to work with jurisdictions and haulers to divert the PGM currently received at the landfills by developing in-County markets. OCWR staff reached out and met with numerous cities, haulers, and compost producers who have given their support to the County to develop organics programs to comply with recent legislation. The steps of launching the pilot projects are further described in sections below.

#### Compost Pilot Test Facilities

Though this was the testing phase of the initiative, subcommittee members named each of the compost operations:

- Olinda: Valencia Greenery
- Bowerman:
   Bee Canyon Greenery
- Prima: Capistrano Greenery

#### 5.2 Training

While a number of OCWR employees possessed at least a minimal understanding of the composting process, immersion training was critical. More than a dozen subcommittee members attended the Certified Compost Operations Manager training course offered by the US Composting Council in Davis, California from March 12-16, 2018. Upon completion of the 40-hour training, the employees gained the basic principles and a solid working knowledge to begin work on the pilot compost projects. In November 2018, an additional 20 staff members completed the US Compost Council's Compost Operations training course, which OCWR hosted at the Frank R. Bowerman Landfill.

## 5.3 California Environmental Quality Act (CEQA), Regulatory & Jurisdictional Compliance

To comply with CEQA for the pilot projects, categorical exemptions (CEs) were prepared and filed with the Clerk-Recorder's Office on March 13, 2018. Under the CEs, the pilot projects were analyzed for up to 92 cy (i.e., approximately 60 tons) of compost material utilizing open windrow technology and aerated static pile. Copies of the CEs can be found in Appendix D.

Within Orange County, multi-regulatory agency oversight is required to construct and operate an organics processing facility, particularly when co-located on a landfill. Regulatory agencies involved with composting operations are separate and distinct from one another yet all have the common interest of environmental protection and human safety. While the amount of material needed for the pilot is considered de minimis and would qualify for an exemption under existing regulations, most regulatory agencies require an additional level of permitting since it is OCWR's eventual intention to scale the project to a commercial level. The regulatory agencies involved with permitting are listed below, and a synopsis of the requirements for each is in Appendix E.

- Solid Waste Local Enforcement Agency/CalRecycle
- South Coast Air Quality Management District (SCAQMD)
- California Regional Water Quality Control Board
- Orange County Fire Authority (OCFA)
- California Department of Food and Agriculture



#### 5.4 Compost Pilot Construction, Development & Protocols

Landfill crews from each respective site built areas for the compost pilot operation. The compost pilot areas follow US Composting Council guidelines and regulatory requirements. Engineering and Operations subcommittees members created the compost pilot project site plan and constructed the compost areas (Appendix F). The site plan included:

- Storm water run on runoff controls
- All weather asphalt deck specifications for site operations
- Site specific map location
- Equipment requirements and safety protocols
- Composting process flow diagram and field procedure (Appendix G)

Using the process flow diagram as shown in Figure 11, each site performed field measurements on the windrow pile per the process. The diagram included specifications for construction of the windrow pile, watering guidelines and temperature monitoring for site operations staff. Daily temperature measurements and field observations helped determine the health of the windrow pile and provide guidance on the frequency of watering and turning the windrow. The windrow temperature and moisture content data collected by site designated staff is required by regulatory agencies to ensure that compost handlers are carefully monitoring their green waste materials. The process flow and field procedures helps provide guidance on the composting maturity process, lab sampling procedures, curing and screening stages to field personnel.



All-weathered compost pad for Capistrano Greenery Pilot Project.

FEEDSTOCK DELIVERY	FEEDSTOCK WEIGH IN	QUALITY ASSURANCE	WINDROW CONSTRUCTION	COMPOSTING	СОМ
	Landfill Scales	Accept Load			
) FEEDSTOCK INFORMATION &	1) WEIGH IN & RECORD KEEPING	1) VISUAL INSPECTION	1) WINDROW BUILDING	1) TEMPERATURE & MOISTURE MONITORING	b) Moistur
SPECIFICATION A) Supplier/Generator: Hauler	<ul> <li>Feedstock hauler information and facility of origin shall be recorded</li> </ul>	A) Feedstock Material Specification	A) Designate an identification number for windrow pile	A) Temperature Monitoring	trends • Adjust mo
B) Type: Processed Green Material (PGM)	B) Feedstock shall be weighed in and	B) Level of Contamination	B) Windrow shall be built according to the	<ul> <li>A 24" temperature probe shall be use in measuring pile temperatures at a</li> </ul>	temperatu based on
C) Material Specification	shall be recorded in tons		following dimensions:	depth of 24" from the surface	B) Windrow F
<ul> <li>Particle size: 1/8 - 2 inch</li> <li>Acceptable contamination limit: &lt;10%</li> <li>Total Feedstock Volume: NTE 92 c.y.</li> </ul>	Return to Hauler/ Generator	Reject Load	<ul> <li>■Base width: 10 ft. Max.</li> <li>■Height: 6 ft. Max.</li> <li>■Length: 90 ft. Max.</li> </ul>	<ul> <li>At a minimum, 9 temperature readings shall be taken at the following approximate locations and points:</li> </ul>	Piles sha loader at
- Total Feedstock Volume. NTE 32 c.y.		2) REMOVAL OF VISIBLE CONTAMINANTS	C) Windrow shall be built in such a manner		minimize and align
		A) As practical as possible, contaminants such as plastics, metals, & glassetc. shall be sorted out and removed from	that pile is uncompacted thereby increasing Free Air Space (FAS) and decreasing pile bulk density	shall be taken 5–10 ft. away from both ends of the entire length and at the middle of pile	<ul> <li>Turn over readings</li> </ul>
		the feedstock 3) FEEDSTOCK/ WINDROW PILE COMPOSITE SAMPLE COLLECTION	D) Windrow shall be built and situated as not to impede surface drainage run-off or allow surface drainage run-off to	<ul> <li>Monitoring Points – temperatures shall be taken at the middle of each side slope and top of pile per monitoring</li> </ul>	maintain 140—150 shall be t of 15 days
		<ul> <li>A) Composite Sample Collection- shall consist of at least 12 mixed samples of</li> </ul>	break or ran through windrow pile	<ul> <li>Frequency – temperatures shall be</li> </ul>	phase
		equal volume and extracted from the following sampling locations:		monitored daily until such time adjustments in the monitoring	in the fie ● If a rain
		<ul> <li>Four samples from one-half width of the pile each at a different cross section</li> </ul>		frequency are made based on established data trends for temperature	the pile v the pile is may be t
		<ul> <li>Four samples from one-fourth width of the pile each at a different cross section</li> </ul>		<ul> <li>Record keeping – temperature readings shall be recorded as composite readings per monitoring location and recorded in the field monitoring data sheet</li> </ul>	top half c depth, ap to mainta 45-60%
		<ul> <li>Four samples from one-eight width of the pile each at a different cross</li> </ul>		B) Moisture Monitoring	C) Windrow F
		section B) Composite samples shall be collected		<ul> <li>Once windrow pile had been watered or hydrated, moisture content shall be measured and monitored</li> </ul>	<ul> <li>Rewater p readings of content is</li> </ul>
		into a 5-gallon container for the purpose of:		<ul> <li>Moisture Content – Hydrate windrow until moisture content is consistently</li> </ul>	3) ACTIVE PH
		<ul> <li>Initial Feedstock Laboratory Analysis</li> </ul>		attained between 45-60%	A) Compostin
		<ul> <li>Initial Bulk Density Measurement</li> <li>Dry Weight Basis-bulk density shall</li> </ul>		<ul> <li>Guaging Moisture – samples shall be collected 3" below the surface and tested for moisture using the Squeeze Ball Method</li> </ul>	<ul> <li>Active Phase</li> <li>maintained</li> <li>minimum c</li> </ul>
		be measured and computed using a 5-gallon container and portable weighing scale		Moisture testing locations -shall be	<ul> <li>Moisture Co shall be ma</li> </ul>
		Dry Weight Bulk Density measurement		taken consistently within the vicinity of the temperature monitoring locations	minimum o
		shall be recorded in the field monitoring data sheet		<ul> <li>Frequency— moisture content shall be measured immediately after watering the pile</li> </ul>	<ul> <li>Maturity - S</li> <li>be use to</li> <li>completion</li> </ul>
				<ul> <li>Record keeping — date and volume of water used to hydrate windrow shall be recorded in the field monitoring data</li> </ul>	Solvita Mat indicates g phase othe until matur
				sheet 2) DATA EVALUATION, WINDROW TURNING, & REWATERING	attained ar B) Compostin
				A) Monitoring Data Evaluation	• A compos
				<ul> <li>Temperature and moisture monitoring data obtained during the 1st and 2nd week shall be evaluated for:</li> </ul>	at a minir of the cor analysis
				a) Temperature Trends for wet and dry	

#### CING PILOT PROJECT

#### **IPOSTING** (continued)



re evapration/dissipation rate for wet piles

onitoring frequency for ure & moisture as needed established trends

#### Pile Turning

Il be turned in-place using a t a 20 to 30 degree angle to disturbance to the orientation ment of pile

r piles if composite temperature are less than 140 F and ideal temperatures between F (Thermophilic stage) OR pile turned 5 times at a minimum ys interval during the active

over activities shall be recorded eld monitoring data sheet

event occurs prior to watering within six hours of watering and is wet  $3^{\circ}$  from the surface, pile turned without watering. If the of the pile is dry to the  $3^{\circ}$ oply additional water as needed ain moisture content between

#### Pile Rewatering

piles if composite temperature exceeds 155 F° or moisture is lower than 45%

ASE & MATURITY

ng Process Stage

ase— pile temperature shall be d between 122—150 F<sup>\*</sup> for a of 22 days

Content— pile moisture content naintained between 45—60% for a of 22 days

Solvita Maturity Kit and Index shal test and determine maturity or n of active phase

aturity Index of 5 or greater greenwaste has completed active herwise active phase shall continue urity index of 5 or greater is and curing phase has commenced

ing Process Sample Collection

site sample shall be collected imum 22 days from the start omposting process for laboratory

#### 1) CURING PHASE

- A) Curing Stage completion takes at a minimum of 40 days to several months
- Maturity- maturity and completion of the curing phase shall be tested and determined by using the Solvita Maturity Kit and Index

Solvita Maturity Index of 7 or greater indicates greenwaste has completed curing phase otherwise curing phase shall continue until an index reading of 7 or greater is attained

B) Completion of Curing Phase

• Characteristics (What to look for)

- a) Pile no longer generates heat after turning
- b) About 1/2 to 1/3 of its original volume
- c) Dark in color and smells earthy
- d) Original materials are no longer recognizable
- C) Final Compost Sample Collection

 Once curing phase had been completed and confirmed, a final composite sample shall be collected for laboratory analysis

SCREENING(by others) ) Compost Material Preparation

A) Compost Material shall be screened to allow materials through a seive size no greater than 3/8"

B) Compost Material 3/8" or less shall be stockpiled, stored, and segregated from residual material greater than 3/8"

#### END USE

1) General Landfill On-site Uses for:

- A) Compost Material 3/8" or less
- Supplement and enrich soil necessary to maintain various landfill office facility vegetation and promote growth in the mitigation or restoration of habitat areas
- B) Compost Material greater than 3/8"
- •Use as ground cover to help retain soil moisture and minimize water use for vegetation around landfill field offices

#### **CURING**



#### 5.5 Compost Pilot Daily Operations

Between March 27-29, 2018, OCWR's pilot compost operation launched at the Valencia, Bee Canyon and Capistrano Greeneries, with each site accepting approximately 60 tons or 92 cy of processed greenwaste as compost feedstock.

#### **Olinda - Valencia Greenery**

The largest producer of green waste material in OCWR's North Region (Olinda) is Republic Services and CRR Inc. Approximately two loads each of PGM from Republic Services and CRR were directed to the designated compost area and dumped for processing. The feedstock from the two sources were kept separate in a single windrow pile measured 6 feet by 70 feet in length. Visual observation of contamination in the piles showed the Republic Services load to be heavily contaminated with glass, film plastics and trash. The CR&R load appeared to be relatively free of contamination, but had a sour odor. The initial bulk density of the CVT pile was 1,350 pounds per cubic yard, but the CR&R pile was 1,920 pounds per cubic yard. Based on the odor and the relatively high bulk density, it was suspected that the CR&R load was contaminated with MRF fines. A water truck applied 9,000 gallons of water to the greenwaste pile to achieve a 65 percent moisture content. Staff then recorded baseline daily temperature readings. In short time the piles entered the process of further pathogen reduction (PFRP). During this phase the temperature of the pile exceeds 131 degrees Fahrenheit and the microbial breakdown of organic matter begins to take place.

Over the next three months staff tracked the daily temperatures and mixed the feedstock with water every five to ten days. After 92 days of composting and curing, the windrow pile was screened and tested by a certified compost testing lab.

#### **Bowerman - Bee Canyon Greenery**

Frank R. Bowerman Landfill receives PGM from various haulers including Tierra Verde Industries, CR&R Inc. and Republic Services. On March 29, 2018, FRB operations directed four TVI transfer loads to the newly constructed compost deck area for processing. The four TVI loads were relatively clean, the initial bulk density of the TVI pile was 820 pounds per cubic yard. FRB's operators mixed the feedstock and assembled the windrow to a height of 6 feet and length of 83 feet. A water truck applied to the green waste approximately 5,000 gallons of water to achieve a 60 percent moisture content. Staff then recorded baseline temperature readings at 6 points on each windrow, and began taking daily temperature and moisture content measurements and adding water to the piles every five to ten days. In short time the piles entered the Process to Further Reduce Pathogens (PFRP). Over the next three months FRB operations tracked the daily temperatures and mixed the feedstock with water every five to ten days. After 92 days of composting and curing, the windrow pile was screened and tested by a certified compost testing lab.



A compost pile is watered at the start of the pilot project at Valencia Greenery on March 27, 2018.



PGM is placed in a windrow at the Bee Canyon



#### 5.5 Compost Pilot Daily Operations (continued)

#### Prima - Capistrano Greenery

At the Capistrano Greenery located within the boundaries of the Prima Deshecha landfill in South Orange County, the two main producers of green waste material are Tierra Verde Industries (TVI) and CRR Inc. On March 19, 2018, Prima operations directed two TVI loads to the compost deck area for processing. The loads were generally free of any contamination but was noted to contain high volume of palm husks. Prima's operators assembled the windrow piles to a height of 6 feet and length of 83 feet. Water trucks added approximately 4,000 gallons of water to the initial compost pile, Prima trained staff then measured the initial bulk density and pile temperatures. Over the next three months Prima operations tracked the daily temperatures and mixed the feedstock with water every five to ten days. After 94 days of composting and curing, the windrow pile was tested by a certified compost testing lab and the results showed a low contamination rate. The compost product was tested as stable and rated good for moderate-selected uses.



The first load of PGM is received at the start of the pilot project at Capistrano Greenery on March 27, 2018.

Appendix H contains sample Field Data Sheets of the compost operations.

#### 5.6 Job Hazard Analysis

At the time of this pilot, composting was a new operation for OCWR and its team members. In addition to gaining compost process expertise, team members would encounter new or unidentified hazards associated with the operations. A hazard, as defined by the Occupational Safety and Health Administration (OSHA) is the potential for harm. In practical terms, a hazards often are associated with a condition or activity that, if left uncontrolled, can result in an injury or illness. Identifying hazards and eliminating or controlling them as early as possible will help prevent injuries and illnesses. The Operations and Safety subcommittee implemented the job hazard analysis (JHA) technique to address hazards associated with compost operations.

A JHA approach focuses on job tasks as a way to identify hazards before they occur. It hones in on the relationship between the worker, the task, the tools, and the work environment. Ideally, after uncontrolled hazards are identified, steps will be taken to eliminate or reduce them to an acceptable risk level.

Operations and Safety subcommittee members involved site staff in creating the JHA. The JHA process includes identifying employees who would be performing the work activities to provide oversight, ensure quality analysis, and increase team member "buy in" to the solution. To create the JHA, the group outlined the anticipated job steps and added information to describe each job step. Next, the team asked the following questions about each job step:

- What can go wrong?
- What are the consequences?
- How could it arise?
- What are the contributing factors?
- How likely is it that the hazard will occur?

The subcommittee leads reviewed the JHAs while observing the work activities. They made adjustments based on the observations. Compost operations JHAs are presented as Appendix I.



#### 5.7 Testing Procedures & Protocols

To understand the nutritional value and compliance of the finished compost, samples of the finished compost were collected and sent for analysis to Soil Control Laboratories, a Seal of Testing Assurance (STA) Certified Laboratory, in accordance with USCC Test Methods for the Examination of Composting and Compost (TMECC) protocols. The TMECC method provides detailed protocols for the composting industry to verify the physical, chemical and biological condition of composting feedstock, material in process and composting products at the point of sale. Laboratory Analytical Reports are presented as Appendix J.

#### **Sampling Protocol**

Samples were collected from 15 randomized locations throughout each finished compost pile using a hand trowel. The samples were composited, homogenized, and double-bagged in two separate one-gallon zip-lock bags. The samples were immediately chilled in a cooler with blue ice and logged on a chain-of-custody during the collection and transportation process. The samples were shipped to the laboratory for analysis within 24 hours of collection.

#### **Analytical Methods**

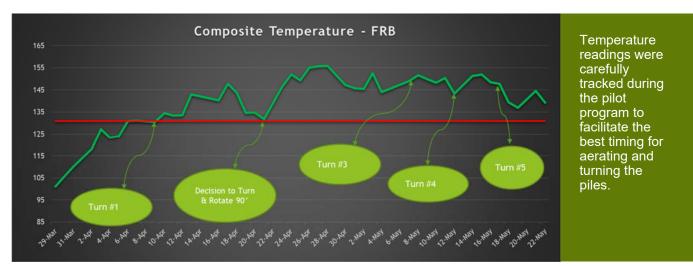
In accordance with USCC STA standards and TMECC protocols, the samples were analyzed for a wide variety of analytes for stability, maturity, nutrients, health and physical properties. Analytical results generally reflect potentially marketable products. All results indicated a moderately stable product with compost market applicability ranging from selected use to all uses and maturity ranging from very mature to immature. Nutrient content ranged from low to average, indicating the compost may be suitable for improvement of soil structure (low nutrient) to fertilizer (average nutrient). Concentrations for iron and aluminum were higher than expected possibly due to loads mixed with MRF fines. This equated to all samples having a high ash content (>50%), indicating high concentrations of inorganic material. One sample had physical contaminants of 2.64% which exceeds the 0.5% allowed due



An OCWR staff member checks the temperature readings of a compost pile during the pilot test.

to presence of glass. Analytical results for one sample indicated presence of fecal coliform exceeding the 1,000 grams per dry weight health and safety threshold. All other health and safety analytes were within safety thresholds.

These results are interpreted to indicate opportunities for improved nutrients and inorganic diversion from the compost feedstock, as well as improved maturity and pathogen reduction in the composting processes.





## 5.8 Finished Product Activities - Screening and Use

Composting equipment must perform under dirty, moist, abrasive, hot, cold corrosive, dusty conditions and on rugged terrain. The consistent wear and tear of green waste is similar to the demands of OCWR's equipment fleet on the handling of municipal waste. The organics management committee viewed the screening as an opportunity to better understand the various types of compost related equipment technologies. As part of the pilot study, a review of compost screening equipment was conducted to ensure that all technologies were explored. The compost general committee toured several sites in the local area reviewing various screening operations. The committee developed a plan to screen the first windrow piles by using various screening technologies at different sites.

At Valencia Greenery the EDGE TR622 trommel was used to screen the first compost pile. The trommel had a ½ inch screen with 80% recovered as finished product, although it was recommended by the screening company to use a ¼ inch screen to reduce the amount of glass and other contaminant generated from residential greenwaste. Overall the trommel performed well according to site operations and the data collected from the demonstration was saved for further review and analysis by the operations committee.

At Bee Canyon Greenery the Doppstadt SM720 trommel was used to screen the sites pilot compost pile. The trommel had a 5/8 inch screen with 52% recovered as a finished product. The trommel can be converted to a star screen. Overall the trommel performed well; however the feedstock could have been dryer to avoid buildup and increase throughput. The data collected from the demonstration was saved for further review and analysis by the operations committee.

At Capistrano Greenery the BEJAC star screener with 2 inch minus screen was used at Capistrano Greenery. One feature of the star screener was its ability to produce three different types of products. However, some of the material had to be screened twice due to clumping due to a higher moisture content of the product. Overall the star screener performed well.

Upon completion of the screening, the finished product was either used on-site as alternative daily cover or as cap for the next compost pile pilot demonstration.

#### 5.9 Pilot Project Observations & Conclusions

Through the pilot project OCWR was able to put into practice standard methods and compost best practices in order to operate safely in accordance with regulations to create a product that is safe and potentially marketable. OCWR found that this could be achieved by creating operational procedures, training team members, following regulatory protocols, and monitoring and adjusting operations based on observations and shared learnings.

While OCWR has had no prior experience to operating a composting facility, there were many aspects of the operation similar to that of landfill operations. With proper training and planning, OCWR has the means to expand the pilot projects into commercial scale facilities utilizing in-house County forces with the acquisition of equipment and developing of infrastructure.





A trommel is used to screen finished compost product into different particle sizes.



Finished compost is rich in nutrients and microbes and can be used to amend soil and aid plant growth.



### 6. Next Steps

With the success of the pilot projects the next step in the evolution of the OCWR's organic strategic initiative is to develop commercial scale composting facilities. Owning and operating commercial scale composting facilities will help fulfill OCWR's goal of developing a regional solution to divert PGM from the landfills to a higher and better end use.

While the work in 2018 was focused on launching the pilot projects, in 2019 the focus will focus be on securing the permits and building the infrastructure to operate commercial scale facilities. The objective is to commence operations at one or more locations before January 1, 2020. This section of the report provides a roadmap of the activities and proposed timeframes to achieve this goal. Details of activities accomplished to date and future tasks to be completed are included in a timeline contained within Appendix K.

Year	Month	Action			
2018	Мау	Begin Conceptual Design Plans Initial Scoping Meetings with Regulatory Agencies			
2019	January	Begin Detail Design Plans and Technical Specifications Begin Report of Composting Site Information Begin Technical Report/SWPPP			
2019	February	Complete Non-Disposal Facility Element (NDFE) Process			
2019	May	Plan Check by OCFA on Design Plans			
2019	June	Regulatory Review of Technical Report/SWPPP and Report of Composting Site Information			
2019	September	Public Review of Mitigated Negative Declaration OCWR Holds Informational Meeting			
2019	October	Permits obtained from OCFA			
2019	December	BOS adopts Mitigated Negative Declaration			
2019	December	Submittal of Technical Report/SWPPP to Regional Board Submittal of SWFP Application to LEA/CalRecycle			
2020	January	Commence Construction of Commercial Facility			
2020	Summer	SWFP issued Commence Operations			

#### Figure 12: Timeline for Commercial Processing Facility

Note: The above represents scenario for Bee Canyon Greenery

#### 6.1 Board of Supervisors Resolution on Organic Waste Management

On April 23, 2019, the Board of Supervisors adopted Resolution No. 19-031, directing OCWR to "utilize County resources to research opportunities and develop strategies to meet State-imposed organics recycling mandates." A copy of the resolution is included in Appendix L.

The Resolution asserts the Board's understanding of and support for OCWR's efforts to first comply with mandates for the County unincorporated jurisdiction and then to contribute to a regional solution to build a County-wide infrastructure for compliant organic waste management.



#### 6.2 Budgetary Planning

In OCWR's 2018 Five-Year Strategic Financial Plan, more than \$90 million was budgeted for expenses related to research, develop, and acquire the equipment and utilities to build OCWR's organic infrastructure. The majority of the costs will begin in FY 19/20 and extend through FY 23/24. A breakdown of the organics budgetary planning is included in Figure 13.

#### Figure 13: Organics Budgetary Planning FY 18/19 - FY 23/24

		Requested FY 18/19	Adopted Budget FY 18/19	2018 Strategic Financial Plan				
Unit	Description			FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
3305	Organics Committee Related Expenses	3,000,000		-	-	-2	1. <b>-</b> 1.	(*)
3005	Research & Development for Organics	328	44	10,000,000	5,000,000	10,000,000	5,000,000	528
3005	"In-County" Organics Management	-	÷.	10,000	10,000	10,000	10,000	10,000
3005	"Out-of-County" Travel for Organics Management	40,000	40,000	15,000	15,000	15,000	15,000	15,000
P900	Composting Facility Land Acquisition & Development	8-8	÷		10,000,000	-1	10,000,000	(
P900	Equipment and Structures	120	4	2	15,000,000	2	15,000,000	0.0128
P900	Design	1.0	÷	2,500,000	-	2,500,000	1.5	( <del></del> )
P900	CM, QA/QC Services	328	44		2,500,000	4	2,500,000	828
		\$ 3,040,000	\$ 40,000	\$12,525,000	\$32,525,000	\$12,525,000	\$32,525,000	\$ 25,000

#### 6.3 Proposed Facilities

Conceptual Design Plans will guide the transformation of the 92 cy pilot projects into commercial scale facilities. The conceptual design plans identified the locations, quantities of materials, and infrastructure needed to operate and meet regulatory requirements. The facilities will contain two components: an open windrow greenwaste composting operation and a Source Separated Organics (SSO) Processing Facility. Details of the commercial scale facilities are located in appendix M.

#### Figure 14: Proposed Design Elements for Full Scale Operation

Facility Name	Acreage	Greenwaste Daily Tonnage	Material Onsite (CY)	Source Separated Organics (SSO) Daily Tonnage
Valencia	10	150	40,000	100
Bee Canyon	30	437	142,000	100
Capistrano	19	204	77,000	100
Total	59	791	226,000	300



OCWR is proposing new conceptual facilities at each of the 3 pilot Greenery sites, which will include open windrow greenwaste composting operations (example shown above from TVI) and Source Separated Organics processing.



#### 6.4 Environmental Analysis & Regulatory Considerations

Environmental considerations under the California Environmental Quality Act (CEQA) and regulatory permits must be obtained prior to commencing full scale operations. To ease into the permitting process, OCWR will seek to permit one of the three pilot projects first, Bee Canyon Greenery. This will streamline the regulatory review process that will allow the other facilities to be permitted with less review time given the similarities in design in all three facilities. In addition, the greenwaste composting will be permitted prior to the SSO Processing Facility, which requires less capital and infrastructure upgrades to be built. Once the greenwaste composting operations are well established, OCWR can move forward with the entitlements for the SSO processing, which are governed by a separate set of regulations and is more complex.

A synopsis of the permits for Bee Canyon Greenery that must be obtained follows. Similar timeframes apply to Valencia and Capistrano Greeneries with start times dependent on progress made on Bee Canyon Greenery. Each composting facility will be permitted as stand-alone activities separate from the landfill operating permits.

#### California Environmental Quality Act (CEQA)

It is anticipated that a Mitigated Negative Declaration will be prepared for each facility. The schedule for completing the Mitigated Negative Declaration for Bee Canyon Greenery includes the following:

- November 2018 July 2019: Draft Initial Study Prepared
- August 2019: Regulatory Administrative Review
- September 2019 October 2019: State Clearing House Review
- December 2019: BOS Approval of MND/Notice of Determination Filed

#### Solid Waste Local Enforcement Agency/CalRecycle

In consultation with the LEA, each facility will have full Solid Waste Facility Permits separate from the landfill permits. Each facility will be required to have a Report of Composting Site Information (RCSI). The RCSI along with a completed MND must be submitted to the LEA as part of the application package. In addition, Non-Disposal Facility Elements (NDFEs) may need to be prepared which updates the County Integrated Waste Management Plan (CIWMP). Since the operation will be located within the property boundary of the landfill, an amendment to the Joint Technical Document will be required as an antidotal reference.

- January 2019 May 2019: Draft RCSI
- January 2019 February 2019: NDFE Update



- December 2019 June 2020: Full Solid Waste Facility Permit Process and JTD Amendment
- Summer 2020: Permit Issued

Through the Solid Waste Facility Permit process, each of the pilot projects are allowed to accept up to 12,500 cy of material onsite under the Enforcement Agency (EA) Notification. Administrative revisions to the original application may be required if OCWR elects to take this step up approach.

For the SSO Processing Facility this type of activity is typically co-located at Materials Recovery Facilities (MRFs). As a standalone operation co-located at the landfills, this operation would fall under the Transfer/Processing and Handling Regulations found in Title 14 of the California Code of Regulations. With a processing capacity of 100 tons per day, this activity would be considered a medium volume transfer/processing facility requiring a Registration Permit. A Transfer/Processing Report (T/PR) will be required to be prepared and submitted as part of the application package for the Registration Permit. Although not required, an Odor Impact Minimization Plan (OIMP) may also need to be prepared given the putrescible nature of foodwaste.





# CC Waste & Recycling

### 6.4 Environmental Analysis & Regulatory Considerations (continued)

#### South Coast Air Quality Management District (SCAQMD)

No additional permits will be required for Bee Canyon Greenery for open air windrow composting provided the primary

feedstock is greenwaste and no emission control systems are installed. The registration notification under Rule 1133 will need to be updated with new volumes and figures. Once submitted, the notification is filed by the SCAQMD with no further action required. For equipment purchases such as screeners, chippers, and grinders, some permitting may be required from the SCAQMD if the equipment is considered stationary. If the equipment is self-propelled it may be considered as an off-road equipment and may qualify under the California Air Resources Board's (CARB) In-Use Off-Road Diesel-Fueled Fleets Regulation. Under this regulation, the equipment would need to be registered through its online Diesel Off-Road Online Reporting System (DOORS) program. For purposes of developing the commercial scale facilities, OCWR intends to use existing equipment such as loaders which are already registered under the CARB's In-Use Off-Road Diesel-Fueled Fleets Regulation.



For the SSO Processing Facility this type of activity is governed under Rule 410 Odors from Transfer Stations and Material Recovery Facilities. However, the facility may be exempt as the rule applies to facilities that has a permitted throughput greater than 100 tons per day.

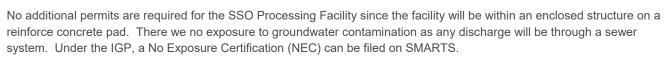
While the activity may be exempted, there may be other rules that apply if emission control systems are incorporated into the design of the enclosed structure. Additional consultation will be required with the SCAQMD to identify those rules and plan check review.

#### California Regional Water Quality Control Board (RWQCB)

California Regional Water Quality Control Board: Based on the volumes of materials to be handled, a Notice of Intent (NOI) will be filed with each respective Regional Board under the Composting General Order, Order WQ-2015-0121-DWQ. This will allow the composting operations to be permitted separately from the landfills, which have their own site-specific Waste Discharge Requirements (WDR). As part of the NOI, a Technical Report will be required that outlines the design features to prevent and monitor for groundwater contamination. In addition, a separate Stormwater Pollution Prevention Plan (SWPPPs) under the General Industrial General Program – Stormwater (IGP) will be required. Under this approach, the landfill's SWPPP will not be required to be updated except for minor reference to the composting SWPPP. A separate NOI will also be required

to be submitted to the State Water Resources Control Board's online Stormwater Multiple Application and Reporting Tracking System (SMARTS). Once the NOI is submitted there is a 90-day waiting period before composting operations can commence.

- January 2019 May 2019: Draft Technical Report and SWPPP
- June 2019 September 2019: Regulatory Informal Review of Technical Report and SWPPP
- December 2019: Submittal of NOI packages. 90-day waiting period.
- March 2020: End of 90-day waiting period to commence operations.







#### 6.4 Environmental Analysis & Regulatory Considerations (continued)

#### **Orange County Fire Authority (OCFA)**

For the quantities of materials OCWR desires to process, permits will be required from the OCFA. The OCFA is in the process of developing guidelines for Composting, Mulch and Organic Processing. Plan check documents must be submitted to the OCFA in conjunction with the water district (i.e., Irvine Water District for Bee Canyon) that provides the water. The documents must detail water suppression methods, including conveyance systems, tanks, and best

management practices to prevent spontaneous combustion of greenwaste materials. Once the plans are approved by both agencies, OCWR can begin the process to construct the infrastructure needed to operate at full scale.

- January 2019 May 2019: Development of Fire Prevention Plan and Construction Details
- May 2019 October 2019: Plan Check with OCFA and Water Supplier Agency
- October 2019: Permits Issued

FIRE

For the SSO Processing Facility full plan check will be required with the OCFA, Orange County Public Works and utility companies since the activity requires an enclosed structure. Detailed engineering design plans and specifications will be required along with geotechnical investigation and structural calculations. Given the multitude of agencies involved, permitting timeframes are expected to be extensive and can range from 2 to 3 years of permitting.

#### 6.5 Construction of Commercial Scale Facilities

Construction of the commercial scale facilities can be accomplished through various methods available to OCWR. The precise method will be in accordance with the County's procurement policy for capital improvement projects and will depend on the complexity of the project and project costs. The availability to utilize existing contracts and funding will also be a consideration as well as project timing and in-house OCWR labor forces. Construction can begin upon receipt of the permits form the OCFA, water district, and Regional Water Quality Control Board. Timeframes for construction can vary between 6 months to 2 years depending on procurement method.



After receiving all required permits, OCWR plans to implement full-scale composting operations at each landfill site. Photos depict full scale composting operations observed by OCWR on visits to other regional composting facilities.



## **Appendix A: Committee Member List**

### **Sponsors**

Tom Koutroulis Director OC Waste & Recycling

Executive Sponsor Lisa Smith Deputy Director, Business Services

**Executive Sponsor Jeff Southern** Deputy Director, Landfill Development



### Committee

David Tieu, P.E., MSCE, QISP, QSD Deputy Director, South Region

Ruth Wardwell Strategic Communications Manager

Jeff Arbour Environmental Services Manager

Isaac Novella Administrative Manager, Central Region

Brian Probolsky Contract & Program Support Manager

Kevin Hanson Sr. Project Manager, Central Region

Nan Natanom-Harrold, P.E., LEED AP Civil Engineer, North Region

Aimee Halligan Sr. Environmental Resources Specialist, Central Region

## Orange County Waste and Recycling

300 North Flower St. Ste. 400 Santa Ana, CA 92703

www.oclandfills.com



## **Appendix B: Subcommittee Structure**

## OC Waste & Recycling Organics Strategic Initiative Subcommittees

October 25, 2017

#### **Introduction**

OC Waste & Recycling has performed preliminary assessment to evaluate potential opportunities to develop an organics processing facility at one or more locations. To continue the initial baseline work of the Organics Management Committee, additional subcommittees are being formed to develop the business plan, strategic marketing, infrastructure, resources, and community acceptance needed for a successful organics management program. These subcommittees include the following:

- 1. Business Development and Outreach
- 2. Engineering, Research, and Development
- 3. Permitting
- 4. Operations and Safety

Each subcommittee will be asked the 5 "Ws" of what, when, where, why, how and present learning opportunities for work group members to gain new knowledge that will help transform OC Waste & Recycling from promoting recycling to doing recycling.

#### Subcommittee Structure

Each subcommittee is expected to have between 4-6 members led by a Lead and Coleader. Subcommittees should meet no less than bi-weekly with the Lead expected to also attend the general Organics Management Committee meetings. Subcommittee members should expect to spend 5-15 hours or more a week depending on assign tasks. This may include attending meetings, workshops, conferences, tours, giving presentations, etc. All subcommittees are interdependent of each other. Some information must be obtain from one or more work groups for another work group to complete deliverables. Consequently, frequent communication and cross pollination of information between subcommittees is inherently implied. In addition, the amount of work for each subcommittee will vary throughout the process as the organics program develops in stages. The Organics Management Committee will evaluate overall progress and identify key tasks to maintain forward progress.

#### **Deliverables**

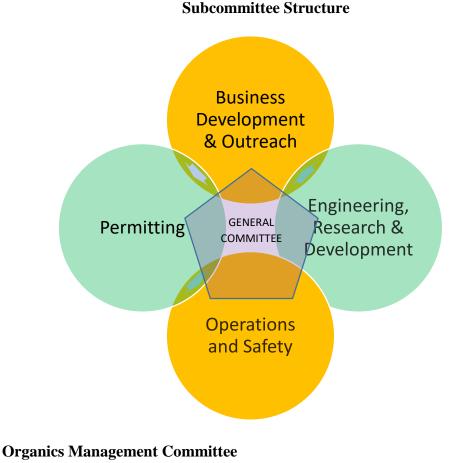
Each of the subcommittees will be tasked with a series of assignments that will contribute to the overall work of the general Organics Management Committee. To help provide the framework for each of the work groups, a purpose statement and list of propose activities have been developed as a starting point. Each subcommittee will research and provide recommended actions for each activity. Each set of responses should include appropriate references, if applicable. Some responses will also require developing a schedule of implementation since OC Waste & Recycling may not have the infrastructure or current systems in place. For these situations, work groups will be expected to develop recommendations to acquire such assets and provide a timeline for acquisition. This information will help identify barriers that may exist and the critical activities that must be completed. Therefore, each subcommittee should identify the critical path and focus the team's effort to developing answers and solutions. The estimated timeframe for each subcommittee to research and present the information will be 2-3 months with updates as needed. Deliverables will be in the form of reports and presentations to the Organics Management Committee as well as OCWR staff.

Project files will be saved on the following folders:

S:\\_No\_Auto\_Delete\\_South\_Region\Strategic Initiative Organic Management\2. Organic Management Resources\Subcommittees

#### Job Code and Training and Travel

All work related to the organics program will be coded to job number LA3501. In addition, a budget of \$25,000 for FY 2017/2018 has been allocated under the Waste Management Operations for training and travel related expenses. Tia Jorgensen will be processing all requests and payments.



#### **Organics Management Committee** Chair: David Tieu

Vice Chair: Brian Probolsky

#### **Business Development and Outreach**

Lead: Brian Probolsky Co-Lead: Ruth Wardwell

#### **Engineering, Research, and Development**

Lead: Nan Harrold Co-Lead: Kevin Hanson

#### Permitting

Lead: David Tieu Co-Lead: Jeff Arbour

#### **Operations and Safety**

Lead: Jeff Arbour Co-Lead: Dick Harabedian

#### 1. Business Development, and Outreach

**Purpose:** To develop the business model for a long term successful organics processing program. Elements include marketing, siting, program financing, community outreach, and communication.

Lead: Brian Probolsky Co-Lead: Ruth Wardwell Members:

#### Description of activities.

- a. Determine business model (i.e., Own and Operate, Public-Private Partnership, etc.)
- b. Determine how much PGM can be used by each OCWR landfill for erosion control and other beneficial reuse that will be counted as diversion.
- c. Identify sources and quantities of feedstock and final end use markets. Secure partnerships through agreements.
  - i. How much greenwaste, lumber, foodwaste, manure, and biosolids will be received (cy/tons) on a daily basis?
  - ii. Who will be providing the feedstock? How much can they bring in on a daily basis?
  - iii.What bulking/amendments agents are needed?
  - iv. What are the sources of the bulking/amendments?
  - v. What changes to the Waste Disposal Agreements are needed?
- d. Identify product specification and quantities of products to produce.
  - i. What are the different compost and mulch products and quantities to be produced?

- ii. Are there seasonal considerations for the production of compost and mulch?
- e. Determine locations and facility size (demonstration and full scale) for the production of organics.
  - i. For offsite locations, determine real estate transaction process to allow for organic processing activities.
- f. Determine distribution centers and means of product delivery.
- g. Determine revenue sources including tipping fees for the receipt of feedstock and sale of product.
- h. Establish a 10 year projection on growth and pro-forma on capital expenditures, operations, and maintenance costs.
- i. Develop 5 year strategic financial plan.
- j. Identify funding and grant opportunities. Apply for grants.
- k. Update the County Integrated Waste Management Plan (CIWMP) and Non-Disposal Facility Element (NDFE).
- 1. Identify information technology needs to conduct business transactions, reporting, and record keeping.
- m. Meet with customers to understand product needs and expectations.
- n. Pursue customer acquisition and expand markets.
- o. Monitor organics market and legislative developments.
- p. Develop performance metrics to evaluate success.
- q. Create scope of work for and coordinate and manage activity of public affairs vendor. Includes overall strategic communications plan.
- r. Develop and implement internal messaging.
- s. Serve as a spokesperson for OCWR and engagement with the community.
- t. Meet with partners to develop regional communications plan.
- u. Develop a protocol for responding to community and media inquiries.
- v. Identify resources and a plan to market the compost product.
- w. Develop educational programs, events, and partnerships with non-profit organizations.

#### 2. Engineering, Research and Development

Purpose: To develop the infrastructure needed for organics processing.

Lead: Nan Harrold Co-Lead: Kevin Hanson Members:

#### **Description of activities.**

a. Research the most suitable technologies and processes available to receive and produce organic products.

- i. Options include standard windrow composting, aerated static pile (positive vs. negative pressure), in-vessel, gore cover, etc.
- ii. Determine processing characteristics such as moisture content, temperature, carbon:nitrogen ratios, oxygen levels.
- iii. Determine technology cost.
- iv. Determine method of bringing on the technology.
- b. Establish the manufacturing production process from feedstock to product.
  - i. Describe facility layout and acreage needed.
  - ii. How will the material be received?
  - iii. How long is the active composting process?
  - iv. What is geometry of the different piles?
  - v. How often are the piles turned? How will they be turned?
  - vi. How long is the curing process?
  - vii. How much material (cy) can be stored within the facility?
- c. Identify equipment needs and research vendors to produce a product. Determine different ownership options (e.g., rent vs. own).
  - i. Considerations include screeners, trommels, loaders, grinders, conveyors, and colorizers.
- d. Determine the auxiliary infrastructure needed to support the manufacturing production process. Identify utilities and their respective loads.
  - i. What site improvements will be needed?
  - ii. How much power, water, and sewer will be needed?
  - iii. What types of fire suppression equipment will be needed?
  - iv. How will the utilities be delivered?
- e. Develop environmental engineering controls and best management practices to meet regulatory and community standards (i.e., odor and vector management).
  - i. Considerations include leachate production and stormwater collection.
  - ii. Determine drainage flow and how it would be captured.
  - iii. How will dust control be managed?
  - iv. What practices can be taken to minimize internal combustion of the piles?
- f. Determine capital expenditures, operations, and maintenance costs.
  - i. What will be the mechanism to maintain the equipment?

- g. Determine product quality control and testing standards.
  - i. Identify laboratories that conduct fecal coliform, salmonella, and heavy metal testing.
  - ii. Determine frequency of testing.
  - iii. Identify soils laboratory for engineer fill analysis.
  - iv. Identify vendors who provide monitoring and sampling equipment (i.e., temperature, C:N, moisture, etc.)
- h. Provide engineering support during production.

#### 3. Permitting

**Purpose:** To secure the necessary entitlements to site an organics processing facility.

Lead: David Tieu Co-Lead: Jeff Arbour Members:

#### **Description of activities.**

- a. Determine the type of environmental documents (i.e., CEQA) needed to site an organics facility. Prepare environmental documentation.
- b. Identify regulatory permits needed to site and operate an organics facility. Prepare Report of Facility Information/Odor Impact Minimization Plan/Odor Best Management Practice Feasibility Report and permit application to secure permits.
  - i. Considerations should include permits from LEA, Regional Board, SCAQMD, CARB, fire authority, and potentially OCPW plan check.
  - ii. Odor monitoring and response.
- c. Served as a liaison between OCWR and the regulatory agencies.
- d. Prepare and submit regulatory compliance reports.
- e. Identify trade associations, training opportunities, and certifications.
  - Considerations include US Composting Council, Manager of Composting Operations, California Resource Recovery Association, Zero Waste Certification, Recycling Seal of Testing Assurance (STA) program, Association of Compost Producers.

#### 4. Operations and Safety

**Purpose:** To evaluate the operational and safety requirements for an organics processing facility.

Lead: Jeff Arbour Co-Lead: Dick Harabedian Members:

#### Description of activities.

- a. Identify staffing requirements. Determine existing and needed job classifications. Meet with HR and unions as needed. Determine staffing acquisition.
  - i. Determine if existing Orange County title job classifications are acceptable for existing staff to perform duties at an organics processing facility.
  - ii. If new job classifications are needed, determine path for creating those classifications.
- b. Identify number of staff, position titles, and supervisory structure for each facility location. If co-located on OCWR landfills, identify extent to which existing staff can take on additional responsibilities.
- c. Identify staffing responsibilities and duties.
- d. Establish training and operating manuals for the production of organic products.
- e. Identify and establish safety protocols.
  - i. Establish safety meetings and topics.
  - ii. What updates to the IIPP will be needed?
- f. Identify personal protection equipment (PPE).
- g. Identify ancillary tools and equipment for compost production.
- h. What security measures will be needed?
- i. What will be the days and hours of operations?
- j. What are the employee shifts?
- k. Identify procedures to meet CalRecycle's contamination levels of finished compost.



# ORGANICS INITIATIVE

Organics Subcommittee Roster – Updated 10/18/18							
Group E-mail:	OrganicsSubcomms@ocwr.ocgov.com						
Business Development and Outreach							
	Emily Jackson	Regulatory Support					
Lead: Brian Probolsky	Irene Alonso	Strategic Communications					
CoLead: Ruth Wardwell	Mike Kashani	Renewable Energy Program					
	John Arnau	CEQA and Habitat					
	Isaac Novella	Central Region - Administration					
	Karalyn Meeh	Budget and Finance					
	Steven Halligan	Contract and Program Support					
	Nikil Patel	Administration					
E	ngineering, Research and Develop	ment					
	Josh Farris	Central Region					
Lead: Nan Harrold	Peter Livingston	Renewable Energy Program					
CoLead: Kevin Hanson	Ruthie Resnik	Environmental Services					
	Mario Castillo	Regulatory Support					
	Soheil Afshari	South Region - Engineering					
	Steven Halligan	Contract and Program Support					
	Jim Markham	North Region - Operations					
	Permitting						
	Jesus Perez	Waste Disposal and Diversion					
Lead: David Tieu	John Arnau	CEQA and Habitat					
CoLead: Jeff Arbour	Eli Esber	Real Estate					
	Warisa Niizawa	Regulatory Support					
	Lu Lu Goh	Contract and Program Support					
	Robert Borboa	South Region - Operations					
	<b>Operations &amp; Safety</b>						
	Trang Doan	Budget and Finance					
Lead: Jeff Arbour	Laura Perguson	South Region - Operations					
Co-Lead: Dick Harabedian	Larry Adams	Central Regions - Operations					
	John Escutia	South Region - Administration					
	At Large						
	Evelyn Grechuta graphics, maps etc.	Regulatory Support					
	Ben Castillo	Operations					
	Scott Holstein IT	IT					
	Chris Romines IT	IT					



# **Appendix C: PGM Characterization**

Prima	PGM Provider	Alottments (Loads)	Net Weight(lb) <sup>(1)</sup>	Contamination Content% <sup>(2)</sup>	Visual Moisture Content% <sup>(2)</sup>		Color and Particle Size
						PGM odor/trash visible	
1	CR&R	6	11.5	10 - 15	20 to 25	C&D, landscaper trash	Darker, 6"stick,1"-4"PGM
						Less odorous/less trash visible	
						Palm root, organic debris,	
						small leaves, low	
2	TVI	6	11	2 to 5	20 to 30	contamination	Darker,6"stick,1"-3"PGM

# PGM EVALUATION

FRB	PGM Provider	Alottments (Loads)	Net Weight(lb) <sup>(1)</sup>	Contamination Content% <sup>(2)</sup>	Visual Moisture Content% <sup>(2)</sup>	General Observation	Particle Size
1	CR&R	10	10	15		PGM odor/trash visible curbside, woody, trashy	Darker, 6"stick,1"-5"PGM
2	TVI	6	7	2-5		PGM odor, mulch, wood chips, some palm, fibrous	Lighter color, 6"stick,1"-4"PGM
3	Rainbow	10	8	5 - 10			Medium Color, 4"stick,1"-2"PGM

Olinda	PGM Provider	Alottments (Loads)	Net Weight(lb) <sup>(1)</sup>	Contamination Content% <sup>(2)</sup>	Visual Moisture Content% <sup>(2)</sup>	General Observation	Color and Particle Size
						PGM odor/less trash visible	
						Green waste, landscape,	
						leaves , wood stick, organic	
1	CR&R	10	7	5 - 10	10 to 15	debris	Darker, 6" stick, 1"-3" PGM
						PGM odor/less trash visible	
2	TVI (3)	6	7	2 - 5	5 to 10	Palm frond material	Brown,8"stick,1"-3"PGM
						PGM odor/trash visible	
						(plastics/rocks)/dirty	
						Curbside, Green waste,	
						landscaper trash, street	
3	СVТ	26	13	20	20 to 25	sweeping debris?	Darker grey,4"stick,1"-2"PGM

Notes:

(1) Five gallon bucket was used to weigh the PGM.

(2) Contamination and Moisture content was visually estimated not measured.







# Tieu, David [OCWR]

From:	Tieu, David [OCWR]
Sent:	Friday, November 10, 2017 10:33 AM
То:	Natanom-Harrold, Nan [OCWR]; Arbour, Jeff [OCWR]; Southern, Jeff [OCWR]; Halligan,
	Aimee [OCWR]; Albarian, Paul (COCO) [COCO]; Arnau, John [OCWR]; Hanson, Kevin
	[OCWR]; Probolsky, Brian [OCWR]; Koutroulis, Tom [OCWR]; Smith, Lisa [OCWR];
	Wardwell, Ruth [OCWR]
Cc:	Harabedian, Dick [OCWR]
Subject:	PGM Screening
Attachments:	PGM EVALUATION 11-9-2017.xlsx

Team,

This past week, we completed a non-scientific PGM screening study. The purpose of the study was to visually characterize the greenwaste feedstock brought in from each of the haulers to our respective landfills. This will allow us to gain a better understanding of the type of greenwaste (i.e., leafy, woody, grass, shrubs, etc.) being received in term of their physical characteristics and level of contamination. This information will also help to further understand the processes the hauler use to pre-process their material and areas of improvement prior to bringing it to us for either PGM as ADC or PGM as organics feedstock.

For this screening, each of the sites took samples and shipped it to Prima. Samples were received on November 3. It was decided South Region would do the screening to provide consistency of characterizing the material. As part of the screening, staff did the following measurements:

- Weight, using a 5 gallon bucket for each sample
- Visual Contamination Content (%)
- Visual Moisture Content (%)
- Color and Particle Size
- General Observations

Being that this screening was non-scientific the contamination and moisture content are meant to be taken as relative numbers. The weight is accurate as each sample was weighed using a commercial scale. Woody materials and contamination were separated and recorded on the data sheet. Some general observations:

1. Material from TVI had the least of amount of contamination (2-5%). It also seemed to have the most consistency in terms of the type of greenwaste feedstock. Samples came in at average of 8 lbs/sample.

2. Material from CVT had the most contamination (20%) with plastics and rocks. It was also the densest at 13 lbs/sample.

3. Material from Rainbow was fairly clean consisting of greenwaste from landscaping/lawn cuttings.

4. Material from CRR has some contamination and oversized woody materials.

Although the data sheet has pictures imbedded, high resolution photographs are saved on the following link under the Operations Subcommittee since evaluation the contaminations was one of assignments.

<u>S:\ No\_Auto-Delete\ South\_Region\Strategic Initiative Organic Management\2. Organic Management</u> <u>Resources\Subcommittees\Operations and Safety</u>

Also, if anyone wants samples of the PGM, we can put them in ziplock bags and ship them to you.

# Thanks,

David

PRIMA – CR&R



PRIMA – CR&R



# PRIMA TVI

# PRIMA – TVI



PRIMA – TVI

# FRB CR&R



# FRB CR&R







# FRB TVI



# **FRB RAINBOW**



# **FRB RAINBOW**



# OLINDA CR&R



# OLINDA CR&R



# **OLINDA TVI**



# OLINDA TVI



# **OLINDA CVT**



# **OLINDA CVT**





# Appendix D: CEQA



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MAR 1 3 2018

ORANGE COUNTY CLERK-RECORDER DEPARTMENT

DEPUTY N BY:



POSTED

Title: Administrative Manager I

### OC WASTE & RECYCLING 300 NORTH FLOWER STREET, SUITE 400 SANTA ANA, CALIFORNIA 92703

### NOTICE OF EXEMPTION

		Pilot Composting Project at the Prima Deshecha Landfill	
	Project Location – Specific		
	32250 La Pata Avenue		
	Project Location – City	Project Location – County	
	San Juan Capistrano	Orange County	
		roject: As a result of recent California legislation, SB 1383, that	
		ert or recycle at least 50 percent of all organic wastes currently	
		75 percent by 2025, OC Waste & Recycling (OCWR) will	
1		ng project at the Prima Deshecha Landfill. The purpose of the	
		or OCWR to (1) gain a better understanding of composting	
		ions; (2) determine the costs associated with composting design,	
		by studying and observing on a microscale, determine the	
		occur at a full-scale composting operation; (4) learn how to make	
		t all U.S. Composting Council testing requirements and (5)	
		post. No significant impacts to the environment will occur.	
1	Public Agency Approving Project:	Date of Decision	
	OC Waste & Recycling	March 9, 2018 -	
l	Public or Private Applicant:	<u>ộ</u>	
	OC Waste & Recycling, 300 N. Flower Stre	eet, Suite 400, Santa Ana, CA 92703	
	Exempt Status: (Check One)	S S	
	Ministerial [CEQA Guidelines	Ale -	i.
	Section 15268]	Statutorial [Type and Section Number]:	ĺ.
	Declared Emergency [Section	2018	
1	15269 (a) & (b)]		1
	Emergency Project [Section		
	15269 (a) & (b)]	March 9, 2018 eet, Suite 400, Santa Ana, CA 92703 Statutorial [Type and Section Number]: Clerk, RECORDER Clerk, RECORDER Clerk, RECORDER Clerk, RECORDER Statutorial [Type and Section Number]: Clerk, RECORDER Clerk, RECORDER Clerk, RECORDER Clerk, RECORDER Statutorial [Type and Section Number]: Clerk, RECORDER Clerk, RECORDER _	
	Gen. Rule [Sec. 15061(b)(3)]	XCategorical Exemption (Classes 1, 4, 6, 7 & 8 P	
	Explanation of Exempt Status: The propo	osed action is Categorically Exempt (Class 1) from the provisions of	
		QA Guidelines, since Class 1 (Existing Facilities) includes the minor	
ĺ		opographic features, involving negligible or no expansion of use	
		agency's determination. In addition, the proposed action is also provisions of CEQA pursuant to Section 15304 of the CEQA	
ł	Cuidelines since Class 4 Minor Alterations	to Land) involves minor alterations to land. The proposed action is	
	dideines, since class 4 (Minor Alterations	the provisions of CEQA pursuant to Section 15306 (Information	
		data collection, research, experimental management and resource	
		serious or major disturbance to an environmental resource. Also,	
		xempt (Class 7) from the provisions of CEQA pursuant to Section	
	15307 (Actions by Regulatory Agencies for	Protection of Natural Resources), since Class 7 consists of actions	
	taken by a public agency for the protection	of natural resources. The proposed action is also Categorically	
	Exempt (Class 8) from the provisions of CE	QA pursuant to Section 15308 (Actions by Regulatory Agencies for	
	Protection of the Environment), since Class	8 consists of actions taken by a public agency for the protection of	
	the environment. No significant impacts to		
	Contact Person:	Phone Number:	
	John Amau	(714) 834-4107	
	JULITATIBU	((1+))))+++())	

NOTE: Exempt of County Fees per Government Code Section 6103

Signature:

Date: March 13, 2018

brack

CALIFORNIA State of California - Department of Fish and Wildlife 2018 ENVIRONMENTAL FILING F DFW 753.5a (Rev. 01/01/18) Previously D		PT					
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OC WASTE & RECYCLING					03/13/2	2018	
COUNTY/STATE AGENCY OF FILING					DOCUMEN	IT NUMBER	
Orange					201885	000244	
PROJECT TITLE		***					
PROPOSED DEMONSTRATION PILOT COMPOSTING PROJECT A	T THE PRIMA DESHECHA	LANDF	FILL (	oc w	ASTE & REC	YCLING LOG #	674)
PROJECT APPLICANT NAME	PROJECT APPLICANT	EMAIL			PHONE NL	JMBER	
OC WASTE & RECYCLING					(714) 83	84-4107	
PROJECT APPLICANT ADDRESS	CITY	S	TATE		ZIP CODE		
300 N. FLOWER STREET, SUITE 400	SANTA ANA		CA		92703		
PROJECT APPLICANT (Check appropriate box)		·····			102100		
Local Public Agency School District	Other Special District		Пs	tate A	gency	Private	Entity
			<u> </u>				
CHECK APPLICABLE FEES:							
Environmental Impact Report (EIR)		\$3,168	3.00	\$			0.00
Mitigated/Negative Declaration (MND)(ND)		\$2,280	).75	\$			0.00
Certified Regulatory Program document (CRP)		\$1,077	7.00	\$			0.00
Exempt from fee							
Notice of Exemption (attach)							
CDFW No Effect Determination (attach)							
Fee previously paid (attach previously issued cash receipt copy)	/)						
Water Right Application or Petition Fee (State Water Resources)	s Control Board only)	\$850	00.0	\$			0.00
County documentary handling fee				\$			0.00
C Other				\$			
PAYMENT METHOD:							
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Thomas D. Koutroulis, Director 300 N. Flower Street, Suite 400 Santa Ana, CA 92703

> <u>www.oclandfills.com</u> Telephone: (714) 834-4000 Fax: (714) 834-4183

TO:	File
FROM:	Tom Koutroulis, Director OC Waste & Recycling
SUBJECT:	Proposed Demonstration Pilot Composting

# SUBJECT: Proposed Demonstration Pilot Composting Project at the Prima Deshecha Landfill (OCWR Log #674)

# I. Nature of Project

As a result of recent California legislation, SB 1383, that requires all jurisdictions in California to divert or recycle at least 50 percent of all organic wastes currently going to solid waste landfills, and at least 75 percent by 2025, OC Waste & Recycling (OCWR) will implement a demonstration pilot composting project at the Prima Deshecha Landfill. The purpose of the demonstration pilot composting project is for OCWR to (1) gain a better understanding of composting design, permitting, engineering and operations; (2) determine the costs associated with composting design, permitting, engineering and operations; (3) by studying and observing on a microscale, determine the potential environmental issues that could occur at a full-scale composting operation; (4) learn how to make high quality finished compost that will meet all U.S. Composting Council testing requirements and (5) analyze the potential uses for finished compost.

The proposed demonstration pilot composting project ("the project") will occur on an approximate 1-acre area at the Prima Deshecha Landfill, within Waste Management Unit 1 of the existing Zone 1 landfill, as shown on the attached exhibit. This area of the landfill is not currently being used for active landfill disposal. Material feedstocks to be composted include source separated residential curbside green waste, commercial green waste, processed green waste and wood waste. The project will not have more than 60 tons (i.e., 92 cubic yards) of material on-site at any one time or process more than 250 tons of material per year. While it is anticipated that the wood waste will be relatively homogeneous and clean, some of the green waste that will be received will come to the landfill directly from residential curbside pickup, so there will likely be small amounts of residual solid waste mixed in with the green waste. Through visual inspection, green waste that contains only very small amounts of residual solid waste will be used for the project. Any green waste received at the composting operation that is noticeably contaminated with residual solid waste will be disposed at the active area of the landfill. Any highly odorous loads will also be removed from the composting area and disposed in the landfill. OCWR will divert feedstock materials to the project that are already being delivered to the landfill, so there will be no additional truck trips.

As part of the project, OCWR will try two different types of composting operations. The first type will be open windrow composting. OCWR will create one windrow that will be no more than 92 cubic yards of material on-site with the approximate dimensions of 82 feet long, 10 feet wide and 6 feet high, in compliance with Orange County Fire Authority (OCFA) requirements. The feedstock will be placed on top of a crushed asphalt surface for all weather access and

surrounded by an earthen berm to prevent storm water run-on and run-off. The windrow will be periodically turned with a loader, skid steer, or similar equipment, up to three times per week, to quicken the decomposition of the feedstock into compost and to maintain temperatures greater than 131 degrees Fahrenheit during the pathogen reduction process. The heavy equipment is already in use at the landfill on a routine basis and will be made available for the project. The initial compost processing phase will last at least 22 days or until the pile has completed the pathogen reduction process. Afterwards, the compost material will be cured for a period that will last between 30-60 days for further stabilization of the compost product. After the curing process is complete, OCWR may screen the finished compost to remove oversized uncomposted material and residual solid waste. Altogether, the composting process may take up to 100 days. The active composting process will require the use of water to hydrate the windrow keeping the feedstock moist without overwatering, to limit the potential for leachate generation. Water will be provided by a water truck that is already in use at the landfill operation and will be made available for the project. The existing potable water line, the reclaimed water line and the 50,000 gallon water storage tank that currently serve the landfill operation have sufficient capacity to support the project. The water truck will fill up at the J-stand that is located closest to the project. Water will not be used during the curing process. Approximately 250 gallons of water per day may be used to hydrate the compost piles. All water used for composting will be contained within the asphalt pad and perimeter earthen berms to minimize runoff. In addition, water will be used as needed to provide for dust control in accordance with SCAQMD Rule 403 as part of normal landfill operations.

As an alternative to open air windrow composting, or in combination with open air windrow composting, OCWR may also make compost by creating an aerated static pile, using the same feedstock materials described above for open air windrow composting. Feedstock materials will be placed on top of plastic piping, which will be placed on a crushed asphalt surface. The plastic piping will then be removed, creating openings at the bottom of the pile that will create a chimney effect, thereby allowing oxygen to pass through the pile. The dimensions of the aerated static pile (i.e., height, width and length) will be no greater than the dimensions of the open air windrow compost pile described above. The same heavy equipment would be used for the aerated static pile, although less turning of the pile would be required when compared to open air windrow composting. It is also anticipated that the timeframes for the active and curing composting phases for aerated static pile composting will be similar to open air windrow composting. In addition, it is anticipated that the aerated static pile composting will use a similar amount of water when compared to open air windrow composting. Whether OCWR chooses to implement open air windrow composting only, or in combination with aerated static pile composting, at no time will the project have more than 60 tons (i.e., 92 cubic yards) of material on-site at any one time or process more than 250 tons of material per year.

Testing will be performed as prescribed by the U.S. Composting Council once the compost has been cured. It is OCWR's intent to make high quality compost that will receive certification from the U.S. Composting Council and will also contain less than 0.5 percent contamination, as required by the California Department of Resources Recovery and Recycling (CalRecycle).

Both composting methods will require that OCWR place ground asphalt on the surface of the landfill where the composting will occur, to maintain the integrity of the landfill interim soil

cover and to preclude any leaching from the project into the underlying waste mass. Surface water runoff will be diverted away from the composting area to the existing landfill surface water collection system. Surface water runoff that comes into contact with compost materials will be tested.

Methane generated by the underlying landfill area will not result in surface fires at the composting area through the effective maintenance and monitoring of the landfill gas collection system.

As part of the project, OCWR will use finished compost at the landfill for beneficial reuse at the landfill such as landscaping, geosynthetic tarp framing and for erosion control. In addition, the compost may be sold or given away to potential end users as part of OCWR's market research, business development and public outreach.

Implementation of the demonstration pilot composting operation at the Prima Deshecha Landfill is exempt from permitting due to the limited tonnage of feedstock materials that the project will receive. However, the following agencies will be notified of the project and operations will be performed in a manner that is consistent with the respective regulations and best management practices of these agencies. These agencies include the following: CalRecycle; Orange County Health Care Agency, Environmental Health Division acting as the Local Enforcement Agency (LEA) for CalRecycle; the California Regional Water Quality Control Board, San Diego Region (Regional Board); South Coast Air Quality Management District (SCAQMD); and OCFA. Implementation of the project will require registration with SCAQMD in accordance with Rule 1133.

With the implementation of the project design features and operational controls discussed above, and by complying with all of the conditions and requirements included in the agency approvals, the proposed demonstration pilot composting project will not result in any significant impacts to the environment.

# II. Authority for Administrative Action

The Director of OC Waste & Recycling, pursuant to the authority granted in OCCO Sections 4-3-104, 4-3-126, and 4-3-137, takes the following administrative actions.

# III. CEQA Approval

The proposed action is Categorically Exempt (Class 1) from the provisions of CEQA pursuant to Section 15301 of the CEQA Guidelines, since Class 1 (Existing Facilities) consists of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographic features, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination. In addition, the proposed action is also Categorically Exempt (Class 4) from the provisions of CEQA pursuant to Section 15304 of the CEQA Guidelines, since Class 4 (Minor Alterations to Land) involves minor alterations to land. The proposed action is also Categorically Exempt (Class 6) from the provisions of CEQA pursuant to Section 15304 of CEQA pursuant to Section 15306 (Information

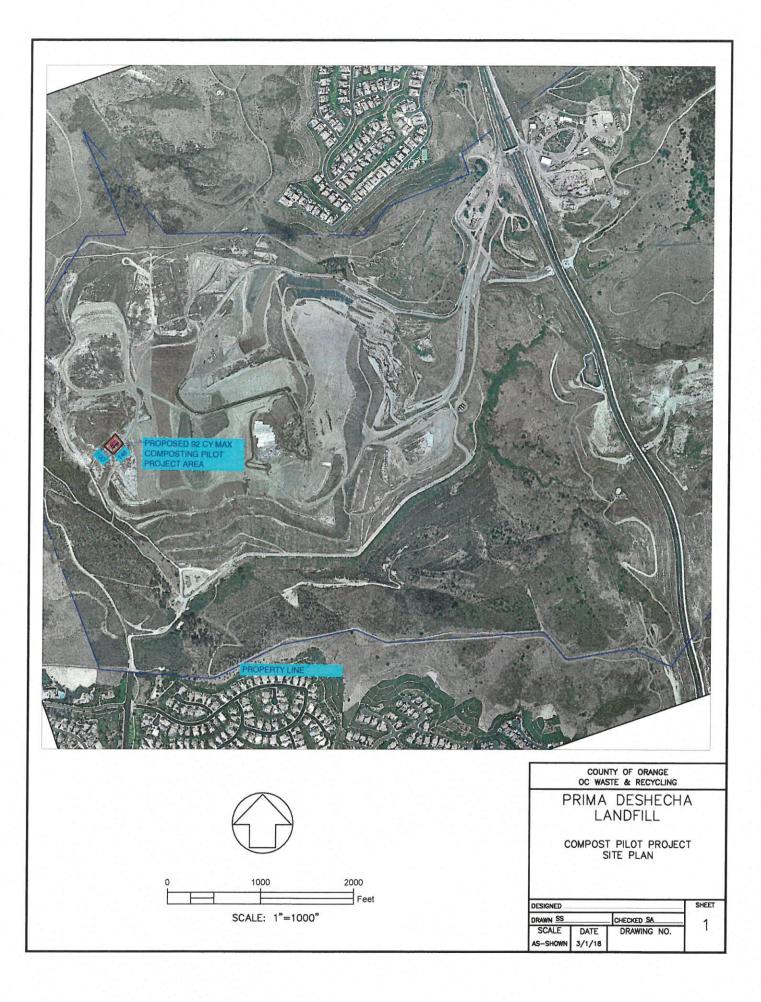
Collection), since Class 6 consists of basic data collection, research, experimental management and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource. Also, the proposed action is also Categorically Exempt (Class 7) from the provisions of CEQA pursuant to Section 15307 (Actions by Regulatory Agencies for Protection of Natural Resources), since Class 7 consists of actions taken by a public agency for the protection of natural resources. The proposed action is also Categorically Exempt (Class 8) from the provisions of CEQA pursuant to Section 15308 (Actions by Regulatory Agencies for Protection of the Environment), since Class 8 consists of actions taken by a public agency for the protection of the environment. The proposed composting demonstration pilot project at the Prima Deshecha Landfill is consistent with a Class 1, Class 4, Class 6, Class 7 and Class 8 Categorical Exemption determination.

# IV. Certification

I hereby certify that the subject project is approved.

Date: 3/9/2018

Director, OC Waste & Recycling





FILED

MAR 1 3 2018

ORANGE COUNTY CLERK-RECORDER DEPARTMENT

DEPUTY BY: Ħ



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### OC WASTE & RECYCLING 300 NORTH FLOWER STREET, SUITE 400 SANTA ANA, CALIFORNIA 92703

## NOTICE OF EXEMPTION

Project Title: Proposed Demonstration	Pilot Composting Project at the FRB Landfill
(OC Waste & Recycling Log #673)	
Project Location – Specific	
11002 Bee Canyon Access Road	
Project Location – City	Project Location - County
Irvine	Orange County
	Project: As a result of recent California legislation, SB 1383, that
	vert or recycle at least 50 percent of all organic wastes currently
	75 percent by 2025, OC Waste & Recycling (OCWR) will
	ing project at the FRB Landfill. The purpose of the demonstration
	1) gain a better understanding of composting design, permitting,
	e the costs associated with composting design, permitting,
	ng and observing on a microscale, determine the potential a full-scale composting operation; (4) learn how to make high
	U.S. Composting Council testing requirements and (5) analyze
	lo significant impacts to the environment will occur.
Public Agency Approving Project:	Date of Decision
OC Waste & Recycling	
Public or Private Applicant:	
OC Waste & Recycling, 300 N. Flower St	reet Suite 400 Santa Ana CA 92703
Exempt Status: (Check One)	
	Kon T
Ministerial [CEQA Guidelines	
Section 15268]	Statutorial [Type and Section Number]:
Declared Emergency [Section	R 2
15269 (a) & (b)]	Statutorial [Type and Section Number]:
Emergency Project [Section	March 9, 2018 reet, Suite 400, Santa Ana, CA 92703 Statutorial [Type and Section Number]: X_Categorical Exemption (Classes 1, 4, 6, 7 & 8)
15269 (a) & (b)]	X Categorical Exemption (Classes 1, 4, 6, 7 & 8
Gen. Rule [Sec. 15061(b)(3)]	Categorical Exemption (Classes 1, 4, 6, 7 & 89 5
	oosed action is Categorically Exempt (Class 1) from the provisions of
	EQA Guidelines, since Class 1 (Existing Facilities) includes the minor
	topographic features, involving negligible or no expansion of use
	id agency's determination. In addition, the proposed action is also
	e provisions of CEQA pursuant to Section 15304 of the CEQA is to Land) involves minor alterations to land. The proposed action is
	the provisions of CEQA pursuant to Section 15306 (Information
	data collection, research, experimental management and resource
	a serious or major disturbance to an environmental resource. Also,
	Exempt (Class 7) from the provisions of CEQA pursuant to Section
	r Protection of Natural Resources), since Class 7 consists of actions
taken by a public agency for the protectio	n of natural resources. The proposed action is also Categorically
Exempt (Class 8) from the provisions of CE	EQA pursuant to Section 15308 (Actions by Regulatory Agencies for
Protection of the Environment), since Clas	s 8 consists of actions taken by a public agency for the protection of
the environment. No significant impacts t	o the environment will occur.
Contact Person:	Phone Number:
John Amau	(714) 834-4107
NOTE: Exempt of County Fees per Gov	
0.00	
bignature: Com Chi	MULL Title: Administrative Manager I
Date: March 13 2018	

Date: March 13, 2018

30-2018-02-05

CALIFORNIA State of California - Department of Fish and Wildlife 2018 ENVIRONMENTAL FILING FI DFW 753.5a (Rev. 01/01/18) Previously DF				
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SEE INSTRUCTIONS ON REVERSE. TYPE OR PRINT CLEARLY.				
LEAD ACTION				DATE
OC WASTE & RECYCLING				03/13/2018
COUNTY/STATE AGENCY OF FILING				DOCUMENT NUMBER
Orange				201885000243
PROJECT TITLE	₩			
PROPOSED DEMONSTRATION PILOT COMPOSTING PROJE	CT AT THE FRB LANDFI		VAST	E & RECYCLING LOG #673)
PROJECT APPLICANT NAME	PROJECT APPLICANT EMA			PHONE NUMBER
OC WASTE & RECYCLING				(714) 834-4107
PROJECT APPLICANT ADDRESS	CITY	STATE		ZIP CODE
300 N. FLOWER STREET, SUITE 400	SANTA ANA	CA		92703
PROJECT APPLICANT (Check appropriate box)				
✓ Local Public Agency School District	Other Special District	St	ate Ag	gency Private Entity
CHECK APPLICABLE FEES:				
Environmental Impact Report (EIR)	\$3,	168.00	\$	0.00
Mitigated/Negative Declaration (MND)(ND)	\$2,	280.75	\$	0.00
Certified Regulatory Program document (CRP)	\$1,	,077.00	\$	0.00
<ul> <li>Exempt from fee</li> <li>Notice of Exemption (attach)</li> <li>CDFW No Effect Determination (attach)</li> <li>Fee previously paid (attach previously issued cash receipt copy)</li> </ul>				
				0.00
Water Right Application or Petition Fee (State Water Resources	Control Board only) \$	850.00	\$	
County documentary handling fee			\$	0.00
Other			\$ .	
PAYMENT METHOD:	TOTAL REC	EIVED	\$	0.00
SIGNATURE AGENC	Y OF FILING PRINTED NAM	E AND TI	TLE	
X 7fazel J. Ben 5 HAZE	L L. BENNETT, DE	PUTY	CLI	ERK





www.oclandfills.com Telephone: (714) 834-4000 Fax: (714) 834-4183

TO: File

FROM: Tom Koutroulis, Director OC Waste & Recycling

# SUBJECT: Proposed Demonstration Pilot Composting Project at the Frank R. Landfill (OCWR Log #673)

# I. Nature of Project

As a result of recent California legislation, SB 1383, that requires all jurisdictions in California to divert or recycle at least 50 percent of all organic wastes currently going to solid waste landfills, and at least 75 percent by 2025, OC Waste & Recycling (OCWR) will implement a demonstration pilot composting project at the Frank R. Bowerman (FRB) Landfill. The purpose of the demonstration pilot composting project is for OCWR to (1) gain a better understanding of composting design, permitting, engineering and operations; (2) determine the costs associated with composting design, permitting, engineering and operations; (3) by studying and observing on a microscale, determine the potential environmental issues that could occur at a full-scale composting operation; (4) learn how to make high quality finished compost that will meet all U.S. Composting Council testing requirements and (5) analyze the potential uses for finished compost.

The proposed demonstration pilot composting project ("the project") will occur on an approximate 1-acre area at the FRB Landfill, within the eastern limits of Phase VI, as shown on the attached exhibit. This area of the landfill is not currently being used for active landfill disposal. Material feedstocks to be composted include source separated residential curbside green waste, commercial green waste, processed green waste and wood waste. The project will not have more than 60 tons (i.e., 92 cubic yards) of material on-site at any one time or process more than 250 tons of material per year. While it is anticipated that the wood waste will be relatively homogeneous and clean, some of the green waste that will be received will come to the landfill directly from residential curbside pickup, so there will likely be small amounts of residual solid waste mixed in with the green waste. Through visual inspection, green waste that contains only very small amounts of residual solid waste will be used for the project. Any green waste received at the composting operation that is noticeably contaminated with residual solid waste will be disposed at the active area of the landfill. Any highly odorous loads will also be removed from the composting area and disposed in the landfill. OCWR will divert feedstock materials to the project that are already being delivered to the landfill, so there will be no additional truck trips.

As part of the project, OCWR will try two different types of composting operations. The first type will be open windrow composting. OCWR will create one windrow that will be no more than 92 cubic yards of material on-site with the approximate dimensions of 82 feet long, 10 feet wide and 6 feet high, in compliance with Orange County Fire Authority (OCFA) requirements. The feedstock will be placed on top of a crushed asphalt surface for all weather access and

surrounded by an earthen berm to prevent storm water run-on and run-off. The windrow will be periodically turned with a loader, skid steer, or similar equipment, up to three times per week, to quicken the decomposition of the feedstock into compost and to maintain temperatures greater than 131 degrees Fahrenheit during the pathogen reduction process. The heavy equipment is already in use at the landfill on a routine basis and will be made available for the project. The initial compost processing phase will last at least 22 days or until the pile has completed the pathogen reduction process. Afterwards, the compost material will be cured for a period that will last between 30-60 days for further stabilization of the compost product. After the curing process is complete, OCWR may screen the finished compost to remove oversized uncomposted material and residual solid waste. Altogether, the composting process may take up to 100 days. The active composting process will require the use of water to hydrate the windrow keeping the feedstock moist without overwatering, to limit the potential for leachate generation. Water will be provided by a water truck that is already in use at the landfill operation and will be made available for the project. The existing potable water line, the reclaimed water line and the 100,000 gallon water storage tank that currently serve the landfill operation have sufficient capacity to support the project. The water truck will fill up at the J-stand that is located closest to the project. Water will not be used during the curing process. Approximately 250 gallons of water per day may be used to hydrate the compost piles. All water used for composting will be contained within the asphalt pad and perimeter earthen berms to minimize runoff. In addition, water will be used as needed to provide for dust control in accordance with SCAQMD Rule 403 as part of normal landfill operations.

As an alternative to open air windrow composting, or in combination with open air windrow composting, OCWR may also make compost by creating an aerated static pile, using the same feedstock materials described above for open air windrow composting. Feedstock materials will be placed on top of plastic piping, which will be placed on a crushed asphalt surface. The plastic piping will then be removed, creating openings at the bottom of the pile that will create a chimney effect, thereby allowing oxygen to pass through the pile. The dimensions of the aerated static pile (i.e., height, width and length) will be no greater than the dimensions of the open air windrow compost pile described above. The same heavy equipment would be used for the aerated static pile, although less turning of the pile would be required when compared to open air windrow composting. It is also anticipated that the timeframes for the active and curing composting phases for aerated static pile composting will be similar to open air windrow composting. In addition, it is anticipated that the aerated static pile composting will use a similar amount of water when compared to open air windrow composting. Whether OCWR chooses to implement open air windrow composting only, or in combination with aerated static pile composting, at no time will the project have more than 60 tons (i.e., 92 cubic yards) of material on-site at any one time or process more than 250 tons of material per year.

Testing will be performed as prescribed by the U.S. Composting Council once the compost has been cured. It is OCWR's intent to make high quality compost that will receive certification from the U.S. Composting Council and will also contain less than 0.5 percent contamination, as required by the California Department of Resources Recovery and Recycling (CalRecycle).

Both composting methods will require that OCWR place ground asphalt on the surface of the landfill where the composting will occur, to maintain the integrity of the landfill interim soil

cover and to preclude any leaching from the project into the underlying waste mass. Surface water runoff will be diverted away from the composting area to the existing landfill surface water collection system. Surface water runoff that comes into contact with compost materials will be tested.

Methane generated by the underlying landfill area will not result in surface fires at the composting area through the effective maintenance and monitoring of the landfill gas collection system.

As part of the project, OCWR will use finished compost at the landfill for beneficial reuse at the landfill such as landscaping, geosynthetic tarp framing and for erosion control. In addition, the compost may be sold or given away to potential end users as part of OCWR's market research, business development and public outreach.

Implementation of the demonstration pilot composting operation at the FRB Landfill is exempt from permitting due to the limited tonnage of feedstock materials that the project will receive. However, the following agencies will be notified of the project and operations will be performed in a manner that is consistent with the respective regulations and best management practices of these agencies. These agencies include the following: CalRecycle; Orange County Health Care Agency, Environmental Health Division acting as the Local Enforcement Agency (LEA) for CalRecycle; the California Regional Water Quality Control Board, San Diego Region (Regional Board); South Coast Air Quality Management District (SCAQMD); and OCFA. Implementation of the project will require registration with SCAQMD in accordance with Rule 1133.

With the implementation of the project design features and operational controls discussed above, and by complying with all of the conditions and requirements included in the agency approvals, the proposed demonstration pilot composting project will not result in any significant impacts to the environment.

# II. Authority for Administrative Action

The Director of OC Waste & Recycling, pursuant to the authority granted in OCCO Sections 4-3-104, 4-3-126, and 4-3-137, takes the following administrative actions.

# III. CEQA Approval

18

The proposed action is Categorically Exempt (Class 1) from the provisions of CEQA pursuant to Section 15301 of the CEQA Guidelines, since Class 1 (Existing Facilities) consists of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographic features, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination. In addition, the proposed action is also Categorically Exempt (Class 4) from the provisions of CEQA pursuant to Section 15304 of the CEQA Guidelines, since Class 4 (Minor Alterations to Land) involves minor alterations to land. The proposed action is also Categorically Exempt (Class 6) from the provisions of CEQA pursuant to Section 15304 of the CEQA pursuant to Section 15306 (Information Collection), since Class 6 consists of basic data collection, research, experimental management

and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource. Also, the proposed action is also Categorically Exempt (Class 7) from the provisions of CEQA pursuant to Section 15307 (Actions by Regulatory Agencies for Protection of Natural Resources), since Class 7 consists of actions taken by a public agency for the protection of natural resources. The proposed action is also Categorically Exempt (Class 8) from the provisions of CEQA pursuant to Section 15308 (Actions by Regulatory Agencies for Protection of the Environment), since Class 8 consists of actions taken by a public agency for the protection of the environment. The proposed composting demonstration pilot project at the FRB Landfill is consistent with a Class 1, Class 4, Class 6, Class 7 and Class 8 Categorical Exemption determination.

# IV. Certification

I hereby certify that the subject project is approved.

Date: 3/9/2018

Director, OC Waste & Recycling





800-8100-08

FILED

MAR 1 3 2018

ORANGE COUNTY CLERK-RECORDER DEPARTMENT

DEPUTY BY:

Recorded in Official Records, Orange County



41 82 Z01

#### OC WASTE & RECYCLING 300 NORTH FLOWER STREET, SUITE 400 SANTA ANA, CALIFORNIA 92703

#### NOTICE OF EXEMPTION

	Pilot Composting Project at the Olinda Alpha Land	fill
(OC Waste & Recycling Log #672)		
Project Location – Specific		
1942 N. Valencia Avenue		
Project Location – City	Project Location – County	
Brea	Orange County	
Description of Nature and Purpose of P	roject: As a result of recent California legislation, SB 1	383, that
requires all jurisdictions in California to div	ert or recycle at least 50 percent of all organic wastes	currently
going to solid waste landfills, and at least a	75 percent by 2025, OC Waste & Recycling (OCWR) w	/ill
implement a demonstration pilot compostin	ng project at the Olinda Alpha Landfill. The purpose of	the
demonstration pilot composting project is f	or OCWR to (1) gain a better understanding of compo	sting
design, permitting, engineering and operat	ions; (2) determine the costs associated with compost	ing design,
permitting, engineering and operations; (3)	by studying and observing on a microscale, determine	e the
	occur at a full-scale composting operation; (4) learn how	
high quality finished compost that will mee	t all U.S. Composting Council testing requirements and	1 (5)
	post. No significant impacts to the environment will oc Date of Decision	4.7
Public Agency Approving Project:		E
OC Waste & Recycling	March 9, 2018	<u>G</u>
Public or Private Applicant:	at Suite 400 Sente Ana CA 02702	Z Z
OC Waste & Recycling, 300 N. Flower Stre	eet, Suite 400, Santa Ana, CA 92703	UYE R
Exempt Status: (Check One)		
Ministerial [CEQA Guidelines	1	Pot
Section 15268]	Statutorial [Type and Section Number]:	
		≉ 28
Declared Emergency [Section		
15269 (a) & (b)]		8
Emergency Project [Section		HUGH NGUYEN, CLERK-RECORDER
15269 (a) & (b)]	Categorical Exemption (Classes 1, 4, 6, 7 &	1 <b>B</b>
Gen. Rule [Sec. 15061(b)(3)]		7
Gen. Rule [Sec. 15001(b)(3)]		
Explanation of Exempt Status: The property	osed action is Categorically Exempt (Class 1) from the p	rovisions of
CEQA pursuant to Section 15301 of the CE	QA Guidelines, since Class 1 (Existing Facilities) include	es the minor
alteration of existing public structures or t	opographic features, involving negligible or no expansion	sion of use
beyond that existing at the time of the lead	agency's determination. In addition, the proposed ac	tion is also
Categorically Exempt (Class 4) from the	provisions of CEQA pursuant to Section 15304 of	the CEQA
Guidelines, since Class 4 (Minor Alterations	s to Land) involves minor alterations to land. The propos	ed action is
also Categorically Exempt (Class 6) from	the provisions of CEQA pursuant to Section 15306 (	Information
Collection), since Class 6 consists of basic	data collection, research, experimental management and	nd resource
evaluation activities which do not result in a	serious or major disturbance to an environmental reso	urce. Also,
the proposed action is also Categorically E	xempt (Class 7) from the provisions of CEQA pursuant	t to Section
15307 (Actions by Regulatory Agencies for	Protection of Natural Resources), since Class 7 consist	is of actions
taken by a public agency for the protection	of natural resources. The proposed action is also Ca	ategorically
Exempt (Class 8) from the provisions of CE	QA pursuant to Section 15308 (Actions by Regulatory A	gencies for
Protection of the Environment), since Class	8 consists of actions taken by a public agency for the p	rotection of
the environment. No significant impacts to	the environment will occur.	
0	Dhana Mumhan	
Contact Person:	Phone Number:	]

(714) 834-4107

NOTE: Exempt of County Fees per Government Code Section 6103

and Signature: Date: March 13, 2018

Title: Administrative Manager I

# State of California - Department of Fish and Wildlife 2018 ENVIRONMENTAL FILING FEE CASH RECEIPT

DFW 753.5a (Rev. 01/01/18) Previously DFG 753.5a



RECEIPT NUMBER:

30-2018 02	228
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STATE CLEARINGHOUSE NUMBER (If applicable)

LEADAGENCY       LEADAGENCY       DATE         OC WASTE & RECYCLING       03/13/2018         COUNTY/STATE AGENCY OF FILING       DOCUMENT NUMBER         [Orange       201885000242         PROJECT TITLE       PROJECT TITLE         PROJECT APPLICANT NAME       PROJECT APPLICANT EMAIL         OC WASTE & RECYCLING STING PROJECT AT THE OLINDA ALPHA LANDFILL (OC WASTE & RECYCLING LOG #672)         PROJECT APPLICANT ADDRESS       CITY         STATE       ZIP CODE         OON . FLOWER STREET, SUITE 400       SANTA ANA         CA       92703         PROJECT APPLICANT (Check appropriate box)       []         []       Local Public Agency       ] Private Entity         CHECK APPLICANT (Check appropriate box)       []       []         []       Local Public Agency       ] Private Entity         CHECK APPLICANT FEES:       []       []         []       Environmental Impact Report (EIR)       \$]       \$]       0.00         []       Colled Feesite       []       0.00       0.00         []       Check appropriation (MDD)(ND)       \$]       \$]       0.00         []       Call Public Agency       []       State Agency       []       0.00         []       E	SEE INSTRUCTIONS ON REVERSE. TYPE OR PRINT CLEAR	LY.				
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PROJECT APPLICANT (Check appropriate box)	PROJECT APPLICANT ADDRESS	CITY	STA	TE	ZIP CODE	
PROJECT APPLICANT (Check appropriate box)	300 N. FLOWER STREET, SUITE 400	SANTA ANA	CA		92703	
CHECK APPLICABLE FEES: <ul> <li>Environmental Impact Report (EIR)</li> <li>S3,168.00</li> <li>Mitigated/Negative Declaration (MND)(ND)</li> <li>S2,280.75</li> <li>0.00</li> <li>Certified Regulatory Program document (CRP)</li> <li>S1,077.00</li> <li>Certified Regulatory Program document (CRP)</li> <li>S1,077.00</li> <li>Counce of Exemption (attach)</li> <li>CDFW No Effect Determination (attach)</li> <li>Fee previously paid (attach previously issued cash receipt copy)</li> <li>Water Right Application or Petition Fee (State Water Resources Control Board only)</li> <li>S850.00</li> <li>0.00</li> <li>County documentary handling fee</li> <li>0.00</li> <li>Other</li> <li>Cosh</li> <li>Credit</li> <li>Check</li> <li>Other</li> <li>Cash</li> <li>Credit</li> <li>Check</li> <li>Other</li> <li>AGENCY OF FILING PRINTED NAME AND TITLE</li> </ul>		l		100 March 100		
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www.oclandfills.com Telephone: (714) 834-4000 Fax: (714) 834-4183

10.	File
FROM:	Tom Koutroulis, Director
	OC Waste & Recycling

Ella

## SUBJECT: Proposed Demonstration Pilot Composting Project at the Olinda Alpha Landfill (OCWR Log #672)

## I. Nature of Project

As a result of recent California legislation, SB 1383, that requires all jurisdictions in California to divert or recycle at least 50 percent of all organic wastes currently going to solid waste landfills, and at least 75 percent by 2025, OC Waste & Recycling (OCWR) will implement a demonstration pilot composting project at the Olinda Alpha Landfill. The purpose of the demonstration pilot composting project is for OCWR to (1) gain a better understanding of composting design, permitting, engineering and operations; (2) determine the costs associated with composting design, permitting, engineering and operations; (3) by studying and observing on a microscale, determine the potential environmental issues that could occur at a full-scale composting operation; (4) learn how to make high quality finished compost that will meet all U.S. Composting Council testing requirements and (5) analyze the potential uses for finished compost.

The proposed demonstration pilot composting project ("the project") will occur on an approximate 1-acre area at the Olinda Alpha Landfill, in the equipment maintenance area, as shown on the attached exhibit. This area of the landfill is not currently being used for active landfill disposal. Material feedstocks to be composted include source separated residential curbside green waste, commercial green waste, processed green waste and wood waste. The project will not have more than 60 tons (i.e., 92 cubic yards) of material on-site at any one time or process more than 250 tons of material per year. While it is anticipated that the wood waste will be relatively homogeneous and clean, some of the green waste that will be received will come to the landfill directly from residential curbside pickup, so there will likely be small amounts of residual solid waste mixed in with the green waste. Through visual inspection, green waste that contains only very small amounts of residual solid waste will be used for the project. Any green waste received at the composting operation that is noticeably contaminated with residual solid waste will be disposed at the active area of the landfill. Any highly odorous loads will also be removed from the composting area and disposed in the landfill. OCWR will divert feedstock materials to the project that are already being delivered to the landfill, so there will be no additional truck trips.

As part of the project, OCWR will try two different types of composting operations. The first type will be open windrow composting. OCWR will create one windrow that will be no more than 92 cubic yards of material on-site with the approximate dimensions of 82 feet long, 10 feet wide and 6 feet high, in compliance with Orange County Fire Authority (OCFA) requirements. The feedstock will be placed on top of a crushed asphalt surface for all weather access and

surrounded by an earthen berm to prevent storm water run-on and run-off. The windrow will be periodically turned with a loader, skid steer, or similar equipment, up to three times per week, to quicken the decomposition of the feedstock into compost and to maintain temperatures greater than 131 degrees Fahrenheit during the pathogen reduction process. The heavy equipment is already in use at the landfill on a routine basis and will be made available for the project. The initial compost processing phase will last at least 22 days or until the pile has completed the pathogen reduction process. Afterwards, the compost material will be cured for a period that will last between 30-60 days for further stabilization of the compost product. After the curing process is complete, OCWR may screen the finished compost to remove oversized uncomposted material and residual solid waste. Altogether, the composting process may take up to 100 days. The active composting process will require the use of water to hydrate the windrow keeping the feedstock moist without overwatering, to limit the potential for leachate generation. Water will be provided by a water truck that is already in use at the landfill operation and will be made available for the project. The existing potable water line and the 100,000 gallon water storage tank that currently serve the landfill operation have sufficient capacity to support the project. The water truck will fill up at the J-stand that is located closest to the project. Water will not be used during the curing process. Approximately 250 gallons of water per day may be used to hydrate the compost piles. All water used for composting will be contained within the asphalt pad and perimeter earthen berms to minimize runoff. In addition, water will be used as needed to provide for dust control in accordance with SCAQMD Rule 403 as part of normal landfill operations.

1.

As an alternative to open air windrow composting, or in combination with open air windrow composting, OCWR may also make compost by creating an aerated static pile, using the same feedstock materials described above for open air windrow composting. Feedstock materials will be placed on top of plastic piping, which will be placed on a crushed asphalt surface. The plastic piping will then be removed, creating openings at the bottom of the pile that will create a chimney effect, thereby allowing oxygen to pass through the pile. The dimensions of the aerated static pile (i.e., height, width and length) will be no greater than the dimensions of the open air windrow compost pile described above. The same heavy equipment would be used for the aerated static pile, although less turning of the pile would be required when compared to open air windrow composting. It is also anticipated that the timeframes for the active and curing composting phases for aerated static pile composting will be similar to open air windrow composting. In addition, it is anticipated that the aerated static pile composting will use a similar amount of water when compared to open air windrow composting. Whether OCWR chooses to implement open air windrow composting only, or in combination with aerated static pile composting, at no time will the project have more than 60 tons (i.e., 92 cubic yards) of material on-site at any one time or process more than 250 tons of material per year.

Testing will be performed as prescribed by the U.S. Composting Council once the compost has been cured. It is OCWR's intent to make high quality compost that will receive certification from the U.S. Composting Council and will also contain less than 0.5 percent contamination, as required by the California Department of Resources Recovery and Recycling (CalRecycle).

Both composting methods will require that OCWR place ground asphalt on the surface of the landfill where the composting will occur, to maintain the integrity of the landfill interim soil

cover and to preclude any leaching from the project into the underlying waste mass. Surface water runoff will be diverted away from the composting area to the existing landfill surface water collection system. Surface water runoff that comes into contact with compost materials will be tested.

Methane generated by the underlying landfill area will not result in surface fires at the composting area through the effective maintenance and monitoring of the landfill gas collection system.

As part of the project, OCWR will use finished compost at the landfill for beneficial reuse at the landfill such as landscaping, geosynthetic tarp framing and for erosion control. In addition, the compost may be sold or given away to potential end users as part of OCWR's market research, business development and public outreach.

Implementation of the demonstration pilot composting operation at the Olinda Alpha Landfill is exempt from permitting due to the limited tonnage of feedstock materials that the project will receive. However, the following agencies will be notified of the project and operations will be performed in a manner that is consistent with the respective regulations and best management practices of these agencies. These agencies include the following: CalRecycle; Orange County Health Care Agency, Environmental Health Division acting as the Local Enforcement Agency (LEA) for CalRecycle; the California Regional Water Quality Control Board, San Diego Region (Regional Board); South Coast Air Quality Management District (SCAQMD); and OCFA. Implementation of the project will require registration with SCAQMD in accordance with Rule 1133.

With the implementation of the project design features and operational controls discussed above, and by complying with all of the conditions and requirements included in the agency approvals, the proposed demonstration pilot composting project will not result in any significant impacts to the environment.

## II. Authority for Administrative Action

The Director of OC Waste & Recycling, pursuant to the authority granted in OCCO Sections 4-3-104, 4-3-126, and 4-3-137, takes the following administrative actions.

#### III. CEQA Approval

The proposed action is Categorically Exempt (Class 1) from the provisions of CEQA pursuant to Section 15301 of the CEQA Guidelines, since Class 1 (Existing Facilities) consists of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographic features, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination. In addition, the proposed action is also Categorically Exempt (Class 4) from the provisions of CEQA pursuant to Section 15304 of the CEQA Guidelines, since Class 4 (Minor Alterations to Land) involves minor alterations to land. The proposed action is also Categorically Exempt (Class 6) from the provisions of CEQA pursuant to Section 15304 of CEQA pursuant to Section 15306 (Information

Collection), since Class 6 consists of basic data collection, research, experimental management and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource. Also, the proposed action is also Categorically Exempt (Class 7) from the provisions of CEQA pursuant to Section 15307 (Actions by Regulatory Agencies for Protection of Natural Resources), since Class 7 consists of actions taken by a public agency for the protection of natural resources. The proposed action is also Categorically Exempt (Class 8) from the provisions of CEQA pursuant to Section 15308 (Actions by Regulatory Agencies for Protection of the Environment), since Class 8 consists of actions taken by a public agency for the protection of the environment. The proposed composting demonstration pilot project at the Olinda Alpha Landfill is consistent with a Class 1, Class 4, Class 6, Class 7 and Class 8 Categorical Exemption determination.

#### IV. Certification

I hereby certify that the subject project is approved.

Date: 3/9/2018

Director, OC Waste & Recycling



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# **Appendix E: Regulatory Permits**

## **APPENDIX E**

Regulatory Agency Permitting Synopsis Reference Section 5.3

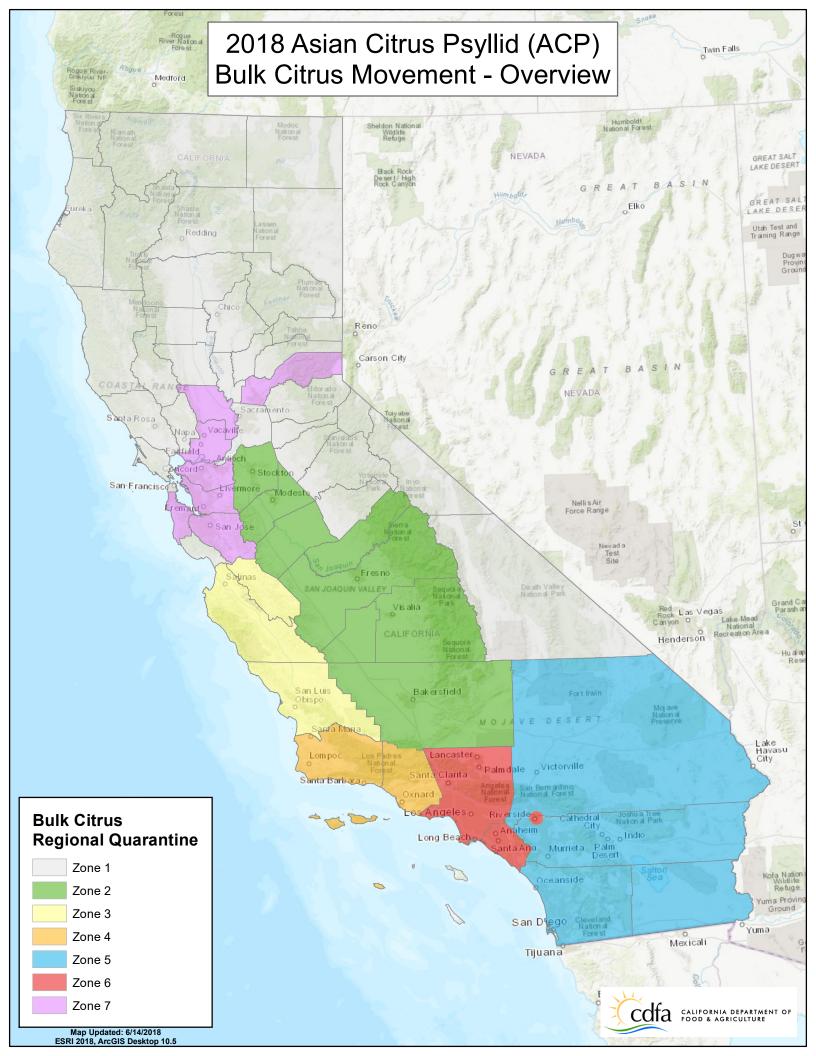
- Solid Waste Local Enforcement Agency/CalRecycle: Under CalRecycle, composting operations is regulated under the Compostable Materials Handling regulations found in Title 14 of the California Code of Regulations. Although the pilot projects qualify as exempted as the volume of material was less than 100 cy, Enforcement Agency (EA) Notifications were obtained which allows for maximum material of 12,500 cy onsite. As part of the EA Notification, Odor Impact Minimization Plans (OIMPs) were submitted in March 2018 for each pilot project. Solid Waste Identification System (SWIS) Numbers were issued and pilot projects are inspected on a quarterly basis
- South Coast Air Quality Management District (SCAQMD): Composting activities are regulated under Rule 1133. For open windrow composting utilizing green waste as feedstock no permit is required. However, each of the pilot projects were required to be registered with the SCAQMD. Registration was completed on March 5, 2018, with annual reporting of volumes received, processed, and produce. No regulatory exemptions are provided irrespective of the amount of volume since the pilots are categorized as commercial entities.
- California Regional Water Quality Control Board: On August 4, 2015, the State Water Resources Control Board adopted General Waste Discharge Requirements (WDR) for composting operations (Composting General Order, Order WQ-2015-0121-DWQ). Within the Composting General Order, normally there is exemption threshold if the volume of material is 500 cubic yards of material onsite or less. Each of the active landfills have site specific WDRs for landfill disposal. The Valencia and Bee Canyon Greenery pilots are under the jurisdiction of the Regional Water Quality Control Board -Santa Ana Region. A Report of Waste Discharge (ROWD) and Notice of Non-Applicability (NONA) were submitted on March 2018 under the exemption threshold found in the Composting General Order. However, instead of qualifying for an exemption under the General Composting Order, Olinda and FRB were required to update their respective Stormwater Pollution Prevention Plans (SWPPPs) under the General Industrial General Program – Stormwater (IGP). SWPPP revisions were completed in March 2018. For Capistrano Greenery, a different approach was taken since the pilot is located within the jurisdiction of the Regional Water Quality Control Board – San Diego Region. A ROWD and NONA was accepted with no revision to Prima's SWPPP. For all three pilot projects, no revisions each landfill's WDRs were required for the pilot projects.
- Orange County Fire Authority (OCFA): Under the purview of the OCFA, no permits are required for composting operations that exceed 2,500 cubic feet of material onsite.

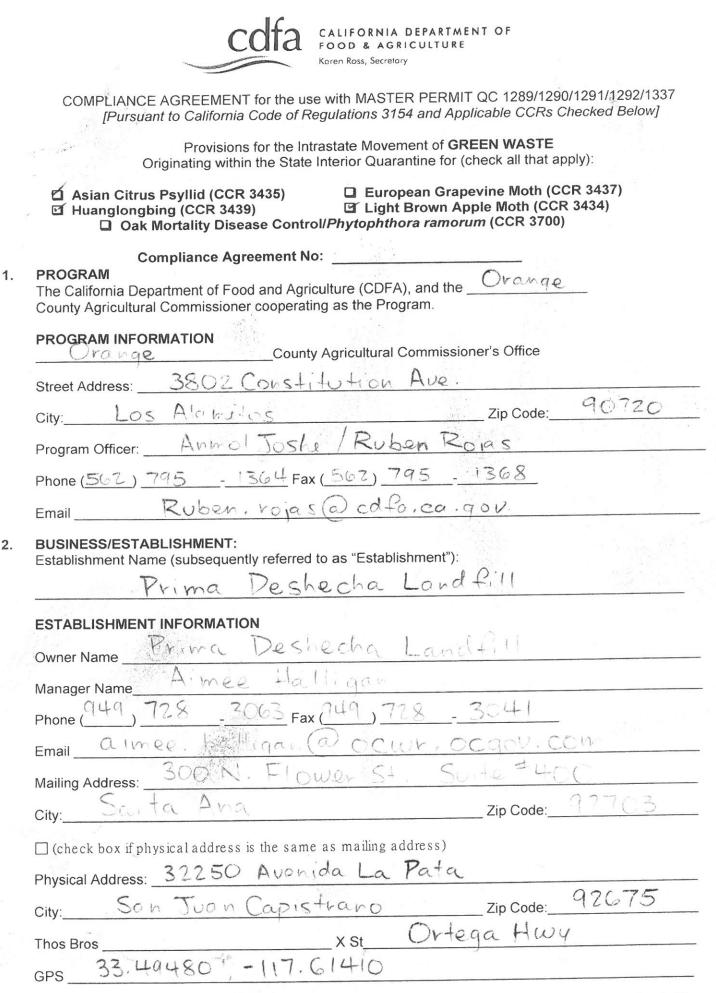
Translated to 92 cy, the OCFA exemption threshold was the limiting factor for the amount of material that each pilot project could be processed without the need to apply for permits. Despite being at the threshold, the OCFA issued Composting Facility Conditions for each of the pilot projects since OCWR had indicated plans to expand beyond the 92 cy. The Composting Facility Conditions serve as a quasi-permit and was issued on April 25, 2018 for each pilot projects.

• California Department of Food and Agriculture: The Asian Citrus Psyllid (ACP) is a widely distributed pest in Southern Asia, which has spread to citrus crops in California. The ACP has the ability to destroy a variety of trees as there is currently no treatments available. Eradication and quarantining the movement of woodwaste is the key to the spread of this pest. Through composting, this process has been able to eliminate the pest from being further spread. Through CDFA, quarantine zones have been established for the movement of green waste. Uncomposted greenwaste that originates within the County is limited to Orange and Los Angeles counties and portions of the City of Riverside. Transporters and facility operators who handle Greenwaste are required to obtain from CDFA Compliance Agreement. Compliance Agreements were obtained for Bee Canyon and Capistrano Greenery in July 2017. To date, a Compliance Agreement has not been issued for Valencia Greenery.



# CA Department of Food and Agriculture (CDFA)





#### BACKGROUND:

The pests known as Asian citrus psyllid, European grapevine moth, light brown apple moth and *Phytophthora ramorum* present a real and ongoing threat to the agricultural industry, environment and economy of the State of California. Movement of regulated articles and commodities is a recognized channel for the spread of these pests from established areas to new locations. The Program is a cooperative effort between public entities that are responsible for mitigating the movement of these pests from regulated areas where the pest is established to new locations.

#### AGREEMENT:

A. The Program, will permit your establishment to self-execute the quarantine requirements attached as exhibits checked below, inclusive and incorporated into this agreement by reference as if fully set out. The exhibits checked below are binding:

#### CHECK ALL EXHIBITS THAT APPLY:

	Exhibit GW2	BIOMASS/COGENERATION (Processed and Unprocessed)
0	Exhibit GW4	COMPOSTING (Processed and Unprocessed)
ĕ	Exhibit GW6	LANDFILL (Processed and Unprocessed)
	Exhibit GW10	HAULER/TRANSPORTER Moving Green Waste Resulting from the Processing of
		Regulated Articles (e.g. bulk grapes for crush) that Originated in a Quarantine Area

- Exhibit GW12
   TRANSFER STATION
- **B**. In exchange for the Program's promise contained in sub-paragraph "A" above, the Establishment agrees to abide by the following rules and regulations:
  - 1. Handle, process, and/or move regulated articles in accordance with the quarantine requirements for each pest checked on page 1;
  - 2. Follow the Program's instructions regarding the use of all permits and certificates;
  - Maintain and make such records as the Program requires, accessible for inspection upon reasonable notice by the Program Officer. These records shall be maintained for a period of the later of 2 years or the resolution of any outstanding claims.
- C. This agreement becomes effective on signing and shall remain in effect until canceled by either party on 30 days notice to the other at the address of either appearing above. However, the Program may accelerate the notice to immediate for cause, including but not limited to the Establishment's abandonment of the procedures outlined in the attached Exhibit(s).
- D. Establishment assumes liability, if any, arising from the manner in which Establishment sells, handles or distributes any regulated host material.

NOTICE: Any signatory or employee of any signatory who violates the terms of this Compliance Agreement may be subject to Civil Penalties pursuant to California Food and Agricultural Code Section 5705.

Signed in the County of Orange	in the State of California on $7, 27, 18$
Establishment by: (print name)	Program by: (print name)
Armee Halligan	Esteban Vilallin
Manager/Owner (signature):	Program Officer (signature):
annie Huligan	





United States Department of Agriculture Animal and Plant Health Inspection Service Plant Protection and Quarantine

COMPLIANCE AGREEMENT for the use with Master Permit QC 1289/1290/1291/1337

# **EXHIBIT: GW6 GREEN WASTE RECEIVER – LANDFILL**

Provisions for the Intrastate Movement of PROCESSED AND UNPROCESSED GREEN WASTE Originating within the State Interior Quarantine for (check all that apply):

TO BE USED FOR PROCESSED GREEN WASTE ONLY

Huanglongbing (CCR 3439)

Light Brown Apple Moth (CCR 3434)

Oak Mortality Disease Control/Phytophthora ramorum (CCR 3700)

## A. Green Waste Definitions and Regulatory Movement Requirements

'Green Waste' is unprocessed or processed vegetative material which contains any of the following or a mixture thereof: stems, leaves, culls, discarded fruits and vegetables, grass clippings, weeds, yard trimmings, wood/vine/processing/harvesting waste, hulls, bark, branches, logs and stumps, home garden/field/vineyard/grove/orchard residues, duff, mulch, compost, and other miscellaneous plant materials.

- 1. 'Unprocessed Green Waste\*' is 'Green Waste' in the raw state. It has not undergone any mechanical procedure to lessen the pest risk and is therefore a regulated item. All parties involved in selling, transporting, or receiving 'Unprocessed Green Waste', from a Quarantine Area, must have a Program issued compliance agreement. The movement of 'Unprocessed Green Waste' is regulated, and it must remain within the guarantine area.
- 2. 'Processed Green Waste' is 'Green Waste' that has undergone some mechanical procedure to lessen or eliminate the pest risk. Depending upon the degree of processing, it may or may not be a regulated item. All parties involved in selling, transporting, or receiving 'Processed Green Waste', from a Quarantine Area, that is not completely processed into 'Compost' must have a Program issued compliance agreement. The movement of 'Processed Green Waste' is dependent upon the degree of processing (mulch or compost). Refer to items a and b.
  - a) 'Mulch\*' is 'Processed Green Waste' that has been chipped, ground or shredded. 'Mulch' is not completely processed and still poses a pest risk, and is therefore a regulated item. All parties involved in selling, transporting, or receiving 'Processed Green Waste' in the form of 'Mulch', from a Quarantine Area, must have a Program issued compliance agreement. The movement of 'Mulch' is regulated, and it must remain within the guarantine area.
  - b) 'Compost' is 'Processed Green Waste' composted in accordance with California Code of Regulations, Title 14, Division 7, Chapter 3.1. 'Compost' is completely processed and no longer poses a pest risk, and is therefore not a regulated item. All parties involved in selling, transporting, or receiving 'Processed Green Waste' in the form of 'Compost', from a Quarantine Area, are not required to have a Program issued compliance agreement. The movement of 'Compost' is unregulated, and it may move within or outside of any guarantine area.

\*In special circumstances, and with prior Program approval, regulated forms of 'Green Waste' may be moved outside the Quarantine Area to approved receivers under compliance.

Initial

7/27/18

## B. For each of the quarantines checked above, the Establishment agrees to:

#### 1. Transporter/Hauler Verification

Only accept green waste from a transporter/hauler operating under a compliance agreement for each applicable pest checked above and accompanied by the transporter/hauler's quarantine certification (including self-haul loads).

#### 2. Unprocessed Green Waste

Handle green waste from the quarantine area for each applicable pest checked above which is received **unprocessed** (NOT ground, chipped or shredded) by implementing all of the following:

- a) Safeguard (tarp, enclosed structure, etc.) unprocessed green waste prior to processing
- b) Process (grind, chip or shred) green waste as soon as feasible
- c) Complete requirements in 3 (a) or (b) as outlined below

#### 3. Processed Green Waste

Receive green waste from the quarantine area for each applicable pest checked above which has been **processed** incompletely (ground, chipped or shredded) by implementing one of the following:

- a) Add as alternative daily cover to the active face within 48 hours of receipt, or
- b) Apply for other on site uses as outlined by the Program in "Special Instructions"

#### 4. Alternative Daily Cover

Remain in compliance with California Code of Regulations (CCR) Title 27, Division 2, Chapter 3, Subchapter 4, Article 2, Section 20690 (a) and (b)(3), and CCR Title 14, Division 7, Chapter 9, Article 9.2.

#### 5. Runoff

Remain in compliance with the Regional Water Quality Control Board requirements regarding the management of water runoff from the green waste storage area.

#### 6. Movement of Green Waste from this Facility\*

Do not move unprocessed green waste, or green waste that has been processed incompletely (mulch) from this facility, except under the direction of the County Agricultural Commissioner or a designated representative. Upon receiving notification from the Commissioner that green waste may be moved from this facility, the Establishment shall comply within 90 days. Unprocessed green waste and green waste processed incompletely (mulch) must be moved to a receiver within the Quarantine Area, and via a transporter/hauler both operating under a Program issued Compliance Agreement for each applicable pest checked above.

When allowed by the County, the movement of green waste must abide by the following:

- a) Movement of unprocessed green waste is regulated, and it must remain within the Quarantine Area.
- b) Movement of green waste processed incompletely (mulch) is regulated, and it must remain within the Quarantine Area.
- c) Green waste processed completely (compost) is the only form of green waste that is not regulated. Compost may move within or outside the quarantine area.
- d) Green waste resulting from EGVM regulated articles (including grape and olive) that has been pressed at 2 bars, or 28 PSI, is no longer regulated and may be distributed anywhere in California except vinevards located outside an EGVM guarantine area.

\*In special circumstances, and with prior Program approval, <u>regulated</u> forms of 'Green Waste' may be moved outside the Quarantine Area to approved receivers under compliance.

#### 7. Records

Maintain a record of certified weighmaster certificates for all shipments of green waste received from the quarantine area for a period of two years and make them available for inspection by county, state or federal plant regulatory officials upon request.

#### 8. Inspections

Allow county, state or federal plant regulatory officials to perform unannounced inspections of all plant material located at the Establishment or records at any time during normal business hours.

#### 9. Quarantine Areas

Be responsible for regularly verifying current quarantined areas for each applicable pest checked above. The most up to date quarantine information can be viewed at:

Asian Citrus Psyllid: http://pi.cdfa.ca.gov/pgm/manual/pdf/420.pdf **European Grapevine Moth:** http://pi.cdfa.ca.gov/pgm/manual/pdf/422.pdf Huanglongbing: http://pi.cdfa.ca.gov/pgm/manual/pdf/423.pdf Light Brown Apple Moth: http://pi.cdfa.ca.gov/pgm/manual/pdf/419.pdf Phytophthora ramorum: http://pi.cdfa.ca.gov/pgm/manual/pdf/455.pdf

#### 10. Trapping

Allow traps to be placed at the density listed below and serviced at intervals specified by the Program.

Asian Citrus Psyllid= 2-5 traps per acre European Grapevine Moth=1 trap every five acres Light Brown Apple Moth=1 trap every five acres

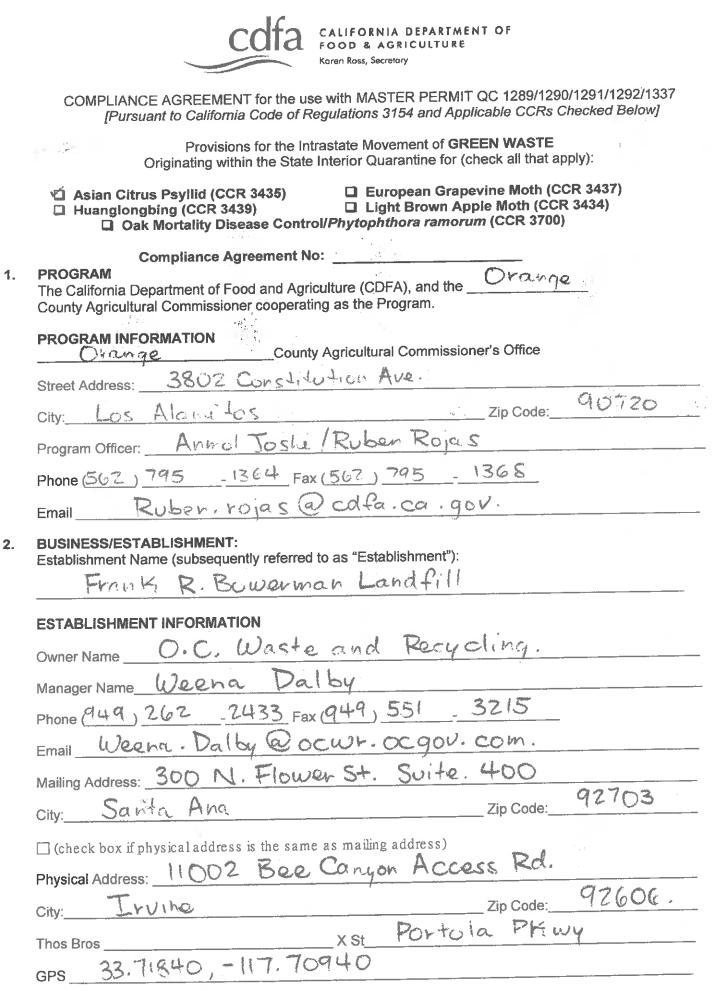
#### 11. Cost Recovery

Reimburse costs to the county agricultural commissioner's office, at their request, involved with regulatory activities conducted outside the quarantine area including but not limited to issuance of compliance agreements, deployment and servicing of traps, and records verification.

#### SPECIAL INSTRUCTIONS:

Aimee Halligan Printed name (Owner/Manager) Signature of Establishment Date

Failure to comply with stipulations outlined above may result in civil penalties pursuant to California Food and Agricultural Code Section 5705 and/or revocation of this Agreement.



#### BACKGROUND:

The pests known as Asian citrus psyllid, European grapevine moth, light brown apple moth and Phytophthora ramorum present a real and ongoing threat to the agricultural industry, environment and economy of the State of California. Movement of regulated articles and commodities is a recognized channel for the spread of these pests from established areas to new locations. The Program is a cooperative effort between public entities that are responsible for mitigating the movement of these pests from regulated areas where the pest is established to new locations.

#### AGREEMENT:

A. The Program, will permit your establishment to self-execute the quarantine requirements attached as exhibits checked below, inclusive and incorporated into this agreement by reference as if fully set out. The exhibits checked below are binding:

#### **CHECK ALL EXHIBITS THAT APPLY:**

- BIOMASS/COGENERATION (Processed and Unprocessed) Exhibit GW2
  - **COMPOSTING (Processed and Unprocessed)** Exhibit GW4
- ิย์ LANDFILL (Processed and Unprocessed) Exhibit GW6
- HAULER/TRANSPORTER Moving Green Waste Resulting from the Processing of Exhibit GW10 Regulated Articles (e.g. bulk grapes for crush) that Originated in a Quarantine Area **TRANSFER STATION** Exhibit GW12
- B. In exchange for the Program's promise contained in sub-paragraph "A" above, the Establishment agrees to abide by the following rules and regulations:
  - 1. Handle, process, and/or move regulated articles in accordance with the quarantine requirements for each pest checked on page 1;
  - 2. Follow the Program's instructions regarding the use of all permits and certificates;
  - 3. Maintain and make such records as the Program requires, accessible for inspection upon reasonable notice by the Program Officer. These records shall be maintained for a period of the later of 2 years or the resolution of any outstanding claims.
- C. This agreement becomes effective on signing and shall remain in effect until canceled by either party on 30 days notice to the other at the address of either appearing above. However, the Program may accelerate the notice to immediate for cause, including but not limited to the Establishment's abandonment of the procedures outlined in the attached Exhibit(s).
- D. Establishment assumes liability, if any, arising from the manner in which Establishment sells, handles or distributes any regulated host material.

NOTICE: Any signatory or employee of any signatory who violates the terms of this Compliance Agreement may be subject to Civil Penalties pursuant to California Food and Agricultural Code Section 5705.

Signed in the County of Orange	in the State of California on 7,23,18
Establishment by: (print name) WRENG Dalby	Program by: (print name) Esteban Villalba
Manager/Owner (signature):	Program Officer (signature):



COMPLIANCE AGREEMENT for the use with Master Permit QC 1289/1290/1291/1337

# **EXHIBIT: GW6 GREEN WASTE RECEIVER – LANDFILL**

Provisions for the Intrastate Movement of PROCESSED AND UNPROCESSED GREEN WASTE Originating within the State Interior Quarantine for (check all that apply):

TO BE USED FOR PROCESSED GREEN WASTE ONLY

Asian Citrus Psyllid (CCR 3435) - European Grapevine Moth (CCR 3437) Huanglongbing (CCR 3439)

Light Brown Apple Moth (CCR 3434)

**Qak Mortality Disease Control**/*Phytophthora ramorum* (CCR 3700)

## A. Green Waste Definitions and Regulatory Movement Requirements

'Green Waste' is unprocessed or processed vegetative material which contains any of the following or a mixture thereof: stems, leaves, culls, discarded fruits and vegetables, grass clippings, weeds, yard trimmings, wood/vine/processing/harvesting waste, hulls, bark, branches, logs and stumps, home garden/field/vineyard/grove/orchard residues, duff, mulch, compost, and other miscellaneous plant materials.

- 1. 'Unprocessed Green Waste\*' is 'Green Waste' in the raw state. It has not undergone any mechanical procedure to lessen the pest risk and is therefore a regulated item. All parties involved in selling. transporting, or receiving 'Unprocessed Green Waste', from a Quarantine Area, must have a Program issued compliance agreement. The movement of 'Unprocessed Green Waste' is regulated, and it must remain within the guarantine area.
- 2. 'Processed Green Waste\*' is 'Green Waste' that has undergone some mechanical procedure to lessen or eliminate the pest risk. Depending upon the degree of processing, it may or may not be a regulated item. All parties involved in selling, transporting, or receiving 'Processed Green Waste', from a Quarantine Area, that is not completely processed into 'Compost' must have a Program issued compliance agreement. The movement of 'Processed Green Waste' is dependent upon the degree of processing (mulch or compost). Refer to items a and b.
  - a) 'Mulch\*' is 'Processed Green Waste' that has been chipped, ground or shredded. 'Mulch' is not completely processed and still poses a pest risk, and is therefore a regulated item. All parties involved in selling, transporting, or receiving 'Processed Green Waste' in the form of 'Mulch', from a Quarantine Area, must have a Program issued compliance agreement. The movement of 'Mulch' is regulated, and it must remain within the guarantine area.
  - b) 'Compost' is 'Processed Green Waste' composted in accordance with California Code of Regulations, Title 14, Division 7, Chapter 3.1. 'Compost' is completely processed and no longer poses a pest risk, and is therefore not a regulated item. All parties involved in selling, transporting, or receiving 'Processed Green Waste' in the form of 'Compost', from a Quarantine Area, are not required to have a Program issued compliance agreement. The movement of 'Compost' is unregulated, and it may move within or outside of any guarantine area.

\*In special circumstances, and with prior Program approval, regulated forms of 'Green Waste' may be moved outside the Quarantine Area to approved receivers under compliance.

7/23/14

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Page 1 of 3

Rev. 4/6/15

## B. For each of the quarantines checked above, the Establishment agrees to:

#### 1. Transporter/Hauler Verification

Only accept green waste from a transporter/hauler operating under a compliance agreement for each applicable pest checked above and accompanied by the transporter/hauler's quarantine certification (including self-haul loads).

#### 2. Unprocessed Green Waste

Handle green waste from the quarantine area for each applicable pest checked above which is received **unprocessed** (NOT ground, chipped or shredded) by implementing all of the following:

- a) Safeguard (tarp, enclosed structure, etc.) unprocessed green waste prior to processing
- b) Process (grind, chip or shred) green waste as soon as feasible
- c) Complete requirements in 3 (a) or (b) as outlined below

#### 3. Processed Green Waste

Receive green waste from the quarantine area for each applicable pest checked above which has been processed incompletely (ground, chipped or shredded) by implementing one of the following:

- a) Add as alternative daily cover to the active face within 48 hours of receipt, or
- b) Apply for other on site uses as outlined by the Program in "Special Instructions"

#### 4. Alternative Daily Cover

Remain in compliance with California Code of Regulations (CCR) Title 27, Division 2, Chapter 3, Subchapter 4, Article 2, Section 20690 (a) and (b)(3), and CCR Title 14, Division 7, Chapter 9, Article 9.2.

#### 5. Runoff

Remain in compliance with the Regional Water Quality Control Board requirements regarding the management of water runoff from the green waste storage area.

#### 6. Movement of Green Waste from this Facility\*

Do not move unprocessed green waste, or green waste that has been processed incompletely (mulch) from this facility, except under the direction of the County Agricultural Commissioner or a designated representative. Upon receiving notification from the Commissioner that green waste may be moved from this facility, the Establishment shall comply within 90 days. Unprocessed green waste and green waste processed incompletely (mulch) must be moved to a receiver within the Quarantine Area, and via a transporter/hauler both operating under a Program issued Compliance Agreement for each applicable pest checked above.

When allowed by the County, the movement of green waste must abide by the following:

- a) Movement of unprocessed green waste is regulated, and it must remain within the Quarantine Area.
- b) Movement of green waste processed incompletely (mulch) is regulated, and it must remain within the Quarantine Area.
- c) Green waste processed completely (compost) is the only form of green waste that is not regulated. Compost may move within or outside the quarantine area.
- d) Green waste resulting from EGVM regulated articles (including grape and olive) that has been pressed at 2 bars, or 28 PSI, is no longer regulated and may be distributed anywhere in California except vineyards located outside an EGVM quarantine area.

\*In special circumstances, and with prior Program approval, <u>regulated</u> forms of 'Green Waste' may be moved outside the Quarantine Area to approved receivers under compliance.

#### 7. Records

Maintain a record of certified weighmaster certificates for all shipments of green waste received from the quarantine area for a period of two years and make them available for inspection by county, state or federal plant regulatory officials upon request.

#### 8. Inspections

Allow county, state or federal plant regulatory officials to perform unannounced inspections of all plant material located at the Establishment or records at any time during normal business hours.

#### 9. Quarantine Areas

Be responsible for regularly verifying current quarantined areas for each applicable pest checked above. The most up to date quarantine information can be viewed at:

Asian Citrus Psyllid: http://pi.cdfa.ca.gov/pqm/manual/pdf/420.pdf European Grapevine Moth: http://pi.cdfa.ca.gov/pqm/manual/pdf/422.pdf Huanglongbing: http://pi.cdfa.ca.gov/pqm/manual/pdf/423.pdf Light Brown Apple Moth: http://pi.cdfa.ca.gov/pqm/manual/pdf/419.pdf Phytophthora ramorum: http://pi.cdfa.ca.gov/pqm/manual/pdf/455.pdf

## 10. Trapping

Allow traps to be placed at the density listed below and serviced at intervals specified by the Program.

Asian Citrus Psyllid= 2-5 traps per acre European Grapevine Moth=1 trap every five acres Light Brown Apple Moth=1 trap every five acres

#### 11. Cost Recovery

Reimburse costs to the county agricultural commissioner's office, at their request, involved with regulatory activities conducted outside the quarantine area including but not limited to issuance of compliance agreements, deployment and servicing of traps, and records verification.

## **SPECIAL INSTRUCTIONS:**

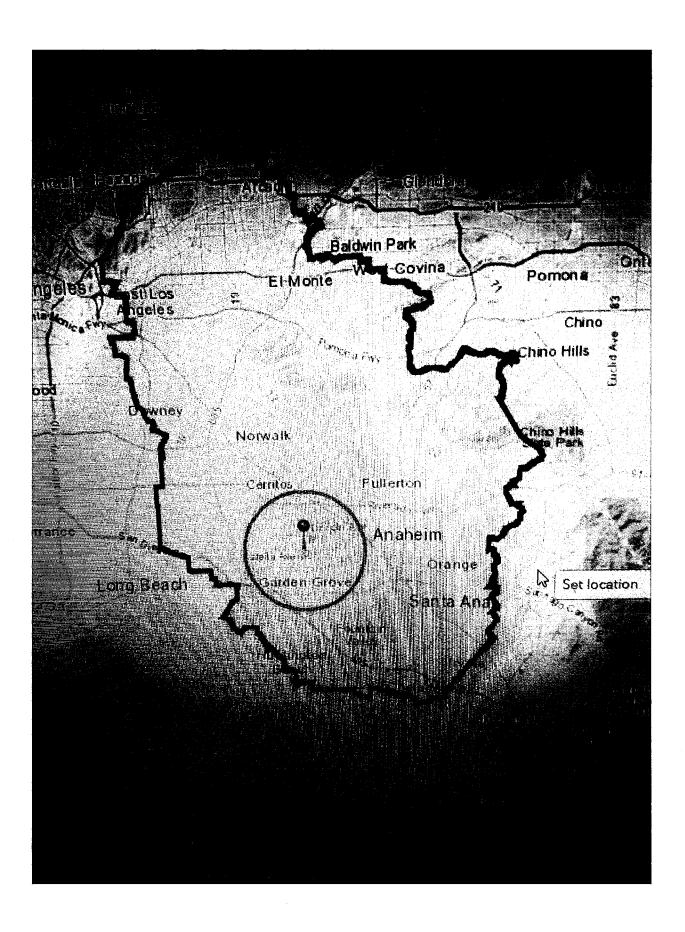
Weeng Dalb

Printed name (Owner/Manager)

23/2018

Signature of Establishment

Failure to comply with stipulations outlined above may result in civil penalties pursuant to California Food and Agricultural Code Section 5705 and/or revocation of this Agreement.





	COMPLIANCE AGREEMENT for the use with MASTER PERMIT QC 1289/1290/1291/1292/1337 [Pursuant to California Code of Regulations 3154 and Applicable CCRs Checked Below]
	Provisions for the Intrastate Movement of <b>GREEN WASTE</b> Originating within the State Interior Quarantine for (check all that apply):
	<ul> <li>Asian Citrus Psyllid (CCR 3435)</li> <li>Light Brown Apple Moth (CCR 3437)</li> <li>Oak Mortality Disease Control/Phytophthora ramorum (CCR 3700)</li> </ul>
	Compliance Agreement No:
	PROGRAM The California Department of Food and Agriculture (CDFA), and the <u>Orange</u> County Agricultural Commissioner cooperating as the Program.
F	PROGRAM INFORMATION County Agricultural Commissioner's Office
~	Street Address: 3802 Constitution Ave
	City: Los Alamitos Zip Code: 90720
	Program Officer: Anmol Joshi / Ruben Rojas
F	Phone $(562) - 795 - 1364$ Fax $(562) - 795 - 1368$
	EmailRuben. Rojas@CDFA.ca.gov
F	BUSINESS/ESTABLISHMENT: Establishment Name (subsequently referred to as "Establishment"):
-	CRER Transfer.
E	ESTABLISHMENT INFORMATION
C	Dwner NameC  2  2  R
Ņ	Manager Name
F	Phone $(714)$ $-\frac{2000}{6300}$ $(602.)$
-	Email <u>jzavala (a) Crrmait</u> COM. Mailing Address: <u>11232</u> Kinott Ave
	City: Stanton Zip Code: 90680
	Sity: Stanton
<b>`</b> •[	(check box if physical address is the same as mailing address)
F	Physical Address:
C	City:Zip Code:
T	Thos Bros X St_ Recycle Way.

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#### BACKGROUND:

The pests known as Asian citrus psyllid, European grapevine moth, light brown apple moth and *Phytophthora ramorum* present a real and ongoing threat to the agricultural industry, environment and economy of the State of California. Movement of regulated articles and commodities is a recognized channel for the spread of these pests from established areas to new locations. The Program is a cooperative effort between public entities that are responsible for mitigating the movement of these pests from regulated areas where the pest is established to new locations.

#### AGREEMENT:

A. The Program, will permit your establishment to self-execute the quarantine requirements attached as exhibits checked below, inclusive and incorporated into this agreement by reference as if fully set out. The exhibits checked below are binding:

#### CHECK ALL EXHIBITS THAT APPLY:

- Exhibit GW2
   BIOMASS/COGENERATION (Processed and Unprocessed)
  - Exhibit GW4 COMPOSTING (Processed and Unprocessed)
- **D**<u>Exhibit GW6</u> **LANDFILL (Processed and Unprocessed)**
- Image: Section 2HAULER/TRANSPORTER Moving Green Waste Resulting from the Processing of<br/>Regulated Articles (e.g. bulk grapes for crush) that Originated in a Quarantine AreaImage: Section 2Exhibit GW12Image: Section 2TRANSFER STATION
- **B**. In exchange for the Program's promise contained in sub-paragraph "A" above, the Establishment agrees to abide by the following rules and regulations:
  - 1. Handle, process, and/or move regulated articles in accordance with the quarantine requirements for each pest checked on page 1;
  - 2. Follow the Program's instructions regarding the use of all permits and certificates;
  - 3. Maintain and make such records as the Program requires, accessible for inspection upon reasonable notice by the Program Officer. These records shall be maintained for a period of the later of 2 years or the resolution of any outstanding claims.
- **C.** This agreement becomes effective on signing and shall remain in effect until canceled by either party on 30 days notice to the other at the address of either appearing above. However, the Program may accelerate the notice to immediate for cause, including but not limited to the Establishment's abandonment of the procedures outlined in the attached Exhibit(s).
- D. Establishment assumes liability, if any, arising from the manner in which Establishment sells, handles or distributes any regulated host material.

NOTICE: Any signatory or employee of any signatory who violates the terms of this Compliance Agreement may be subject to Civil Penalties pursuant to California Food and Agricultural Code Section 5705.

Signed in the County of Orange	in the State of California on $7,19,18$
Establishment by: (print name)	Program by: (print name) Esteban Villalba
Manager/Owner (signature):	Program Officer (signature):





United States Department of Agriculture **Animal and Plant Health Inspection Service** Plant Protection and Ouarantine

COMPLIANCE AGREEMENT for the use with Master Permit QC 1289/1290/1291/1292/1337

## **EXHIBIT: GW10 GREEN WASTE – TRANSPORTER/HAULER**

Provisions for the Intrastate Movement of PROCESSED AND UNPROCESSED GREEN WASTE Originating within the State Interior Quarantine Area for (check all that apply) Asian Citrus Psyllid (CCR 3435)\* European Grapevine Moth (CCR 3437)

Huanglongbing (CCR 3439)

Light Brown Apple Moth (CCR 3434)

**Oak Mortality Disease Control**/*Phytophthora ramorum* (CCR 3700)

\*Compliance Agreement not required when green waste remains within the guarantine area.

## A. Green Waste Definitions and Regulatory Movement Requirements

'Green Waste' is unprocessed or processed vegetative material which contains any of the following or a mixture thereof: stems, leaves, culls, discarded fruits and vegetables, grass clippings, weeds, yard trimmings, wood/vine/processing/harvesting waste, hulls, bark, branches, logs and stumps, home garden/field/vineyard/grove/orchard residues, duff, mulch, compost, and other miscellaneous plant materials.

- 1. 'Unprocessed Green Waste\*' is 'Green Waste' in the raw state. It has not undergone any mechanical procedure to lessen the pest risk and is therefore a regulated item. All parties involved in selling, transporting, or receiving 'Unprocessed Green Waste', from a Quarantine Area, must have a Program issued compliance agreement. The movement of 'Unprocessed Green Waste' is regulated. and it must remain within the guarantine area.
- 2. 'Processed Green Waste\*\*' is 'Green Waste' that has undergone some mechanical procedure to lessen or eliminate the pest risk. Depending upon the degree of processing, it may or may not be a regulated item. All parties involved in selling, transporting, or receiving 'Processed Green Waste', from a Quarantine Area, that is not completely processed into 'Compost' must have a Program issued compliance agreement. The movement of 'Processed Green Waste' is dependent upon the degree of processing (mulch or compost). Refer to items a and b.
  - a) 'Mulch\*\*' is 'Processed Green Waste' that has been chipped, ground or shredded. 'Mulch' is not completely processed and still poses a pestitisk, and is therefore a regulated item. All parties involved in selling, transporting, or receiving 'Processed Green Waste' in the form of 'Mulch', from a Quarantine Area, must have a Program issued compliance agreement. The movement of 'Mulch' is regulated, and it must remain within the guarantine area.
  - b) 'Compost' is 'Processed Green Waste' composted in accordance with California Code of Regulations, Title 14, Division 7, Chapter 3.1. 'Compost' is completely processed and no longer poses a pest risk, and is therefore not a regulated item. All parties involved in selling, transporting, or receiving 'Processed Green Waste' in the form of 'Compost', from a Quarantine Area, are not required to have a Program issued compliance agreement. The movement of 'Compost' is unregulated, and it may move within or outside of any guarantine area.

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\*\*In special circumstances, and with prior Program approval, <u>regulated</u> forms of 'Green Waste' may be moved outside the Quarantine Area to approved receivers under compliance.

## B. For each of the quarantines checked above, the Establishment agrees to:

#### 1. Vehicle and/or Trailer Requirements

Only transport green waste in a vehicle or trailer in compliance with the California Vehicle Code sections 23114(a) and 23115(a).

- 23114. (a) A vehicle may not be driven or moved on any highway unless the vehicle is so constructed, covered, or loaded as to prevent any of its contents or load other than clear water or feathers from live birds from dropping, sifting, leaking, blowing, spilling, or otherwise escaping from the vehicle.
- 23115. (a) No vehicle transporting garbage, swill, used cans or bottles, wastepapers, waste cardboard, ashes, refuse, trash, or rubbish, or any noisome, nauseous, or offensive matter, or anything being transported for disposal or recycling shall be driven or moved upon any highway unless the load is totally covered in a manner that will prevent the load or any part of the load from spilling or falling from the vehicle.

#### 2. Safeguarded Conveyance

- a) Transport green waste in a fully enclosed vehicle or trailer, or
- b) Transport green waste in a vehicle or trailer covered in a manner, approved by the Program, to eliminate the loss of green waste while in transit.

#### 3. Approved Receiver

Only move green waste to an approved green waste receiver under compliance agreement for the applicable pest checked above or as specified in special instructions.

#### 4. Movement of Green Waste\*\*

Unprocessed green waste and green waste processed incompletely (mulch) must be moved to a receiver within the Quarantine Area, operating under a Program issued Compliance Agreement for each applicable pest checked above.

The movement of green waste <u>must</u> abide by the following:

- a) Movement of unprocessed green waste is regulated, and it must remain within the Quarantine Area.
- b) Movement of green waste processed incompletely (mulch) is regulated, and it must remain within the Quarantine Area.
- c) Green waste processed completely (compost) is the only form of green waste that is not regulated. Compost may move within or outside the quarantine area.
- d) Green waste resulting from EGVM regulated articles (including grape and olive) that has been pressed at 2 bars, or 28 PSI, is no longer regulated and may be distributed anywhere in California except vineyards located outside an EGVM quarantine area.

\*\*In special circumstances, and with prior Program approval, <u>regulated</u> forms of 'Green Waste' may be moved outside the Quarantine Area to approved receivers under compliance.

## 5. Shipping Documents and Quarantine Certification

- a) Ensure applicable quarantine certification accompanies each shipment and;
- b) Provide a copy of the bill of lading (or other shipping document) and quarantine certification to receiver.

#### 6. Trailer Cleaning

Ensure the conveyance used to transport green waste is thoroughly cleaned of debris after unloading and prior to leaving the approved receiving facility.

#### 7. Direct Route

Transport green waste from the origin facility to the approved receiving facility by the most direct route feasible, or by a route described in the special instructions below.

#### 8. Spill Notification

Notify the local county agricultural commissioner of a green waste spill as soon as possible, but no later than 24 hours after a spill.

## **SPECIAL INSTRUCTIONS:**

Ju Za

Printed name (Owner/Manager)

Signature of Establishment

Date

Failure to comply with stipulations outlined above may result in civil penalties pursuant to California Food and Agricultural Code Section 5705 and/or revocation of this Agreement



CALIFORNIA DEPARTMENT OF FOOD & AGRICULTURE Samin Ross, Systems,



United States Department of Agriculture Animal and Plant Health Inspection Service Plant Protection and Quarantine

COMPLIANCE AGREEMENT for Use with Master Permit QC 1289/1290/1291/1337

# EXHIBIT: GW12

# GREEN WASTE RECEIVER – PROCESSOR or TRANSFER STATION

#### Provisions for the Intrastate Movement of **PROCESSED AND UNPROCESSED GREEN WASTE** ting within the State Interior Overanting for (shack all that a

Originating within the State Interior Quarantine for (check all that apply):

Asian Citrus Psyllid (CCR 3435)

Huanglongbing (CCR 3439)

European Grapevine Moth (CCR 3437)

Light Brown Apple Moth (CCR 3434)

**Oak Mortality Disease Control**/*Phytophthora ramorum* (CCR 3700)

## A. Green Waste Definitions and Regulatory Movement Requirements

'Green Waste' is unprocessed or processed vegetative material which contains any of the following or a mixture thereof: stems, leaves, culls, discarded fruits and vegetables, grass clippings, weeds, yard trimmings, wood/vine/processing/harvesting waste, hulls, bark, branches, logs and stumps, home garden/field/vineyard/grove/orchard residues, duff, mulch, compost, and other miscellaneous plant materials.

- 1. 'Unprocessed Green Waste'' is 'Green Waste' in the raw state. It has not undergone any mechanical procedure to lessen the pest risk and is therefore a regulated item. All parties involved in selling, transporting, or receiving 'Unprocessed Green Waste', from a Quarantine Area, must have a Program issued compliance agreement. The movement of 'Unprocessed Green Waste' is regulated, and it must remain within the guarantine area.
- 2. 'Processed Green Waste\*' is 'Green Waste' that has undergone some mechanical procedure to lessen or eliminate the pest risk. Depending upon the degree of processing, it may or may not be a regulated item. All parties involved in selling, transporting, or receiving 'Processed Green Waste', from a Quarantine Area, that is not completely processed into 'Compost' must have a Program issued compliance agreement. The movement of 'Processed Green Waste' is dependent upon the degree of processing (mulch or compost). Refer to items a and b.
  - a) 'Mulch\*' is 'Processed Green Waste' that has been chipped, ground or shredded. 'Mulch' <u>is not completely</u> processed and still poses a pest risk, and is therefore a regulated item. All parties involved in selling, transporting, or receiving 'Processed Green Waste' in the form of 'Mulch', from a Quarantine Area, must have a Program issued compliance agreement. The movement of 'Mulch' is <u>regulated</u>, and it must remain within the quarantine area.
  - b) 'Compost' is 'Processed Green Waste' composted in accordance with California Code of Regulations, Title 14, Division 7, Chapter 3.1. 'Compost' is completely processed and no longer poses a pest risk, and is therefore not a regulated item. All parties involved in selling, transporting, or receiving 'Processed Green Waste' in the form of 'Compost', from a Quarantine Area, are not required to have a Program issued compliance agreement. The movement of 'Compost' is <u>unregulated</u>, and it may move within or outside of any guarantine area.





CALIFORNIA DEPARTMENT OF FOOD & AGRICULTURE Koren Ross, Secretory

	COMPLIANCE AGREEMENT for the use with MASTER PERMIT QC 1289/1290/1291/1292/1337 [Pursuant to California Code of Regulations 3154 and Applicable CCRs Checked Below]
	Provisions for the Intrastate Movement of <b>GREEN WASTE</b> Originating within the State Interior Quarantine for (check all that apply):
	<ul> <li>Asian Citrus Psyllid (CCR 3435)</li> <li>Huanglongbing (CCR 3439)</li> <li>Cak Mortality Disease Control/Phytophthora ramorum (CCR 3700)</li> </ul>
1.	Compliance Agreement No: PROGRAM The California Department of Food and Agriculture (CDFA), and the County Agricultural Commissioner cooperating as the Program.
	PROGRAM INFORMATION
	Street Address: 3802 Constitution Ave
	City: Los Alamitos Zip Code: 90720 Program Officer: Anmol Toshi / Ruben Rojas
	Phone $(562)$ 795 - 1364 Fax $(562)$ 795 - 1368
	Email <u>Ruben.rojas @cdla.ca.gov</u>
2.	BUSINESS/ESTABLISHMENT: Establishment Name (subsequently referred to as "Establishment"):
	CRGR The
	ESTABLISHMENT INFORMATION
	Owner Name CRER Inc.
	Manager Name Baltuzar Zavala
	Phone $(949)$ 289 - 4009 Fax $(949)$ 728 - 3444
	Email bzavala@c+rmail.com
	Mailing Address: 31641 Ortoga High way
	Mailing Address: 31641 Ortega Highway City: San Juan Cappistrand Zip Code: 92675
	(check box if physical address is the same as mailing address)
	Physical Address:
	City:Zip Code:
	City:Zip Code: Thos BrosX StX StY
	GPS 33.51930, -117.56800

#### BACKGROUND:

The pests known as Asian citrus psyllid, European grapevine moth, light brown apple moth and *Phytophthora ramorum* present a real and ongoing threat to the agricultural industry, environment and economy of the State of California. Movement of regulated articles and commodities is a recognized channel for the spread of these pests from established areas to new locations. The Program is a cooperative effort between public entities that are responsible for mitigating the movement of these pests from regulated areas where the pest is established to new locations.

# A.

## AGREEMENT:

A. The Program, will permit your establishment to self-execute the quarantine requirements attached as exhibits checked below, inclusive and incorporated into this agreement by reference as if fully set out. The exhibits checked below are binding:

#### CHECK ALL EXHIBITS THAT APPLY:

<b>Ģ</b>	Exhibit GW2	BIOMASS/COGENERATION (Processed and Unprocessed)
Ó	Exhibit GW4	COMPOSTING (Processed and Unprocessed)
9	Exhibit GW6	LANDFILL (Processed and Unprocessed)

- <u>Exhibit GW10</u>
   <u>HAULER/TRANSPORTER</u> Moving Green Waste Resulting from the Processing of Regulated Articles (e.g. bulk grapes for crush) that Originated in a Quarantine Area
   <u>Exhibit GW12</u>
   <u>TRANSFER STATION</u>
- **B.** In exchange for the Program's promise contained in sub-paragraph "A" above, the Establishment agrees to abide by the following rules and regulations:
  - 1. Handle, process, and/or move regulated articles in accordance with the quarantine requirements for each pest checked on page 1;
  - 2. Follow the Program's instructions regarding the use of all permits and certificates;
  - 3. Maintain and make such records as the Program requires, accessible for inspection upon reasonable notice by the Program Officer. These records shall be maintained for a period of the later of 2 years or the resolution of any outstanding claims.
- **C.** This agreement becomes effective on signing and shall remain in effect until canceled by either party on 30 days notice to the other at the address of either appearing above. However, the Program may accelerate the notice to immediate for cause, including but not limited to the Establishment's abandonment of the procedures outlined in the attached Exhibit(s).
- D. Establishment assumes liability, if any, arising from the manner in which Establishment sells, handles or distributes any regulated host material.

NOTICE: Any signatory or employee of any signatory who violates the terms of this Compliance Agreement may be subject to Civil Penalties pursuant to California Food and Agricultural Code Section 5705.

Signed in the County of Orange	in the State of California on $7,31,18$
Establishment by: (print name) Ra //0201 Subvold	Program by: (print name) Esteban Villaba
Manager/Owner (signature):	Program Officer (signature):



CALIFORNIA OFPARTMENT OF POOD & AGRICULTURE Kominger, Secondary



A United States Department of Agriculture Animal and Plant Health Inspection Service Plant Protection and Quarantine

COMPLIANCE AGREEMENT for the use with Master Permit QC 1289/1290/1291/1292/1337

## EXHIBIT: GW10 GREEN WASTE – TRANSPORTER/HAULER

## Provisions for the Intrastate Movement of **PROCESSED AND UNPROCESSED GREEN WASTE** Originating within the State Interior Quarantine Area for (check all that apply)

Asian Citrus Psyllid (CCR 3435)\*

European Grapevine Moth (CCR 3437)

Huanglongbing (CCR 3439)

Light Brown Apple Moth (CCR 3434)

Oak Mortality Disease Control/Phytophthora ramorum (CCR 3700)

\*Compliance Agreement not required when green waste remains within the guarantine area.

# A. Green Waste Definitions and Regulatory Movement Requirements

'Green Waste' is unprocessed or processed vegetative material which contains any of the following or a mixture thereof: stems, leaves, culls, discarded fruits and vegetables, grass clippings, weeds, yard trimmings, wood/vine/processing/harvesting waste, hulls, bark, branches, logs and stumps, home garden/field/vineyard/grove/orchard residues, duff, mulch, compost, and other miscellaneous plant materials.

- 1. 'Unprocessed Green Waste\*' is 'Green Waste' in the raw state. It has not undergone any mechanical procedure to lessen the pest risk and is therefore a regulated item. All parties involved in selling, transporting, or receiving 'Unprocessed Green Waste', from a Quarantine Area, must have a Program issued compliance agreement. The movement of 'Unprocessed Green Waste' is regulated, and it must remain within the quarantine area.
- 2. 'Processed Green Waste\*\*' is 'Green Waste' that has undergone some mechanical procedure to lessen or eliminate the pest risk. Depending upon the degree of processing, it may or may not be a regulated item. All parties involved in selling, transporting, or receiving 'Processed Green Waste', from a Quarantine Area, that is not completely processed into 'Compost' must have a Program issued compliance agreement. The movement of 'Processed Green Waste' is dependent upon the degree of processing (mulch or compost). Refer to items a and b.
  - a) 'Mulch\*\*' is 'Processed Green Waste' that has been chipped, ground or shredded. 'Mulch' is not <u>completely</u> processed and still poses a pest risk, and is therefore a regulated item. All parties involved in selling, transporting, or receiving 'Processed Green Waste' in the form of 'Mulch', from a Quarantine Area, must have a Program issued compliance agreement. The movement of 'Mulch' is <u>regulated</u>, and it must remain within the quarantine area.
  - b) 'Compost' is 'Processed Green Waste' composted in accordance with California Code of Regulations, Title 14, Division 7, Chapter 3.1. 'Compost' is completely processed and no longer poses a pest risk, and is therefore not a regulated item. All parties involved in selling, transporting, or receiving 'Processed Green Waste' in the form of 'Compost', from a Quarantine Area, are not required to have a Program issued compliance agreement. The movement of 'Compost' is <u>unregulated</u>, and it may move within or outside of any guarantine area.



\*\*In special circumstances, and with prior Program approval, <u>regulated</u> forms of 'Green Waste' may be moved outside the Quarantine Area to approved receivers under compliance.

# B. For each of the quarantines checked above, the Establishment agrees to:

## 1. Vehicle and/or Trailer Requirements

Only transport green waste in a vehicle or trailer in compliance with the California Vehicle Code sections 23114(a) and 23115(a).

- 23114. (a) A vehicle may not be driven or moved on any highway unless the vehicle is so constructed, covered, or loaded as to prevent any of its contents or load other than clear water or feathers from live birds from dropping, sifting, leaking, blowing, spilling, or otherwise escaping from the vehicle.
- 23115. (a) No vehicle transporting garbage, swill, used cans or bottles, wastepapers, waste cardboard, ashes, refuse, trash, or rubbish, or any noisome, nauseous, or offensive matter, or anything being transported for disposal or recycling shall be driven or moved upon any highway unless the load is totally covered in a manner that will prevent the load or any part of the load from spilling or falling from the vehicle.

#### 2. Safeguarded Conveyance

- a) Transport green waste in a fully enclosed vehicle or trailer, or
- b) Transport green waste in a vehicle or trailer covered in a manner, approved by the Program, to eliminate the loss of green waste while in transit.

#### 3. Approved Receiver

Only move green waste to an approved green waste receiver under compliance agreement for the applicable pest checked above or as specified in special instructions.

#### 4. Movement of Green Waste\*\*

Unprocessed green waste and green waste processed incompletely (mulch) must be moved to a receiver within the Quarantine Area, operating under a Program issued Compliance Agreement for each applicable pest checked above.

The movement of green waste must abide by the following:

- a) Movement of unprocessed green waste is regulated, and it must remain within the Quarantine Area.
- b) Movement of green waste processed incompletely (mulch) is regulated, and it must remain within the Quarantine Area.
- c) Green waste processed completely (compost) is the only form of green waste that is not regulated. Compost may move within or outside the quarantine area.
- d) Green waste resulting from EGVM regulated articles (including grape and olive) that has been pressed at 2 bars, or 28 PSI, is no longer regulated and may be distributed anywhere in California except vineyards located outside an EGVM quarantine area.

\*\*In special circumstances, and with prior Program approval, <u>regulated</u> forms of 'Green Waste' may be moved outside the Quarantine Area to approved receivers under compliance.

## 5. Shipping Documents and Quarantine Certification

- a) Ensure applicable quarantine certification accompanies each shipment and;
- b) Provide a copy of the bill of lading (or other shipping document) and quarantine certification to receiver.

## 6. Trailer Cleaning

Ensure the conveyance used to transport green waste is thoroughly cleaned of debris after unloading and prior to leaving the approved receiving facility.

#### 7. Direct Route

Transport green waste from the origin facility to the approved receiving facility by the most direct route feasible, or by a route described in the special instructions below.

#### 8. Spill Notification

Notify the local county agricultural commissioner of a green waste spill as soon as possible, but no later than 24 hours after a spill.

## **SPECIAL INSTRUCTIONS:**

Ra 11020, 6 16

Printed name (Owner/Manager)

Signature of Establishment

Date

- 3-18

Failure to comply with stipulations outlined above may result in civil penalties pursuant to California Food and Agricultural Code Section 5705 and/or revocation of this Agreement





United States Department of Agriculture Animal and Plant Health Inspection Service Plant Protection and Quarantine

COMPLIANCE AGREEMENT for Use with Master Permit QC 1289/1290/1291/1337

## EXHIBIT: GW12 GREEN WASTE RECEIVER – PROCESSOR or TRANSFER STATION

#### Provisions for the Intrastate Movement of **PROCESSED AND UNPROCESSED GREEN WASTE** Insting within the State Interior Ouerenting for (check of that and

Originating within the State Interior Quarantine for (check all that apply):

 Asian Citrus Psyllid (CCR 3435)
 European Grapevine Moth (CCR 3437)

 Huanglongbing (CCR 3439)
 Itight Brown Apple Moth (CCR 3434)

**Oak Mortality Disease Control**/*Phytophthora ramorum* (CCR 3700)

## A. Green Waste Definitions and Regulatory Movement Requirements

'Green Waste' is unprocessed or processed vegetative material which contains any of the following or a mixture thereof: stems, leaves, culls, discarded fruits and vegetables, grass clippings, weeds, yard trimmings, wood/vine/processing/harvesting waste, hulls, bark, branches, logs and stumps, home garden/field/vineyard/grove/orchard residues, duff, mulch, compost, and other miscellaneous plant materials.

- 1. 'Unprocessed Green Waste\*' is 'Green Waste' in the raw state. It has not undergone any mechanical procedure to lessen the pest risk and is therefore a regulated item. All parties involved in selling, transporting, or receiving 'Unprocessed Green Waste', from a Quarantine Area, must have a Program issued compliance agreement. The movement of 'Unprocessed Green Waste' is regulated, and it must remain within the quarantine area.
- 2. 'Processed Green Waste\*' is 'Green Waste' that has undergone some mechanical procedure to lessen or eliminate the pest risk. Depending upon the degree of processing, it may or may not be a regulated item. All parties involved in selling, transporting, or receiving 'Processed Green Waste', from a Quarantine Area, that is not completely processed into 'Compost' must have a Program issued compliance agreement. The movement of 'Processed Green Waste' is dependent upon the degree of processing (mulch or compost). Refer to items a and b.
  - a) 'Mulch\*' is 'Processed Green Waste' that has been chipped, ground or shredded. 'Mulch' is not completely processed and still poses a pest risk, and is therefore a regulated item. All parties involved in selling, transporting, or receiving 'Processed Green Waste' in the form of 'Mulch', from a Quarantine Area, must have a Program issued compliance agreement. The movement of 'Mulch' is <u>regulated</u>, and it must remain within the quarantine area.
  - b) 'Compost' is 'Processed Green Waste' composted in accordance with California Code of Regulations, Title 14, Division 7, Chapter 3.1. 'Compost' is completely processed and no longer poses a pest risk, and is therefore not a regulated item. All parties involved in selling, transporting, or receiving 'Processed Green Waste' in the form of 'Compost', from a Quarantine Area, are not required to have a Program issued compliance agreement. The movement of 'Compost' is <u>unregulated</u>, and it may move within or outside of any quarantine area.

\*In special circumstances, and with prior Program approval, <u>regulated</u> forms of 'Green Waste' may be moved outside the Quarantine Area to approved receivers under compliance.

# B. For each of the quarantines checked above, the Establishment agrees to:

## 1. Approved Hauler/Transporter: Moving to this Facility

Only accept green waste from a transporter/hauler operating under a compliance agreement for each applicable pest checked above and accompanied by the transporter/hauler's quarantine certification (including self-haul loads).

## 2. Green Waste Processing

- a) Process (grind, chip, shred or other as approved in Special Instructions) green waste that originated from the quarantine area checked above as soon as feasible **OR**
- b) If green waste processing is not available:
   i. Safeguard upprocessed green was
  - Safeguard unprocessed green waste while at Establishment (physical barrier: i.e. tarp, enclosed structure, etc.) AND
  - ii. Move green waste to an approved receiver (see #4) as soon as feasible

## 3. Runoff

Remain in compliance with the Regional Water Quality Control Board requirements regarding the management of water runoff from the green waste storage area.

## 4. Movement of Green Waste from this Facility\*

Only move unprocessed green waste, or green waste that has been processed incompletely (mulch) from this facility to a receiver within the Quarantine Area, and via a transporter/hauler both operating under a Program issued Compliance Agreement for each applicable pest checked above.

The movement of green waste must abide by the following:

- a) Movement of unprocessed green waste is regulated, and it must remain within the Quarantine Area.
- b) Movement of green waste processed incompletely (mulch) is regulated, and it must remain within the Quarantine Area.
- c) Green waste processed completely (compost) is the only form of green waste that is not regulated. Compost may move within or outside the quarantine area.
- d) Green waste resulting from EGVM regulated articles (including grape and olive) that has been pressed at 2 bars, or 28 PSI, is no longer regulated and may be distributed anywhere in California except vineyards located outside an EGVM quarantine area.

\*In special circumstances, and with prior Program approval, <u>regulated</u> forms of 'Green Waste' may be moved outside the Quarantine Area to approved receivers under compliance.

## 5. Approved Hauler/Transporter: Moving from this Facility

Only load green waste for transport onto any conveyance with verification the transporter/haulers is operating under a compliance agreement for the appropriate pest.

#### 6. Approved Receiver

Verify green waste will be transported to a green waste receiver under compliance agreement for the pest(s) checked above.

#### 7. Records

Maintain a record of certified weighmaster certificates for all shipments of green waste received from the quarantine area for a period of two years and make them available for inspection by county, state or federal plant regulatory officials upon request.

## 8. Inspections

Allow county, state or federal plant regulatory officials to perform unannounced inspections of all plant material located at the Establishment or records at any time during normal business hours.

9. Quarantine Areas

Be responsible for regularly verifying current quarantine areas for each applicable pest checked above. The most up to date quarantine information can be viewed at:

Asian Citrus Psyllid: http://pi.cdfa.ca.gov/pqm/manual/pdf/420.pdf European Grapevine Moth: http://pi.cdfa.ca.gov/pqm/manual/pdf/422.pdf Huanglongbing: http://pi.cdfa.ca.gov/pqm/manual/pdf/423.pdf Light Brown Apple Moth: http://pi.cdfa.ca.gov/pqm/manual/pdf/419.pdf Phytophthora ramorum: http://pi.cdfa.ca.gov/pqm/manual/pdf/455.pdf

## 10. Trapping

Allow traps to be placed at the density listed below and serviced at intervals specified by the Program.

Asian Citrus Psyllid= 2-5 traps per acre European Grapevine Moth=1 trap every five acres Huanglongbing (for Asian Citrus Psyllid)= 2-5 traps per acre Light Brown Apple Moth=1 trap every five acres

#### 11. Cost Recovery

Reimburse costs to the county agricultural commissioner's office, at their request, involved with regulatory activities conducted outside the quarantine area including but not limited to compliance agreement issuance, deployment /servicing of traps, and records verification.

## **SPECIAL INSTRUCTIONS:**

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		······
The Hickor Savak Printed name (Owner/Manager)	Cat Ca	S- I- B
Printed name (Owner/Manager)	Stgnature of Establishment	Date

Failure to comply with stipulations outlined above may result in civil penalties pursuant to California Food and Agricultural Code Section 5705 and/or revocation of this Agreement.





USDA Animal and Plant Health Inspection Service United States Department of Agriculture **Plant Protection and Quarantine** 

COMPLIANCE AGREEMENT for the use with Master Permit QC 1289/1290/1291/1337

## **EXHIBIT: GW4 GREEN WASTE RECEIVER – COMPOSTING**

Provisions for the Intrastate Movement of PROCESSED AND UNPROCESSED GREEN WASTE Originating within the State Interior Quarantine for (check all that apply);

TO BE USED FOR PROC	ESSED GREEN WASTE ONLY
Asian Citrus Psyllid (CCR 3435) Huanglongbing (CCR 3439)	European Grapevine Moth (CCR 3437)

Oak Mortality Disease Control/Phytophthora ramorum (CCR 3700)

## A. Green Waste Definitions and Regulatory Movement Requirements

'Green Waste' is unprocessed or processed vegetative material which contains any of the following or a mixture thereof: stems, leaves, culls, discarded fruits and vegetables, grass clippings, weeds, yard trimmings, wood/vine/processing/harvesting waste, hulls, bark, branches, logs and stumps. home garden/field/vineyard/grove/orchard residues, duff, mulch, compost, and other miscellaneous plant materials.

- 1. 'Unprocessed Green Waste\*' is 'Green Waste' in the raw state. It has not undergone any mechanical procedure to lessen the pest risk and is therefore a regulated item. All parties involved in selling, transporting, or receiving 'Unprocessed Green Waste', from a Quarantine Area, must have a Program issued compliance agreement. The movement of 'Unprocessed Green Waste' is regulated, and it must remain within the guarantine area.
- 2. 'Processed Green Waste'' is 'Green Waste' that has undergone some mechanical procedure to lessen or eliminate the pest risk. Depending upon the degree of processing, it may or may not be a regulated item. All parties involved in selling, transporting, or receiving 'Processed Green Waste', from a Quarantine Area, that is not completely processed into 'Compost' must have a Program issued compliance agreement. The movement of 'Processed Green Waste' is dependent upon the degree of processing (mulch or compost). Refer to items a and b.
  - a) 'Mulch'' is 'Processed Green Waste' that has been chipped, ground or shredded. 'Mulch' is not completely processed and still poses a pest risk, and is therefore a regulated item. All parties involved in selling, transporting, or receiving 'Processed Green Waste' in the form of 'Mulch', from a Quarantine Area, must have a Program issued compliance agreement. The movement of 'Mulch' is regulated, and it must remain within the guarantine area.
  - b) 'Compost' is 'Processed Green Waste' composted in accordance with California Code of Regulations, Title 14, Division 7, Chapter 3.1. 'Compost' is completely processed and no longer poses a pest risk, and is therefore not a regulated item. All parties involved in selling, transporting, or receiving 'Processed Green Waste' in the form of 'Compost', from a Quarantine Area, are not required to have a Program issued compliance agreement. The movement of 'Compost' is unregulated, and it may move within or outside of any quarantine area.

\*In special circumstances, and with prior Program approval, regulated forms of 'Green Waste' may be moved outside the Quarantine Area to approved receivers under compliance.

Date

## B. For each of the quarantines checked above, the Establishment agrees to:

## 1. Transporter/Hauler Verification

Only accept green waste from a transporter/hauler operating under a compliance agreement for each applicable pest checked above. Each load must be accompanied by the transporter/hauler's quarantine certification (including self-haul loads).

## 2. Unacceptable Green Waste Sources

Do not knowingly accept green waste from a site "known to be infested" with *Phytophthora ramorum*, without the consent of the Department. (A site "known to be infested" refers to a positive site as confirmed by an official regulatory sample or material removed as part of the County Hazardous Tree Removal Program.)

Current maps of officially confirmed regulatory samples can be viewed by visiting: <u>http://www.oakmapper.org/oaks/index</u>

## 3. Unprocessed Green Waste

Handle green waste from any quarantine area for each applicable pest checked above which is received **unprocessed** (NOT ground, chipped or shredded) by implementing all of the following:

- a) Safeguard (tarp, enclosed structure, etc.) unprocessed green waste prior to processing and
- b) Process (grind, chip or shred) green waste as soon as feasible and
- c) Complete applicable requirements outlined in #4 below.

## 4. Processed Green Waste from Quarantine Areas

Add all processed green waste from the quarantine area for each applicable pest checked above which has been **processed** (ground, chipped or shredded) to an active compost unit **within 72 hours of receipt**.

## 5. Temperature Duration Requirements

Meet time and temperature requirements pursuant to CCR, Title 14, Division 7, Chapter 3.1, Section 17868.3. Notify the Program within 24 hours of it being determined that it is not in compliance with CCR, Title 14, Division 7, Chapter 3.1, Section 17868.3.

## 6. Runoff

Remain in compliance with the Regional Water Quality Control Board requirements regarding the management of water runoff from the green waste storage area.

## 7. Regulatory Compliance

Remain in compliance with California Code of Regulations, Title 14, Division 7, Chapter 3.1, Section 17868.3

Notify the Program within 24 hours of it being determined that it is not in compliance with CCR, Title 14, Division 7, Chapter 3.1, Section 17868.3.

## 8. Movement of Green Waste from this Facility\*

Do not move unprocessed green waste, or green waste that has been processed incompletely (mulch) from this facility, except under the direction of the County Agricultural Commissioner or a designated representative. Upon receiving notification from the Commissioner that green waste may be moved from this facility, the Establishment shall comply within 90 days. Unprocessed green waste and green waste processed incompletely (mulch) must be moved to a receiver within the Quarantine Area, and via a transporter/hauler both operating under a Program issued Compliance Agreement for each applicable pest checked above.

When allowed by the County, the movement of green waste must abide by the following:

- a) Movement of unprocessed green waste is regulated, and it must remain within the Quarantine Area.
- b) Movement of green waste processed incompletely (mulch) is regulated, and it must remain within the Quarantine Area.

- c) Green waste processed completely (compost) is the only form of green waste that is not regulated. Compost may move within or outside the quarantine area.
- d) Green waste resulting from EGVM regulated articles (including grape and olive) that has been pressed at 2 bars, or 28 PSI, is no longer regulated and may be distributed anywhere in California except vineyards located outside an EGVM quarantine area.

\*In special circumstances, and with prior Program approval, <u>regulated</u> forms of 'Green Waste' may be moved outside the Quarantine Area to approved receivers under compliance.

## 9. Records

Maintain a record of certified weighmaster certificates for all shipments of green waste received from any quarantine area for a period of two years and make them available for inspection by county, state or federal plant regulatory officials upon request.

#### 10. Inspections

Allow county, state or federal plant regulatory officials to perform unannounced inspections of all plant material located at the Establishment, or records at any time during normal business hours.

#### 11. Quarantine Areas

Be responsible for regularly verifying current quarantined areas for each applicable pest checked above. The most up to date quarantine information can be viewed at:

#### Asian Citrus Psyllid:

http://pi.cdfa.ca.gov/pqm/manual/pdf/420.pdf European Grapevine Moth: http://pi.cdfa.ca.gov/pqm/manual/pdf/422.pdf Huanglongbing: http://pi.cdfa.ca.gov/pqm/manual/pdf/423.pdf Light Brown Apple Moth: http://pi.cdfa.ca.gov/pqm/manual/pdf/419.pdf Phytophthora ramorum: http://pi.cdfa.ca.gov/pqm/manual/pdf/455.pdf

#### 12. Trapping

Allow traps to be placed at the density listed below and serviced at intervals specified by the Program.

Asian Citrus Psyllid = 2-5 traps per acre European Grapevine Moth =1 trap every five acres Huanglongbing (for Asian Citrus Psyllid) = 2-5 traps per acre Light Brown Apple Moth =1 trap every five acres

#### 13. Cost Recovery

Reimburse costs to the county agricultural commissioner's office, at their request, for regulatory activities conducted outside the quarantine area, including but not limited to compliance agreements issuance, deployment /servicing of traps, and records verification.

#### **SPECIAL INSTRUCTIONS:**

1-3-18 Printed name (Owner/Manager) Signature of Establishment

Failure to comply with stipulations outlined above may result in civil penalties pursuant to California Food and Agricultural Code Section 5705 and/or revocation of this Agreement.

\*In special circumstances, and with prior Program approval, <u>regulated</u> forms of 'Green Waste' may be moved outside the Quarantine Area to approved receivers under compliance.

## B. For each of the quarantines checked above, the Establishment agrees to:

## 1. Approved Hauler/Transporter: Moving to this Facility

Only **accept** green waste from a transporter/hauler operating under a compliance agreement for each applicable pest checked above and accompanied by the transporter/hauler's quarantine certification (including self-haul loads).

## 2. Green Waste Processing

- a) Process (grind, chip, shred or other as approved in Special Instructions) green waste that originated from the quarantine area checked above as soon as feasible **OR**
- b) If green waste processing is not available:
  - i. Safeguard unprocessed green waste while at Establishment (physical barrier: i.e. tarp, enclosed structure, etc.) **AND**
  - ii. Move green waste to an approved receiver (see #4) as soon as feasible

## 3. Runoff

Remain in compliance with the Regional Water Quality Control Board requirements regarding the management of water runoff from the green waste storage area.

## 4. Movement of Green Waste from this Facility\*

Only move unprocessed green waste, or green waste that has been processed incompletely (mulch) from this facility to a receiver within the Quarantine Area, and via a transporter/hauler both operating under a Program issued Compliance Agreement for each applicable pest checked above.

The movement of green waste must abide by the following:

- a) Movement of unprocessed green waste is regulated, and it must remain within the Quarantine Area.
- b) Movement of green waste processed incompletely (mulch) is regulated, and it must remain within the Quarantine Area.
- c) Green waste processed completely (compost) is the only form of green waste that is not regulated. Compost may move within or outside the quarantine area.
- d) Green waste resulting from EGVM regulated articles (including grape and olive) that has been pressed at 2 bars, or 28 PSI, is no longer regulated and may be distributed anywhere in California except vineyards located outside an EGVM quarantine area.

\*In special circumstances, and with prior Program approval, <u>regulated</u> forms of 'Green Waste' may be moved outside the Quarantine Area to approved receivers under compliance.

#### 5. Approved Hauler/Transporter: Moving from this Facility

Only **load** green waste for transport onto any conveyance with verification the transporter/haulers is operating under a compliance agreement for the appropriate pest.

#### 6. Approved Receiver

Verify green waste will be transported to a green waste receiver under compliance agreement for the pest(s) checked above.

## 7. Records

Maintain a record of certified weighmaster certificates for all shipments of green waste received from the quarantine area for a period of two years and make them available for inspection by county, state or federal plant regulatory officials upon request.

## 8. Inspections

Allow county, state or federal plant regulatory officials to perform unannounced inspections of all plant material located at the Establishment or records at any time during normal business hours.

## 9. Quarantine Areas

Be responsible for regularly verifying current quarantine areas for each applicable pest checked above. The most up to date quarantine information can be viewed at:

Asian Citrus Psyllid: http://pi.cdfa.ca.gov/pqm/manual/pdf/420.pdf European Grapevine Moth: http://pi.cdfa.ca.gov/pqm/manual/pdf/422.pdf Huanglongbing: http://pi.cdfa.ca.gov/pqm/manual/pdf/423.pdf Light Brown Apple Moth: http://pi.cdfa.ca.gov/pqm/manual/pdf/419.pdf Phytophthora ramorum: http://pi.cdfa.ca.gov/pqm/manual/pdf/455.pdf

## 10. Trapping

Allow traps to be placed at the density listed below and serviced at intervals specified by the Program.

Asian Citrus Psyllid= 2-5 traps per acre

European Grapevine Moth=1 trap every five acres

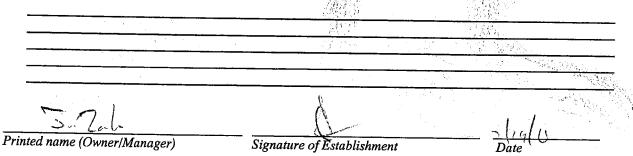
Huanglongbing (for Asian Citrus Psyllid)= 2-5 traps per acre

Light Brown Apple Moth=1 trap every five acres

#### 11. Cost Recovery

Reimburse costs to the county agricultural commissioner's office, at their request, involved with regulatory activities conducted outside the quarantine area including but not limited to compliance agreement issuance, deployment /servicing of traps, and records verification.

## SPECIAL INSTRUCTIONS:



Failure to comply with stipulations outlined above may result in civil penalties pursuant to California Food and Agricultural Code Section 5705 and/or revocation of this Agreement.



COMPLIANCE AGREEMENT for the use with MASTER PERMIT QC 1289/1290/1291/1292/1337 [Pursuant to California Code of Regulations 3154 and Applicable CCRs Checked Below]

Provisions for the Intrastate Movement of <b>GREEN WASTE</b> Originating within the State Interior Quarantine for (check all that apply):
<ul> <li>Asian Citrus Psyllid (CCR 3435)</li> <li>Huanglongbing (CCR 3439)</li> <li>Dak Mortality Disease Control/Phytophthora ramorum (CCR 3700)</li> </ul>
Compliance Agreement No:
The California Department of Food and Agriculture (CDFA), and the ORANGE
PROGRAM INFORMATION
Street Address: 3802 CONSTITUTION AVE
City: LOS ALANITOS, CA Zip Code: 90720
City: LOS ALANITOS, CA Zip Code: 90720 Program Officer: ANMOL Joshi / Rubén Rojas
Phone (562) 795 1364 Fax ()
Phone (562) 795 1364 Fax ( Email Luben. Losas @ Cdfa. ca. gov.
BUSINESS/ESTABLISHMENT: Establishment Name (subsequently referred to as "Establishment"):
ESTABLISHMENT INFORMATION
Owner Name LEtublic Services Manager Name James Pastro
Manager Name James Castro
Phone (714) 938 - 3360 Fax ()
Email Jastro Prepublisservicer, com
Mailing Address:
City: Zip Code:
Check box if physical address is the same as mailing address)
Physical Address: 1131 N. Hlue GUM ST.
City NXINIIDIAL CO
City: FATAFETM, CH Zip Code: 72806
City: <u>ANAHEIM, CA</u> Thos Bros <u>769-E3</u> XSt <u>E. LA PALMA AVE.</u>

1.

2.

## BACKGROUND:

The pests known as Asian citrus psyllid, European grapevine moth, light brown apple moth and *Phytophthora ramorum* present a real and ongoing threat to the agricultural industry, environment and economy of the State of California. Movement of regulated articles and commodities is a recognized channel for the spread of these pests from established areas to new locations. The Program is a cooperative effort between public entities that are responsible for mitigating the movement of these pests from regulated areas where the pest is established to new locations.

## AGREEMENT:

A. The Program, will permit your establishment to self-execute the quarantine requirements attached as exhibits checked below, inclusive and incorporated into this agreement by reference as if fully set out. The exhibits checked below are binding:

## CHECK ALL EXHIBITS THAT APPLY:

Exhibit GW2	BIOMASS/COGENERATION (Processed and Unprocessed)
Exhibit GW4	COMPOSTING (Processed and Unprocessed)
Exhibit GW6	LANDFILL (Processed and Unprocessed)
Exhibit GW10	HAULER/TRANSPORTER Moving Green Waste Resulting from the Processing of
	Regulated Articles (e.g. bulk grapes for crush) that Originated in a Quarantine Area
Exhibit GW12	TRANSFER STATION

- **B**. In exchange for the Program's promise contained in sub-paragraph "A" above, the Establishment agrees to abide by the following rules and regulations:
  - 1. Handle, process, and/or move regulated articles in accordance with the quarantine requirements for each pest checked on page 1;
  - 2. Follow the Program's instructions regarding the use of all permits and certificates;
  - 3. Maintain and make such records as the Program requires, accessible for inspection upon reasonable notice by the Program Officer. These records shall be maintained for a period of the later of 2 years or the resolution of any outstanding claims.
- **C.** This agreement becomes effective on signing and shall remain in effect until canceled by either party on 30 days notice to the other at the address of either appearing above. However, the Program may accelerate the notice to immediate for cause, including but not limited to the Establishment's abandonment of the procedures outlined in the attached Exhibit(s).
- D. Establishment assumes liability, if any, arising from the manner in which Establishment sells, handles or distributes any regulated host material.

NOTICE: Any signatory or employee of any signatory who violates the terms of this Compliance Agreement may be subject to Civil Penalties pursuant to California Food and Agricultural Code Section 5705.

Signed in the County of OPANGE	in the State of California on $\frac{7}{18}$ $\frac{18}{2018}$
Establishment by: (print name)	Program by: (print name)
	riggian by. (print name)
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ames ostro	Super dolls
Manager/Owner (signature):	Program Officer (signature):
(orgina diro).	ribgram Onicer (signature).
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CALIFORNIA DEPARTMENT OF FOOD & AGRICULTURE Korm Ross, Secretary



United States Department of Agriculture Animal and Plant Health Inspection Service Plant Protection and Quarantine

COMPLIANCE AGREEMENT for the use with Master Permit QC 1289/1290/1291/1292/1337

## EXHIBIT: GW10 GREEN WASTE – TRANSPORTER/HAULER

Provisions for the Intrastate Movement of **PROCESSED AND UNPROCESSED GREEN WASTE** Originating within the State Interior Quarantine Area for (check all that apply)

Asian Citrus Psyllid (CCR 3435)\*

Huanglongbing (CCR 3439)

L European Grapevine Moth (CCR 3437)

Light Brown Apple Moth (CCR 3434)

Oak Mortality Disease Control/Phytophthora ramorum (CCR 3700)

\*Compliance Agreement not required when green waste remains within the quarantine area.

# A. Green Waste Definitions and Regulatory Movement Requirements

'Green Waste' is unprocessed or processed vegetative material which contains any of the following or a mixture thereof: stems, leaves, culls, discarded fruits and vegetables, grass clippings, weeds, yard trimmings, wood/vine/processing/harvesting waste, hulls, bark, branches, logs and stumps, home garden/field/vineyard/grove/orchard residues, duff, mulch, compost, and other miscellaneous plant materials.

- 1. 'Unprocessed Green Waste\*' is 'Green Waste' in the raw state. It has not undergone any mechanical procedure to lessen the pest risk and is therefore a regulated item. All parties involved in selling, transporting, or receiving 'Unprocessed Green Waste', from a Quarantine Area, must have a Program issued compliance agreement. The movement of 'Unprocessed Green Waste' is regulated, and it must remain within the quarantine area.
- 2. 'Processed Green Waste\*\*' is 'Green Waste' that has undergone some mechanical procedure to lessen or eliminate the pest risk. Depending upon the degree of processing, it may or may not be a regulated item. All parties involved in selling, transporting, or receiving 'Processed Green Waste', from a Quarantine Area, that is not completely processed into 'Compost' must have a Program issued compliance agreement. The movement of 'Processed Green Waste' is dependent upon the degree of processing (mulch or compost). Refer to items a and b.
  - a) 'Mulch\*\*' is 'Processed Green Waste' that has been chipped, ground or shredded. 'Mulch' is not <u>completely</u> processed and still poses a pest risk, and is therefore a regulated item. All parties involved in selling, transporting, or receiving 'Processed Green Waste' in the form of 'Mulch', from a Quarantine Area, must have a Program issued compliance agreement. The movement of 'Mulch' is <u>regulated</u>, and it must remain within the quarantine area.
  - b) 'Compost' is 'Processed Green Waste' composted in accordance with California Code of Regulations, Title 14, Division 7, Chapter 3.1. 'Compost' is completely processed and no longer poses a pest risk, and is therefore not a regulated item. All parties involved in selling, transporting, or receiving 'Processed Green Waste' in the form of 'Compost', from a Quarantine Area, are not required to have a Program issued compliance agreement. The movement of 'Compost' is <u>unregulated</u>, and it may move within or outside of any quarantine area.

124/1

Date

\*\*In special circumstances, and with prior Program approval, <u>regulated</u> forms of 'Green Waste' may be moved outside the Quarantine Area to approved receivers under compliance.

## B. For each of the quarantines checked above, the Establishment agrees to:

## 1. Vehicle and/or Trailer Requirements

Only transport green waste in a vehicle or trailer in compliance with the California Vehicle Code sections 23114(a) and 23115(a).

- 23114. (a) A vehicle may not be driven or moved on any highway unless the vehicle is so constructed, covered, or loaded as to prevent any of its contents or load other than clear water or feathers from live birds from dropping, sifting, leaking, blowing, spilling, or otherwise escaping from the vehicle.
- 23115. (a) No vehicle transporting garbage, swill, used cans or bottles, wastepapers, waste cardboard, ashes, refuse, trash, or rubbish, or any noisome, nauseous, or offensive matter, or anything being transported for disposal or recycling shall be driven or moved upon any highway unless the load is totally covered in a manner that will prevent the load or any part of the load from spilling or falling from the vehicle.

## 2. Safeguarded Conveyance

- a) Transport green waste in a fully enclosed vehicle or trailer, or
- b) Transport green waste in a vehicle or trailer covered in a manner, approved by the Program, to eliminate the loss of green waste while in transit.

## 3. Approved Receiver

Only move green waste to an approved green waste receiver under compliance agreement for the applicable pest checked above or as specified in special instructions.

## 4. Movement of Green Waste\*\*

Unprocessed green waste and green waste processed incompletely (mulch) must be moved to a receiver within the Quarantine Area, operating under a Program issued Compliance Agreement for each applicable pest checked above.

The movement of green waste must abide by the following:

- a) Movement of unprocessed green waste is regulated, and it must remain within the Quarantine Area.
- b) Movement of green waste processed incompletely (mulch) is regulated, and it must remain within the Quarantine Area.
- c) Green waste processed completely (compost) is the only form of green waste that is not regulated. Compost may move within or outside the quarantine area.
- d) Green waste resulting from EGVM regulated articles (including grape and olive) that has been pressed at 2 bars, or 28 PSI, is no longer regulated and may be distributed anywhere in California except vineyards located outside an EGVM quarantine area.

\*\*In special circumstances, and with prior Program approval, <u>regulated</u> forms of 'Green Waste' may be moved outside the Quarantine Area to approved receivers under compliance.

## 5. Shipping Documents and Quarantine Certification

- a) Ensure applicable quarantine certification accompanies each shipment and;
- b) Provide a copy of the bill of lading (or other shipping document) and quarantine certification to receiver.

6. Trailer Cleaning

Ensure the conveyance used to transport green waste is thoroughly cleaned of debris after unloading and prior to leaving the approved receiving facility.

7. Direct Route

Transport green waste from the origin facility to the approved receiving facility by the most direct route feasible, or by a route described in the special instructions below.

8. Spill Notification

Notify the local county agricultural commissioner of a green waste spill as soon as possible, but no later than 24 hours after a spill.

#### **SPECIAL INSTRUCTIONS:**

Deve Ross

Printed name (Owner/Manager)

Amella. 15

Signature of Establishment

Date

Failure to comply with stipulations outlined above may result in civil penalties pursuant to California Food and Agricultural Code Section 5705 and/or revocation of this Agreement





United States Department of Agriculture Animal and Plant Health Inspection Service Plant Protection and Quarantine

COMPLIANCE AGREEMENT for the use with Master Permit QC 1289/1290/1291/1337

## **EXHIBIT: GW4 GREEN WASTE RECEIVER – COMPOSTING**

Provisions for the Intrastate Movement of PROCESSED AND UNPROCESSED GREEN WASTE Originating within the State Interior Quarantine for (check all that apply):

TO BE USED FOR PROCESSED GREEN WASTE ONLY

Asian Citrus Psyllid (CCR 3435) European Grapevine Moth (CCR 3437) Huanglongbing (CCR 3439) Light Brown Apple Moth (CCR 3434)

**Oak Mortality Disease Control**/*Phytophthora ramorum* (CCR 3700)

## A. Green Waste Definitions and Regulatory Movement Requirements

'Green Waste' is unprocessed or processed vegetative material which contains any of the following or a mixture thereof: stems, leaves, culls, discarded fruits and vegetables, grass clippings, weeds, yard trimmings, wood/vine/processing/harvesting waste. hulls, bark. branches, logs and stumps, home garden/field/vineyard/grove/orchard residues, duff, mulch, compost, and other miscellaneous plant materials.

- 1. 'Unprocessed Green Waste\*' is 'Green Waste' in the raw state. It has not undergone any mechanical procedure to lessen the pest risk and is therefore a regulated item. All parties involved in selling, transporting, or receiving 'Unprocessed Green Waste', from a Quarantine Area, must have a Program issued compliance agreement. The movement of 'Unprocessed Green Waste' is regulated, and it must remain within the guarantine area.
- 2. 'Processed Green Waste\*' is 'Green Waste' that has undergone some mechanical procedure to lessen or eliminate the pest risk. Depending upon the degree of processing, it may or may not be a regulated item. All parties involved in selling, transporting, or receiving 'Processed Green Waste', from a Quarantine Area, that is not completely processed into 'Compost' must have a Program issued compliance agreement. The movement of 'Processed Green Waste' is dependent upon the degree of processing (mulch or compost). Refer to items a and b.
  - a) 'Mulch\*' is 'Processed Green Waste' that has been chipped, ground or shredded. 'Mulch' is not completely processed and still poses a pest risk, and is therefore a regulated item. All parties involved in selling, transporting, or receiving 'Processed Green Waste' in the form of 'Mulch', from a Quarantine Area, must have a Program issued compliance agreement. The movement of 'Mulch' is regulated, and it must remain within the guarantine area.
  - b) 'Compost' is 'Processed Green Waste' composted in accordance with California Code of Regulations, Title 14, Division 7, Chapter 3.1. 'Compost' is completely processed and no longer poses a pest risk, and is therefore not a regulated item. All parties involved in selling, transporting, or receiving 'Processed Green Waste' in the form of 'Compost', from a Quarantine Area, are not required to have a Program issued compliance agreement. The movement of 'Compost' is unregulated, and it may move within or outside of any guarantine area.

\*In special circumstances, and with prior Program approval, regulated forms of 'Green Waste' may be moved outside the Quarantine Area to approved receivers under compliance.

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Page 1 of 3

# B. For each of the quarantines checked above, the Establishment agrees to:

## 1. Transporter/Hauler Verification

Only accept green waste from a transporter/hauler operating under a compliance agreement for each applicable pest checked above. Each load must be accompanied by the transporter/hauler's quarantine certification (including self-haul loads).

## 2. Unacceptable Green Waste Sources

Do not knowingly accept green waste from a site "known to be infested" with *Phytophthora ramorum*, without the consent of the Department. (A site "known to be infested" refers to a positive site as confirmed by an official regulatory sample or material removed as part of the County Hazardous Tree Removal Program.)

Current maps of officially confirmed regulatory samples can be viewed by visiting: <u>http://www.oakmapper.org/oaks/index</u>

## 3. Unprocessed Green Waste

Handle green waste from any quarantine area for each applicable pest checked above which is received **unprocessed** (NOT ground, chipped or shredded) by implementing all of the following:

- a) Safeguard (tarp, enclosed structure, etc.) unprocessed green waste prior to processing and
- b) Process (grind, chip or shred) green waste as soon as feasible and
- c) Complete applicable requirements outlined in #4 below.

## 4. Processed Green Waste from Quarantine Areas

Add all processed green waste from the quarantine area for each applicable pest checked above which has been **processed** (ground, chipped or shredded) to an active compost unit **within 72 hours of receipt**.

## 5. Temperature Duration Requirements

Meet time and temperature requirements pursuant to CCR, Title 14, Division 7, Chapter 3.1, Section 17868.3. Notify the Program within 24 hours of it being determined that it is not in compliance with CCR, Title 14, Division 7, Chapter 3.1, Section 17868.3.

#### 6. Runoff

Remain in compliance with the Regional Water Quality Control Board requirements regarding the management of water runoff from the green waste storage area.

## 7. Regulatory Compliance

Remain in compliance with California Code of Regulations, Title 14, Division 7, Chapter 3.1, Section 17868.3

Notify the Program within 24 hours of it being determined that it is not in compliance with CCR, Title 14, Division 7, Chapter 3.1, Section 17868.3.

## 8. Movement of Green Waste from this Facility\*

Do not move unprocessed green waste, or green waste that has been processed incompletely (mulch) from this facility, except under the direction of the County Agricultural Commissioner or a designated representative. Upon receiving notification from the Commissioner that green waste may be moved from this facility, the Establishment shall comply within 90 days. Unprocessed green waste and green waste processed incompletely (mulch) must be moved to a receiver within the Quarantine Area, and via a transporter/hauler both operating under a Program issued Compliance Agreement for each applicable pest checked above.

When allowed by the County, the movement of green waste must abide by the following:

- a) Movement of unprocessed green waste is regulated, and it must remain within the Quarantine Area.
- b) Movement of green waste processed incompletely (mulch) is regulated, and it must remain within the Quarantine Area.

- c) Green waste processed completely (compost) is the only form of green waste that is not regulated. Compost may move within or outside the quarantine area.
- d) Green waste resulting from EGVM regulated articles (including grape and olive) that has been pressed at 2 bars, or 28 PSI, is no longer regulated and may be distributed anywhere in California except vineyards located outside an EGVM quarantine area.

\*In special circumstances, and with prior Program approval, <u>regulated</u> forms of 'Green Waste' may be moved outside the Quarantine Area to approved receivers under compliance.

## 9. Records

Maintain a record of certified weighmaster certificates for all shipments of green waste received from any quarantine area for a period of two years and make them available for inspection by county, state or federal plant regulatory officials upon request.

#### 10. Inspections

Allow county, state or federal plant regulatory officials to perform unannounced inspections of all plant material located at the Establishment, or records at any time during normal business hours.

## **11. Quarantine Areas**

Be responsible for regularly verifying current quarantined areas for each applicable pest checked above. The most up to date quarantine information can be viewed at:

## Asian Citrus Psyllid:

http://pi.cdfa.ca.gov/pqm/manual/pdf/420.pdf European Grapevine Moth: http://pi.cdfa.ca.gov/pqm/manual/pdf/422.pdf Huanglongbing: http://pi.cdfa.ca.gov/pqm/manual/pdf/423.pdf Light Brown Apple Moth: http://pi.cdfa.ca.gov/pqm/manual/pdf/419.pdf *Phytophthora ramorum*: http://pi.cdfa.ca.gov/pqm/manual/pdf/455.pdf

#### 12. Trapping

Allow traps to be placed at the density listed below and serviced at intervals specified by the Program.

Asian Citrus Psyllid = 2-5 traps per acre European Grapevine Moth =1 trap every five acres Huanglongbing (for Asian Citrus Psyllid) = 2-5 traps per acre Light Brown Apple Moth =1 trap every five acres

#### 13. Cost Recovery

Reimburse costs to the county agricultural commissioner's office, at their request, for regulatory activities conducted outside the quarantine area, including but not limited to compliance agreements issuance, deployment /servicing of traps, and records verification.

**SPECIAL INSTRUCTIONS:** 

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Printed name (Owner/Manager)

Signature of Establishment

Failure to comply with stipulations outlined above may result in civil penalties pursuant to California Food and Agricultural Code Section 5705 and/or revocation of this Agreement.





United States Department of Agriculture Animal and Plant Health Inspection Service Plant Protection and Quarantine

COMPLIANCE AGREEMENT for Use with Master Permit QC 1289/1290/1291/1337

## EXHIBIT: GW12

# **GREEN WASTE RECEIVER – PROCESSOR or TRANSFER STATION**

Provisions for the Intrastate Movement of **PROCESSED AND UNPROCESSED GREEN WASTE** Originating within the State Interior Quarantine for (check all that apply):

 Asian Citrus Psyllid (CCR 3435)
 European Grapevine Moth (CCR 3437)

 Huanglongbing (CCR 3439)
 Light Brown Apple Moth (CCR 3434)

Oak Mortality Disease Control/Phytophthora ramorum (CCR 3700)

A. Green Waste Definitions and Regulatory Movement Requirements

'Green Waste' is unprocessed or processed vegetative material which contains any of the following or a mixture thereof: stems, leaves, culls, discarded fruits and vegetables, grass clippings, weeds, yard trimmings, wood/vine/processing/harvesting waste, hulls, bark, branches, logs and stumps, home garden/field/vineyard/grove/orchard residues, duff, mulch, compost, and other miscellaneous plant materials.

- 1. 'Unprocessed Green Waste\*' is 'Green Waste' in the raw state. It has not undergone any mechanical procedure to lessen the pest risk and is therefore a regulated item. All parties involved in selling, transporting, or receiving 'Unprocessed Green Waste', from a Quarantine Area, must have a Program issued compliance agreement. The movement of 'Unprocessed Green Waste' is regulated, and it must remain within the quarantine area.
- 2. 'Processed Green Waste\*' is 'Green Waste' that has undergone some mechanical procedure to lessen or eliminate the pest risk. Depending upon the degree of processing, it may or may not be a regulated item. All parties involved in selling, transporting, or receiving 'Processed Green Waste', from a Quarantine Area, that is not completely processed into 'Compost' must have a Program issued compliance agreement. The movement of 'Processed Green Waste' is dependent upon the degree of processing (mulch or compost). Refer to items a and b.
  - a) 'Mulch\*' is 'Processed Green Waste' that has been chipped, ground or shredded. 'Mulch' is not completely processed and still poses a pest risk, and is therefore a regulated item. All parties involved in selling, transporting, or receiving 'Processed Green Waste' in the form of 'Mulch', from a Quarantine Area, must have a Program issued compliance agreement. The movement of 'Mulch' is <u>regulated</u>, and it must remain within the quarantine area.
  - b) 'Compost' is 'Processed Green Waste' composted in accordance with California Code of Regulations, Title 14, Division 7, Chapter 3.1. 'Compost' is completely processed and no longer poses a pest risk, and is therefore not a regulated item. All parties involved in selling, transporting, or receiving 'Processed Green Waste' in the form of 'Compost', from a Quarantine Area, are not required to have a Program issued compliance agreement. The movement of 'Compost' is <u>unregulated</u>, and it may move within or outside of any quarantine area.

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\*In special circumstances, and with prior Program approval, <u>regulated</u> forms of 'Green Waste' may be moved outside the Quarantine Area to approved receivers under compliance.

# B. For each of the quarantines checked above, the Establishment agrees to:

## 1. Approved Hauler/Transporter: Moving to this Facility

Only accept green waste from a transporter/hauler operating under a compliance agreement for each applicable pest checked above and accompanied by the transporter/hauler's quarantine certification (including self-haul loads).

## 2. Green Waste Processing

- a) Process (grind, chip, shred or other as approved in Special Instructions) green waste that originated from the quarantine area checked above as soon as feasible **OR**
- b) If green waste processing is not available:
  - i. Safeguard unprocessed green waste while at Establishment (physical barrier: i.e. tarp, enclosed structure, etc.) AND
  - ii. Move green waste to an approved receiver (see #4) as soon as feasible

## 3. Runoff

Remain in compliance with the Regional Water Quality Control Board requirements regarding the management of water runoff from the green waste storage area.

## 4. Movement of Green Waste from this Facility\*

Only move unprocessed green waste, or green waste that has been processed incompletely (mulch) from this facility to a receiver within the Quarantine Area, and via a transporter/hauler both operating under a Program issued Compliance Agreement for each applicable pest checked above.

The movement of green waste must abide by the following:

- a) Movement of unprocessed green waste is regulated, and it must remain within the Quarantine Area.
- b) Movement of green waste processed incompletely (mulch) is regulated, and it must remain within the Quarantine Area.
- c) Green waste processed completely (compost) is the only form of green waste that is not regulated. Compost may move within or outside the quarantine area.
- d) Green waste resulting from EGVM regulated articles (including grape and olive) that has been pressed at 2 bars, or 28 PSI, is no longer regulated and may be distributed anywhere in California except vineyards located outside an EGVM quarantine area.

\*In special circumstances, and with prior Program approval, <u>regulated</u> forms of 'Green Waste' may be moved outside the Quarantine Area to approved receivers under compliance.

# 5. Approved Hauler/Transporter: Moving from this Facility

Only load green waste for transport onto any conveyance with verification the transporter/haulers is operating under a compliance agreement for the appropriate pest.

## 6. Approved Receiver

Verify green waste will be transported to a green waste receiver under compliance agreement for the pest(s) checked above.

## 7. Records

Maintain a record of certified weighmaster certificates for all shipments of green waste received from the quarantine area for a period of two years and make them available for inspection by county, state or federal plant regulatory officials upon request.

## 8. Inspections

Allow county, state or federal plant regulatory officials to perform unannounced inspections of all plant material located at the Establishment or records at any time during normal business hours.

## 9. Quarantine Areas

Be responsible for regularly verifying current quarantine areas for each applicable pest checked above. The most up to date quarantine information can be viewed at:

Asian Citrus Psyllid: http://pi.cdfa.ca.gov/pgm/manual/pdf/420.pdf European Grapevine Moth: http://pi.cdfa.ca.gov/pgm/manual/pdf/422.pdf Huanglongbing: http://pi.cdfa.ca.gov/pgm/manual/pdf/423.pdf Light Brown Apple Moth: http://pi.cdfa.ca.gov/pgm/manual/pdf/419.pdf Phytophthora ramorum: http://pi.cdfa.ca.gov/pgm/manual/pdf/455.pdf

## 10. Trapping

Allow traps to be placed at the density listed below and serviced at intervals specified by the Program.

Asian Citrus Psyllid= 2-5 traps per acre European Grapevine Moth=1 trap every five acres Huanglongbing (for Asian Citrus Psyllid)= 2-5 traps per acre Light Brown Apple Moth=1 trap every five acres

## 11. Cost Recovery

Reimburse costs to the county agricultural commissioner's office, at their request, involved with regulatory activities conducted outside the quarantine area including but not limited to compliance agreement issuance, deployment /servicing of traps, and records verification.

## **SPECIAL INSTRUCTIONS:**

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Printed name (Owner/Manager)

Signature of Establishment

Failure to comply with stipulations outlined above may result in civil penalties pursuant to California Food and Agricultural Code Section 5705 and/or revocation of this Agreement.



# Local Enforcement Agency (LEA)



Thomas D. Koutroulis, Director 300 N. Flower Street, Suite 400 Santa Ana, CA 92703

> www.oclandfills.com Telephone: (714) 834-4000 Fax: (714) 834-4183

March 13, 2018

Kathryn Cross, P.G. Solid Waste Local Enforcement Agency 1241 E. Dyer Road, Suite 120 Santa Ana, California 92705-5611

## Subject: Notifications for Composting Pilot Projects

Dear Ms. Cross:

In accordance with 14 CCR § 18103.1 and 14 CCR § 17857.1, OC Waste & Recycling is hereby submitting Enforcement Agency Notification along with CEQA documents for the following facilities:

Bee Canyon Greenery (at FRB Landfill) Valencia Greenery (at Olinda Alpha Landfill) Capistrano Greenery (at Prima Deshecha Landfill)

If you have any questions regarding the enclosed forms, please contact me at (714) 834-4115, or by e-mail at <u>warisa.niizawa@ocwr.ocgov.com</u>.

Sincerely,

Whi The.

Warisa Niizawa, P.E., Senior Professional Engineer Regulatory Support

Enclosures

# **ENFORCEMENT AGENCY NOTIFICATION**

Enforcer	ment Agen	cy: County O	f Orange Hea	Ith Ca	re Agen	су		Of	ficial U	se Only	
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County:	Orange	9					Date R	Received:			
		Barry V.		GEN	ERAL I	NFORMATION			al an		
	n Name:	Capistrano Gre									
Address		Avenida La Pata			City:	San Juan Capi	strano	State:	CA	Zip:	92675
Phone:	714-834	-4056		Fax:							
Operator	Name:	OC Waste & R	ecycling								
Address:	300 N.	Flower Street, S	uite 400		City:	Santa Ana		State:	CA	Zip:	92703
Phone:	714-834-	4056		Fax:	714-8	34-4001					
Land Ow	iner:	OC Waste & R	ecycling								
Address:	300 N.	Flower Street, St	uite 400		City:	Santa Ana		State:	CA	Zip:	92703
Phone:	714-834-	4056		Fax:	714-8	34-4001					
				a set a set a	and the second se	INFORMATION		-			San Sala
Authorizin details	ng Eligibilit	Y (State Section of 14	CCR Division 7, 0	Chapter 3	, 3.1 or 3.1	2): See back for more	17857	7.1			
Charles and the second second	of Waste/M	laterial Handled:	Green Wa	ste/Pro	ocessed	Green Material					
Volume c	of Waste/M	laterial Handled:	92 CY								
Peak Loa	ading:		Cubic Yard	ds <u>or</u> 🔲	Tons	Annual Loading:			🛛 Cub	ic Yards or	Tons
Days and	Hours of	Operation: Mo	nSat. 7 a.m	5 p.i	m.		Opera	ation Acre	age:	1	
Brief Des	cription of	the Operation:	Pilot operati	on cor	nposting	g no more than 9				ssed are	en material
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		pliance with the (	and the second sec	August Party States							
	responder ain local la	nce from the loca nd use approval.	I planning de	partme	ent that o	compliance with	CEQA is	not requi	red for	the ope	ration to
Writ	tten notice	to the local plan	ning departm	ent of	the oper	rator's intent to c	ommenc	e operatio	ons.		
			IV. OWN	ER/OF	PERATO	OR CERTIFICAT	ION				
	I hereby cert	ify under penalty of p	perjury that the in	nformati	on provide	ed is true and accura	ate to the b	est of my kr	nowledge	e and beli	ef.
Signature	of Land O	wner:	Thom	DK	cent	th?		Date	<b>e</b> :	3/12	12018
Signature	of Operato	or:	Thom	N	cent.	tail		Date	):	3/12	/2018
'ompletion	of this form is	not required by rea	ulation: howaya	it will a	rouide the	VVVV	10.0	1.1			-

Completion of this form is not required by regulation; however, it will provide the enforcement agency with the information required by 14 CCR 18103.1.

A separate Notification is required for each eligible operation.

Please cite only one of the following Title 14 regulations when filling in the "authorizing eligibility" box of Notification Form CalRecycle 169:

#### □ Section 17362.2. Contaminated Soil Transfer/Processing Operations.

All contaminated soil transfer/processing operations, except as otherwise provided in this Article, shall comply with the Enforcement Agency Notification requirements set forth in Title 14, Division 7, Chapter 5.0, Article 3.0 of the California Code of Regulations (commencing at section 18103). These operations shall be inspected by the enforcement agency at least once every three (3) months unless the enforcement agency approves, with Department concurrence, a reduced inspection frequency. The enforcement agency may approve a reduced inspection frequency only if it will not pose an additional risk to public health and safety or the environment but in no case shall the frequency be less than once per calendar year.

#### Section 17377.2. Nonhazardous Ash Transfer/Processing Operations.

(a) All operators of nonhazardous ash transfer/processing operations, except as otherwise provided in this Article, shall comply with the Enforcement Agency Notification requirements set forth in the California Code of Regulations, Title 14, Division 7, Chapter 5.0, Article 3.0 (commencing with section 18103).

## Section 17383.3. Small Volume C&D Wood Debris Chipping and Grinding Operations (less than 200 tons per day)

(a)(1) A small volume C&D wood debris chipping and grinding operations shall comply with the EA Notification requirements set forth in CCR, Title 14, Division 7, Chapter 5.0, Article 3.0, commencing with section 18100 et seq. and shall be inspected by the EA at least once every three (3) months unless the EA approves, with Department concurrence, a reduced inspection frequency. The EA may approved a reduced inspection frequency only if it will not pose an additional risk to public health and safety or the environment but in no case shall the frequency be less than once per calendar year.

## Section 17383.4. Small Volume Construction and Demolition/Inert Debris Processing Operations. (less than 25 tons per day)

All small volume CDI debris processing operations shall comply with the EA Notification requirements set forth in CCR, Title 14, Division 7, Chapter 5.0, Article 3.0, commencing at section 18100. These operations shall be inspected by the EA at least once every three (3) months to verify compliance with minimum standards unless the EA approves, with Department concurrence, a reduced inspection frequency. The EA may approved a reduced inspection frequency only if it will not pose an additional risk to public health and safety or the environment but in no case shall the frequency be less than once per calendar year. To the greatest extent possible, all inspections shall be unannounced and shall be conducted at irregular intervals. The operator shall specify the operation's boundary area in the operating record.

## □ Section 17383.7. Inert Debris Type A Processing Operations. (less than 1500 tons per day)

All inert debris Type A processing operations subject to this Article shall comply with the EA Notification requirements set forth in CCR, Title 14, Division 7, Chapter 5.0, Article 3.0 and commencing with section 18100.

## □ Section 17383.9. Emergency Construction and Demolition/Inert Debris Processing Operations.

(a) All emergency CDI debris processing operations shall comply with the EA Notification requirements set forth in CCR, Title 14, Division 7, Chapter 5.0, Article 3.0, section 18100 et. seq. Such operations may occur at locations which are not permitted solid waste facilities. These operations shall be inspected by the EA as necessary to verify compliance with minimum standards, but in no case less than monthly. To the greatest extent possible, all inspections shall be unannounced and shall be conducted at irregular intervals. The operator shall specify the operation's boundary area in the operating record.

## □ Section 17388.3. Inert Debris Engineered Fill Operations.

Inert debris engineered fill operations shall submit EA Notifications, as set forth in CCR, Title 14, section 18100 et seq. and shall comply with all applicable RWQCB waste discharge requirements.

#### □ Section 17403.2. Sealed Container Transfer Operations.

All sealed container transfer operations subject to this Article shall comply with the Enforcement Agency Notification requirements set forth in Title 14, Division 7, Chapter 5.0, Article 3.0 of California Code of Regulations (commencing with section 18100). These operations shall be inspected by the EA at least once every three (3) months to verify compliance with minimum standards unless the EA approves, with Department concurrence, a reduced inspection frequency. The EA may approved a reduced inspection frequency only if it will not pose an additional risk to public health and safety or the environment but in no case shall the frequency be less than once per calendar year. The operator shall specify the operation's boundary area in the operating record.

#### Section 17403.3. Limited Volume Transfer Operations.

All limited volume transfer operations subject to this Article shall comply with the Enforcement Agency Notification requirements set forth in Title 14, Division 7, Chapter 5.0, Article 3.0 of the California Code of Regulations (commencing with section 18100). These operations shall be inspected by the EA as necessary to verify compliance with minimum standards. Inspections shall be conducted quarterly, unless the EA determines a lesser frequency is necessary, but in no case shall the frequency be less than annual. The operator shall specify the operation's boundary area in the operating record.

#### □ Section 17403.3.1. Glass Container Processing Operations.

(a) All Glass Container Processing Operations subject to this Article shall comply with the Enforcement Agency Notification requirements set forth in Title 14, Division 7, Chapter 5, Article 3.0, of the California Code of Regulations (commencing with section 18100).

#### □ Section 17403.5. Emergency Transfer/Processing Operations.

(a) All emergency transfer/processing operations shall comply with the Enforcement Agency Notification requirements set forth in Title 14, Division 7, Chapter 5.0, Article 3.0 of the California Code of Regulations (commencing with section 18100). These operations shall be inspected by the EA as necessary to verify compliance with minimum standards, but in no case shall the frequency be less than monthly. The operator shall specify the operation's boundary area in the operating record.

## □ Section 17856. Agricultural Material Composting Operations.

(a) Agricultural material composting operations shall comply with the Enforcement Agency Notification requirements set forth in Title 14, California Code of Regulations, Division 7, Chapter 5.0, Article 3.0 (commencing with Section 18100) and the applicable requirements specified in Chapter 3.1.

#### Section 17857.1. Green Material Composting Operations.

(a) A green material composting operation may have no more than 12,500 cubic yards of feedstock, chipped and ground material, amendments, additives, and stabilized compost on-site at any one time. Green material composting operations shall comply with the EA Notification requirements set forth in Title 14, Division 7, Chapter 5.0, Article 3.0 (commencing with Section 18100) and the requirements of this Chapter.

## □ Section 17859.1. Biosolids Composting at POTWs.

(a) Except as provided in section 17855(a)(5)(B), the composting of biosolids on-site at a Publicly Owned Treatment Works (POTW) shall comply with the EA Notification requirements set forth in Title 14, California Code of Regulations, Division 7, Chapter 5.0, Article 3.0 (commencing with Section 18100).

## □ Section17862. Research Composting Operations.

(a) An operator conducting research composting operations shall not have more than 5,000 cubic-yards of feedstock, chipped and ground material, amendments, additives, active compost, and stabilized compost on-site at any one time, and shall comply with the EA Notification requirements set forth in Title 14, California Code of Regulations, Division 7, Chapter 5.0, Article 3.0 (commencing with Section 18100), except as otherwise provided by this Chapter.

## □ Section 17862.1. Chipping and Grinding Operations.

(a) A chipping and grinding operation that receives up to 200 tons per day of material that may be handled by a green material composting operation shall comply with the EA Notification requirements set forth in Title 14, Division 7, Chapter 5.0, Article 3.0 (commencing with Section 18100), and the applicable requirements specified in this Chapter.

## □ Section 17896.8. Research In-Vessel Digestion Operations.

(a) An operator conducting research in-vessel digestion operations shall comply with the EA Notification requirements set forth in Title 14, California Code of Regulations, Division 7, Chapter 5.0, Article 3.0 (commencing with section 18100), except as otherwise provided by this Chapter.

## Section 17896.9. Dairy In-Vessel Digestion Operations.

(a) All dairy in-vessel digestion operations shall comply with the EA Notification requirements set forth in Title 14, California Code of Regulations, Division 7, Chapter 5.0, Article 3.0 (commencing with section 18100).

## □ Section 17896.10. Distribution Center In-Vessel Digestion Operations.

(a) All distribution center in-vessel digestion operations shall comply with the EA Notification requirements set forth in Title 14, California Code of Regulations, Division 7, Chapter 5.0, Article 3.0 (commencing with section 18100).

## □ Section 17896.11. Limited Volume In-Vessel Digestion Operations.

(a) All limited volume in-vessel digestion operations shall comply with the Enforcement Agency Notification requirements set forth in Title 14, California Code of Regulations, Division 7, Chapter 5.0, Article 3.0 (commencing with section 18100).





MAR 1 3 2018

ORANGE COUNTY CLERK-RECORDER DEPARTMENT

DEPUTY N BY:



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#### OC WASTE & RECYCLING 300 NORTH FLOWER STREET, SUITE 400 SANTA ANA, CALIFORNIA 92703

#### NOTICE OF EXEMPTION

	TICE OF EXEMIFTION	
Project Title: Proposed Demonstration	Pilot Composting Project at the Prima Deshecha Land	fill
(OC Waste & Recycling Log #674)		
Project Location - Specific		
32250 La Pata Avenue	Detail of a	
Project Location – City	Project Location – County	
San Juan Capistrano	Orange County	
requires all jurisdictions in California to div going to solid waste landfills, and at least implement a demonstration pilot compostii demonstration pilot composting project is t design, permitting, engineering and operat permitting, engineering and operations; (3) potential environmental issues that could of high quality finished compost that will mee analyze the potential uses for finished com	roject: As a result of recent California legislation, SB 1383, rert or recycle at least 50 percent of all organic wastes curre 75 percent by 2025, OC Waste & Recycling (OCWR) will ng project at the Prima Deshecha Landfill. The purpose of for OCWR to (1) gain a better understanding of composting tions; (2) determine the costs associated with composting d ) by studying and observing on a microscale, determine the occur at a full-scale composting operation; (4) learn how to a tall U.S. Composting Council testing requirements and (5) post. No significant impacts to the environment will occur.	the lesign, make
Public Agency Approving Project:	Date of Decision	
OC Waste & Recycling	March 9, 2018	돌
Public or Private Applicant:		GH
OC Waste & Recycling, 300 N. Flower Stre	eet, Suite 400, Santa Ana, CA 92703	Z
Exempt Status: (Check One)		S S
Ministerial [CEQA Guidelines Section 15268] Declared Emergency [Section	Statutorial [Type and Section Number]:	HUGH NGUYEN, CLERK-RECORDER
15269 (a) & (b)] Emergency Project [Section 15269 (a) & (b)] Gen. Rule [Sec. 15061(b)(3)]	XCategorical Exemption (Classes 1, 4, 6, 7 & 8	RECORDER
CEQA pursuant to Section 15301 of the CEC alteration of existing public structures or to beyond that existing at the time of the lead Categorically Exempt (Class 4) from the Guidelines, since Class 4 (Minor Alterations also Categorically Exempt (Class 6) from to Collection), since Class 6 consists of basic of evaluation activities which do not result in a the proposed action is also Categorically Ex 15307 (Actions by Regulatory Agencies for F taken by a public agency for the protection Exempt (Class 8) from the provisions of CEC	sed action is Categorically Exempt (Class 1) from the provisi QA Guidelines, since Class 1 (Existing Facilities) includes the opographic features, involving negligible or no expansion of agency's determination. In addition, the proposed action is provisions of CEQA pursuant to Section 15304 of the C to Land) involves minor alterations to land. The proposed act the provisions of CEQA pursuant to Section 15306 (Inform data collection, research, experimental management and res- serious or major disturbance to an environmental resource. cempt (Class 7) from the provisions of CEQA pursuant to Sec Protection of Natural Resources), since Class 7 consists of act of natural resources. The proposed action is also Categor QA pursuant to Section 15308 (Actions by Regulatory Agenci 8 consists of actions taken by a public agency for the protect	minor of use s also CEQA tion is nation ource Also, ection ctions rically es for

Contact Person:	Phone Number:	
John Amau	(714) 834-4107	
NOTE: Exempt of County Fee	es per Government Code Section 6103	

In Janan Signature: Date: March 13, 2018

Title: Administrative Manager I

CALIFORNIA	Sta
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2.73	DF

## State of California - Department of Fish and Wildlife 2018 ENVIRONMENTAL FILING FEE CASH RECEIPT

DFW 753.5a (Rev. 01/01/18) Previously DFG 753.5a



RECEIPT NUMBER:

30-2018 0230

STATE CLEARINGHOUSE NUMBER (If applicable)

SEE INSTRUCTIONS ON REVERSE. TYPE OR PRINT CLEARLY.					
LEAD AGENCY		DATE			
OC WASTE & RECYCLING				03/13/2	018
COUNTY/STATE AGENCY OF FILING					TNUMBER
Orange				201885	000244
PROJECT TITLE					
PROPOSED DEMONSTRATION PILOT COMPOSTING PROJECT A	T THE PRIMA DESHECHA	LANDFILL	(OC W	ASTE & REC	YCLING LOG #674)
PROJECT APPLICANT NAME	PROJECT APPLICANT	EMAIL		PHONE NU	
OC WASTE & RECYCLING				(714) 83	4-4107
PROJECT APPLICANT ADDRESS	CITY	STAT	E	ZIP CODE	An other states of the states
300 N. FLOWER STREET, SUITE 400	SANTA ANA	CA		92703	
PROJECT APPLICANT (Check appropriate box)					
Local Public Agency     School District	Other Special District		State A	gency	Private Entity
CHECK APPLICABLE FEES:   Environmental Impact Report (EIR)  Mitigated/Negative Declaration (MND)(ND)  Certified Regulatory Program document (CRP)  Exempt from fee  Notice of Exemption (attach)  CDFW No Effect Determination (attach)  Fee previously paid (attach previously issued cash receipt cop	ру)	\$3,168.00 \$2,280.75 \$1,077.00	\$		0.00
	as Cantral Board anti-	\$850.00	e		0.00
Water Right Application or Petition Fee (State Water Resource	es Control Board only	\$000.00	5	-	0.00
County documentary handling fee			¢		
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PAYMENT METHOD:	TOTAL	RECEIVED	\$		0.00
Cash Credit Check Other	10 me		•		
al ill	NCY OF FILING PRINTED N			ERK	



Thomas D. Koutroulis, Director 300 N. Flower Street, Suite 400 Santa Ana, CA 92703

> <u>www.oclandfills.com</u> Telephone: (714) 834-4000 Fax: (714) 834-4183

TO:	File
FROM:	Tom Koutroulis, Director OC Waste & Recycling
SUBJECT:	Proposed Demonstration Pilot Composting Project at the Prima Deshecha Landfill (OCWR Log #674)

Waste & Recycling

## I. Nature of Project

As a result of recent California legislation, SB 1383, that requires all jurisdictions in California to divert or recycle at least 50 percent of all organic wastes currently going to solid waste landfills, and at least 75 percent by 2025, OC Waste & Recycling (OCWR) will implement a demonstration pilot composting project at the Prima Deshecha Landfill. The purpose of the demonstration pilot composting project is for OCWR to (1) gain a better understanding of composting design, permitting, engineering and operations; (2) determine the costs associated with composting design, permitting, engineering and operations; (3) by studying and observing on a microscale, determine the potential environmental issues that could occur at a full-scale composting operation; (4) learn how to make high quality finished compost that will meet all U.S. Composting Council testing requirements and (5) analyze the potential uses for finished compost.

The proposed demonstration pilot composting project ("the project") will occur on an approximate 1-acre area at the Prima Deshecha Landfill, within Waste Management Unit 1 of the existing Zone 1 landfill, as shown on the attached exhibit. This area of the landfill is not currently being used for active landfill disposal. Material feedstocks to be composted include source separated residential curbside green waste, commercial green waste, processed green waste and wood waste. The project will not have more than 60 tons (i.e., 92 cubic yards) of material on-site at any one time or process more than 250 tons of material per year. While it is anticipated that the wood waste will be relatively homogeneous and clean, some of the green waste that will be received will come to the landfill directly from residential curbside pickup, so there will likely be small amounts of residual solid waste mixed in with the green waste. Through visual inspection, green waste that contains only very small amounts of residual solid waste will be used for the project. Any green waste received at the composting operation that is noticeably contaminated with residual solid waste will be disposed at the active area of the landfill. Any highly odorous loads will also be removed from the composting area and disposed in the landfill. OCWR will divert feedstock materials to the project that are already being delivered to the landfill, so there will be no additional truck trips.

As part of the project, OCWR will try two different types of composting operations. The first type will be open windrow composting. OCWR will create one windrow that will be no more than 92 cubic yards of material on-site with the approximate dimensions of 82 feet long, 10 feet wide and 6 feet high, in compliance with Orange County Fire Authority (OCFA) requirements. The feedstock will be placed on top of a crushed asphalt surface for all weather access and

surrounded by an earthen berm to prevent storm water run-on and run-off. The windrow will be periodically turned with a loader, skid steer, or similar equipment, up to three times per week, to auicken the decomposition of the feedstock into compost and to maintain temperatures greater than 131 degrees Fahrenheit during the pathogen reduction process. The heavy equipment is already in use at the landfill on a routine basis and will be made available for the project. The initial compost processing phase will last at least 22 days or until the pile has completed the pathogen reduction process. Afterwards, the compost material will be cured for a period that will last between 30-60 days for further stabilization of the compost product. After the curing process is complete, OCWR may screen the finished compost to remove oversized uncomposted material and residual solid waste. Altogether, the composting process may take up to 100 days. The active composting process will require the use of water to hydrate the windrow keeping the feedstock moist without overwatering, to limit the potential for leachate generation. Water will be provided by a water truck that is already in use at the landfill operation and will be made available for the project. The existing potable water line, the reclaimed water line and the 50,000 gallon water storage tank that currently serve the landfill operation have sufficient capacity to support the project. The water truck will fill up at the J-stand that is located closest to the project. Water will not be used during the curing process. Approximately 250 gallons of water per day may be used to hydrate the compost piles. All water used for composting will be contained within the asphalt pad and perimeter earthen berms to minimize runoff. In addition, water will be used as needed to provide for dust control in accordance with SCAQMD Rule 403 as part of normal landfill operations.

As an alternative to open air windrow composting, or in combination with open air windrow composting. OCWR may also make compost by creating an aerated static pile, using the same feedstock materials described above for open air windrow composting. Feedstock materials will be placed on top of plastic piping, which will be placed on a crushed asphalt surface. The plastic piping will then be removed, creating openings at the bottom of the pile that will create a chimney effect, thereby allowing oxygen to pass through the pile. The dimensions of the aerated static pile (i.e., height, width and length) will be no greater than the dimensions of the open air windrow compost pile described above. The same heavy equipment would be used for the aerated static pile, although less turning of the pile would be required when compared to open air windrow composting. It is also anticipated that the timeframes for the active and curing composting phases for aerated static pile composting will be similar to open air windrow composting. In addition, it is anticipated that the aerated static pile composting will use a similar amount of water when compared to open air windrow composting. Whether OCWR chooses to implement open air windrow composting only, or in combination with aerated static pile composting, at no time will the project have more than 60 tons (i.e., 92 cubic yards) of material on-site at any one time or process more than 250 tons of material per year.

Testing will be performed as prescribed by the U.S. Composting Council once the compost has been cured. It is OCWR's intent to make high quality compost that will receive certification from the U.S. Composting Council and will also contain less than 0.5 percent contamination, as required by the California Department of Resources Recovery and Recycling (CalRecycle).

Both composting methods will require that OCWR place ground asphalt on the surface of the landfill where the composting will occur, to maintain the integrity of the landfill interim soil

cover and to preclude any leaching from the project into the underlying waste mass. Surface water runoff will be diverted away from the composting area to the existing landfill surface water collection system. Surface water runoff that comes into contact with compost materials will be tested.

Methane generated by the underlying landfill area will not result in surface fires at the composting area through the effective maintenance and monitoring of the landfill gas collection system.

As part of the project, OCWR will use finished compost at the landfill for beneficial reuse at the landfill such as landscaping, geosynthetic tarp framing and for erosion control. In addition, the compost may be sold or given away to potential end users as part of OCWR's market research, business development and public outreach.

Implementation of the demonstration pilot composting operation at the Prima Deshecha Landfill is exempt from permitting due to the limited tonnage of feedstock materials that the project will receive. However, the following agencies will be notified of the project and operations will be performed in a manner that is consistent with the respective regulations and best management practices of these agencies. These agencies include the following: CalRecycle; Orange County Health Care Agency, Environmental Health Division acting as the Local Enforcement Agency (LEA) for CalRecycle; the California Regional Water Quality Control Board, San Diego Region (Regional Board); South Coast Air Quality Management District (SCAQMD); and OCFA. Implementation of the project will require registration with SCAQMD in accordance with Rule 1133.

With the implementation of the project design features and operational controls discussed above, and by complying with all of the conditions and requirements included in the agency approvals, the proposed demonstration pilot composting project will not result in any significant impacts to the environment.

## II. Authority for Administrative Action

The Director of OC Waste & Recycling, pursuant to the authority granted in OCCO Sections 4-3-104, 4-3-126, and 4-3-137, takes the following administrative actions.

## III. CEQA Approval

The proposed action is Categorically Exempt (Class 1) from the provisions of CEQA pursuant to Section 15301 of the CEQA Guidelines, since Class 1 (Existing Facilities) consists of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographic features, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination. In addition, the proposed action is also Categorically Exempt (Class 4) from the provisions of CEQA pursuant to Section 15304 of the CEQA Guidelines, since Class 4 (Minor Alterations to Land) involves minor alterations to land. The proposed action is also Categorically Exempt (Class 6) from the provisions of CEQA pursuant to Section 15304 of the Section 15306 (Information

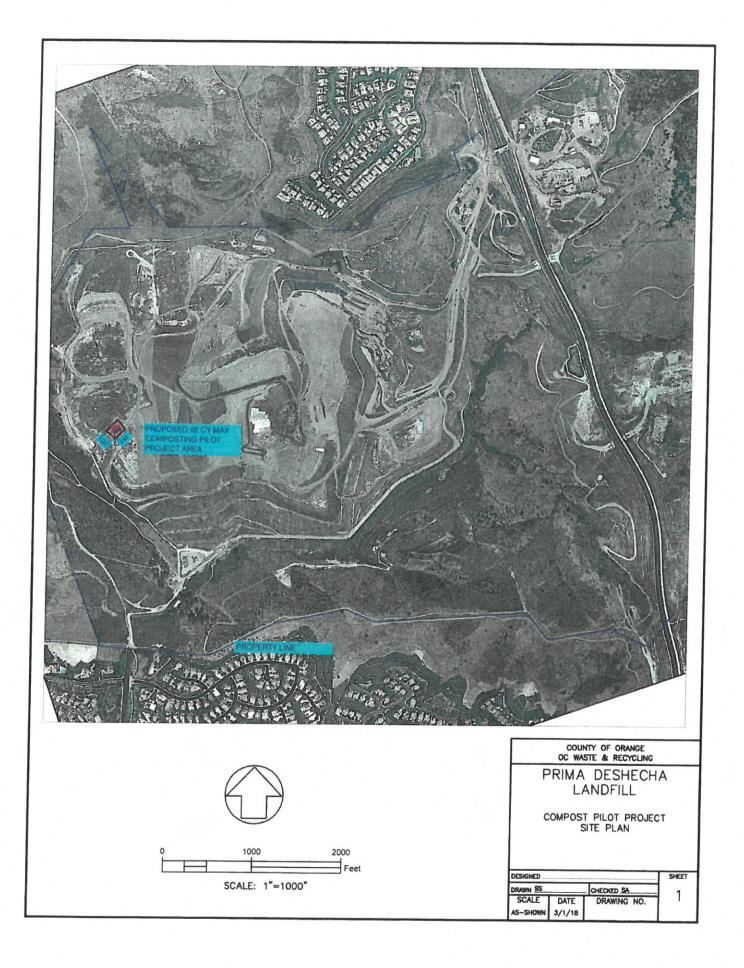
Collection), since Class 6 consists of basic data collection, research, experimental management and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource. Also, the proposed action is also Categorically Exempt (Class 7) from the provisions of CEQA pursuant to Section 15307 (Actions by Regulatory Agencies for Protection of Natural Resources), since Class 7 consists of actions taken by a public agency for the protection of natural resources. The proposed action is also Categorically Exempt (Class 8) from the provisions of CEQA pursuant to Section 15308 (Actions by Regulatory Agencies for Protection of the Environment), since Class 8 consists of actions taken by a public agency for the protection of the Environment), since Class 8 consists of actions taken by a public agency for the protection of the environment. The proposed composting demonstration pilot project at the Prima Deshecha Landfill is consistent with a Class 1, Class 4, Class 6, Class 7 and Class 8 Categorical Exemption determination.

#### IV. Certification

I hereby certify that the subject project is approved.

Date: 3/9/2018

Director, OC Waste & Recycling



# **ENFORCEMENT AGENCY NOTIFICATION**

Enforcem	ent Ageno	cy: County Of	Orange He	alth Ca	re Agen	су		Official	Use Only	1
	1						SWIS Numb	er:		
County:	Orange			NA			Date Receiv	ed:	e di la constante	See Star
				I. GEN	ERAL I	NFORMATION				Sec. 1.
Operation		Bee Canyon Gr				T				
Address:		Bee Canyon Acce	ss Road		City:	Irvine	Sta	te: CA	A Zip:	92618
Phone:	714-834-			Fax:						
Operator		OC Waste & Re				T				
Address:	1	Flower Street, Sui	ite 400		City:	Santa Ana	Sta	e: CA	Zip:	92703
Phone:	714-834-	4056		Fax:	714-8	34-4001				
Land Own	er:	OC Waste & Re	cycling							
Address:	300 N. F	Flower Street, Sui	te 400		City:	Santa Ana	Sta	e: CA	Zip:	92703
Phone:	714-834-4	4056		Fax:	714-8	34-4001				
				and the second sec		INFORMATION				
Authorizin	g Eligibility	y (State Section of 14 C	CR Division 7,	Chapter 3	, 3.1 or 3.1	2): See back for more	17857.1			
Type(s) of	Waste/Ma	aterial Handled:	Green Wa	aste/Pro	ocessed	Green Material				
Volume of	Waste/Ma	aterial Handled:	92 CY		6a		an a			
Peak Load	ling:		🛛 Cubic Ya	rds <u>or</u>	Tons	Annual Loading:			Cubic Yards o	r 🗌 Tons
Days and	Hours of (	Operation: Mon	Sat. 7 a.m	n 5 p.i	m.		Operation Acreage: 1			
Brief Desc	ription of t	he Operation:	Pilot operat	tion con	nposting	g no more than 9				een material
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and a start	III. C	OCUMENTATIO	N OF LOC	AL NO	TIFICA	TION (check one a	and submit with	EA Notifi	cation)	
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Corre	esponden	ce from the local and use approval.				Carlo base to this of a set of the Planta in Section and		quired f	or the ope	ration to
Writt	en notice	to the local planni	ing departm	nent of t	the oper	rator's intent to co	ommence ope	ations.		
	al a sta		IV. OWN	NER/OF	ERATO	OR CERTIFICAT	ION		and the second	
	nereby certif	y under penalty of pe	rjury that the	informatio	on provide	ed is true and accura	ate to the best of i	ny knowle	dge and bel	ief.
Signature o	of Land Ov	wner:	Thomas	Du	Lout	An		Date:	3/17	2/2018
Signature o		10035-0023-012578-002	Thomas	n D	Kont	tontria	1.1	Date:	3/12	/ 2018
inpletion of	uns ionn is	not required by regul	ation; noweve	er, it will p	provide the	e enforcement ageno	cy with the inform	ation requi	red by 14 C	CR 18103.1.

A separate Notification is required for each eligible operation.

Please cite only one of the following Title 14 regulations when filling in the "authorizing eligibility" box of Notification Form CalRecycle 169:

## Section 17362.2. Contaminated Soil Transfer/Processing Operations.

All contaminated soil transfer/processing operations, except as otherwise provided in this Article, shall comply with the Enforcement Agency Notification requirements set forth in Title 14, Division 7, Chapter 5.0, Article 3.0 of the California Code of Regulations (commencing at section 18103). These operations shall be inspected by the enforcement agency at least once every three (3) months unless the enforcement agency approves, with Department concurrence, a reduced inspection frequency. The enforcement agency may approve a reduced inspection frequency only if it will not pose an additional risk to public health and safety or the environment but in no case shall the frequency be less than once per calendar year.

## Section 17377.2. Nonhazardous Ash Transfer/Processing Operations.

(a) All operators of nonhazardous ash transfer/processing operations, except as otherwise provided in this Article, shall comply with the Enforcement Agency Notification requirements set forth in the California Code of Regulations, Title 14, Division 7, Chapter 5.0, Article 3.0 (commencing with section 18103).

## Section 17383.3. Small Volume C&D Wood Debris Chipping and Grinding Operations (less than 200 tons per day)

(a)(1) A small volume C&D wood debris chipping and grinding operations shall comply with the EA Notification requirements set forth in CCR, Title 14, Division 7, Chapter 5.0, Article 3.0, commencing with section 18100 et seq. and shall be inspected by the EA at least once every three (3) months unless the EA approves, with Department concurrence, a reduced inspection frequency. The EA may approved a reduced inspection frequency only if it will not pose an additional risk to public health and safety or the environment but in no case shall the frequency be less than once per calendar year.

## Section 17383.4. Small Volume Construction and Demolition/Inert Debris Processing Operations. (less than 25 tons per day)

All small volume CDI debris processing operations shall comply with the EA Notification requirements set forth in CCR, Title 14, Division 7, Chapter 5.0, Article 3.0, commencing at section 18100. These operations shall be inspected by the EA at least once every three (3) months to verify compliance with minimum standards unless the EA approves, with Department concurrence, a reduced inspection frequency. The EA may approved a reduced inspection frequency only if it will not pose an additional risk to public health and safety or the environment but in no case shall the frequency be less than once per calendar year. To the greatest extent possible, all inspections shall be unannounced and shall be conducted at irregular intervals. The operator shall specify the operation's boundary area in the operating record.

## Section 17383.7. Inert Debris Type A Processing Operations. (less than 1500 tons per day)

All inert debris Type A processing operations subject to this Article shall comply with the EA Notification requirements set forth in CCR, Title 14, Division 7, Chapter 5.0, Article 3.0 and commencing with section 18100.

## □ Section 17383.9. Emergency Construction and Demolition/Inert Debris Processing Operations.

(a) All emergency CDI debris processing operations shall comply with the EA Notification requirements set forth in CCR, Title 14, Division 7, Chapter 5.0, Article 3.0, section 18100 et. seq. Such operations may occur at locations which are not permitted solid waste facilities. These operations shall be inspected by the EA as necessary to verify compliance with minimum standards, but in no case less than monthly. To the greatest extent possible, all inspections shall be unannounced and shall be conducted at irregular intervals. The operator shall specify the operation's boundary area in the operating record.

## □ Section 17388.3. Inert Debris Engineered Fill Operations.

Inert debris engineered fill operations shall submit EA Notifications, as set forth in CCR, Title 14, section 18100 et seq. and shall comply with all applicable RWQCB waste discharge requirements.

#### □ Section 17403.2. Sealed Container Transfer Operations.

All sealed container transfer operations subject to this Article shall comply with the Enforcement Agency Notification requirements set forth in Title 14, Division 7, Chapter 5.0, Article 3.0 of California Code of Regulations (commencing with section 18100). These operations shall be inspected by the EA at least once every three (3) months to verify compliance with minimum standards unless the EA approves, with Department concurrence, a reduced inspection frequency. The EA may approved a reduced inspection frequency only if it will not pose an additional risk to public health and safety or the environment but in no case shall the frequency be less than once per calendar year. The operator shall specify the operation's boundary area in the operating record.

#### □ Section 17403.3. Limited Volume Transfer Operations.

All limited volume transfer operations subject to this Article shall comply with the Enforcement Agency Notification requirements set forth in Title 14, Division 7, Chapter 5.0, Article 3.0 of the California Code of Regulations (commencing with section 18100). These operations shall be inspected by the EA as necessary to verify compliance with minimum standards. Inspections shall be conducted quarterly, unless the EA determines a lesser frequency is necessary, but in no case shall the frequency be less than annual. The operator shall specify the operation's boundary area in the operating record.

#### □ Section 17403.3.1. Glass Container Processing Operations.

(a) All Glass Container Processing Operations subject to this Article shall comply with the Enforcement Agency Notification requirements set forth in Title 14, Division 7, Chapter 5, Article 3.0, of the California Code of Regulations (commencing with section 18100).

#### □ Section 17403.5. Emergency Transfer/Processing Operations.

(a) All emergency transfer/processing operations shall comply with the Enforcement Agency Notification requirements set forth in Title 14, Division 7, Chapter 5.0, Article 3.0 of the California Code of Regulations (commencing with section 18100). These operations shall be inspected by the EA as necessary to verify compliance with minimum standards, but in no case shall the frequency be less than monthly. The operator shall specify the operation's boundary area in the operating record.

#### □ Section 17856. Agricultural Material Composting Operations.

(a) Agricultural material composting operations shall comply with the Enforcement Agency Notification requirements set forth in Title 14, California Code of Regulations, Division 7, Chapter 5.0, Article 3.0 (commencing with Section 18100) and the applicable requirements specified in Chapter 3.1.

## Section 17857.1. Green Material Composting Operations.

(a) A green material composting operation may have no more than 12,500 cubic yards of feedstock, chipped and ground material, amendments, additives, and stabilized compost on-site at any one time. Green material composting operations shall comply with the EA Notification requirements set forth in Title 14, Division 7, Chapter 5.0, Article 3.0 (commencing with Section 18100) and the requirements of this Chapter.

## □ Section 17859.1. Biosolids Composting at POTWs.

(a) Except as provided in section 17855(a)(5)(B), the composting of biosolids on-site at a Publicly Owned Treatment Works (POTW) shall comply with the EA Notification requirements set forth in Title 14, California Code of Regulations, Division 7, Chapter 5.0, Article 3.0 (commencing with Section 18100).

## □ Section17862. Research Composting Operations.

(a) An operator conducting research composting operations shall not have more than 5,000 cubic-yards of feedstock, chipped and ground material, amendments, additives, active compost, and stabilized compost on-site at any one time, and shall comply with the EA Notification requirements set forth in Title 14, California Code of Regulations, Division 7, Chapter 5.0, Article 3.0 (commencing with Section 18100), except as otherwise provided by this Chapter.

## □ Section 17862.1. Chipping and Grinding Operations.

(a) A chipping and grinding operation that receives up to 200 tons per day of material that may be handled by a green material composting operation shall comply with the EA Notification requirements set forth in Title 14, Division 7, Chapter 5.0, Article 3.0 (commencing with Section 18100), and the applicable requirements specified in this Chapter.

## Section 17896.8. Research In-Vessel Digestion Operations.

(a) An operator conducting research in-vessel digestion operations shall comply with the EA Notification requirements set forth in Title 14, California Code of Regulations, Division 7, Chapter 5.0, Article 3.0 (commencing with section 18100), except as otherwise provided by this Chapter.

## □ Section 17896.9. Dairy In-Vessel Digestion Operations.

(a) All dairy in-vessel digestion operations shall comply with the EA Notification requirements set forth in Title 14, California Code of Regulations, Division 7, Chapter 5.0, Article 3.0 (commencing with section 18100).

## □ Section 17896.10. Distribution Center In-Vessel Digestion Operations.

(a) All distribution center in-vessel digestion operations shall comply with the EA Notification requirements set forth in Title 14, California Code of Regulations, Division 7, Chapter 5.0, Article 3.0 (commencing with section 18100).

## Section 17896.11. Limited Volume In-Vessel Digestion Operations.

(a) All limited volume in-vessel digestion operations shall comply with the Enforcement Agency Notification requirements set forth in Title 14, California Code of Regulations, Division 7, Chapter 5.0, Article 3.0 (commencing with section 18100).





MAR 1 3 2018

ORANGE COUNTY CLERK-RECORDER DEPARTMENT

#B DEPUTY BY:



POSTEL

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#### OC WASTE & RECYCLING 300 NORTH FLOWER STREET, SUITE 400 SANTA ANA, CALIFORNIA 92703

#### NOTICE OF EXEMPTION

oject Location – Specific	
002 Bee Canyon Access Road	
oject Location – City	Project Location – County
ine	Orange County
	Project: As a result of recent California legislation, SB 1383, that
	livert or recycle at least 50 percent of all organic wastes currently
	t 75 percent by 2025, OC Waste & Recycling (OCWR) will
	sting project at the FRB Landfill. The purpose of the demonstration
	(1) gain a better understanding of composting design, permitting,
	ne the costs associated with composting design, permitting,
	ing and observing on a microscale, determine the potential
	a full-scale composting operation; (4) learn how to make high
anty inished compost that will meet a	I U.S. Composting Council testing requirements and (5) analyze No significant impacts to the environment will occur.
blic Agency Approving Project:	Date of Decision
Waste & Recycling	March 9, 2018
blic or Private Applicant:	March 0, 2010
	treet, Suite 400, Santa Ana, CA 92703
empt Status: (Check One)	E .
	tor
Ministerial [CEQA Guidelines	10 ÷
ction 15268]	Statutorial [Type and Section Number]:
Declared Emergency [Section	R
269 (a) & (b)]	
Emergency Project (Section	March 9, 2018 treet, Suite 400, Santa Ana, CA 92703 Statutorial [Type and Section Number]:  XCategorical Exemption (Classes 1, 4, 6, 7 & 8)
269 (a) & (b)]	X Categorical Exemption (Classes 1 4 6 7 8 80
Gen. Rule [Sec. 15061(b)(3)]	7
QA pursuant to Section 15301 of the C eration of existing public structures or rond that existing at the time of the lea egorically Exempt (Class 4) from th delines, since Class 4 (Minor Alteration of Categorically Exempt (Class 6) from lection), since Class 6 consists of basic iluation activities which do not result in proposed action is also Categorically 07 (Actions by Regulatory Agencies for en by a public agency for the protection empt (Class 8) from the provisions of Class 1000 contents of the protection empt (Class 8) from the provisions of Class 1000 contents of the protection empt (Class 8) from the provisions of Class 1000 contents of the protection empt (Class 8) from the provisions of Class 1000 contents of the protection content of the protection contents of the protection content	posed action is Categorically Exempt (Class 1) from the provisions of EQA Guidelines, since Class 1 (Existing Facilities) includes the minor topographic features, involving negligible or no expansion of use ad agency's determination. In addition, the proposed action is also e provisions of CEQA pursuant to Section 15304 of the CEQA ns to Land) involves minor alterations to land. The proposed action is n the provisions of CEQA pursuant to Section 15306 (Information c data collection, research, experimental management and resource a serious or major disturbance to an environmental resource. Also, Exempt (Class 7) from the provisions of CEQA pursuant to Section or Protection of Natural Resources), since Class 7 consists of actions on of natural resources. The proposed action is also Categorically EQA pursuant to Section 15308 (Actions by Regulatory Agencies for is 8 consists of actions taken by a public agency for the protection of to the environment will occur.
ntact Person:	Phone Number:
John Amau	(714) 834-4107
	remment Code Section 6103

Date: March 13, 2018

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# State of California - Department of Fish and Wildlife 2018 ENVIRONMENTAL FILING FEE CASH RECEIPT

DFW 753.5a (Rev. 01/01/18) Previously DFG 753.5a



RECEIPT NUMBER:

30-2018 0229

STATE CLEARINGHOUSE NUMBER (If applicable)

SEE INSTRUCTIONS ON REVERSE. TYPE OR PRINT CLEARLY.				
LEAD AGENCY	LEADAGENCY EMAIL		DATE 03/13/2018	
OC WASTE & RECYCLING				
COUNTY/STATE AGENCY OF FILING			DOCUMENT NUMBER	
Orange			201885000243	
PROJECT TITLE				
PROPOSED DEMONSTRATION PILOT COMPOSTING PRO-	JECT AT THE FRB LANDFILL	OC WAS	FE & RECYCLING LOG #673)	
PROJECT APPLICANT NAME	PROJECT APPLICANT EMAIL		PHONE NUMBER	
OC WASTE & RECYCLING			(714) 834-4107	
PROJECT APPLICANT ADDRESS	CITY	STATE	ZIP CODE	
300 N. FLOWER STREET, SUITE 400	SANTA ANA	CA	92703	
PROJECT APPLICANT (Check appropriate box)	- L <sub>ever</sub>			
✓ Local Public Agency School District	Other Special District	State A	gency Private Entity	
<ul> <li>Environmental Impact Report (EIR)</li> <li>Mitigated/Negative Declaration (MND)(ND)</li> <li>Certified Regulatory Program document (CRP)</li> <li>Exempt from fee         <ul> <li>Notice of Exemption (attach)</li> <li>CDFW No Effect Determination (attach)</li> <li>Fee previously paid (attach previously issued cash receipt cop</li> </ul> </li> </ul>	\$2,2 \$1.0	\$8.00 \$ 80.75 \$ 77.00 \$	0.00 0.00 0.00	
Water Right Application or Petition Fee (State Water Resource)	es Control Board only) \$85	50.00 \$	0.00	
County documentary handling fee			0.00	
C Other		\$		
PAYMENT METHOD:				
Cash Credit Check Other	TOTAL RECE	IVED \$	0.00	
1. Il isk	ICY OF FILING PRINTED NAME		ERK	

COPY - CDFWIASB





www.oclandfills.com Telephone: (714) 834-4000 Fax: (714) 834-4183

то:	File
FROM:	Tom Koutroulis, Director OC Waste & Recycling
SUBJECT:	Proposed Demonstration Pilot Composting Project at the Frank R. Landfill (OCWR Log #673)

Waste & Recycling

## I. Nature of Project

As a result of recent California legislation, SB 1383, that requires all jurisdictions in California to divert or recycle at least 50 percent of all organic wastes currently going to solid waste landfills, and at least 75 percent by 2025, OC Waste & Recycling (OCWR) will implement a demonstration pilot composting project at the Frank R. Bowerman (FRB) Landfill. The purpose of the demonstration pilot composting project is for OCWR to (1) gain a better understanding of composting design, permitting, engineering and operations; (2) determine the costs associated with composting design, permitting, engineering and operations; (3) by studying and observing on a microscale, determine the potential environmental issues that could occur at a full-scale composting operation; (4) learn how to make high quality finished compost that will meet all U.S. Composting Council testing requirements and (5) analyze the potential uses for finished compost.

The proposed demonstration pilot composting project ("the project") will occur on an approximate 1-acre area at the FRB Landfill, within the eastern limits of Phase VI, as shown on the attached exhibit. This area of the landfill is not currently being used for active landfill disposal. Material feedstocks to be composted include source separated residential curbside green waste, commercial green waste, processed green waste and wood waste. The project will not have more than 60 tons (i.e., 92 cubic yards) of material on-site at any one time or process more than 250 tons of material per year. While it is anticipated that the wood waste will be relatively homogeneous and clean, some of the green waste that will be received will come to the landfill directly from residential curbside pickup, so there will likely be small amounts of residual solid waste mixed in with the green waste. Through visual inspection, green waste that contains only very small amounts of residual solid waste will be used for the project. Any green waste received at the composting operation that is noticeably contaminated with residual solid waste will be disposed at the active area of the landfill. Any highly odorous loads will also be removed from the composting area and disposed in the landfill. OCWR will divert feedstock materials to the project that are already being delivered to the landfill, so there will be no additional truck trips.

As part of the project, OCWR will try two different types of composting operations. The first type will be open windrow composting. OCWR will create one windrow that will be no more than 92 cubic yards of material on-site with the approximate dimensions of 82 feet long, 10 feet wide and 6 feet high, in compliance with Orange County Fire Authority (OCFA) requirements. The feedstock will be placed on top of a crushed asphalt surface for all weather access and

surrounded by an earthen berm to prevent storm water run-on and run-off. The windrow will be periodically turned with a loader, skid steer, or similar equipment, up to three times per week, to quicken the decomposition of the feedstock into compost and to maintain temperatures greater than 131 degrees Fahrenheit during the pathogen reduction process. The heavy equipment is already in use at the landfill on a routine basis and will be made available for the project. The initial compost processing phase will last at least 22 days or until the pile has completed the pathogen reduction process. Afterwards, the compost material will be cured for a period that will last between 30-60 days for further stabilization of the compost product. After the curing process is complete, OCWR may screen the finished compost to remove oversized uncomposted material and residual solid waste. Altogether, the composting process may take up to 100 days. The active composting process will require the use of water to hydrate the windrow keeping the feedstock moist without overwatering, to limit the potential for leachate generation. Water will be provided by a water truck that is already in use at the landfill operation and will be made available for the project. The existing potable water line, the reclaimed water line and the 100,000 gallon water storage tank that currently serve the landfill operation have sufficient capacity to support the project. The water truck will fill up at the J-stand that is located closest to the project. Water will not be used during the curing process. Approximately 250 gallons of water per day may be used to hydrate the compost piles. All water used for composting will be contained within the asphalt pad and perimeter earthen berms to minimize runoff. In addition, water will be used as needed to provide for dust control in accordance with SCAQMD Rule 403 as part of normal landfill operations.

As an alternative to open air windrow composting, or in combination with open air windrow composting, OCWR may also make compost by creating an aerated static pile, using the same feedstock materials described above for open air windrow composting. Feedstock materials will be placed on top of plastic piping, which will be placed on a crushed asphalt surface. The plastic piping will then be removed, creating openings at the bottom of the pile that will create a chimney effect, thereby allowing oxygen to pass through the pile. The dimensions of the aerated static pile (i.e., height, width and length) will be no greater than the dimensions of the open air windrow compost pile described above. The same heavy equipment would be used for the aerated static pile, although less turning of the pile would be required when compared to open air windrow composting. It is also anticipated that the timeframes for the active and curing composting phases for aerated static pile composting will be similar to open air windrow composting. In addition, it is anticipated that the aerated static pile composting will use a similar amount of water when compared to open air windrow composting. Whether OCWR chooses to implement open air windrow composting only, or in combination with aerated static pile composting, at no time will the project have more than 60 tons (i.e., 92 cubic yards) of material on-site at any one time or process more than 250 tons of material per year.

Testing will be performed as prescribed by the U.S. Composting Council once the compost has been cured. It is OCWR's intent to make high quality compost that will receive certification from the U.S. Composting Council and will also contain less than 0.5 percent contamination, as required by the California Department of Resources Recovery and Recycling (CalRecycle).

Both composting methods will require that OCWR place ground asphalt on the surface of the landfill where the composting will occur, to maintain the integrity of the landfill interim soil

cover and to preclude any leaching from the project into the underlying waste mass. Surface water runoff will be diverted away from the composting area to the existing landfill surface water collection system. Surface water runoff that comes into contact with compost materials will be tested.

Methane generated by the underlying landfill area will not result in surface fires at the composting area through the effective maintenance and monitoring of the landfill gas collection system.

As part of the project, OCWR will use finished compost at the landfill for beneficial reuse at the landfill such as landscaping, geosynthetic tarp framing and for erosion control. In addition, the compost may be sold or given away to potential end users as part of OCWR's market research, business development and public outreach.

Implementation of the demonstration pilot composting operation at the FRB Landfill is exempt from permitting due to the limited tonnage of feedstock materials that the project will receive. However, the following agencies will be notified of the project and operations will be performed in a manner that is consistent with the respective regulations and best management practices of these agencies. These agencies include the following: CalRecycle; Orange County Health Care Agency, Environmental Health Division acting as the Local Enforcement Agency (LEA) for CalRecycle; the California Regional Water Quality Control Board, San Diego Region (Regional Board); South Coast Air Quality Management District (SCAQMD); and OCFA. Implementation of the project will require registration with SCAQMD in accordance with Rule 1133.

With the implementation of the project design features and operational controls discussed above, and by complying with all of the conditions and requirements included in the agency approvals, the proposed demonstration pilot composting project will not result in any significant impacts to the environment.

### II. Authority for Administrative Action

The Director of OC Waste & Recycling, pursuant to the authority granted in OCCO Sections 4-3-104, 4-3-126, and 4-3-137, takes the following administrative actions.

## III. CEQA Approval

The proposed action is Categorically Exempt (Class 1) from the provisions of CEQA pursuant to Section 15301 of the CEQA Guidelines, since Class 1 (Existing Facilities) consists of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographic features, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination. In addition, the proposed action is also Categorically Exempt (Class 4) from the provisions of CEQA pursuant to Section 15304 of the CEQA Guidelines, since Class 4 (Minor Alterations to Land) involves minor alterations to land. The proposed action is also Categorically Exempt (Class 6) from the provisions of CEQA pursuant to Section 15304 of the CEQA pursuant to Section 15306 (Information Collection), since Class 6 consists of basic data collection, research, experimental management

and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource. Also, the proposed action is also Categorically Exempt (Class 7) from the provisions of CEQA pursuant to Section 15307 (Actions by Regulatory Agencies for Protection of Natural Resources), since Class 7 consists of actions taken by a public agency for the protection of natural resources. The proposed action is also Categorically Exempt (Class 8) from the provisions of CEQA pursuant to Section 15308 (Actions by Regulatory Agencies for Protection of the Environment), since Class 8 consists of actions taken by a public agency for the protection of the environment. The proposed composting demonstration pilot project at the FRB Landfill is consistent with a Class 1, Class 4, Class 6, Class 7 and Class 8 Categorical Exemption determination.

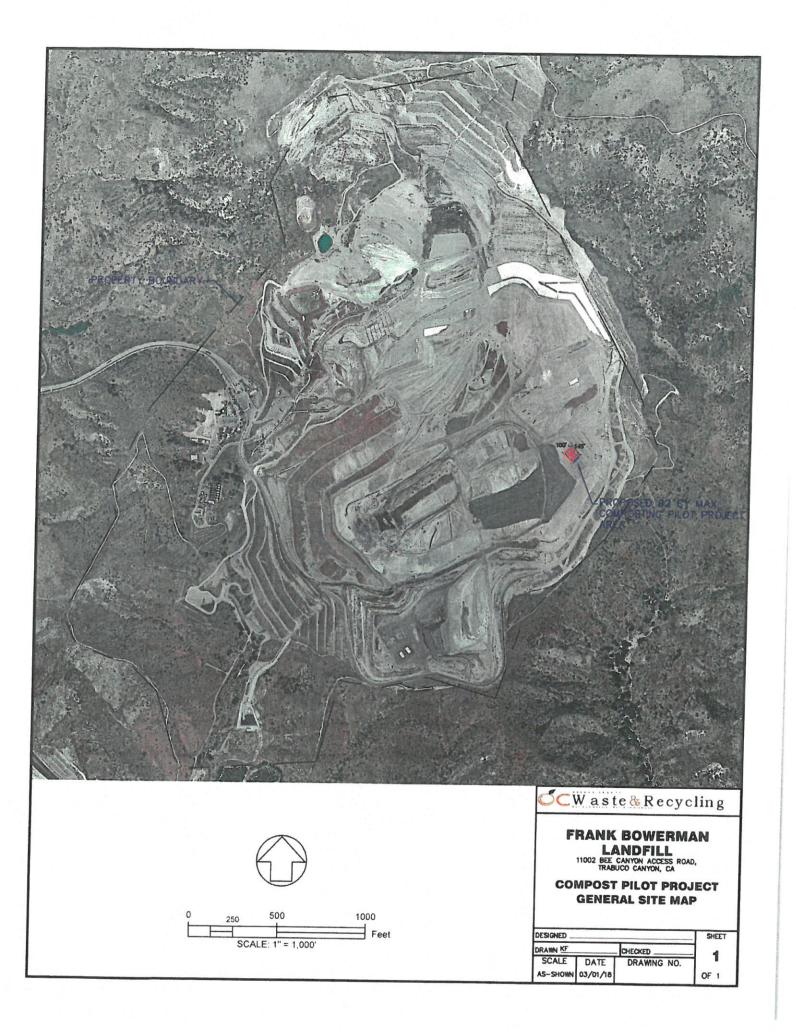
#### IV. Certification

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I hereby certify that the subject project is approved.

Date: 3/9/2018

Director, OC Waste & Recycling



# **ENFORCEMENT AGENCY NOTIFICATION**

Enforcement Agency: Count	y Of Orange He	alth Ca	re Agen	су	0	fficial L	lse Only	
					SWIS Number:			
County: Orange	Date Received:							
		I. GEN	ERAL I	NFORMATION				
Operation Name: Valencia G								
Address: 1942 N. Valencia Av	venue		City:	Brea	State:	CA	Zip:	92823
Phone: 714-834-4056		Fax:						
	& Recycling		and the last					
Address: 300 N. Flower Stree	t, Suite 400	-	City:	Santa Ana	State:	CA	Zip:	92703
Phone: 714-834-4056		Fax:	714-8	34-4001				
	& Recycling							
Address: 300 N. Flower Stree	t, Suite 400		City:	Santa Ana	State:	CA	Zip:	92703
Phone: 714-834-4056		Fax:		34-4001				
A 41 1 1 1 1 1 1 1 1 1 1 1 1 1			and the second second	INFORMATION		a de gran		Soft Street
Authorizing Eligibility (State Section details	of 14 CCR Division 7,	Chapter 3	3, 3.1 or 3.	2): See back for more	17857.1			
Type(s) of Waste/Material Hand	ed: Green W	aste/Pro	ocessed	Green Material				
Volume of Waste/Material Hand	ed: 92 CY							
Peak Loading:	🛛 Cubic Ya	ards <u>or</u>	Tons	Annual Loading:		🛛 Cu	oic Yards o	Tons
Days and Hours of Operation:	MonSat. 6 a.n	n 4 p.	m.		Operation Acre	age:	1	
Brief Description of the Operation	n: Pilot opera	tion cor	npostin	g no more than 9	2 cy at one time c	f proce	essed gre	een material
III. DOCUMENT	ATION OF LOC	AL NO	TIFICA	TION (check one a	and submit with EA	Notifica	ition)	
Proof of Compliance with t	ne California En	vironme	ental Qu	ality Act (CEQA)				Sales Maria
Correspondence from the l obtain local land use appro	ocal planning de val.	epartme	ent that	compliance with	CEQA is not requi	ired for	the ope	ration to
Written notice to the local p	lanning departr	nent of	the ope	rator's intent to co	ommence operation	ons.		
	IV. OW	NER/OF	PERATO	OR CERTIFICAT	ION			
I hereby certify under penalt	of perjury that the	informati	on provid	ed is true and accura	ite to the best of my k	nowledg	e and beli	ef.
Signature of Land Owner:	Thom	$\mathcal{O}$	ant	a. A	Dat	e:	3/12	/2018 12018
Signature of Operator: Completion of this form is not required by	Thomas	NK	ontr	intis	Date	e: 3	1/12/	12018

A separate Notification is required by regulation, nowever, it will provide

Please cite only one of the following Title 14 regulations when filling in the "authorizing eligibility" box of Notification Form CalRecycle 169:

#### Section 17362.2. Contaminated Soil Transfer/Processing Operations.

All contaminated soil transfer/processing operations, except as otherwise provided in this Article, shall comply with the Enforcement Agency Notification requirements set forth in Title 14, Division 7, Chapter 5.0, Article 3.0 of the California Code of Regulations (commencing at section 18103). These operations shall be inspected by the enforcement agency at least once every three (3) months unless the enforcement agency approves, with Department concurrence, a reduced inspection frequency. The enforcement agency may approve a reduced inspection frequency only if it will not pose an additional risk to public health and safety or the environment but in no case shall the frequency be less than once per calendar year.

# Section 17377.2. Nonhazardous Ash Transfer/Processing Operations.

(a) All operators of nonhazardous ash transfer/processing operations, except as otherwise provided in this Article, shall comply with the Enforcement Agency Notification requirements set forth in the California Code of Regulations, Title 14, Division 7, Chapter 5.0, Article 3.0 (commencing with section 18103).

#### Section 17383.3. Small Volume C&D Wood Debris Chipping and Grinding Operations (less than 200 tons per day)

(a)(1) A small volume C&D wood debris chipping and grinding operations shall comply with the EA Notification requirements set forth in CCR, Title 14, Division 7, Chapter 5.0, Article 3.0, commencing with section 18100 et seq. and shall be inspected by the EA at least once every three (3) months unless the EA approves, with Department concurrence, a reduced inspection frequency. The EA may approved a reduced inspection frequency only if it will not pose an additional risk to public health and safety or the environment but in no case shall the frequency be less than once per calendar year.

## Section 17383.4. Small Volume Construction and Demolition/Inert Debris Processing Operations. (less than 25 tons per day)

All small volume CDI debris processing operations shall comply with the EA Notification requirements set forth in CCR, Title 14, Division 7, Chapter 5.0, Article 3.0, commencing at section 18100. These operations shall be inspected by the EA at least once every three (3) months to verify compliance with minimum standards unless the EA approves, with Department concurrence, a reduced inspection frequency. The EA may approved a reduced inspection frequency only if it will not pose an additional risk to public health and safety or the environment but in no case shall the frequency be less than once per calendar year. To the greatest extent possible, all inspections shall be unannounced and shall be conducted at irregular intervals. The operator shall specify the operation's boundary area in the operating record.

#### Section 17383.7. Inert Debris Type A Processing Operations. (less than 1500 tons per day)

All inert debris Type A processing operations subject to this Article shall comply with the EA Notification requirements set forth in CCR, Title 14, Division 7, Chapter 5.0, Article 3.0 and commencing with section 18100.

#### □ Section 17383.9. Emergency Construction and Demolition/Inert Debris Processing Operations.

(a) All emergency CDI debris processing operations shall comply with the EA Notification requirements set forth in CCR, Title 14, Division 7, Chapter 5.0, Article 3.0, section 18100 et. seq. Such operations may occur at locations which are not permitted solid waste facilities. These operations shall be inspected by the EA as necessary to verify compliance with minimum standards, but in no case less than monthly. To the greatest extent possible, all inspections shall be unannounced and shall be conducted at irregular intervals. The operator shall specify the operation's boundary area in the operating record.

#### □ Section 17388.3. Inert Debris Engineered Fill Operations.

Inert debris engineered fill operations shall submit EA Notifications, as set forth in CCR, Title 14, section 18100 et seq. and shall comply with all applicable RWQCB waste discharge requirements.

#### □ Section 17403.2. Sealed Container Transfer Operations.

All sealed container transfer operations subject to this Article shall comply with the Enforcement Agency Notification requirements set forth in Title 14, Division 7, Chapter 5.0, Article 3.0 of California Code of Regulations (commencing with section 18100). These operations shall be inspected by the EA at least once every three (3) months to verify compliance with minimum standards unless the EA approves, with Department concurrence, a reduced inspection frequency. The EA may approved a reduced inspection frequency only if it will not pose an additional risk to public health and safety or the environment but in no case shall the frequency be less than once per calendar year. The operator shall specify the operation's boundary area in the operating record.

#### Section 17403.3. Limited Volume Transfer Operations.

All limited volume transfer operations subject to this Article shall comply with the Enforcement Agency Notification requirements set forth in Title 14, Division 7, Chapter 5.0, Article 3.0 of the California Code of Regulations (commencing with section 18100). These operations shall be inspected by the EA as necessary to verify compliance with minimum standards. Inspections shall be conducted quarterly, unless the EA determines a lesser frequency is necessary, but in no case shall the frequency be less than annual. The operator shall specify the operation's boundary area in the operating record.

#### □ Section 17403.3.1. Glass Container Processing Operations.

(a) All Glass Container Processing Operations subject to this Article shall comply with the Enforcement Agency Notification requirements set forth in Title 14, Division 7, Chapter 5, Article 3.0, of the California Code of Regulations (commencing with section 18100).

#### □ Section 17403.5. Emergency Transfer/Processing Operations.

(a) All emergency transfer/processing operations shall comply with the Enforcement Agency Notification requirements set forth in Title 14, Division 7, Chapter 5.0, Article 3.0 of the California Code of Regulations (commencing with section 18100). These operations shall be inspected by the EA as necessary to verify compliance with minimum standards, but in no case shall the frequency be less than monthly. The operator shall specify the operation's boundary area in the operating record.

#### □ Section 17856. Agricultural Material Composting Operations.

(a) Agricultural material composting operations shall comply with the Enforcement Agency Notification requirements set forth in Title 14, California Code of Regulations, Division 7, Chapter 5.0, Article 3.0 (commencing with Section 18100) and the applicable requirements specified in Chapter 3.1.

### Section 17857.1. Green Material Composting Operations.

(a) A green material composting operation may have no more than 12,500 cubic yards of feedstock, chipped and ground material, amendments, additives, and stabilized compost on-site at any one time. Green material composting operations shall comply with the EA Notification requirements set forth in Title 14, Division 7, Chapter 5.0, Article 3.0 (commencing with Section 18100) and the requirements of this Chapter.

### □ Section 17859.1. Biosolids Composting at POTWs.

(a) Except as provided in section 17855(a)(5)(B), the composting of biosolids on-site at a Publicly Owned Treatment Works (POTW) shall comply with the EA Notification requirements set forth in Title 14, California Code of Regulations, Division 7, Chapter 5.0, Article 3.0 (commencing with Section 18100).

#### □ Section17862. Research Composting Operations.

(a) An operator conducting research composting operations shall not have more than 5,000 cubic-yards of feedstock, chipped and ground material, amendments, additives, active compost, and stabilized compost on-site at any one time, and shall comply with the EA Notification requirements set forth in Title 14, California Code of Regulations, Division 7, Chapter 5.0, Article 3.0 (commencing with Section 18100), except as otherwise provided by this Chapter.

## □ Section 17862.1. Chipping and Grinding Operations.

(a) A chipping and grinding operation that receives up to 200 tons per day of material that may be handled by a green material composting operation shall comply with the EA Notification requirements set forth in Title 14, Division 7, Chapter 5.0, Article 3.0 (commencing with Section 18100), and the applicable requirements specified in this Chapter.

## □ Section 17896.8. Research In-Vessel Digestion Operations.

(a) An operator conducting research in-vessel digestion operations shall comply with the EA Notification requirements set forth in Title 14, California Code of Regulations, Division 7, Chapter 5.0, Article 3.0 (commencing with section 18100), except as otherwise provided by this Chapter.

# Section 17896.9. Dairy In-Vessel Digestion Operations.

(a) All dairy in-vessel digestion operations shall comply with the EA Notification requirements set forth in Title 14, California Code of Regulations, Division 7, Chapter 5.0, Article 3.0 (commencing with section 18100).

# Section 17896.10. Distribution Center In-Vessel Digestion Operations.

(a) All distribution center in-vessel digestion operations shall comply with the EA Notification requirements set forth in Title 14, California Code of Regulations, Division 7, Chapter 5.0, Article 3.0 (commencing with section 18100).

## □ Section 17896.11. Limited Volume In-Vessel Digestion Operations.

(a) All limited volume in-vessel digestion operations shall comply with the Enforcement Agency Notification requirements set forth in Title 14, California Code of Regulations, Division 7, Chapter 5.0, Article 3.0 (commencing with section 18100).



BY:

Date: March 13, 2018

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MAR 1 3 2018

ORANGE COUNTY CLERK-RECORDER DEPARTMENT

HE DEPUTY

Recorded in Official Records, Orange County Hugh Nguyen, Clerk-Recorder NO FE

POSTEC

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#### OC WASTE & RECYCLING 300 NORTH FLOWER STREET, SUITE 400 SANTA ANA, CALIFORNIA 92703

#### NOTICE OF EXEMPTION

(OC Waste & Recycling Log #672)         Project Location - Specific         1942 N. Valencia Avenue         Project Location - City         Description of Nature and Purpose of Project: As a result of recent California legislation. SB 1383, that          requires all jurisdictions in California to divert or recycle at least 50 percent of all organic wastes currently       going to solid waste landfills, and at least 75 percent by 2025, OC Waste & Recycling (OCWR) will          Implement a demonstration pilot composting project at the Olinda Alpha Landfill. The purpose of the       demonstration pilot composting project is for OCWR to (1) gain a bester understanding of composting       design, permitting, engineering and operations; (2) bettermine the costs associated with composting       design, permitting, engineering and operations; (2) bettoring and observing on a microscale, determine the       potential environmental issues that could occur at a full-scale composting on curcic testing       minished compost. No significant impacts to the environment will ocgur.          Public Agency Approving Project:       Date of Decision          OC Waste & Recycling, 300 N. Flower Street. Suite 400, Santa Ana, CA 92703       Weither Public or Private Applicant:          OC Waste & Recycling, 100 N. Flower Street. Suite 400, Santa Ana, CA 92703       Weither Public on Status:          Correct & Execycling, 300 N. Flower Street. Suite 400, Santa Ana, CA 92703       Weither Public Status:          Correct & Recycling, 300 N. Flower Street. Suite 400, Santa Ana, CA 92703       Weither Public Status:		n Pilot Composting Project at the Olinda Alpha Lan	dfill
1942 N. Valencia Avenue         Project Location – City       Project Location – County         Description of Nature and Purpose of Project: As a result of recent California legislation. SB 1383, that       requires all jurisdictions in California to divert or recycle at least 50 percent of all organic wastes currently       going to solid waste landfills, and at least 75 percent by 2025, OC Waste & Recycling (OCWR) will       implement a demonstration pilot composting project at the Olinda Alpha Landfill. The purpose of the       demonstration pilot composting project is for OCWR to (1) gain a better understanding of composting       design, permitting, engineering and operations; (2) determine the costs associated with composting design       demonstration pilot composting that will meet all U.S. Composting council testing requirements and (5)       analyze the potential uses for finished compost. No significant impacts to the environment will organ.          Public Agency Approving Project:       Date of Decision       March 9, 2018          OCW waste & Recycling, 300 N. Flower Street. Suite 400, Santa Ana, CA 92703        Exempt Status: (Check One)			
Project Location - City       Project Location - County         Brea       Orange County         Description of Nature and Purpose of Project: As a result of recent California legislation, SB 1383, that requires all jurisdictions in California to divert or recycle at least 50 percent of all organic wastes currently going to solid waste landfills, and at least 75 percent by 2025. OC Waste & Recycling (OCWN) will implement a demonstration pilot composting project at the Olinda Alpha Landfill. The purpose of the demonstration pilot composting project at the Olinda Alpha Landfill. The purpose of the demonstration pilot composting project at for OCWR to (1) gain a better understanding of composting degisin, permitting, engineering and operations; (3) by studying and observing on a microscale, determine the potential environmental issues that could occur at a full-scale composting peration; (4) lear how to make high quality finished compost for degisin. Nes microscale, determine the potential environment issues that could occur at a full-scale composting operation; (4) lear how to make high quality finished compost for degisine. No significant impacts to the environment will ocgur.         Public Agency Approving Project:       Date of Decision         OC Waste & Recycling       March 9, 2018         Public oper project [Section       March 9, 2018         Its269 (a) & (b)]	Project Location – Specific		
Brea         Orange County           Description of Nature and Purpose of Project: As a result of recent California legislation, SB 1383, that requires all jurisdictions in California to divert or recycle at least 50 percent of all organic wastes currently going to solid waste landfills, and at least 75 percent by 2025, OC Waste & Recycling (OCWR) will implement a demonstration pilot composting project is for OCWR to (1) gain a better understanding of composting design, permitting, engineering and operations; (2) determine the costs associated with composting design permitting, engineering and operations; (3) by studying and observing on a microscale, determine the potential environmental issues that could occur at a full-scale composting project. (4) learn how to make high quality finished compost that will meet all U.S. Composting Council testing requirements and (5) analyze the potential uses for finished compost. No significant impacts to the environment will ocgur.           Public Agency Approving Project:         Date of Decision           OC Waste & Recycling, 300 N. Flower Street, Suite 400, Santa Ana, CA		Derived and the second se	
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# State of California - Department of Fish and Wildlife 2018 ENVIRONMENTAL FILING FEE CASH RECEIPT

DFW 753.5a (Rev. 01/01/18) Previously DFG 753.5a



RECEIPT NUMBER:

30-2018 0228

STATE CLEARINGHOUSE NUMBER (If applicable)

SEE INSTRUCTIONS ON REVERSE. TYPE OR PRINT CLEARLY.				10.175	
	LEADAGENCY EMAIL			DATE	10
OC WASTE & RECYCLING	and the second			03/13/20	
COUNTY/STATE AGENCY OF FILING				DOCUMENT	
Orange				2018850	00242
PROJECT TITLE					
PROPOSED DEMONSTRATION PILOT COMPOSTING PROJECT A	AT THE OLINDA ALPHA LAN	DFILL	(OC WA		A REAL PROPERTY AND ADDRESS OF THE OWNER WATCHING THE OWNER WATCHING.
PROJECT APPLICANT NAME	PROJECT APPLICANT EMAIL			PHONE NUMBER (714) 834-4107	
OC WASTE & RECYCLING				1	4-4107
PROJECT APPLICANT ADDRESS	CITY	STA	TE	ZIP CODE	
300 N. FLOWER STREET, SUITE 400	SANTA ANA	CA	4	92703	2
PROJECT APPLICANT (Check appropriate box)					
Local Public Agency     School District	Other Special District		State A	gency	Private Entity
CHECK APPLICABLE FEES:					0.00
Environmental Impact Report (EIR)		,168.00			
Mitigated/Negative Declaration (MND)(ND)		,280.7			
Certified Regulatory Program document (CRP)	\$1	.077.00	0 \$		0.00
Exempt from fee					
<ul> <li>Notice of Exemption (attach)</li> </ul>					
CDFW No Effect Determination (altach)					
Fee previously paid (attach previously issued cash receipt copy	)				
	Control Roard only	\$850.0	0 C		0.00
Water Right Application or Petition Fee (State Water Resources	s Control Board only/	0000.0	c o		0.00
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www.oclandfills.com Telephone: (714) 834-4000 Fax: (714) 834-4183

TO:

# FROM: Tom Koutroulis, Director OC Waste & Recycling

File

## SUBJECT: Proposed Demonstration Pilot Composting Project at the Olinda Alpha Landfill (OCWR Log #672)

aste&Recycling

## I. Nature of Project

As a result of recent California legislation, SB 1383, that requires all jurisdictions in California to divert or recycle at least 50 percent of all organic wastes currently going to solid waste landfills, and at least 75 percent by 2025, OC Waste & Recycling (OCWR) will implement a demonstration pilot composting project at the Olinda Alpha Landfill. The purpose of the demonstration pilot composting project is for OCWR to (1) gain a better understanding of composting design, permitting, engineering and operations; (2) determine the costs associated with composting design, permitting, engineering and operations; (3) by studying and observing on a microscale, determine the potential environmental issues that could occur at a full-scale composting operation; (4) learn how to make high quality finished compost that will meet all U.S. Composting Council testing requirements and (5) analyze the potential uses for finished compost.

The proposed demonstration pilot composting project ("the project") will occur on an approximate 1-acre area at the Olinda Alpha Landfill, in the equipment maintenance area, as shown on the attached exhibit. This area of the landfill is not currently being used for active landfill disposal. Material feedstocks to be composted include source separated residential curbside green waste, commercial green waste, processed green waste and wood waste. The project will not have more than 60 tons (i.e., 92 cubic yards) of material on-site at any one time or process more than 250 tons of material per year. While it is anticipated that the wood waste will be relatively homogeneous and clean, some of the green waste that will be received will come to the landfill directly from residential curbside pickup, so there will likely be small amounts of residual solid waste mixed in with the green waste. Through visual inspection, green waste that contains only very small amounts of residual solid waste will be used for the project. Any green waste received at the composting operation that is noticeably contaminated with residual solid waste will be disposed at the active area of the landfill. Any highly odorous loads will also be removed from the composting area and disposed in the landfill. OCWR will divert feedstock materials to the project that are already being delivered to the landfill, so there will be no additional truck trips.

As part of the project, OCWR will try two different types of composting operations. The first type will be open windrow composting. OCWR will create one windrow that will be no more than 92 cubic yards of material on-site with the approximate dimensions of 82 feet long, 10 feet wide and 6 feet high, in compliance with Orange County Fire Authority (OCFA) requirements. The feedstock will be placed on top of a crushed asphalt surface for all weather access and

surrounded by an earthen berm to prevent storm water run-on and run-off. The windrow will be periodically turned with a loader, skid steer, or similar equipment, up to three times per week, to quicken the decomposition of the feedstock into compost and to maintain temperatures greater than 131 degrees Fahrenheit during the pathogen reduction process. The heavy equipment is already in use at the landfill on a routine basis and will be made available for the project. The initial compost processing phase will last at least 22 days or until the pile has completed the pathogen reduction process. Afterwards, the compost material will be cured for a period that will last between 30-60 days for further stabilization of the compost product. After the curing process is complete, OCWR may screen the finished compost to remove oversized uncomposted material and residual solid waste. Altogether, the composting process may take up to 100 days. The active composting process will require the use of water to hydrate the windrow keeping the feedstock moist without overwatering, to limit the potential for leachate generation. Water will be provided by a water truck that is already in use at the landfill operation and will be made available for the project. The existing potable water line and the 100,000 gallon water storage tank that currently serve the landfill operation have sufficient capacity to support the project. The water truck will fill up at the J-stand that is located closest to the project. Water will not be used during the curing process. Approximately 250 gallons of water per day may be used to hydrate the compost piles. All water used for composting will be contained within the asphalt pad and perimeter earthen berms to minimize runoff. In addition, water will be used as needed to provide for dust control in accordance with SCAQMD Rule 403 as part of normal landfill operations.

1.

As an alternative to open air windrow composting, or in combination with open air windrow composting, OCWR may also make compost by creating an aerated static pile, using the same feedstock materials described above for open air windrow composting. Feedstock materials will be placed on top of plastic piping, which will be placed on a crushed asphalt surface. The plastic piping will then be removed, creating openings at the bottom of the pile that will create a chimney effect, thereby allowing oxygen to pass through the pile. The dimensions of the aerated static pile (i.e., height, width and length) will be no greater than the dimensions of the open air windrow compost pile described above. The same heavy equipment would be used for the aerated static pile, although less turning of the pile would be required when compared to open air windrow composting. It is also anticipated that the timeframes for the active and curing composting phases for aerated static pile composting will be similar to open air windrow composting. In addition, it is anticipated that the aerated static pile composting will use a similar amount of water when compared to open air windrow composting. Whether OCWR chooses to implement open air windrow composting only, or in combination with aerated static pile composting, at no time will the project have more than 60 tons (i.e., 92 cubic yards) of material on-site at any one time or process more than 250 tons of material per year.

Testing will be performed as prescribed by the U.S. Composting Council once the compost has been cured. It is OCWR's intent to make high quality compost that will receive certification from the U.S. Composting Council and will also contain less than 0.5 percent contamination, as required by the California Department of Resources Recovery and Recycling (CalRecycle).

Both composting methods will require that OCWR place ground asphalt on the surface of the landfill where the composting will occur, to maintain the integrity of the landfill interim soil

cover and to preclude any leaching from the project into the underlying waste mass. Surface water runoff will be diverted away from the composting area to the existing landfill surface water collection system. Surface water runoff that comes into contact with compost materials will be tested.

Methane generated by the underlying landfill area will not result in surface fires at the composting area through the effective maintenance and monitoring of the landfill gas collection system.

As part of the project, OCWR will use finished compost at the landfill for beneficial reuse at the landfill such as landscaping, geosynthetic tarp framing and for erosion control. In addition, the compost may be sold or given away to potential end users as part of OCWR's market research, business development and public outreach.

Implementation of the demonstration pilot composting operation at the Olinda Alpha Landfill is exempt from permitting due to the limited tonnage of feedstock materials that the project will receive. However, the following agencies will be notified of the project and operations will be performed in a manner that is consistent with the respective regulations and best management practices of these agencies. These agencies include the following: CalRecycle; Orange County Health Care Agency, Environmental Health Division acting as the Local Enforcement Agency (LEA) for CalRecycle; the California Regional Water Quality Control Board, San Diego Region (Regional Board); South Coast Air Quality Management District (SCAQMD); and OCFA. Implementation of the project will require registration with SCAQMD in accordance with Rule 1133.

With the implementation of the project design features and operational controls discussed above, and by complying with all of the conditions and requirements included in the agency approvals, the proposed demonstration pilot composting project will not result in any significant impacts to the environment.

## II. Authority for Administrative Action

The Director of OC Waste & Recycling, pursuant to the authority granted in OCCO Sections 4-3-104, 4-3-126, and 4-3-137, takes the following administrative actions.

### III. CEQA Approval

The proposed action is Categorically Exempt (Class 1) from the provisions of CEQA pursuant to Section 15301 of the CEQA Guidelines, since Class 1 (Existing Facilities) consists of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographic features, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination. In addition, the proposed action is also Categorically Exempt (Class 4) from the provisions of CEQA pursuant to Section 15304 of the CEQA Guidelines, since Class 4 (Minor Alterations to Land) involves minor alterations to land. The proposed action is also Categorically Exempt (Class 6) from the provisions of CEQA pursuant to Section 15304 of the Section 15306 (Information

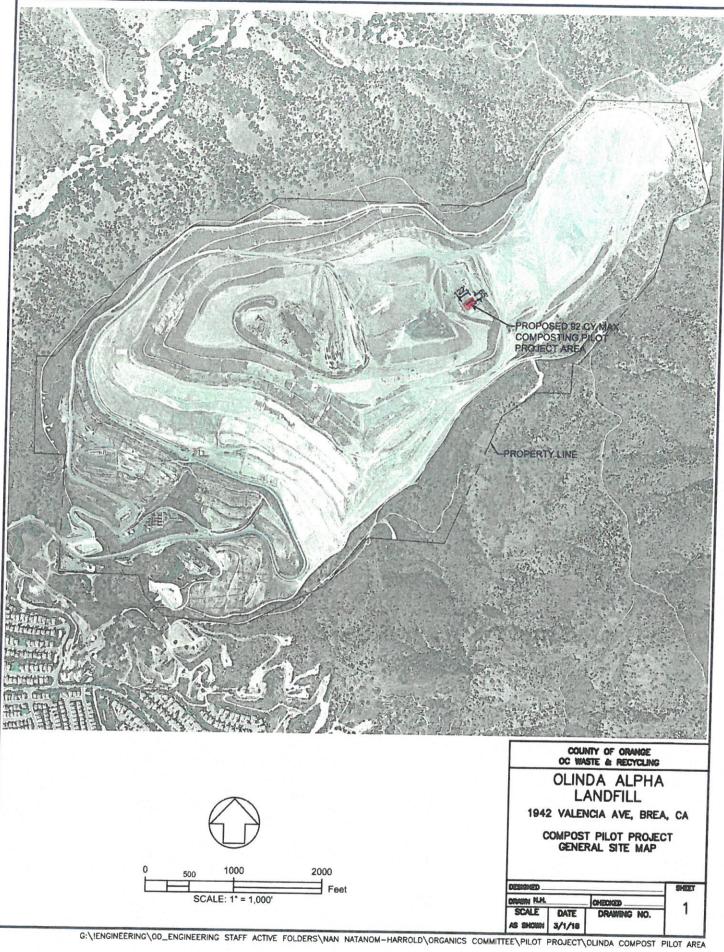
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#### IV. Certification

I hereby certify that the subject project is approved.

Date: 3/9/2018

Director, OC Waste & Recycling





Thomas D. Koutroulis, Director 300 N. Flower Street, Suite 400 Santa Ana, CA 92703

> www.oclandfills.com Telephone: (714) 834-4000 Fax: (714) 834-4183

May 15, 2018

Kathryn Cross, P.G. Solid Waste Local Enforcement Agency 1241 E. Dyer Road, Suite 120 Santa Ana, California 92705-5611

# Subject: Capistrano Greenery Odor Impact Minimization Plan (OIMP)

Dear Ms. Cross:

In accordance with the California Code of Regulations Title 14, Section 17863.4, OC Waste and Recycling is submitting the Odor Impact Minimization Plan to the Local Enforcement Agency for the operation of Capistrano Greenery composting pilot project located at the Prima Deshecha Landfill.

If you have any questions, please contact me at 714-834-4115 or by e-mail at Warisa.niizawa@ocwr.ocgov.com.

Sincerely,

Whi The

Warisa Niizawa, P.E., Senior Professional Engineer Environmental Services

Attachments

# **ODOR IMPACT MINIMIZATION PLAN**

for

# **CAPISTRANO GREENERY**

Submitted by:



300 North Flower Street, Suite 400 Santa Ana, California 92703 (714) 834-4000

> **Date:** May 15, 2018

#### **CAPISTRANO GREENERY**

#### **ODOR IMPACT MINIMIZATION PLAN**

#### Purpose

In accordance with California Code of Regulations Title 14, Section 17863.4 (effective as of April 2003), compostable material handling operations and facilities shall prepare, implement, and maintain a site-specific odor impact minimization plan. This Odor Impact Minimization Plan (OIMP) is being submitted by OC Waste & Recycling to the County of Orange, Health Care Agency/ Local Enforcement Agency (LEA) as required and shall be implemented in minimizing impact of odors to potential receptors as the need arises. The plan is intended to provide guidance to on-site personnel in the handling, storage, and removal of compostable materials at the Capistrano Greenery composting pilot project area located within Prima Deshecha Landfill (PDL). This odor impact minimization plan shall be revised to reflect any changes during the duration of the pilot project, and a copy shall be provided to the LEA, within 30 days of those changes.

## **Facility Information**

Site Name:	Capistrano Greenery
SWIS#:	(TBD)
Location:	32250 Avenida La Pata, San Juan Capistrano, CA92675
Operation:	Pilot and Research Project for the Composting of Processed Green Material (PGM)
Process:	Open windrow pile
Capacity:	Not to exceed 92 cubic yards of PGM feedstock at any given time
Project Duration:	1 year from pilot project start-up
Project Area Size:	100 feet by 145 feet

#### I. Odor Monitoring Protocol

### A. Proximity of Odor Receptors

The project area is located within the Prima Deshecha Landfill and odors coming from the composting operation may have an impact to both on-site and off-site receptors. Below is a list of potential receptors:

1. Potential On-site Receptors

- a. Landfill site personnel
- b. Disposing public
- c. On-site contractors
- d. Transfer truck and material delivery drivers
- e. Public utility personnel
- 2. Potential Off-site Receptors (and corresponding distance away from composting project area, See Figure 1)
  - a. Residential community southeast of the project area approximately 2,510 linear feet (0.48 mile) from the nearest resident.
  - b. Residential community northeast of the project area approximately 3,285 linear feet (0.62 mile) from the nearest resident.

#### **B.** Method for Assessing Odor Impacts

Each operating day, designated on-site personnel shall assess and evaluate perimeter of project area and landfill boundary for objectionable odors.

If objectionable odors are detected, the following assessment methods shall be implemented:

- 1. Designated site personnel shall investigate likely source of odors.
- 2. Designated site personnel shall determine wind patterns and direction at time odor was detected.
- 3. Based on the intensity of odor nuisance, designated site personnel shall determine if odor had travelled off-site by surveying the perimeter of the landfill and vicinity of potential off-site receptors.
- 4. If source of odors is found to be the composting project area, effectiveness of current on-site management practices shall be assessed and alternative or additional measures shall be implemented to reduce odors. (See Table 1 for Possible Causes of Odor and Odor Minimization Management Techniques)
- 5. The LEA shall be notified if it has been determined that possible odor impacts have occurred beyond the landfill property boundary.
- 6. If possible odor impacts have been determined to occur beyond the property boundary, the incident shall be recorded in the landfill daily operational log book (red book) which shall include all actions and activities taken to resolve or minimize odor nuisance for future reference and operational considerations.

## **II.** Meteorological Conditions

Prevailing winds at PDL generally come from the southwest or south during the daytime hours with wind speeds predominantly ranging from 4 mph to 13 mph and shift coming

from the north during the night hours with wind speeds predominantly ranging from 4 mph to 10 mph. (See Exhibit 1 for wind roses and wind speed graphs obtained from the nearest weather station to the project area.)

# III. Complaint Response Protocol

As complaints are received from impacted receptors or regulators, the following response protocol shall be implemented.

- 1. All odor complaints received from potential receptors and/or regulators shall be recorded in the landfill operational log book (red book) and complaint log (See Exhibit 2 for Complaint Log).
- 2. Designated personnel shall contact complainant and/or regulator to obtain details of the complaint such as name, time, location, and nature or characteristics of odors.
- 3. Designated personnel shall notify appropriate regulators of the complaint.
- 4. Designated site personnel shall investigate and implement methods in assessing odor impacts as described in Section I. Odor Monitoring Protocol, Item B. of this plan.
- 5. Designated site personnel shall immediately implement additional or appropriate measures to minimize odors.
- 6. Once OIMP has been implemented and odor has been minimized, designated personnel shall follow-up with complainant.
- 7. All complaint records for the quarter shall be included and incorporated into the Quarterly Self-Monitoring report submitted to the LEA as required.

## IV. Operating Procedures and Design Considerations to Minimize Odors

Operational procedures and design considerations have been taken into account to minimize odor impacts as a result of the composting pilot project operation.

- 1. Feedstock Characteristics
  - a. Feedstock material shall be supplied by regulated green waste processing facilities already permitted to supply PDL with PGM for use as alternative daily cover (ADC).
  - b. Feedstock is limited to PGM which has already undergone stages of sorting, screening, and grinding prior to its delivery to the PDL pilot project area and is expected to emit very minimal odors as it undergoes the composting and curing process.
  - c. Feedstock material shall have a particle size between 1/8 to 6 inches.
  - d. Feedstock material shall have a moisture content not to exceed 50%.
  - e. Contamination level shall not exceed 10% and shall not contain any other organics mixed into the feedstock.
  - f. Odorous loads shall not be accepted.

- g. Feedstock material shall be inspected visually for particle size, moisture content, and contamination level prior to its acceptance.
- 2. Design Considerations
  - a. Feedstock is limited to 92 cubic yards at any given time and just enough to build one pile of windrow measuring 10 feet wide by 90 feet long by 6 feet high.
  - b. Pilot project area is located and situated within the landfill and farther away from potential off-site receptors
  - c. Pilot project area is built on a 2-feet deep compacted asphalt grinding foundation which stabilizes the project area for abrupt settlement while work within the composting area is being performed.
  - d. Pilot project area has been minimized to accommodate one windrow pile and back up area for ease of operation and maintenance limiting potential impacts to other landfill operation activities.
  - e. Perimeter of project area is surrounded by an earthen berm which will divert and prevent rain water run-on and run-off from infiltrating or escaping project area.
  - f. PDL is equipped with an odor control misting system located at the east ridge of PDL and southeast of the project area. PDL is also equipped with a mobile bat winged misting system ready to be deployed to the project area and readily operable as the need arises to minimize odors.
  - g. Composting pad is graded to divert water away from windrow pile and collected at a low point within the perimeter berm of the pad.
  - h. Windrow pile is static and shall be aerated manually by using heavy equipment to build and turn pile which increases feedstock material Free Air space (FAS) and reduce bulk density.
- 3. Operational Considerations
  - a. Windrow pile shall be monitored frequently for temperature and moisture content to prevent potential fires as a result of anaerobic condition or feedstock material dust nuisance during windy conditions.
  - b. Windrow pile temperatures shall not exceed 160 °F.
  - c. Windrow pile moisture content shall be maintained between 40% 60%.
  - d. No pile turning shall be allowed during windy conditions or wind speeds in excess of 15 mph.
  - e. During rain events, no watering or turning of windrow piles shall occur.
  - f. Project area shall be inspected and monitored frequently for ponding.
  - g. Spraying of water on the pile shall be regulated and controlled in such a manner that water is distributed evenly onto the pile preventing excessive watering of the pile and the composting area.

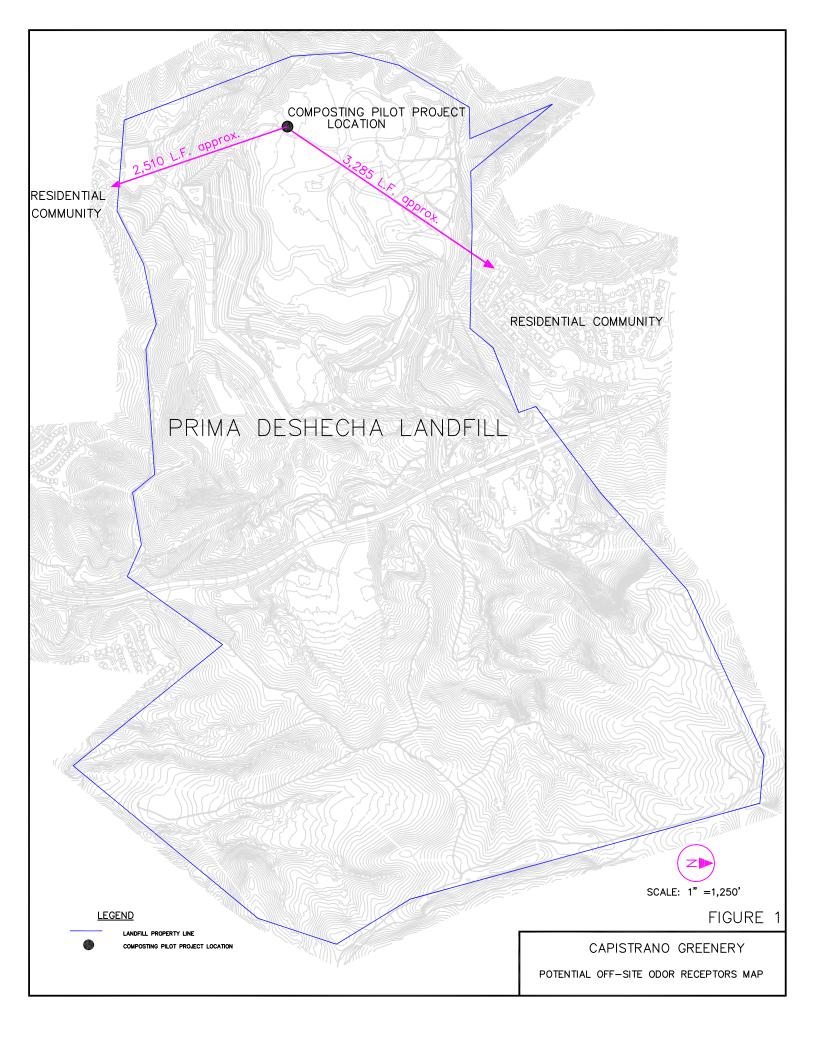
- h. Use of collected contact water for watering windrow pile is not allowed. Collected contact water or rain water shall be collected and hauled off-site for proper disposal.
- i. Two dedicated pieces of heavy equipment for watering and turning piles are available for this pilot project. PDL has a fleet of heavy equipment and is able to immediately replace these dedicated pieces of heavy equipment as the need arises.
- j. Best operational and management practices shall be implemented to maintain good housekeeping of the project area.
- k. Once the curing stage is complete, compost material shall be used on-site immediately.
- 4. Personnel Training and Safety Considerations
  - a. Project lead personnel have undergone and completed the 40-Hour United States Composting Council (USCC) Composting Operations training course.
  - b. PDL site personnel working on the composting pilot project have undergone the 40-Hour Hazardous Waste Operations and Emergency (Hazwoper) training certification program and are also required to attend the 8-hour refresher course annually.
  - c. Orange County Fire Authority (OCFA) has issued the Capistrano Greenery, general conditions which address operational, composting area, fire prevention, emergency response, safety protocols and requirements which will be adhered to in compliance of this requirements.

# TABLE 1

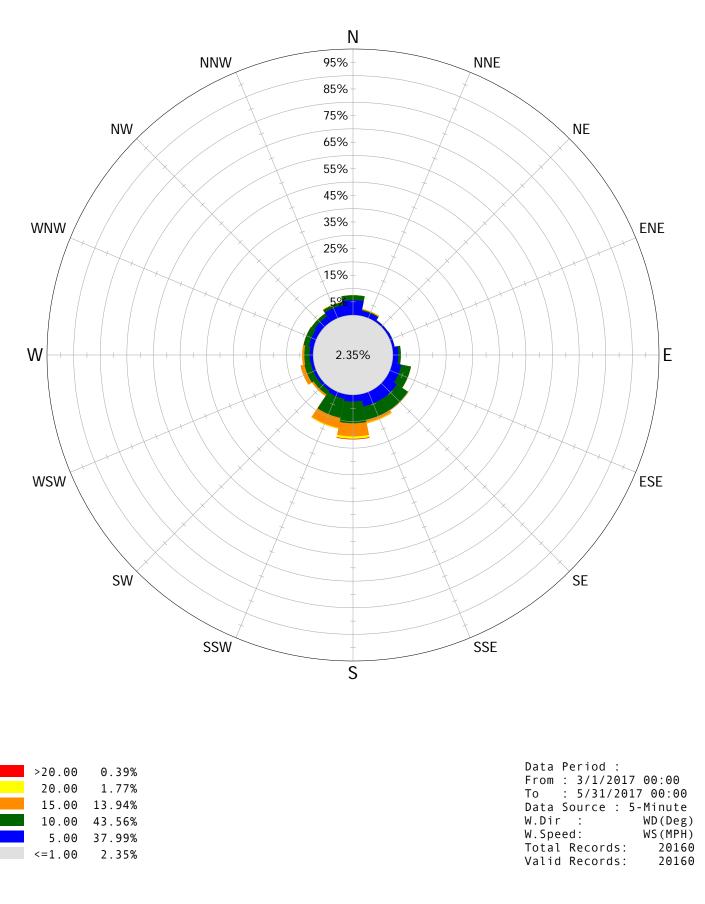
# Possible Causes of Odors and Odor Minimization Management Techniques

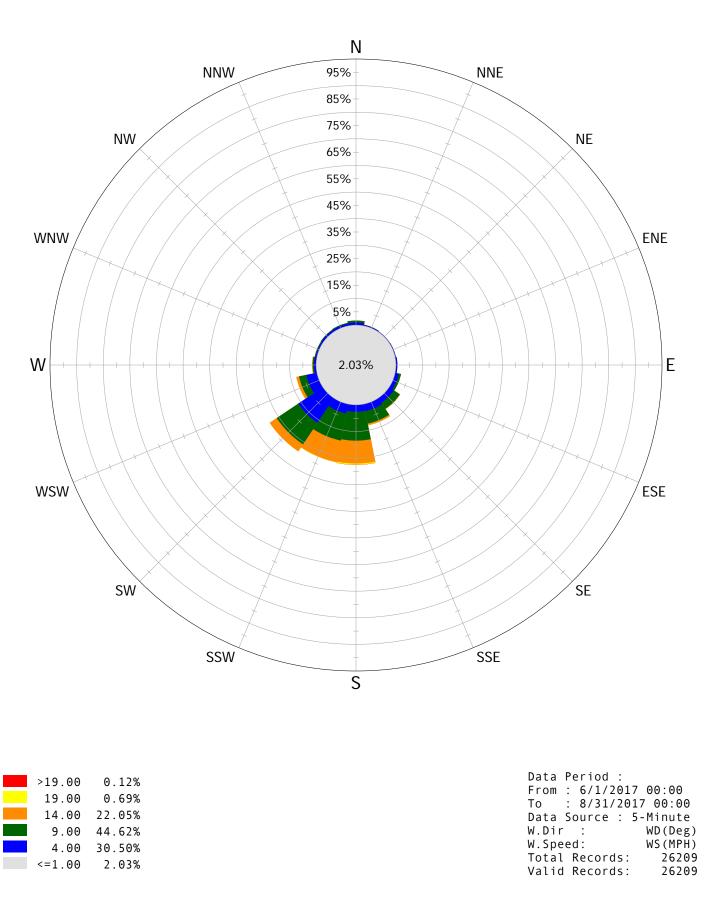
Possible Causes of Odors	Odor Minimization Management Techniques
Odorous feedstock material upon arrival	<ol> <li>Reject and turn back feedstock material loads to hauler/generator facility</li> </ol>
	<ol> <li>Initial moisture content of feedstock material loads shall not exceed 50% prior to its acceptance. If feedstock material exceeds 50% moisture content, load shall be rejected and turned back to hauler/generator facility</li> </ol>
	<ol> <li>Reject and turn back feedstock material loads with contamination level exceeding 10% and/or mixed with other organics</li> </ol>
Excessive watering of compost pile in excess of 60 percent moisture content due to rain events causing ammonia like odors	<ol> <li>Once area is dry enough to work on, increase turning pile frequency to drain excess moisture and reduce moisture content between 40 - 60%</li> </ol>
	<ol> <li>Mix in additional feedstock material thoroughly while turning pile to absorb excessive moisture, provided that total volume of the pile does not exceed 92 c.y.</li> </ol>
Standing water or ponding underneath or adjacent compost pile causing saturated feedstock material to rapidly decompose and emit odors	<ol> <li>Maintain composting pad grade to flow away from pile to a low point established to hold and contain contact water for collection and proper disposal</li> </ol>
	<ol> <li>Maintain and fill in low spots within project area to prevent ponding or standing water</li> </ol>
	<ol> <li>Practice good housekeeping by containing loose feedstock material within the pile</li> </ol>
Compost pile emitting Sulfur like odors due to high temperatures exceeding 160 °F (anaerobic condition) and/or moisture content is below 40%	<ol> <li>Check pile temperatures in excess of 160 °F and moisture content below 40%. If any monitoring or sampling point is in excess of 160 °F and/or moisture content is below 40%, turn and water entire pile thoroughly to obtain temperatures between 131 °F - 160 °F and moisture content between 40 – 60%</li> </ol>

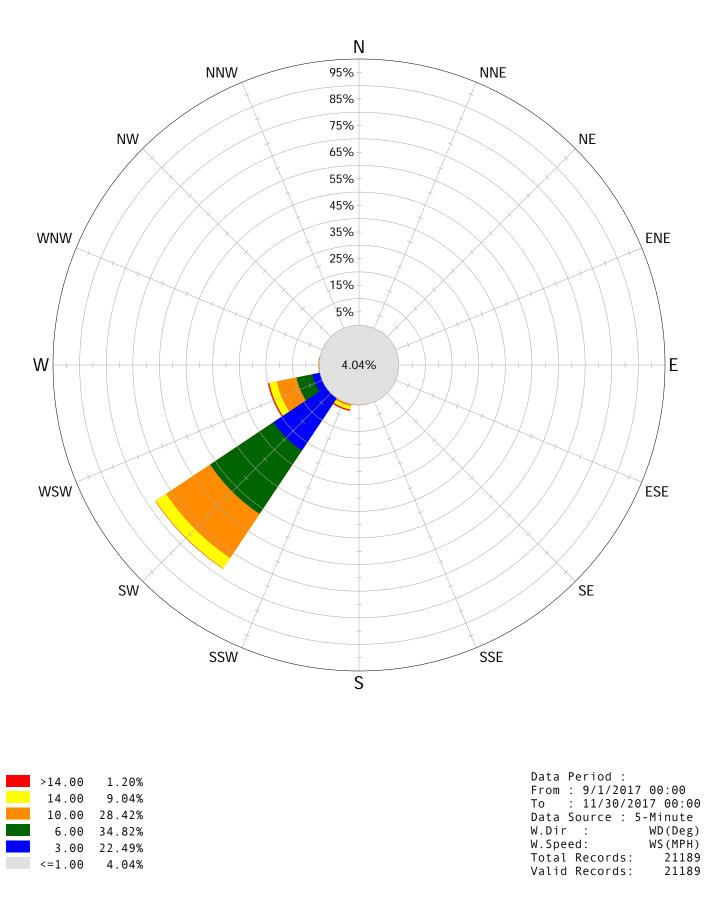
FIGURE 1

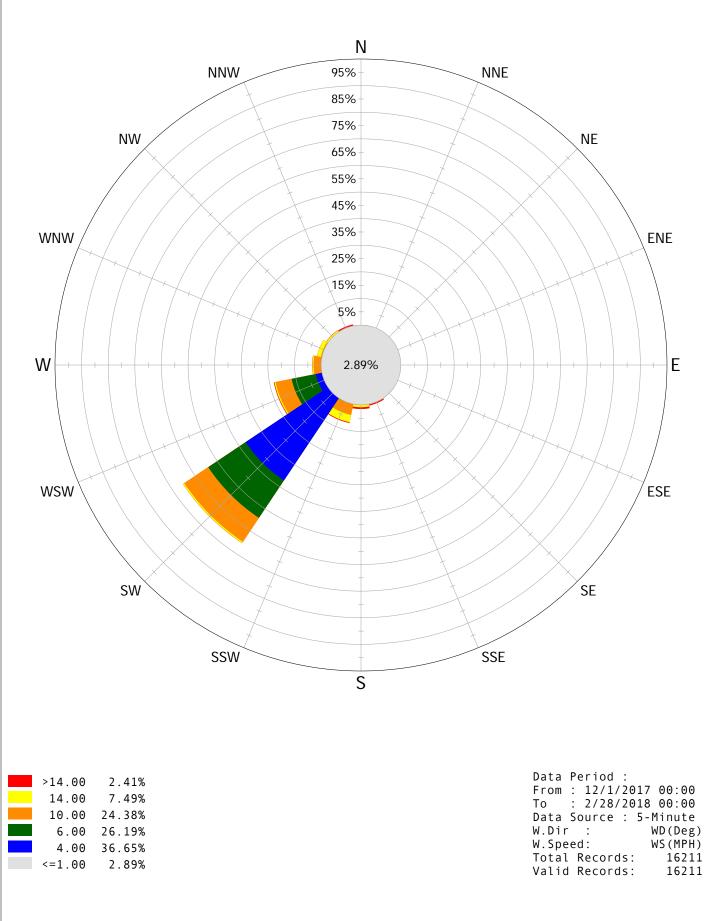


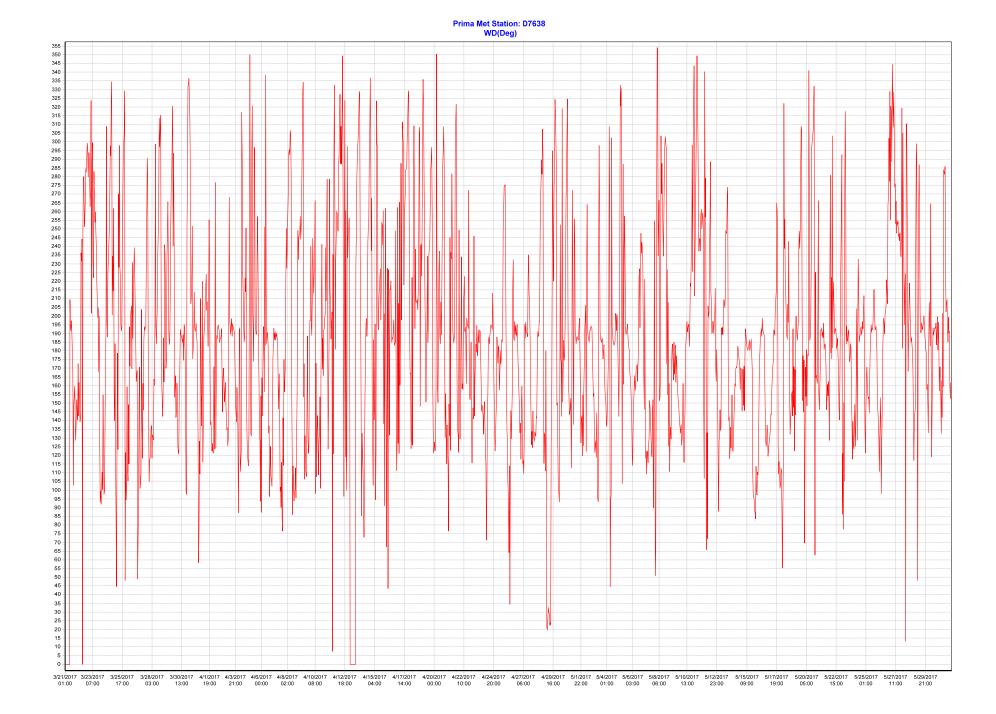
**EXHIBIT 1** 

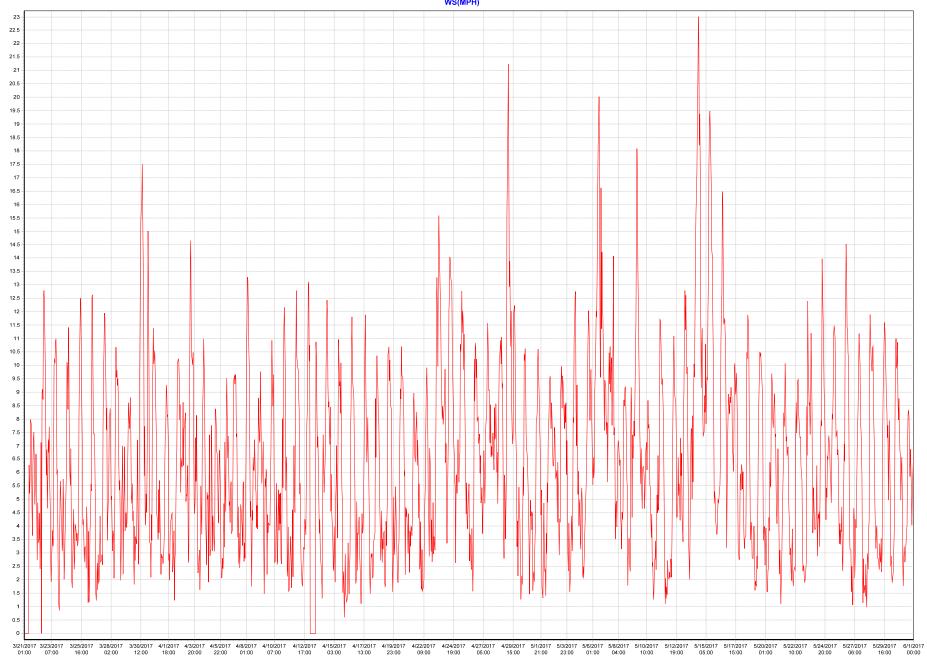












#### Prima Met Station: D7638 WS(MPH)

**EXHIBIT 2** 

# PRIMA DESHECHA LANDFILL COMPLAINT LOG 2018

#### Updated: XXXXXX by XXXXXXX ODOR INSPECTIONS LOG

ODOR INSPECTIONS LOG								
No.	Date and Time Complaint Received	Date and Time of Incident	Complaint Type (i.e., Odors, Noise, View)	Complainant Name and Contact Information	OC W&R Complaint Recipient	Description of Complaint Landfill Operational Conditions Weather Conditions Working Area	PIO Follow-Up and Closure	
1	X/X/XX 1:15 PM <u>Response</u>	X/X/XX 1:15PM	Odor	John Doe XXX Via Salamanca, SJC 949-211-0701 <u>Idoe@gmail.com</u>	Prima Notice	Description of complaint - see email/response <u>Site Daily Report - 1.2.18</u> Phase C3 480'		
2	0						ж. <sub>4</sub>	
3								
4								
5								
6								
7								
8								
9								



# **OC Fire Authority (OCFA)**



# ORANGE COUNTY FIRE AUTHORITY

P.O. Box 57115 Irvine, CA 92619-7115 - 1 Fire Authority Road Irvine, CA 92602

Lori Smith, Assistant Chief/Fire Marshal (714) 573-6000

www.ocfa.org

# COMPOSTING FACILITY CONDITIONS

		C.M. Anton	A	sets Percent inc.
Capistrano Greenery (P	rima Deshech	e Landfill)		
32250 Avenida	La Pata			
N/A		San Juan	Capistrano	1 00 CT C
CLATER/ARE Jose Gam	boa	Jan Sun Suan	Site	92676
949-728-3050		949-34	2-8168	
This document identifies the sp by the Orange County Fire Au	ecific safety c thority (OCF)	onditions being issu A) and their partner	ed to your facility iurisdictions. Any	in accordance with codes adopted

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**OPERATIONAL CONDITIONS** - Miscellaneous Combustible Storage Conditions - 105.6.29

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**STATEMENT:** I hereby acknowledge that I have read this application; that the information provided is correct and that I am the Owner or duly authorized agent of the owner. The applicant, his agent, and employees shall carry out the proposed activities in compliance with all laws, regulations, and conditions applicable thereto, whether specified or not, and in complete accordance with approved plans and specifications.

Signature: (Owner or agent)

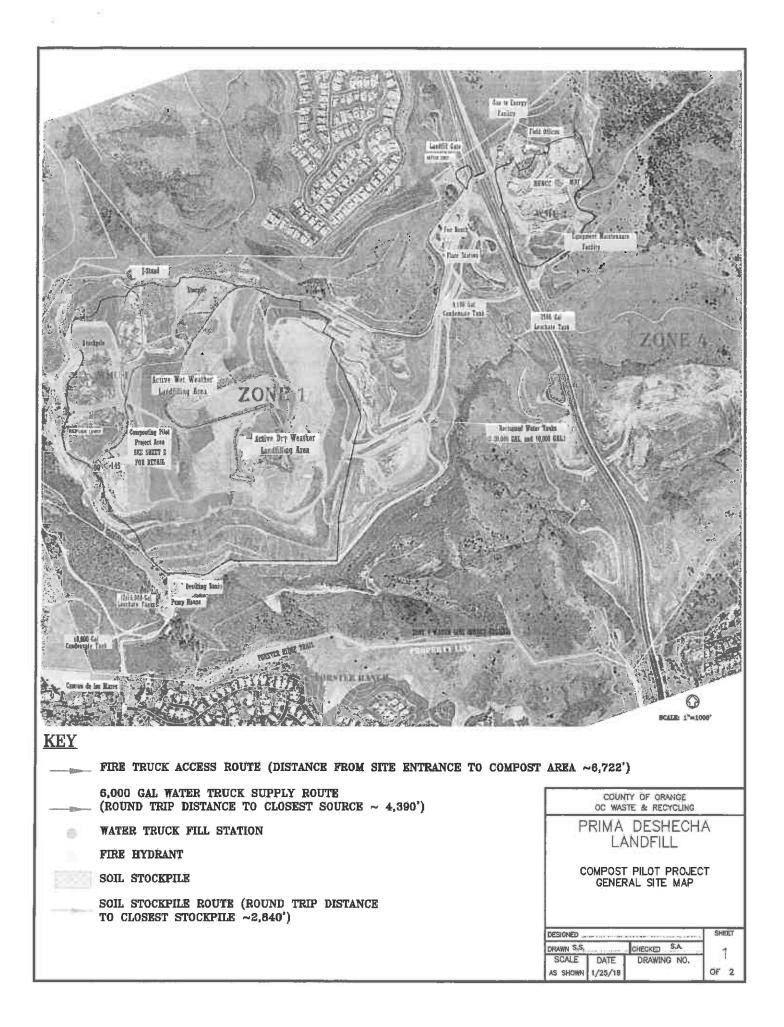
Date Signed:

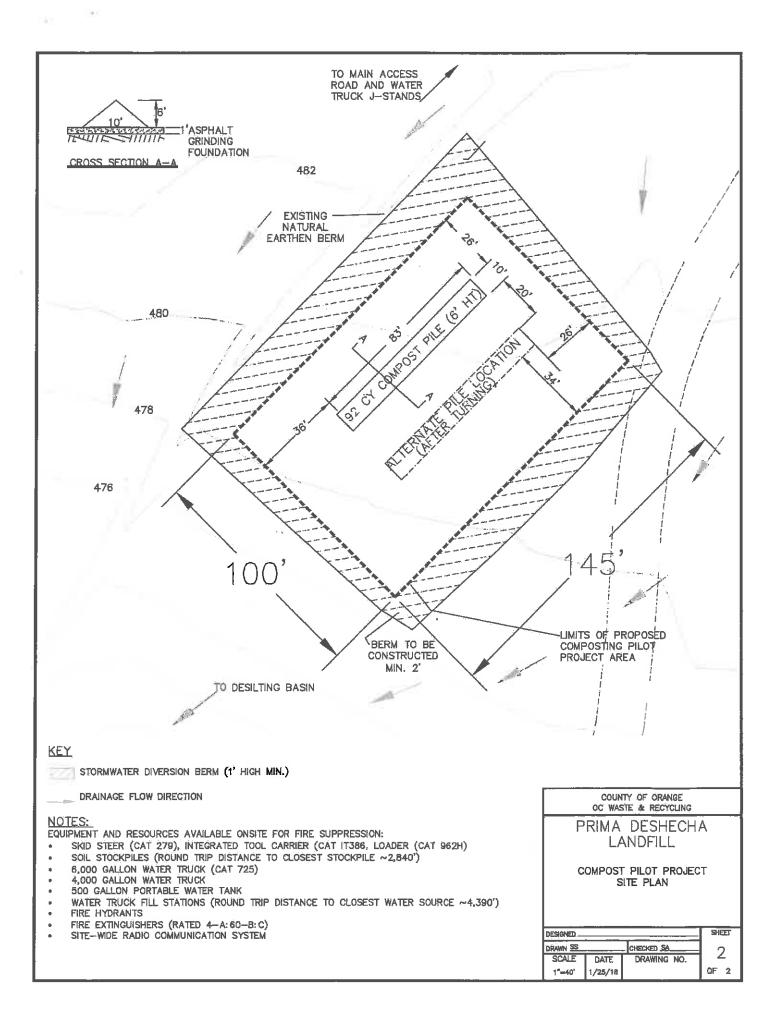
4-25-18

AN INSPECTION WAS CONDUCTED FOR COMPLIANCE WITH PROVISIONS OF THE CALIFORNIA FIRE CODE AND OTHER RELATED CODES AND ORDINANCES. Inspected By:

Bur Hull

**Date Cleared:** 4-25-18





		<ul> <li>apecultacione (NECAMATICA) &amp; SPECIFICATICA)</li> <li>A) Supplier/Generator: Healer</li> <li>B) Type: Processed Green Moterial (PGM)</li> <li>C) Meterial Specification</li> <li>Perrities affic: 1/8 - 2 Inch Perrities affic: 1/8 - 2 Inch Acceptable contembritien Inhit</li> <li>Material Feedstock Volume: NTE 92 c.y.</li> </ul>	
		<ol> <li>WEIGH IN &amp; RECORD KEEPING</li> <li>A) Feedatock houler information and facility of angle shall be reacted</li> <li>B) Feedatock shall be weighed in and shall be reacted in tons</li> <li>B) Reburn to Heuler/ Generator</li> </ol>	FEEDSTOCK WEIGH IN
be measure can be been and several periade seging acceler by Weight Bulk Density massurement shall be reacted to the field manufacting data sheet	<ul> <li>A) Comparison Screpti Voluenter- and equal volume and satracted from the equal volume and satracted from the theory as antipications.</li> <li>Four samples from one-holf width of the pile each at a different cross section</li> <li>Four samples from one-fourth width of the pile each at a different cross section</li> <li>Four samples from one-relativity width of the pile each at a different cross section</li> <li>Domposite samples shall be collected purpose of:</li> <li>Initial Fandstock Laboratory Analysis</li> <li>Initial Balk Density Mesaurement</li> </ul>	<ul> <li>N VISUAL INSPECTION         <ul> <li>A) Feedatock Motarial Specification</li> <li>B) Level of Contomination</li> <li>B) Level of Contomination</li> <li>B) Level of Contomination</li> <li>Raject Load</li> <li>Rapet Load</li> <li>Report Cor VISBLE CONTAMINANTS</li> <li>A) As practical on possible, conterninents auch as plasma, alto evelocity withowide from the fradetock</li> <li>SMPLE COLLECTION</li> <li>MARE Second Contention and the framework from the fradetock</li> </ul> </li> </ul>	Acoupt Load
		<ol> <li>Welkpecke Bull.DING</li> <li>Dasignata an identification number for withdraw pits</li> <li>Windraw shall be built accurrying to the following discussions:</li> <li>Base within: 10 ft. Marx.</li> <li>Height: 8 ft. Marx.</li> <li>Height: 8 ft. Marx.</li> <li>Height: 8 ft. Marx.</li> <li>Height: 9 ft. Marx.</li> <li>Hei</li></ol>	
<ul> <li>Bell Nebini Transmission State States</li> <li>Moleture testing factionsinfall be baken combining within the withing of the tempercure maelicity possible</li> <li>Frequency - moleture content and be measured hemadicity offer workering the pile</li> <li>Recard leaping - date and volume of water used to hydrote window wind by recorded in the field membring data askeet.</li> <li>DATA EVALUATION, WHOROW TURNING date REWATERIA Date Evaluation</li> <li>A Manifering Date Evaluation</li> <li>Temperature and moleture module to busine during the tet and 2nd week shall be evaluated for:</li> <li>Comperature Transfer for wet and dry plane</li> </ul>	<ul> <li>Frequency – temperctures shall be monitored daily until such time adjustments in the monitoring infequency are made based over estabilished data transfer tendings shall be recorded are composite readings and be recorded are composite readings per monitoring location only a reading be meanitoring location only and reading per monitoring location only and in the sub content of constantion of Chene windrow pile had been watered or hydrated, menitored.</li> <li>Once windrow pile had been watered or hydrated, menitored and monitorial and a sub- measured and manitorial windrow until molature content is constantify orthoge between 45–90%.</li> <li>Ganging Moleture – semples shall be collected 3 biols the surface shall be</li> </ul>	<ol> <li>Temperature Maxitaring</li> <li>Tamperature Maxitaring</li> <li>A 24<sup>a</sup> temperature probe shall be use in measuring pile temperatures at a dipth of 24<sup>a</sup> from the surfaces</li> <li>At a minimum. It lemperature radings shall be taken at the following opproximate locations and points:</li> <li>Manitoring Lacations - Lemperatures and of the entile length and at the middle of the entile length and at the middle of the entile length and at the middle of the antibile of each ade sign and tap of pile per monitoring location.</li> </ol>	COMPOSITING
<ul> <li>Verticity of 22 days</li> <li>Verticity Control of 22 days</li> <li>Verticity Skills Internet 48-60% for a nihilmum of 22 days</li> <li>Verticity Skills Internet 48-60% for the use to said tool diammits moturity ar comparison of a days of 5 or genetar indicates grambaratis have completed active phase schwrite active phase half continue until miturity lada of 5 or genetar its activities and suring phase has commerced at comparities grampile shall be collection of a minimum 22 days from the elact of a minimum 22 days from the later of a minimum 22 days from the later or daysin</li> </ul>	Turning over activities shall be recorded In the field monitoring data sheet If a rahe sent occurs prior to visitering the pile site is the hours of violating the pile is very 3 from the surface, pile may be turned without externing, if the ray holf of the pile is day to the 3 ' depth, capity additional without constant between to monitor monitore constant between 45-050     Which we File Rework that reachings accessed in 55 F or moleture reachings accessed in 55 F or moleture reachings accessed in 55 F or moleture some in 55 F or	<ul> <li>b) Mobilizer expertion/despetition rate brends for wet piles</li> <li>Adjust monitoring frequency for temperature &amp; numbure or needed board on established trends board on established trends</li> <li>Window Pile Turning</li> <li>Piles sholl be turned la-picce uning a minimize disturbance to the orientation and digmant of pile</li> <li>Turn own piles if nompeaks temperature readings are less than 140 F and 140-150 F (Inversion) Add F and 140-150 by Inversoritures bitween 140-150 by Inversoritures bitween 140-150 by Inversoritures bitween to the turned 5 lives of a minimum of 15-days Interval during the active phone</li> </ul>	COMPOSTING (continued)
<ul> <li>greater trans</li></ul>	<ul> <li>b) About 1/2 to 1/3 of fla original volumes</li> <li>c) Davk in order and amelie scrithy</li> <li>c) Davk in order and amelie scrithy</li> <li>c) Dripinal materials are no longar recognitable</li> <li>c) Final Composit Sample Collection</li> <li>Cines awing phase had been completed and confirmed, o find composite sample and to collected for taborctary analysis and be collected for taborctary analysis</li> <li>scrittered for taborctary analysis</li> <li>Compast Material Preparation</li> <li>Compast Material Preparation</li> <li>Compast Material Preparation</li> </ul>	<ul> <li>a) Curing Stage - completion tokes at a mahrikum of 40 days to several menths</li> <li>Moturity- meturity and completion of the caring phose shall be completion determined by using the Solvita Mcturiky (kit and Index)</li> <li>Solvita Mcturity Index of 7 or greater helicities greenewaste has completed aming phose otherwise auting phose and south on index reading of 7 ar greater is outside and south on index reading</li> <li>Completion of Curing Phose</li> <li>Completion of Curing Phose</li> <li>Completion of During Phose</li> <li>Completion of During Phose</li> </ul>	CURING



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P.O. Box 57115 Irvine, CA 92619-7115 - 1 Fire Authority Road Irvine, CA 92602

Lori Smith, Assistant Chief/Fire Marshal (714) 573-6000

www.ocfa.org

## **COMPOSTING FACILITY CONDITIONS**

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		and a start of the		
Bee Canyon Greenr	nery (Frank R.	Bowerman Landfill		
11002 Bee C	anyon Dr.			
N/A		Irvine		92676
Green Green Green			Sit Sit	e Manager
0116 1011: 949-551-7101		949-279	9-7556	
This document identifies the by the Orange County Fire considered as permission to	e specific safet Authority (OC	y conditions being issue CFA) and their partner	ed to your facility jurisdictions. An	in accordance with codes adopted

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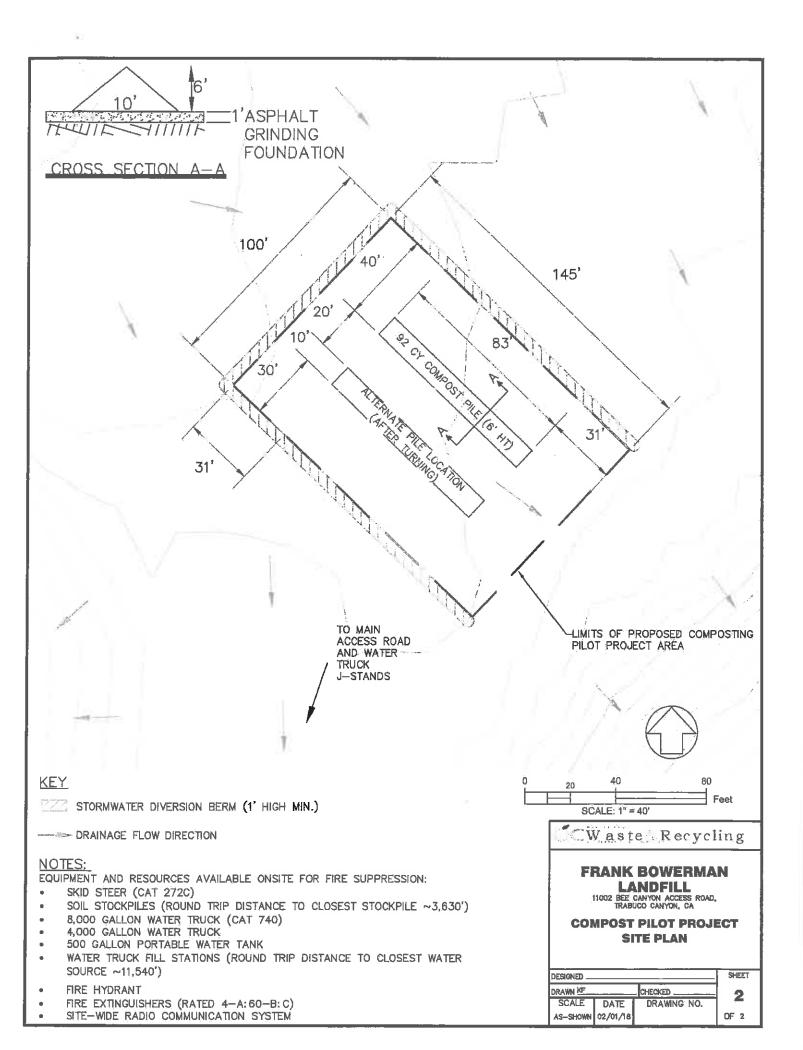
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	Signature: (Owner or agent)		
	S (Frider of "Bone)	Date Signed:	
		Date Bigned:	
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		4-25-18	
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	AN INSPECTION WAS CONDUCTED FOR COMPLIANCE WITH CALIFORNIA FIRE CODE AND OTHER DELATED CONDUCTED FOR		
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ſ	CALIFORNIA FIRE CODE AND OTHER RELATED CODES AND ORD	INANCES	
ł	Inspected By:		

En Heah

Date Cleared: 4-25-18

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	A standard and
SITE ENTRANCE	
ACTIV	Æ DRY
SCALE HOUSE WEAT	
	ARY 2018)
ERE HYDRANT CANTUCIPATED INSTALLATION	
MARCH 2018)	N.C.A.
FOWER (CURRENT AS OF JANUARY 2018)	APROPOSED 92 CY MAX
	PACELITY DETAILS)
	PROPERTY LINE
	~ 光 )
0 0	250 500 1000
KEY FIRE TRUCK ACCESS ROUTE (DISTANCE FROM SITE ENTRANCE TO	SCALE: 1* = 1,000' COMPOST AREA ~8.150')
8,000 GAL WATER TRUCK SUPPLY ROUTE	CW aste Recycling
(ROUND TRIP DISTANCE TO CLOSEST SOURCE ~ 11,540')	FRANK BOWERMAN
WATER TRUCK FILL STATION	LANDFILL 11002 BEE CANYON ACCESS ROAD, TRABUCO CANYON, CA
SOIL STOCKPILE	COMPOST PILOT PROJECT GENERAL SITE MAP
SOIL STOCKPILE ROUTE (ROUND TRIP DISTANCE	DESIGNED SHEET
TO CLOSEST STOCKPILE ~3,630')	DRAWN KF CHECKED 1 SCALE DATE DRAWING NO. AS-SHOWN 02/01/18 OF 2



201 - 201 <sup>a</sup>



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Lori Smith, Assistant Chief/Fire Marshal (714) 573-6000

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## **COMPOSTING FACILITY CONDITIONS**

				27 x 1 1 x x x x x x
Valencia Greener	y (Olinda Aloha	Landfill)	<u>-</u> <u>-</u> -	
1942 N Va	lencia Ave Brea	Ca 92823 (unincorpora	ited)	
N/A		San Juan		92676
CHERNA PERE Ran				e Manager
714-986-267	1	949-91		
This document identifies by the Orange County Fi considered as permission	the specific safe ire Authority (O	by conditions being issu CFA) and their partner	ed to your facility jurisdictions. Any	in accordance with codes adopted error or omission should not be

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- 2. The Prima Desheche Landfill shall provide training for all new employees on all requirements listed within these conditions. Quarterly training shall also be provided to all employees on all requirements listed within these conditions. A training log shall be kept and provided at the time of inspection.
- 3. Prima Desheche Landfill shall provide training for all new employees on evacuation during an emergency or fire. Quarterly training shall also be provided to all employees on evacuation during an emergency or fire. Records shall be maintained showing all training activities.
- 4. Portable fire extinguishers with a minimum rating of 4A:60B:C shall be provided for all vehicles and equipment operating on piles and processing equipment.

- 5. Fire lanes shall be maintained at a minimum of twenty feet (20) wide by fifteen feet (15) high. Fire lanes shall be all-weather surface and able to support 75,000 pounds of vehicle weight.
- 6. Provide Fire Department or other emergency responders 24-hour access to the facility.
- 7. The operator shall provide personnel 7 days a week in order to take the appropriate temperature measurements for the piles of material.
- 8. Within 24 hours, move processed material to active composting with sufficient moisture (at least 50% to start).
- 9. Conduct load checks to identify incoming loads with signs of ash, embers, smoke, or fire. If hot loads are regularly encountered, develop a "Tipping Area" or other appropriate place to isolate burning or smoldering loads.
- 10. Monitor site for signs of fires. If fire is identified, call 911. The area of potential fire will be separated out using heavy equipment and water will be applied immediately.

## **Composting Area Conditions:**

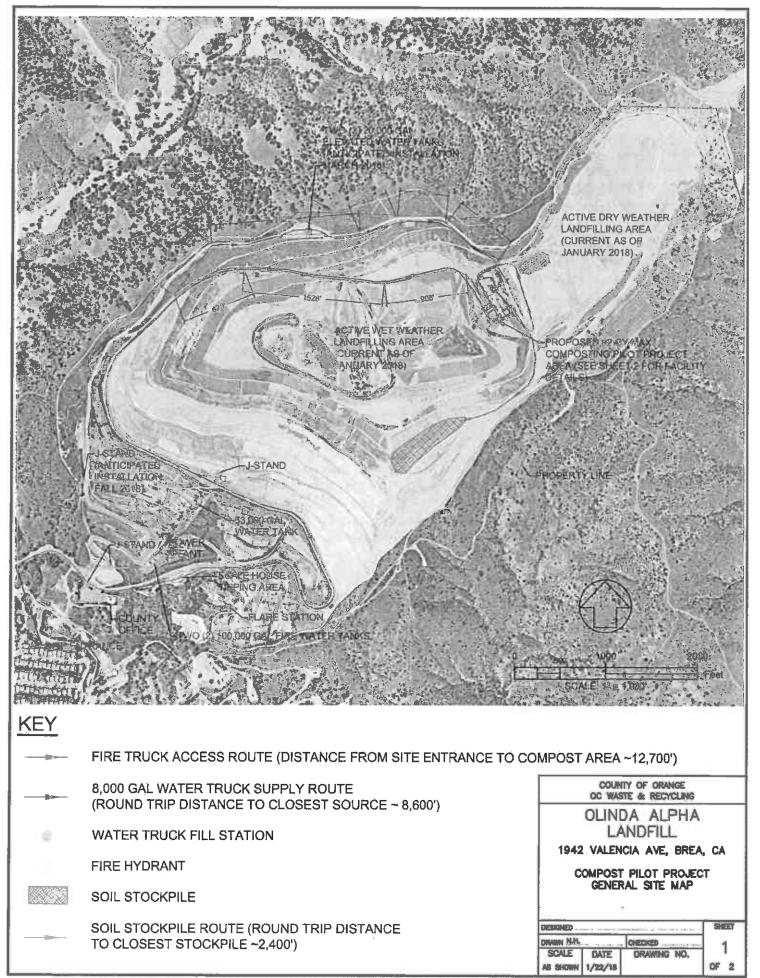
- Piles shall not exceed <u>fifteen (15) feet</u> in height, <u>fifty (50) feet</u> in width, and <u>one hundred fifty (150)</u> <u>feet</u> in length. Piles shall be separated by no less than twelve (12) feet.
  - a. Material stockpiles below 6 feet in height.
  - b. Material stockpiles less than 10 feet in width
  - c. Material stockpiles less than 100 feet in length
  - d. Material stockpiles less than 92 cubic yards in size
- 2. The Site Manager shall be responsible for probing the piles for heat on a daily basis. If the temperature is over 165 (Fahrenheit) degrees, the piles must be turned. A daily log that notes the date, time tested, and temperature of pile must be kept and available for review.
- 3. Static piles shall be monitored by an approved means to measure temperatures within the static piles. Internal pile temperatures shall be monitored and recorded weekly. Records shall be kept on file at the facility and made available for inspection. An operational plan indicating procedures and schedules for the inspection, monitoring and restricting of excessive internal temperatures in static piles shall be submitted to the Fire Code Official for review and approval.
- 4. New loads delivered to the facility shall be inspected while in the truck and tested at the facility entry prior to taking delivery. Material with temperature exceeding 165 degrees (Fahrenheit) shall not be accepted on the site.
- 5. "Red Flag" days are designated by the National Weather Service. During Red Flag days, a person shall be dedicated as a "Fire Watch." The designated party shall be on site monitoring the compost piles. The designated "Fire Watch" party shall have no other duties during this assignment. The "Fire Watch" designee shall call 911 at the first sign of smoke, smoldering, or other signs of heat/fire.

- 6. One-hundred (100) feet of defensible space shall be required from piles to flammable vegetation and SRA open space. The fire access road can be used as part of the defensible space zone.
- 7. Provide space to spread out piles in the event of a spontaneous combustion fire.
- 8. In order to limit fire spread and provide adequate access for firefighting efforts, a minimum of 28 feet (width) around the pile will be required.
- 9. A minimum of 14 feet clearance shall be maintained from the edge of the piles to the edge of the fire department access roads.
- 10. Ensure adequate fencing surrounds the entire site with a locking gate to prevent unauthorized access. Appropriate site security will be required.
- 11. Provide access to an adequate water supply to perform firefighting operations if needed.

Nothing in these conditions shall limit the OCFA's authority and discretion to require different and /or more stringent conditions with the uses approved with these conditions. Any changes in use, occupancy, or hazards of the facility will require a review of the conditions and may result in new conditions or require plan review. Any deviations from these conditions may result in the revocation of this conditions.

STATEMENT: I hereby acknowledge that I have read this application; that the information provided is correct and that I am the Owner or duly authorized agent of the owner. The applicant, his agent, and employees shall carry out the proposed activities in compliance with all laws, regulations, and conditions applicable thereto, whether specified or not, and in complete accordance with approved plans and specifications.

Signature: (Owner or agent)	Date Signed:
Man	4-25-18
AN ANSPECTION WAS CONDUCTED FOR COMPLIANCE WIT CALIFORNIA FIRE CODE AND OTHER RELATED CODES AND OF Inspected By:	H PROVISIONS OF THE RDINANCES.
mspecieu by.	Date Cleared:
12 Hanh	4-25-18



C:\IENGINEERING\DC\_ENGINEERING STAFF ACTIVE FOLDERS\NAN NATANOM-HARROLD\ORGANICS COMMITTEE\PILOT PROJECT\OLINDA COMPOST PILOT AREA

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	LIMITS OF PROPOSED COMPOSTING PILOT PROJECT AREA
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	Feet
STORMWATER DIVERSION BERM (1' HIGH MIN.)	1:480
BRAINAGE FLOW DIRECTION	COUNTY OF DRANGE
NOTES:	OLINDA ALPHA
EQUIPMENT AND RESOURCES AVAILABLE ONSITE FOR FIRE SUPPRESSION: • SKID STEER (CAT 272C)	LANDFILL
<ul> <li>SOIL STOCKPILES (ROUND TRIP DISTANCE TO CLOSEST STOCKPILE ~2,400')</li> </ul>	1942 VALENCIA AVE, BREA, CA
<ul> <li>8,000 GALLON WATER TRUCK (CAT 740)</li> <li>4,000 GALLON WATER TRUCK</li> </ul>	COMPOST PILOT PROJECT
<ul> <li>500 GALLON WATER TRUCK</li> <li>500 GALLON PORTABLE WATER TANK</li> </ul>	SITE PLAN
<ul> <li>WATER TRUCK FILL STATIONS (ROUND TRIP DISTANCE TO CLOSEST WATER SOURCE ~8,600')</li> </ul>	
<ul> <li>FIRE HYDRANT</li> <li>FIRE EXTINGUISHERS (RATED 4-A:60-B:C)</li> </ul>	
SITE-WIDE RADIO COMMUNICATION SYSTEM	CHANNIN MAL CHECKED
	SCALE DATE DRAWING NO. 4 AS SHOWN 1/22/18 OF 2

<ul> <li>FEEDSTOCK INFORMATION &amp; SPECIFICATION</li> <li>A) Supplier/Conversion: Header Promotion Specification excreptible alize: 1/2 - 2 froh excreptible alize: 1/2 - 2 froh excreptible conformation limits:clOF etrail Freedocide: Volume: NTE 52 e.y.</li> </ul>		PROCI
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# San Diego Regional Water Quality Control Board (RWQCB)



Thomas D. Koutroulis, Director 300 N. Flower Street, Suite 400 Santa Ana, CA 92703

> www.oclandfills.com Telephone: (714) 834-4000 Fax: (714) 834-4183

March 28, 2018

Alex Cali, EIT Water Resource Control Engineer California Regional Water Quality Control Board San Diego Region 2375 Northside Drive, Suite 100 San Diego, CA 92108

#### Subject: Notice of Non-Applicability for Capistrano Greenery

Dear Mr. Cali:

In accordance with Order WQ 2015-0121-DWQ, OC Waste & Recycling is hereby submitting Notice of Non-Applicability (NONA) for Capistrano Greenery.

If you have any questions regarding the enclosed form, please contact me at (714) 834-4115, or by e-mail at <u>warisa.niizawa@ocwr.ocgov.com</u>.

Sincerely,

Uh: Th

Warisa Niizawa, P.E., Senior Professional Engineer Environmental Compliance & Closed Sites

Enclosures

cc w/ enclosures: Sam Abu-Shaban, LEA

#### State of California San Diego Regional Water Quality Control Board

#### NOTICE OF NON-APPLICABILITY

#### OF COVERAGE UNDER ORDER WQ 2015-0121-DWQ GENERAL DISCHARGE REQUIREMENTS FOR COMPOSTING OPERATIONS

Submission of this Notice of Non-Applicability constitutes notice that the owner/operator of the facility identified on this form is not required to comply with State Water Resources Control Board Order WQ 2015-0121-DWQ. Only dischargers that have <u>not</u> filed a Notice of Intent (NOI) should file this form. If you have an NOI but would like to terminate coverage, you must file a Notice of Termination form with your Regional Water Quality Control Board office at the address below. If you are unsure whether or not your facility is required to comply with the General Order, please contact the San Diego Regional Water Quality Control Board at (619) 521-3355.

Note: Submittal of this Notice of Non-Applicability does not exempt the landowner or operator from applicable regulatory requirements such as the storm water management requirements of the Industrial General Permit 2014-0057-DWQ, the NPDES General Permit No. CAS000001, and/or future promulgations. If the information provided in this form is inaccurate or incomplete, or if the activity at the facility is changed, this Notice may no longer apply. Further, the information provided shall in no way release the landowner or operator of the facility from any liability which may result from non-compliance with the requirements of the General Order for Composting Operations. The on-going accuracy of the information provided may be subject to verification by inspection by Water Board staff.

When completed, mail this form to:

San Diego Regional Water Quality Control Board 2375 Northside Drive, Suite 100 San Diego, CA 92108

#### I. LANDOWNER

NAME OC Waste & Recycling			CONTACT PERSON Jeff Arbour	
STREET ADDRESS 300 North Flow	er Street, Suite 4	400	TITLE Environmental Services Manager	
<u>CITY Santa Ana</u>	STATE CA	ZIP 92703	PHONE (714) 834-4056	
EMAIL: Jeff.Arbour@ocwr.ocgov.	<u>com</u>			
II. FACILITY/SITE INFORMATION (if different from above)				
COMPANY NAME Capistrano Gree	enery		CONTACT PERSON Jeff Arbour	
STREET ADDRESS 32250 La Pata A	Venue		TITLE Environmental Services Manager	
CITY San Juan Capistrano	STATE CA	ZIP 92675	PHONE (714) 834-4056	
EMAIL: Jeff.Arbour@ocwr.ocgov.				

#### III. BASIS FOR NON-APPLICABILITY<sup>1</sup>

	1.	The facility is closed. No composting materials are present on-site.
		Date of closure//
<u>X</u>	2.	Composting operation is co-located at a landfill or other facility and the composting operations are covered under individual or general waste discharge requirements (WDRs) for the facility.
		WDR Order number:
	3.	Agricultural composting only.
	4.	Chipping and grinding facilities and operations only.
	5.	Lot clearing by local governmental agency for fire protection.
	6.	Composting activities are within a fully enclosed vessel.
	7.	Composting operation receives, processes, and stores less than 500 cubic yards of allowable materials at any given time.
	8.	<ul> <li>Composting operation receives, processes, and stores less than 5,000 cubic yards per year of allowable Tier I and II feedstocks, additives and amendments, and implements the following management practices:</li> <li>a) Completely covers materials during storm events as needed to reduce the generation of wastewater; and</li> <li>b) Manages the application of water to reduce the generation of wastewater.</li> </ul>
	9.	Other non-applicability (Please explain)

#### IV. CERTIFICATION

I certify under penalty of law that the identified facility is not required to be covered under Water Board Order WQ 2015-0121-DWQ. I understand that submittal of this Notice of Non-Applicability does not release an owner/operator from liability for any violations of the General Order or the California Water Code.

PRINTED NAME JEFF ARBOUR	TITLE	ENVERONMENTAL MGR
SIGNATURE		DATE 🤰 /23/19

<sup>1</sup> See Findings 30 and 37 of Order WQ 2015-0121-DWQ, General Waste Discharge Requirements for Composting Operations.



www.oclandfills.com Telephone: (714) 834-4000 Fax: (714) 834-4183

March 15, 2018

Alex Cali California Regional Water Quality Control Board San Diego Region 2375 Northside Drive, Suite 100 San Diego, CA 92108-2700

Dear Mr. Cali:

#### Subject: Prima Deshecha Landfill – Report of Waste Discharge for Proposed Demonistration Pilot Composting Project

Enclosed is the Report of Waste Discharge for the proposed demonstration pilot composting project at Prima Deshecha Landfill, which will be known as Capistrano Greenery. Also included with the application is a detailed description of the project, site map, site plan, and a flow diagram.

SWRCB Order WQ 2015-0121-DWQ, section 30, states that:

The following composting-related activities are unlikely to degrade water quality and are therefore exempt from this General Order. However, the Regional Water Board may determine individual WDRs are appropriate under site-specific conditions. Composting operations may be subject to other federal, state, or local regulations.

- a. Agricultural composting;
- b. Chipping and grinding facilities and operations. This includes chipping and grinding facilities and operations at a composting facility if located outside of the composting operation area;
- *c.* Lot clearing by local government agencies (e.g., grubbing, tree trimming, etc.) for fire protection;
- *d. Composting activities that are within a fully enclosed vessel;*
- e. Composting operations that receive, process, and store less than 500 cy of allowable materials at any given time; and
- f. Composting operations that receive, process, and store less than 5,000 cy per year of allowable Tier I and Tier II feedstocks, additives and amendments that implement the following management practices:
  - 1. Completely cover materials during storm events as needed to reduce the generation of wastewater; and
  - 2. Manage the application of water to reduce the generation of wastewater.

OC Waste & Recycling believes that the Capistrano Greenery pilot program meets the exemption criteria listed above.

If you have any questions, please call me at (714) 834-4115, or send me an e-mail at warisa.niizawa@ocwr.ocgov.com.

Alex Cali March 15, 2018 Page 2 of 2

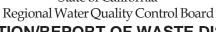
Sincerely,

Whi Th

Warisa Niizawa, P.E., Senior Professional Engineer Environmental Services

cc: Jeff Arbour, OC Waste & Recycling David Tieu, OC Waste & Recycling CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

#### State of California





#### APPLICATION/REPORT OF WASTE DISCHARGE GENERAL INFORMATION FORM FOR WASTE DISCHARGE REQUIREMENTS OR NPDES PERMIT



#### I. FACILITY INFORMATION

#### A. Facility:

Name: Prima Deshecha Landfill dba Capistrano Greenery				
Address: 32250 Avenida La Pata				
city: San Juan Capistrano	<sup>County:</sup> Orange	<sup>state:</sup> CA	Zip Code: 92675	
Contact Person: Jeff Arbour, Manager, Environmental Services		Telephone Numbe (714) 834-40		

#### **B.** Facility Owner:

	Name: OC Waste & Recycling			Owner 1.	Type (Check One) Individual 2. Corporation
	Address: 300 North Flower Street Suite 400			3. 🗸	Governmental 4. Partnership Agency
	ity: Santa Ana	<sup>state:</sup> CA	Zip Code: 92703	5.	Other:
-	ontact Person: eff Arbour, Manager, Environmental Services		Telephone Number (714) 834-40		Federal Tax ID: 956000928

#### C. Facility Operator (The agency or business, not the person):

Name: OC Waste & Recycling			Oper 1.	ator Type (Chec) Individual	k One) 2. Corporation
Address: 300 North Flower Street Suite 400			3. 🗸	Governmental Agency	4. Partnership
<sup>city:</sup> Santa Ana	<sup>State:</sup> CA	zip Code: 92703	5.	Other:	
Contact Person: Jeff Arbour, Manager, Environmental Services		Telephone Numbe (714) 834-40			

#### **D.** Owner of the Land:

Name: OC Waste & Recycling			Owner Type (Check One) 1. Individual 2. Corporation
Address: 300 North Flower Street Suite 400			3. Governmental 4. Partnership Agency
city: Santa Ana	state: CA	Zip Code: 92703	5. Other:
Contact Person: Jeff Arbour, Manager, Environmental Services		Telephone Number (714) 834-4(	

#### E. Address Where Legal Notice May Be Served:

Address: 300 North Flower Street Suite 400		
<sup>city:</sup> Santa Ana	<sup>State</sup> : CA	Zip Code: 92703
Contact Person: Jeff Arbour, Manager, Environmental Services		Telephone Number: (714) 834-4056

#### F. Billing Address:

Address: 300 North Flower Street Suite 400		
city: Santa Ana	state: CA	zip Code: 92703
Contact Person: Jeff Arbour, Manager, Environmental Services		Telephone Number: (714) 834-4056

	State of California Regional Water Quality Con PLICATION/REPORT OF WA GENERAL INFORMATION DISCHARGE REQUIREMEN	STE DISCHARGE	UNIT OUTCES
Check Type of Discharge(s) Describe		ARGE TE DISCHARGE TO SURFAC	CE WATER
Check all that apply:         □       Domestic/Municipal Wastewater         □       Treatment and Disposal         □       Cooling Water         □       Mining         □       Waste Pile         □       Wastewater Reclamation         ✓       Other, please describe:       Propose	Animal Waste Solids <ul> <li>Land Treatment Unit</li> <li>Dredge Material Disposal</li> <li>Surface Impoundment</li> <li>Industrial Process Wastewa</li> </ul>		nstructions) s)
III Describe the physical location of the 1. Assessor's Parcel Number(s) Facility: See section VII for list	I. LOCATION OF THE I facility.	3. Longitude	

Facility: See section VII for list Discharge Point: 124-081-27

Facility: 33.493378 **Discharge Point:** 

Facility: -117.615796 **Discharge Point:** 

Page 6

#### **IV. REASON FOR FILING**

New Discharge or Facility Changes in Ownership/Operator (see instructions) Change in Design or Operation Waste Discharge Requirements Update or NPDES Permit Reissuance Change in Quantity/Type of Discharge Other: Proposed Demonstration Pilot Composting Project, Prima 

## V. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Name of Lead Agency: OC Waste & Recycling						
Has a public agency determined that the proposed project is exempt from CEQA? Ves						
If Yes, state the basis for the exemption and the name of the agency supplying the exemption on the line below.						
Basis for Exemption/Agency: Categorically Exempt (Classes 1, 4, 6, 7, and 8). See Attachment 1 for more detail.						
Has a "Notice of Determination" been filed under CEQA? Yes No If Yes, enclose a copy of the CEQA document, Environmental Impact Report, or Negative Declaration. If no, identify the expected type of CEQA document and expected date of completion.						
Expected CEQA Documents:						
EIR     Negative Declaration     Expected CEQA Completion Date:						

Page 7

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY



#### L State of California Regional Water Quality Control Board APPLICATION/REPORT OF WASTE DISCHARGE GENERAL INFORMATION FORM FOR WASTE DISCHARGE REQUIREMENTS OR NPDES PERMIT



#### **VI. OTHER REQUIRED INFORMATION**

Please provide a COMPLETE characterization of your discharge. A complete characterization includes, but is not limited to, design and actual flows, a list of constituents and the discharge concentration of each constituent, a list of other appropriate waste discharge characteristics, a description and schematic drawing of all treatment processes, a description of any Best Management Practices (BMPs) used, and a description of disposal methods.

Also include a site map showing the location of the facility and, if you are submitting this application for an NPDES permit, identify the surface water to which you propose to discharge. Please try to limit your maps to a scale of 1:24,000 (7.5' USGS Quadrangle) or a street map, if more appropriate.

#### **VII. OTHER**

Attach additional sheets to explain any responses which need clarification. List attachments with titles and dates below:

Proposed Demonstration Pilot Composting Project at the Prima Deshecha Landfill

Compost Project General Site Map

Compost Project Site Plan

Processed Green Material Composting Process Flow Diagram

APNs: 124-081-22 24 26 27: 124-140-42 44 46 47 48 52 54 55: 125-162-06: 125-172-05

You will be notified by a representative of the RWQCB within 30 days of receipt of your application. The notice will state if your application is complete or if there is additional information you must submit to complete your Application/Report of Waste Discharge, pursuant to Division 7, Section 13260 of the California Water Code.

#### **VIII. CERTIFICATION**

"I certify under penalty of law that this document, including all attachments and supplemental information, were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

Print Name: Thomas D. Koutroulis	Title: Director
Signature: Thomas How the	Date: 3/15/2018

#### FOR OFFICE USE ONLY

Date Form 200 Received:	Letter to Discharger:	Fee Amount Received:	Check #:





Thomas D. Koutroulis, Director 300 N. Flower Street, Suite 400 Santa Ana, CA 92703

> <u>www.oclandfills.com</u> Telephone: (714) 834-4000 Fax: (714) 834-4183

TO:	File
FROM:	Tom Koutroulis, Director OC Waste & Recycling
SUBJECT:	Proposed Demonstration Pilot Composting

## SUBJECT: Proposed Demonstration Pilot Composting Project at the Prima Deshecha Landfill (OCWR Log #674)

#### I. Nature of Project

As a result of recent California legislation, SB 1383, that requires all jurisdictions in California to divert or recycle at least 50 percent of all organic wastes currently going to solid waste landfills, and at least 75 percent by 2025, OC Waste & Recycling (OCWR) will implement a demonstration pilot composting project at the Prima Deshecha Landfill. The purpose of the demonstration pilot composting project is for OCWR to (1) gain a better understanding of composting design, permitting, engineering and operations; (2) determine the costs associated with composting design, permitting, engineering and operations; (3) by studying and observing on a microscale, determine the potential environmental issues that could occur at a full-scale composting operation; (4) learn how to make high quality finished compost that will meet all U.S. Composting Council testing requirements and (5) analyze the potential uses for finished compost.

The proposed demonstration pilot composting project ("the project") will occur on an approximate 1-acre area at the Prima Deshecha Landfill, within Waste Management Unit 1 of the existing Zone 1 landfill, as shown on the attached exhibit. This area of the landfill is not currently being used for active landfill disposal. Material feedstocks to be composted include source separated residential curbside green waste, commercial green waste, processed green waste and wood waste. The project will not have more than 60 tons (i.e., 92 cubic yards) of material on-site at any one time or process more than 250 tons of material per year. While it is anticipated that the wood waste will be relatively homogeneous and clean, some of the green waste that will be received will come to the landfill directly from residential curbside pickup, so there will likely be small amounts of residual solid waste mixed in with the green waste. Through visual inspection, green waste that contains only very small amounts of residual solid waste will be used for the project. Any green waste received at the composting operation that is noticeably contaminated with residual solid waste will be disposed at the active area of the landfill. Any highly odorous loads will also be removed from the composting area and disposed in the landfill. OCWR will divert feedstock materials to the project that are already being delivered to the landfill, so there will be no additional truck trips.

As part of the project, OCWR will try two different types of composting operations. The first type will be open windrow composting. OCWR will create one windrow that will be no more than 92 cubic yards of material on-site with the approximate dimensions of 82 feet long, 10 feet wide and 6 feet high, in compliance with Orange County Fire Authority (OCFA) requirements. The feedstock will be placed on top of a crushed asphalt surface for all weather access and

surrounded by an earthen berm to prevent storm water run-on and run-off. The windrow will be periodically turned with a loader, skid steer, or similar equipment, up to three times per week, to quicken the decomposition of the feedstock into compost and to maintain temperatures greater than 131 degrees Fahrenheit during the pathogen reduction process. The heavy equipment is already in use at the landfill on a routine basis and will be made available for the project. The initial compost processing phase will last at least 22 days or until the pile has completed the pathogen reduction process. Afterwards, the compost material will be cured for a period that will last between 30-60 days for further stabilization of the compost product. After the curing process is complete, OCWR may screen the finished compost to remove oversized uncomposted material and residual solid waste. Altogether, the composting process may take up to 100 days. The active composting process will require the use of water to hydrate the windrow keeping the feedstock moist without overwatering, to limit the potential for leachate generation. Water will be provided by a water truck that is already in use at the landfill operation and will be made available for the project. The existing potable water line, the reclaimed water line and the 50,000 gallon water storage tank that currently serve the landfill operation have sufficient capacity to support the project. The water truck will fill up at the J-stand that is located closest to the project. Water will not be used during the curing process. Approximately 250 gallons of water per day may be used to hydrate the compost piles. All water used for composting will be contained within the asphalt pad and perimeter earthen berms to minimize runoff. In addition, water will be used as needed to provide for dust control in accordance with SCAQMD Rule 403 as part of normal landfill operations.

As an alternative to open air windrow composting, or in combination with open air windrow composting, OCWR may also make compost by creating an aerated static pile, using the same feedstock materials described above for open air windrow composting. Feedstock materials will be placed on top of plastic piping, which will be placed on a crushed asphalt surface. The plastic piping will then be removed, creating openings at the bottom of the pile that will create a chimney effect, thereby allowing oxygen to pass through the pile. The dimensions of the aerated static pile (i.e., height, width and length) will be no greater than the dimensions of the open air windrow compost pile described above. The same heavy equipment would be used for the aerated static pile, although less turning of the pile would be required when compared to open air windrow composting. It is also anticipated that the timeframes for the active and curing composting phases for aerated static pile composting will be similar to open air windrow composting. In addition, it is anticipated that the aerated static pile composting will use a similar amount of water when compared to open air windrow composting. Whether OCWR chooses to implement open air windrow composting only, or in combination with aerated static pile composting, at no time will the project have more than 60 tons (i.e., 92 cubic yards) of material on-site at any one time or process more than 250 tons of material per year.

Testing will be performed as prescribed by the U.S. Composting Council once the compost has been cured. It is OCWR's intent to make high quality compost that will receive certification from the U.S. Composting Council and will also contain less than 0.5 percent contamination, as required by the California Department of Resources Recovery and Recycling (CalRecycle).

Both composting methods will require that OCWR place ground asphalt on the surface of the landfill where the composting will occur, to maintain the integrity of the landfill interim soil

cover and to preclude any leaching from the project into the underlying waste mass. Surface water runoff will be diverted away from the composting area to the existing landfill surface water collection system. Surface water runoff that comes into contact with compost materials will be tested.

Methane generated by the underlying landfill area will not result in surface fires at the composting area through the effective maintenance and monitoring of the landfill gas collection system.

As part of the project, OCWR will use finished compost at the landfill for beneficial reuse at the landfill such as landscaping, geosynthetic tarp framing and for erosion control. In addition, the compost may be sold or given away to potential end users as part of OCWR's market research, business development and public outreach.

Implementation of the demonstration pilot composting operation at the Prima Deshecha Landfill is exempt from permitting due to the limited tonnage of feedstock materials that the project will receive. However, the following agencies will be notified of the project and operations will be performed in a manner that is consistent with the respective regulations and best management practices of these agencies. These agencies include the following: CalRecycle; Orange County Health Care Agency, Environmental Health Division acting as the Local Enforcement Agency (LEA) for CalRecycle; the California Regional Water Quality Control Board, San Diego Region (Regional Board); South Coast Air Quality Management District (SCAQMD); and OCFA. Implementation of the project will require registration with SCAQMD in accordance with Rule 1133.

With the implementation of the project design features and operational controls discussed above, and by complying with all of the conditions and requirements included in the agency approvals, the proposed demonstration pilot composting project will not result in any significant impacts to the environment.

#### II. Authority for Administrative Action

The Director of OC Waste & Recycling, pursuant to the authority granted in OCCO Sections 4-3-104, 4-3-126, and 4-3-137, takes the following administrative actions.

#### III. CEQA Approval

The proposed action is Categorically Exempt (Class 1) from the provisions of CEQA pursuant to Section 15301 of the CEQA Guidelines, since Class 1 (Existing Facilities) consists of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographic features, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination. In addition, the proposed action is also Categorically Exempt (Class 4) from the provisions of CEQA pursuant to Section 15304 of the CEQA Guidelines, since Class 4 (Minor Alterations to Land) involves minor alterations to land. The proposed action is also Categorically Exempt (Class 6) from the provisions of CEQA pursuant to Section 15304 of CEQA pursuant to Section 15306 (Information

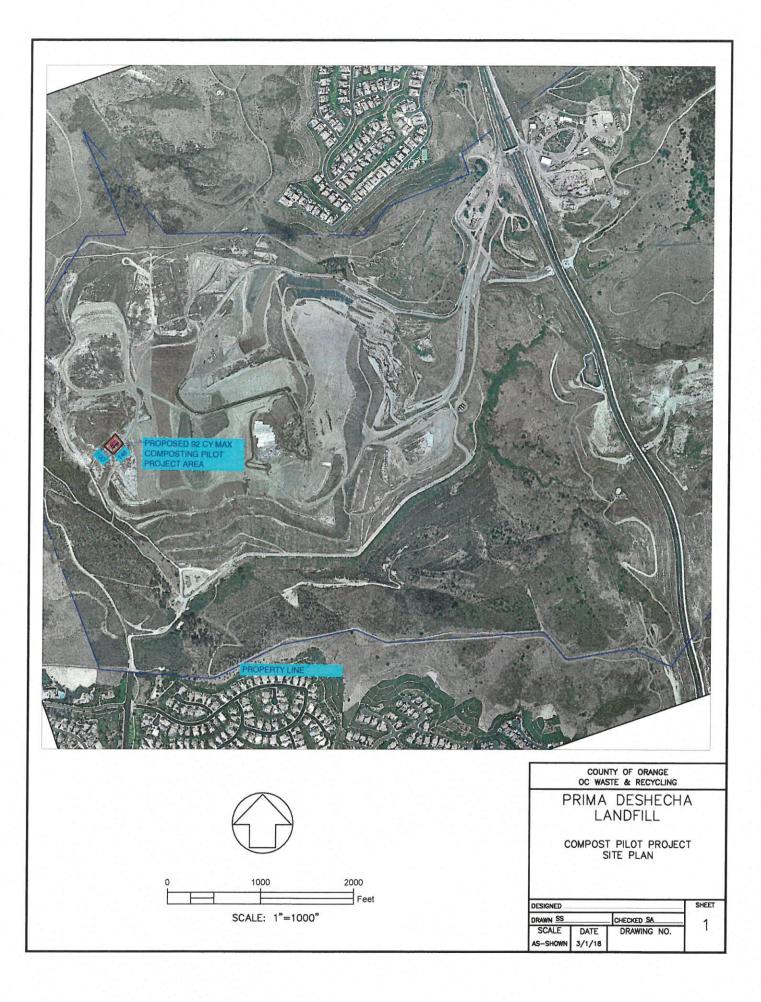
Collection), since Class 6 consists of basic data collection, research, experimental management and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource. Also, the proposed action is also Categorically Exempt (Class 7) from the provisions of CEQA pursuant to Section 15307 (Actions by Regulatory Agencies for Protection of Natural Resources), since Class 7 consists of actions taken by a public agency for the protection of natural resources. The proposed action is also Categorically Exempt (Class 8) from the provisions of CEQA pursuant to Section 15308 (Actions by Regulatory Agencies for Protection of the Environment), since Class 8 consists of actions taken by a public agency for the protection of the environment. The proposed composting demonstration pilot project at the Prima Deshecha Landfill is consistent with a Class 1, Class 4, Class 6, Class 7 and Class 8 Categorical Exemption determination.

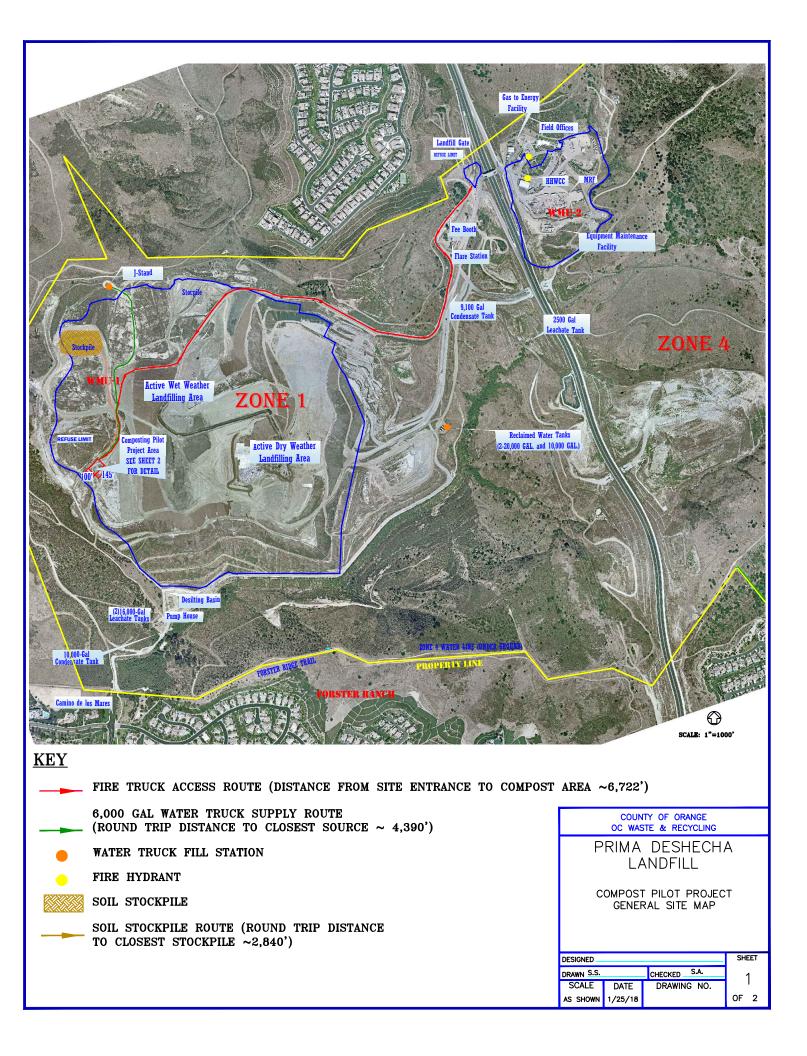
#### IV. Certification

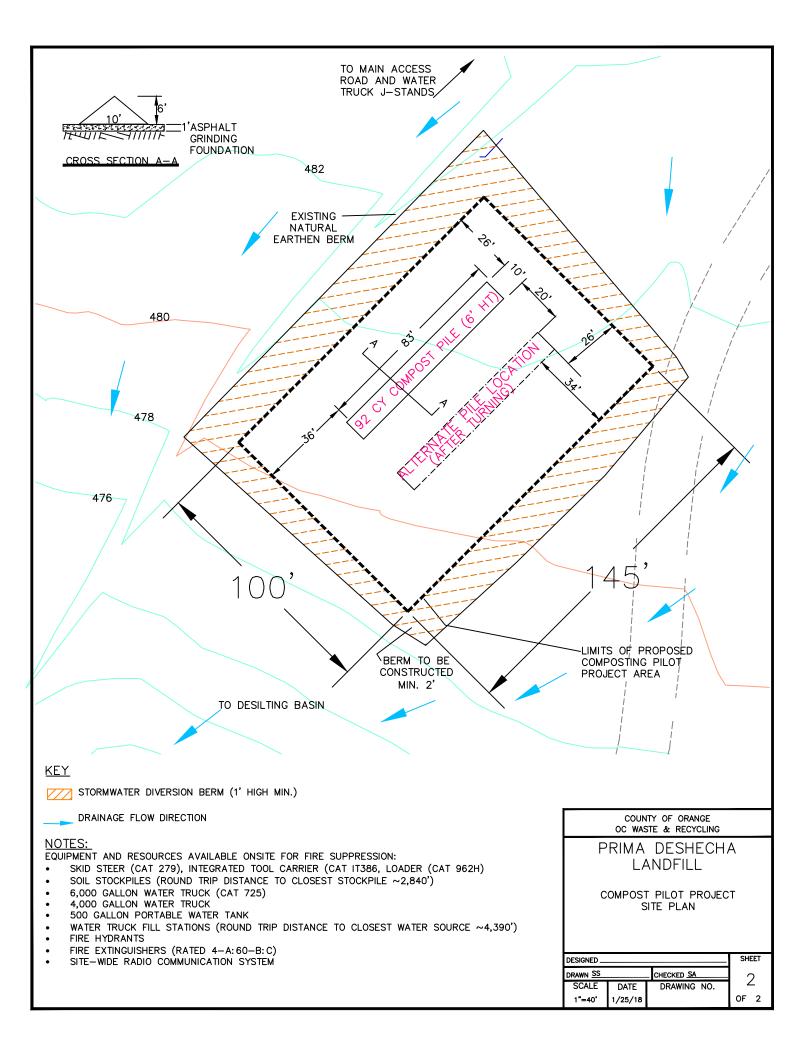
I hereby certify that the subject project is approved.

Date: 3/9/2018

Director, OC Waste & Recycling







FEEDSTOCK DELIVERY	FEEDSTOCK WEIGH IN	QUALITY ASSURANCE	WINDROW CONSTRUCTION	COMPOSTING	СОМ
	Landfill Scales	Accept Load			
) FEEDSTOCK INFORMATION &	1) WEIGH IN & RECORD KEEPING	1) VISUAL INSPECTION	1) WINDROW BUILDING	1) TEMPERATURE & MOISTURE MONITORING	b) Moistur
SPECIFICATION A) Supplier/Generator: Hauler	<ul> <li>Feedstock hauler information and facility of origin shall be recorded</li> </ul>	A) Feedstock Material Specification	A) Designate an identification number for windrow pile	A) Temperature Monitoring	trends • Adjust mo
B) Type: Processed Green Material (PGM)	B) Feedstock shall be weighed in and	B) Level of Contamination	B) Windrow shall be built according to the	◆A 24" temperature probe shall be use in measuring pile temperatures at a	temperatu based on
C) Material Specification	shall be recorded in tons		following dimensions:	depth of 24" from the surface	B) Windrow F
<ul> <li>Particle size: 1/8 - 2 inch</li> <li>Acceptable contamination limit: &lt;10%</li> <li>Total Feedstock Volume: NTE 92 c.y.</li> </ul>	Return to Hauler/ Generator	Reject Load	<ul> <li>■Base width: 10 ft. Max.</li> <li>■Height: 6 ft. Max.</li> <li>■Length: 90 ft. Max.</li> </ul>	<ul> <li>At a minimum, 9 temperature readings shall be taken at the following approximate locations and points:</li> </ul>	Piles sha loader at
- Total Feedstock Volume. NTE 32 c.y.		2) REMOVAL OF VISIBLE CONTAMINANTS	C) Windrow shall be built in such a manner		minimize and align
		<ul> <li>As practical as possible, contaminants such as plastics, metals, &amp; glassetc. shall be sorted out and removed from</li> </ul>	that pile is uncompacted thereby increasing Free Air Space (FAS) and decreasing pile bulk density	shall be taken 5-10 ft. away from both ends of the entire length and at the middle of pile	<ul> <li>Turn over readings</li> </ul>
		the feedstock 3) FEEDSTOCK/ WINDROW PILE COMPOSITE SAMPLE COLLECTION	D) Windrow shall be built and situated as not to impede surface drainage run-off or allow surface drainage run-off to	<ul> <li>Monitoring Points – temperatures shall be taken at the middle of each side slope and top of pile per monitoring</li> </ul>	maintain 140—150 shall be t of 15 days
		<ul> <li>A) Composite Sample Collection- shall consist of at least 12 mixed samples of</li> </ul>	break or ran through windrow pile	<ul> <li>Frequency – temperatures shall be</li> </ul>	phase
		equal volume and extracted from the following sampling locations:		monitored daily until such time adjustments in the monitoring	in the fie ● If a rain
		<ul> <li>Four samples from one-half width of the pile each at a different cross section</li> </ul>		frequency are made based on established data trends for temperature	the pile v the pile is may be t
		<ul> <li>Four samples from one-fourth width of the pile each at a different cross section</li> </ul>		<ul> <li>Record keeping – temperature readings shall be recorded as composite readings per monitoring location and recorded in the field monitoring data sheet</li> </ul>	top half c depth, ap to mainta 45-60%
		<ul> <li>Four samples from one-eight width of the pile each at a different cross</li> </ul>		B) Moisture Monitoring	C) Windrow F
		section B) Composite samples shall be collected		<ul> <li>Once windrow pile had been watered or hydrated, moisture content shall be measured and monitored</li> </ul>	<ul> <li>Rewater p readings of content is</li> </ul>
		into a 5-gallon container for the purpose of:		<ul> <li>Moisture Content – Hydrate windrow until moisture content is consistently</li> </ul>	3) ACTIVE PH
		<ul> <li>Initial Feedstock Laboratory Analysis</li> </ul>		attained between 45-60%	A) Compostin
		<ul> <li>Initial Bulk Density Measurement</li> <li>Dry Weight Basis-bulk density shall</li> </ul>		<ul> <li>Guaging Moisture – samples shall be collected 3" below the surface and tested for moisture using the Squeeze Ball Method</li> </ul>	<ul> <li>Active Phase</li> <li>maintained</li> <li>minimum c</li> </ul>
		be measured and computed using a 5-gallon container and portable weighing scale		Moisture testing locations —shall be	<ul> <li>Moisture Co shall be ma</li> </ul>
		Dry Weight Bulk Density measurement		taken consistently within the vicinity of the temperature monitoring locations	minimum o
		shall be recorded in the field monitoring data sheet		<ul> <li>Frequency— moisture content shall be measured immediately after watering the pile</li> </ul>	<ul> <li>Maturity - S</li> <li>be use to</li> <li>completion</li> </ul>
				<ul> <li>Record keeping – date and volume of water used to hydrate windrow shall be recorded in the field monitoring data</li> </ul>	Solvita Mat indicates g phase othe until matur
				sheet 2) DATA EVALUATION, WINDROW TURNING, & REWATERING	attained a
				A) Monitoring Data Evaluation	• A compos
				<ul> <li>Temperature and moisture monitoring data obtained during the 1st and 2nd week shall be evaluated for:</li> </ul>	at a minir of the cor analysis
				a) Temperature Trends for wet and dry	

#### CING PILOT PROJECT

#### **IPOSTING** (continued)



re evapration/dissipation rate for wet piles

onitoring frequency for ure & moisture as needed established trends

#### Pile Turning

Il be turned in-place using a t a 20 to 30 degree angle to disturbance to the orientation ment of pile

r piles if composite temperature are less than 140 F and ideal temperatures between F (Thermophilic stage) OR pile turned 5 times at a minimum ys interval during the active

over activities shall be recorded eld monitoring data sheet

event occurs prior to watering within six hours of watering and is wet  $3^{\circ}$  from the surface, pile turned without watering. If the of the pile is dry to the  $3^{\circ}$ oply additional water as needed ain moisture content between

#### Pile Rewatering

piles if composite temperature exceeds 155 F° or moisture is lower than 45%

ASE & MATURITY

ng Process Stage

ase— pile temperature shall be d between 122—150 F<sup>\*</sup> for a of 22 days

Content— pile moisture content naintained between 45—60% for a of 22 days

Solvita Maturity Kit and Index shal test and determine maturity or n of active phase

aturity Index of 5 or greater greenwaste has completed active herwise active phase shall continue urity index of 5 or greater is and curing phase has commenced

ing Process Sample Collection

site sample shall be collected imum 22 days from the start omposting process for laboratory

#### 1) CURING PHASE

- A) Curing Stage completion takes at a minimum of 40 days to several months
- Maturity- maturity and completion of the curing phase shall be tested and determined by using the Solvita Maturity Kit and Index

Solvita Maturity Index of 7 or greater indicates greenwaste has completed curing phase otherwise curing phase shall continue until an index reading of 7 or greater is attained

B) Completion of Curing Phase

• Characteristics (What to look for)

- a) Pile no longer generates heat after turning
- b) About 1/2 to 1/3 of its original volume
- c) Dark in color and smells earthy
- d) Original materials are no longer recognizable
- C) Final Compost Sample Collection

 Once curing phase had been completed and confirmed, a final composite sample shall be collected for laboratory analysis

SCREENING(by others) ) Compost Material Preparation

A) Compost Material shall be screened to allow materials through a seive size no greater than 3/8"

B) Compost Material 3/8" or less shall be stockpiled, stored, and segregated from residual material greater than 3/8"

#### END USE

1) General Landfill On-site Uses for:

- A) Compost Material 3/8" or less
- Supplement and enrich soil necessary to maintain various landfill office facility vegetation and promote growth in the mitigation or restoration of habitat areas
- B) Compost Material greater than 3/8"
- •Use as ground cover to help retain soil moisture and minimize water use for vegetation around landfill field offices

#### **CURING**



# South Coast Air Quality Management District (SCAQMD)



www.oclandfills.com Telephone: (714) 834-4000 Fax: (714) 834-4183

March 5, 2018

Permit Services South Coast Air Quality Management District 21865 East Copley Drive Diamond Bar, CA 91765-4182

#### Subject: Registration Forms for Composting Facility – Rule 1133

Permit Services:

OC Waste & Recycling is submitting the composting registration forms for the following facilities:

- 1. Registration form for composting facility (Rule 1133) along with a filing fee in the amount of \$154.17 for Bee Canyon Greenery
- 2. Registration form for composting facility (Rule 1133) along with a filing fee in the amount of \$154.17 for Valencia Greenery
- 3. Registration form for composting facility (Rule 1133) along with a filing fee in the amount of \$154.17 for Capistrano Greenery

If you have any questions or need additional information, please contact Jeff Arbour at (714) 834-4056 or via email at Jeff.arbour@ocwr.ocgov.com.

Sincerely,

Warisa Niizawa, P.E., Senior Professional Engineer Environmental Services Attachments

## **Registration/Annual Update - Rule 1133**



New Registration

O Annual Update

Reporting Calendar Year

Facility Name Valencia Greenery	Stat	IS New OExi	sting Olnacti	CIWWMB Permit/ID/Cla	ssification	LEA Permit/ID/Cla	essification	AQMD ID	
Location Address 1942 N. Valencia Ave.			City Brea		Zip Code 92823		County Orang	County Orange	
Nailing Address 00 N. Flower Street			city Santa Ana		State CA			Zip Code 92703	
Contact Person Jeff Arbour		Title Environmental Se	ervices Manager	Telephone 714-834-4000		Fax 714-834-4001		e-mail jeff.arbour@ocwr.ocgov.com	
Number of employees at the facility*	<b>()</b> 1-10	() 11-20	0	20-30 () 30-60		0 60-100	○ >100	Confidential	

STEP II - Facility Own	er Information						
Facility Owner OC Waste & Recy	cling						
Mailing Address 300 N. Flower Street		City Irvine		State CA		Zip Code 92703	
Contact Person Tom Koutroulis	Title Director		Telephone 714-834-4000		Fax 714-834-4001		e-mail tom.koutroulis@ocwr.ocgov.com

acility Design Capacity (throughput)	320		tons/yr.									
Process Description (Check all that apply) O Greenwaste Chipping/Grinding(C/G)	O Foodwaste	C/G	Green	waste Composting	C	)Foodwaste Cor	npostina		s Composting	OM	lanure Compost	ina
	0.000		0		-			0		0		
O Others (explain)												
Chipping & Grinding Activities												
A. Feedstock Type and Monthly Actual Amou	nt Received											
Feedstock Type	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Curbside Greenwaste												
Foodwaste												
Non-Curbside Greenwaste												
Others (explain)												
			1			1						
B. Products and Monthly Amount Produced			La sura la		24							
		1	1	-		ly Actual Amoun		1				
Product Type	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Composting Feedstock												
ADC												
Mulch												
Dismost												
Biomass	and the second sec											
Others (explain) pomposting Activities A. Composting Method (Check all that apply) Windrow	erated Static Pile		O In-Vessel		() Other	rs (explain)	e: feedstock	is a process	ed green mate	erial from co	ommercial gr	reenwaste
Others (explain) omposting Activities A. Composting Method (Check all that apply) Windrow			O In-Vessel			rs (explain)			ed green mate	erial from co	ommercial gr	reenwaste
Others (explain) omposting Activities A. Composting Method (Check all that apply) Windrow B. Feedstock Type and Monthly Actual Amount	nt Received	Eab		Ancil	Month	ly Actual Amoun	t Received (ton	s/month)				
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Others (explain) composting Activities A. Composting Method (Check all that apply) Windrow A. Composting Method (Check all that apply) Windrow A. Composting Method (Check all that apply) Check all that apply) A. Composting Activities A. Composting Activities Activities A. Composting Activities Activities Activities Activities Activities A	nt Received	Feb.		April	Month	ly Actual Amoun	t Received (ton	s/month)				
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Others (explain) Composting Activities A. Composting Method (Check all that apply) Windrow A B. Feedstock Type and Monthly Actual Amount Feedstock Type Greenwaste Foodwaste Biosolids Manure Others (explain) processed green material C. Product Type Greenwaste - only Compost Class A Compost Class B Compost Others (explain) Published Tipping Fee Schedule by Feedstock	Jan.	80	March	April	Month May 80 Month May	Ily Actual Amoun June Ily Actual Amoun June 6. Enforcemen	t Received (ton: July t Produced (ton: July t Actions	s/month) Aug. 80 s/month) Aug. 80	Sept.	Oct.	Nov. 80 Nov. 80	Dec.
Others (explain) Composting Activities A. Composting Method (Check all that apply) Windrow A B. Feedstock Type and Monthly Actual Amoun Feedstock Type Greenwaste Foodwaste Biosolids Manure Others (explain) processed green material C. Product Type Greenwaste - only Compost Class A Compost Class B Compost Others (explain) Published Tipping Fee Schedule by Feedstock Feedstock Description	At Received	80	March	April	Month May 80 Month May	Ily Actual Amoun June Ily Actual Amoun June G. Enforcemen Number of air qual	t Received (ton: July t Produced (ton: July t Actions t Actions	s/month) Aug. 80 s/month) Aug. 80 forcement actions iss	Sept.	Oct.	Nov. 80 Nov. 80 receding year	Dec.
Others (explain) Composting Activities A. Composting Method (Check all that apply) Windrow A B. Feedstock Type and Monthly Actual Amount Feedstock Type Greenwaste Foodwaste Biosolids Manure Others (explain) processed green material C. Product Type Greenwaste - only Compost Class A Compost Class B Compost Others (explain) Published Tipping Fee Schedule by Feedstock	At Received	80	March	April	Month May 80 Month May	Ily Actual Amoun June Ily Actual Amoun June G. Enforcemen Number of air qual	t Received (ton: July t Produced (ton: July t Actions t Actions	s/month) Aug. 80 s/month) Aug. 80	Sept.	Oct.	Nov. 80 Nov. 80 receding year	Dec.
Others (explain) Composting Activities A. Composting Method (Check all that apply) Windrow A B. Feedstock Type and Monthly Actual Amoun Feedstock Type Greenwaste Foodwaste Biosolids Manure Others (explain) processed green material C. Product Type Greenwaste - only Compost Class A Compost Class B Compost Others (explain) Published Tipping Fee Schedule by Feedstock Feedstock Description	At Received	80	March	April	Month May 80 Month May	Ily Actual Amoun June Ily Actual Amoun June 6. Enforcemen Number of air qual	t Received (ton: July t Produced (ton: July t Actions ty or odor related end	s/month) Aug. 80 s/month) Aug. 80 forcement actions iss	Sept.	Oct.	Nov. 80 Nov. 80 receding year	Dec.

Authorized Signature hours formation

tion and data for my company. Name Thomas D. Koutroulis, Director OC Waste & Recycling Date 2/26/2016 Rev: 10/21/08

# Registration/Annual Update - Rule 1133



New Registration

O Annual Update

Reporting Calendar Year

Facility Name Bee Canyon Greenery	Stat		sting 🔿 Inacti	CIWWMB Permit/ID/	Classification	LEA Permit/ID,	Classification	AQMD ID
Location Address 1022 Bee Canyon Access Road			City Irvine		Zip Coo 9261		County	
Mailing Address 300 N. Flower Street			<b>c</b> ity Santa Ana		State CA		Zip Coo 9270	
Contact Person Jeff Arbour		Title Environmental Se	ervices Manager	Telephone 714-834-4000		Fax 714-834-4001		e-mail jeff.arbour@ocwr.ocgov.com
Number of employees at the facility*	1-10	() 11-20	0	20-30		0 60-100	○ >100	Confidential

STEP II - Facility Own	er Information						
Facility Owner OC Waste & Recy	vcling						
Mailing Address 300 N. Flower Street		City Irvine		State CA		Zip Cod 9270	
Contact Person Tom Koutroulis	Title Director		Telephone 714-834-4000		Fax 714-834-4001		e-mail tom.koutroulis@ocwr.ocgov.com

Facility Design Capacity (throughput)	320		tons/yr.									
Process Description (Check all that apply)												
Greenwaste Chipping/Grinding(C/G)	O Foodwaste	C/G	Green	waste Composting		OFoodwaste Com	posting	O Biosolio	Is Composting	ON	anure Composi	ting
O Others (explain)												
Chipping & Grinding Activities												
A. Feedstock Type and Monthly Actual Amoun	t Received											
					Mon	thly Actual Amount	Received (ton	s/month)				
Feedstock Type	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Curbside Greenwaste												
Foodwaste												
Non-Curbside Greenwaste												
Others (explain)												
B. Products and Monthly Amount Produced												
					Mon	thly Actual Amount	Produced (ton	s/month)				
Product Type	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Composting Feedstock												
ADC												
Mulch												
Biomass												
Others (explain) omposting Activities A. Composting Method (Check all that apply) Windrow	erated Static Pile t Received		O In-Vessel			ers (explain)			ed green mate	erial from co	ommercial g	reenwaste
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Others (explain) omposting Activities A. Composting Method (Check all that apply) Windrow A. B. Feedstock Type and Monthly Actual Amount Feedstock Type Greenwaste Foodwaste Biosolids	t Received	Feb.		April	Mon	thly Actual Amount	Received (ton	s/month)				
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Others (explain) omposting Activities A. Composting Method (Check all that apply) Windrow A. B. Feedstock Type and Monthly Actual Amoun Feedstock Type Greenwaste Foodwaste Biosolids Manure	t Received			April	Mon May 80	thiy Actual Amount	Received (ton: July	s/month) Aug. 80			Nov.	
Others (explain) omposting Activities A. Composting Method (Check all that apply) Windrow A. Composting Method (Check all that apply) Windrow A. Check all that apply) A. Check all that apply and that apply and the apply apply and the apply	Jan.	80	March		Mon May 80 Mont	thiy Actual Amount	Received (ton: July Produced (ton:	s/month) Aug. 80 s/month)	Sept.	Oct.	Nov. 80	. Dec.
Others (explain)  omposting Activities  A. Composting Method (Check all that apply)  Windrow A:  Feedstock Type and Monthly Actual Amount  Feedstock Type  Greenwaste  Foodwaste  Biosolids  Manure  Others (explain) processed green material  C. Products and Monthly Amount Produced  Product Type	t Received			April	Mon May 80 Mon May	thiy Actual Amount	Received (ton: July	s/month) Aug. 80 s/month) Aug.			Nov. 80 Nov.	
Others (explain)  omposting Activities  A. Composting Method (Check all that apply)  Windrow A.  Feedstock Type and Monthly Actual Amount  Feedstock Type Greenwaste Foodwaste Biosolids Manure Others (explain) processed green material  C. Products and Monthly Amount Produced  Product Type Greenwaste - only Compost	Jan.	80	March		Mon May 80 Mont	thiy Actual Amount	Received (ton: July Produced (ton:	s/month) Aug. 80 s/month)	Sept.	Oct.	Nov. 80	. Dec.
Others (explain)  omposting Activities  A. Composting Method (Check all that apply)  Windrow A.  B. Feedstock Type and Monthly Actual Amount  Feedstock Type Greenwaste Foodwaste Biosolids Manure Others (explain) processed green material  C. Products and Monthly Amount Produced  Product Type Greenwaste - only Compost Class A Compost	Jan.	80	March		Mon May 80 Mon May	thiy Actual Amount	Received (ton: July Produced (ton:	s/month) Aug. 80 s/month) Aug.	Sept.	Oct.	Nov. 80 Nov.	. Dec.
Others (explain)  omposting Activities  A. Composting Method (Check all that apply)  Windrow A.  Feedstock Type and Monthly Actual Amount  Feedstock Type Greenwaste Foodwaste Biosolids Manure Others (explain) processed green material  C. Products and Monthly Amount Produced  Product Type Greenwaste - only Compost	Jan.	80	March		Mon May 80 Mon May	thiy Actual Amount	Received (ton: July Produced (ton:	s/month) Aug. 80 s/month) Aug.	Sept.	Oct.	Nov. 80 Nov.	. Dec.
Others (explain) omposting Activities A. Composting Method (Check all that apply) Windrow A. B. Feedstock Type and Monthly Actual Amoun Feedstock Type Greenwaste Foodwaste Biosolids Manure Others (explain) processed green material C. Product Type Greenwaste - only Compost Class A Compost Class B Compost Others (explain)	Jan.	80	March		Mon May 80 Mon May	hly Actual Amount	Received (ton: July Produced (ton: July	s/month) Aug. 80 s/month) Aug.	Sept.	Oct.	Nov. 80 Nov.	. Dec.
Others (explain) omposting Activities A. Composting Method (Check all that apply) Windrow A. B. Feedstock Type and Monthly Actual Amoun Feedstock Type Greenwaste Foodwaste Biosolids Manure Others (explain) processed green material C. Product Type Greenwaste - only Compost Class A Compost Class B Compost Others (explain) Published Tipping Fee Schedule by Feedstock	Jan.	80	March	April	Mon May 80 Mon May	hly Actual Amount bly Actual A	Received (ton: July Produced (ton: July Actions	s/month) Aug. 80 s/month) Aug. 80	Sept.	Oct.	Nov. 80 Nov. 80	. Dec.
Others (explain) omposting Activities A. Composting Method (Check all that apply) Windrow A. B. Feedstock Type and Monthly Actual Amoun Feedstock Type Greenwaste Foodwaste Biosolids Manure Others (explain) processed green material C. Product Type Greenwaste - only Compost Class B Compost Class B Compost Others (explain) Published Tipping Fee Schedule by Feedstock Feedstock Description	I Received	80	March	April	Mon May 80 Mon May	thiy Actual Amount June June hiy Actual Amount June biy Actual Amount June G. Enforcement Number of air quality	Received (ton: July Produced (ton: July Actions or odor related eni	s/month) Aug. 80 s/month) Aug. 80 forcement actions iss	Sept.	Oct.	Nov. 80 Nov. 80 receding year	Dec.
Others (explain) omposting Activities A. Composting Method (Check all that apply) Windrow A. B. Feedstock Type and Monthly Actual Amoun Feedstock Type Greenwaste Foodwaste Biosolids Manure Others (explain) processed green material C. Product Type Greenwaste - only Compost Class A Compost Class B Compost Others (explain) Published Tipping Fee Schedule by Feedstock	I Received	80	March	April	Mon May 80 Mon May	hly Actual Amount bly Actual A	Received (ton: July Produced (ton: July Actions or odor related eni	s/month) Aug. 80 s/month) Aug. 80	Sept.	Oct.	Nov. 80 Nov. 80	Dec.
Others (explain) omposting Activities A. Composting Method (Check all that apply) Windrow A. B. Feedstock Type and Monthly Actual Amoun Feedstock Type Greenwaste Foodwaste Biosolids Manure Others (explain) processed green material C. Product Type Greenwaste - only Compost Class B Compost Class B Compost Others (explain) Published Tipping Fee Schedule by Feedstock Feedstock Description	I Received	80	March	April	Mon May 80 Mon May	thiy Actual Amount June June hiy Actual Amount June biy Actual Amount June G. Enforcement Number of air quality	Received (ton: July Produced (ton: July Actions	s/month) Aug. 80 s/month) Aug. 80 forcement actions iss	Sept.	Oct.	Nov. 80 Nov. 80 receding year	Dec.

Name Thomas D. Koutroulis, Director OC Waste & Recycling Date 2/26/2018 Rev: 10/21/08

# Registration/Annual Update - Rule 1133



New Registration

O Annual Update

Reporting Calendar Year 2018

Facility Name Capistrano Greenery	Stat	us New OExi	sting Olnacti	CIWWMB Permit/ID/C	lassification	LEA Permit/ID/Cla	assification	AQMD ID
Location Address 32250 Avenida La Pata			City San Juan Cap	bistrano	Zip Cod 9267		County Orang	je
Mailing Address 300 N. Flower Street			city Santa Ana		State CA		Zip Code 92703	
Contact Person Jeff Arbour		Title Environmental S	ervices Manager	Telephone 714-834-4000		Fax 714-834-4001		e-mail jeff.arbour@ocwr.ocgov.com
Number of employees at the facility*	<b>()</b> 1-10	() 11-2	• 0	20-30 () 30-60		0 60-100	○ >100	Confidential

STEP II - Facility Own	er Information						
Facility Owner OC Waste & Recy	cling						
Mailing Address 300 N. Flower Street		City Irvine		State CA		Zip Code 92703	
Contact Person Tom Koutroulis	Title Director	1	Telephone 714-834-4000		<sub>Fax</sub> 714-834-4001		e-mail tom.koutroulis@ocwr.ocgov.com

Facility Design Capacity (throughput)	320		tons/yr.									
Process Description (Check all that apply) O Greenwaste Chipping/Grinding(C/G)	O Foodwaste	C/G	Green	waste Composting	(	)Foodwaste Con	nposting	O Biosolid	s Composting	OM	lanure Compost	ing
O Others (explain)												
Chipping & Grinding Activities												
A. Feedstock Type and Monthly Actual Amount	nt Received											
					Mont	hly Actual Amoun	t Received (ton	(month)				
Feedstock Type	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Curbside Greenwaste							00.1	, tog.	oope			
Foodwaste						1						
Non-Curbside Greenwaste												
Others (explain)			-									
		the state of	4	Martin Carlos		4						
B. Products and Monthly Amount Produced		-						1				
				-	and the second se	hly Actual Amoun	The second se	and the second se				
Product Type	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Composting Feedstock												
ADC												
Mulch												
Biomass Others (explain)												
Others (explain) composting Activities A. Composting Method (Check all that apply)	pratod Statia Pila				Outh	note	e: feedstock	is a process	ed green mat	erial from co	ommercial gr	reenwast
Others (explain) composting Activities A. Composting Method (Check all that apply)	erated Static Pile It Received		O In-Vessel			explain)			ed green mat	erial from co	ommercial gr	reenwast
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Others (explain) composting Activities A. Composting Method (Check all that apply) Windrow A. B. Feedstock Type and Monthly Actual Amount Feedstock Type Greenwaste Foodwaste Biosolids Manure Others (explain) processed green material C. Products and Monthly Amount Produced	Jan.	80	March		Mont May 80 Mont	hly Actual Amoun	t Received (tons	/month) Aug. 80	Sept.	Oct.	Nov. 80	Dec.
Others (explain) composting Activities A. Composting Method (Check all that apply) Windrow A. B. Feedstock Type and Monthly Actual Amount Feedstock Type Greenwaste Foodwaste Biosolids Manure Others (explain) processed green material C. Products and Monthly Amount Produced Product Type	nt Received		-	April	Mont May 80 Mont May	hly Actual Amoun	t Received (tons	/month) Aug. 80 //month) Aug.			Nov. 80 Nov.	
Others (explain) Composting Activities A. Composting Method (Check all that apply) Windrow A. B. Feedstock Type and Monthly Actual Amount Feedstock Type Greenwaste Foodwaste Biosolids Manure Others (explain) processed green material C. Products and Monthly Amount Produced Product Type Greenwaste - only Compost	Jan.	80	March		Mont May 80 Mont	hly Actual Amoun	t Received (tons	/month) Aug. 80	Sept.	Oct.	Nov. 80	Dec.
Others (explain) Composting Activities A. Composting Method (Check all that apply) Windrow A. B. Feedstock Type and Monthly Actual Amount Feedstock Type Greenwaste Foodwaste Biosolids Manure Others (explain) processed green material C. Products and Monthly Amount Produced Product Type Greenwaste - only Compost Class A Compost	Jan.	80	March		Mont May 80 Mont May	hly Actual Amoun	t Received (tons	/month) Aug. 80 //month) Aug.	Sept.	Oct.	Nov. 80 Nov.	Dec.
Others (explain) Composting Activities A. Composting Method (Check all that apply) Windrow A. B. Feedstock Type and Monthly Actual Amount Feedstock Type Greenwaste Foodwaste Biosolids Manure Others (explain) processed green material C. Products and Monthly Amount Produced Product Type Greenwaste - only Compost Class A Compost Class B Compost Class B Compost	Jan.	80	March		Mont May 80 Mont May	hly Actual Amoun	t Received (tons	/month) Aug. 80 //month) Aug.	Sept.	Oct.	Nov. 80 Nov.	Dec.
Others (explain) Composting Activities A. Composting Method (Check all that apply) Windrow A. B. Feedstock Type and Monthly Actual Amount Feedstock Type Greenwaste Foodwaste Biosolids Manure Others (explain) processed green material C. Products and Monthly Amount Produced Product Type Greenwaste - only Compost Class A Compost	Jan.	80	March		Mont May 80 Mont May	hly Actual Amoun	t Received (tons	/month) Aug. 80 //month) Aug.	Sept.	Oct.	Nov. 80 Nov.	Dec.
Others (explain) Composting Activities A. Composting Method (Check all that apply) Windrow A. B. Feedstock Type and Monthly Actual Amount Feedstock Type Greenwaste Foodwaste Biosolids Manure Others (explain) processed green material C. Products and Monthly Amount Produced Product Type Greenwaste - only Compost Class A Compost Class B Compost Class B Compost	Jan.	80	March		Mont May 80 Mont May	hly Actual Amoun	t Received (tons	/month) Aug. 80 //month) Aug.	Sept.	Oct.	Nov. 80 Nov.	Dec
Others (explain) composting Activities A. Composting Method (Check all that apply) Windrow A. Composting Method (Check all that apply) Windrow A. Check all that apply) C. A. Check Type Greenwaste Biosolids Manure Others (explain) processed green material C. Product Type Greenwaste - only Compost Class A Compost Class B Compost Others (explain)	Jan.	80	March		Mont May 80 Mont May	hly Actual Amoun June hly Actual Amoun June 6. Enforcemen	t Received (tons	/month) Aug. 80 /month) Aug. 80	Sept.	Oct.	Nov. 80 Nov. 80	Dec
Others (explain) Composting Activities A. Composting Method (Check all that apply) Windrow A. Composting Method (Check all that apply) Windrow A. B. Feedstock Type and Monthly Actual Amount Feedstock Type Greenwaste Foodwaste Biosolids Manure Others (explain) processed green material C. Product Type Greenwaste - only Compost Class A Compost Class B Compost Others (explain) Published Tipping Fee Schedule by Feedstock	Jan.	80	March	April	Mont May 80 Mont May	hly Actual Amoun June hly Actual Amoun June 6. Enforcemen Number of air quali	t Received (tons	/month) Aug. 80 2/month) Aug. 80 orcement actions iss	Sept.	Oct.	Nov. 80 Nov. 80 receding year	Dec
Others (explain) Composting Activities A. Composting Method (Check all that apply) Windrow A. Composting Method (Check all that apply) Windrow A. Composting Method (Check all that apply) Feedstock Type and Monthly Actual Amount Feedstock Type Greenwaste Biosolids Manure Others (explain) processed green material C. Product Type Greenwaste - only Compost Class A Compost Class B Compost Others (explain) Published Tipping Fee Schedule by Feedstock Feedstock Description	Jan.	80	March	April	Mont May 80 Mont May	hly Actual Amoun June hly Actual Amoun June G. Enforcemen Number of air quali	t Received (tons	/month) Aug. 80 2/month) Aug. 80 orcement actions iss	Sept.	Oct.	Nov. 80 Nov. 80 receding year	Dec

I declare under penalty of perjury that the subgaitted information is the best available information and data for my company.

Authorized Signature

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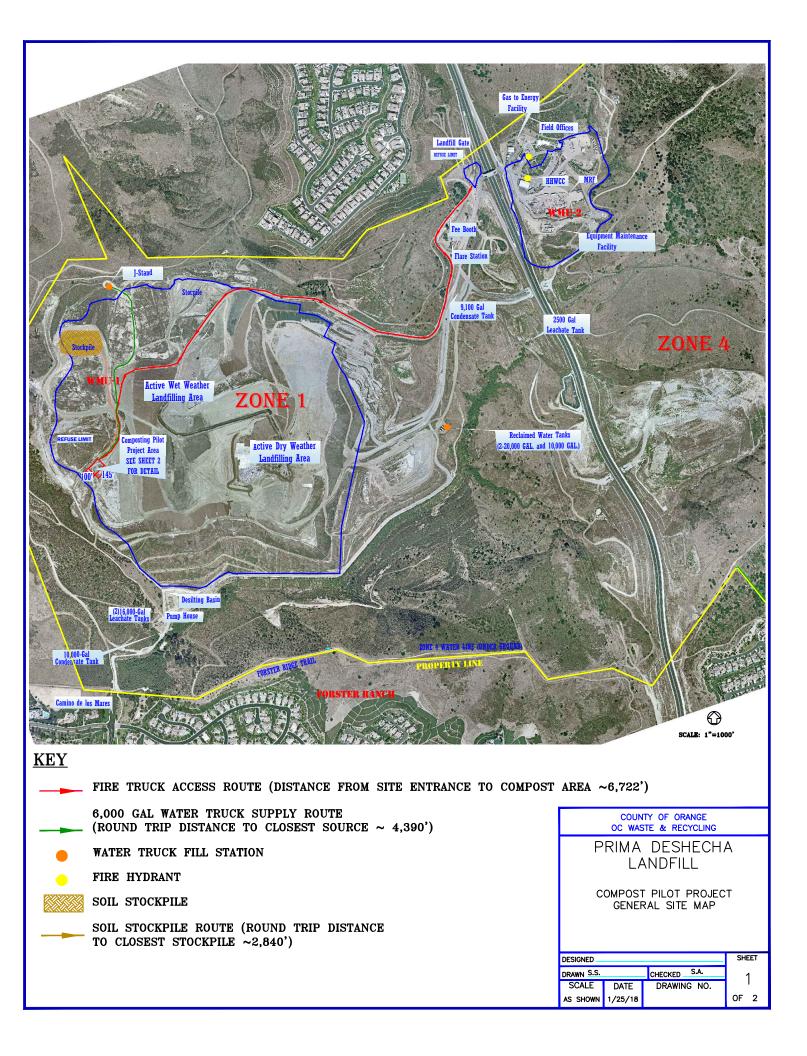
Name Thomas D. Koutroulis, Director OC Waste & Recycling Date

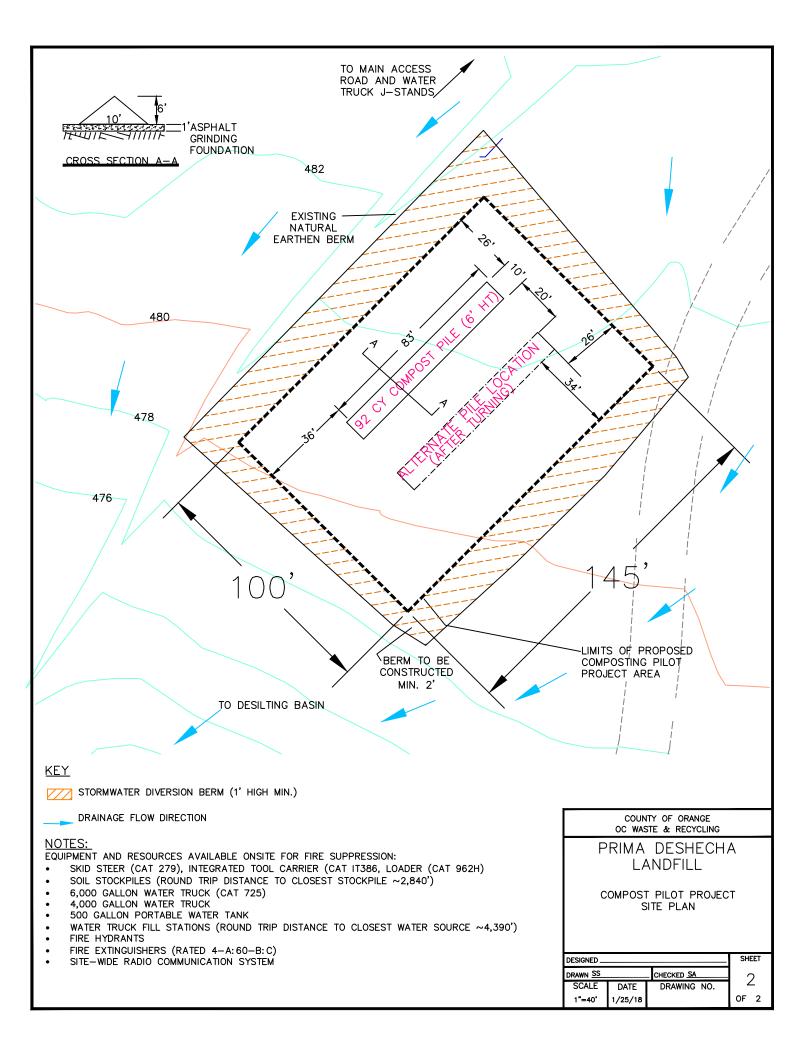
2/26/2018

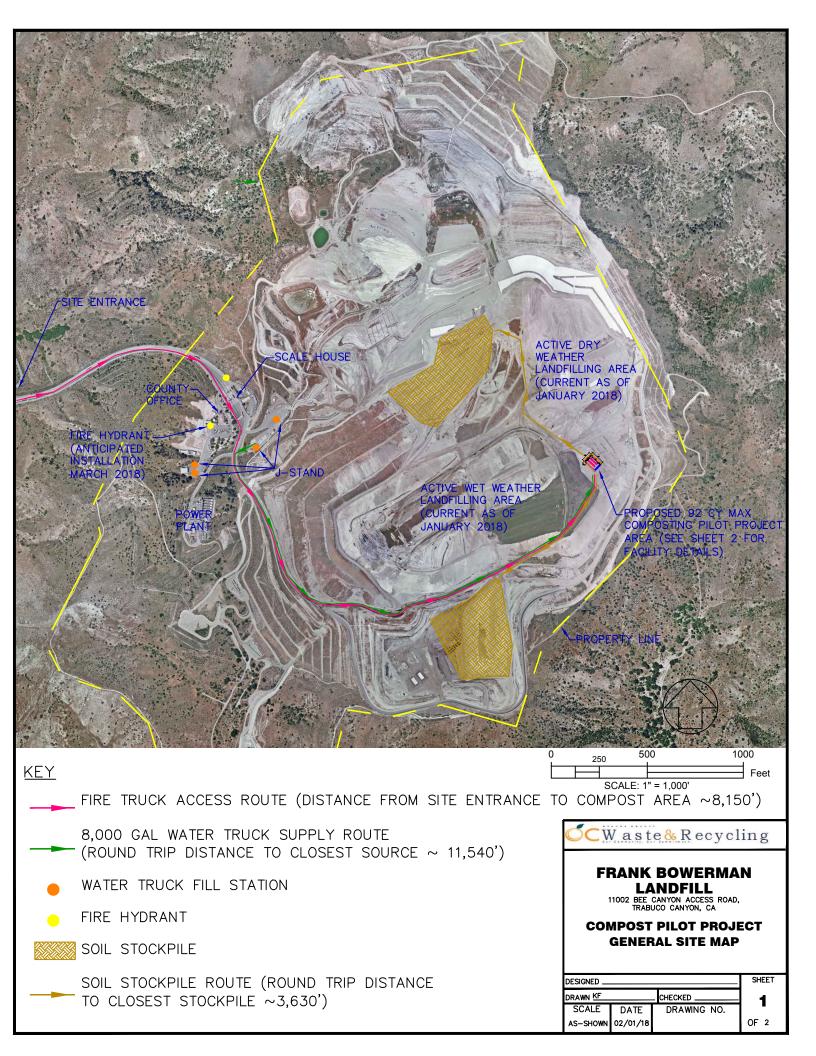
Rev: 10/21/08

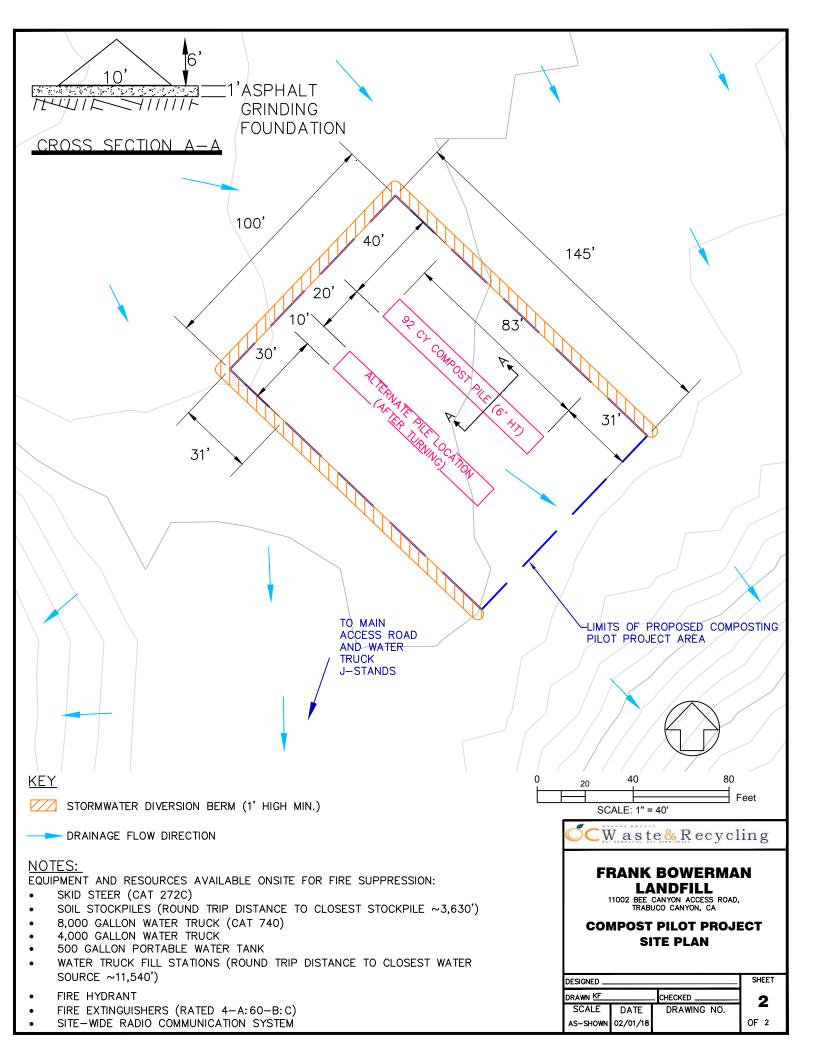


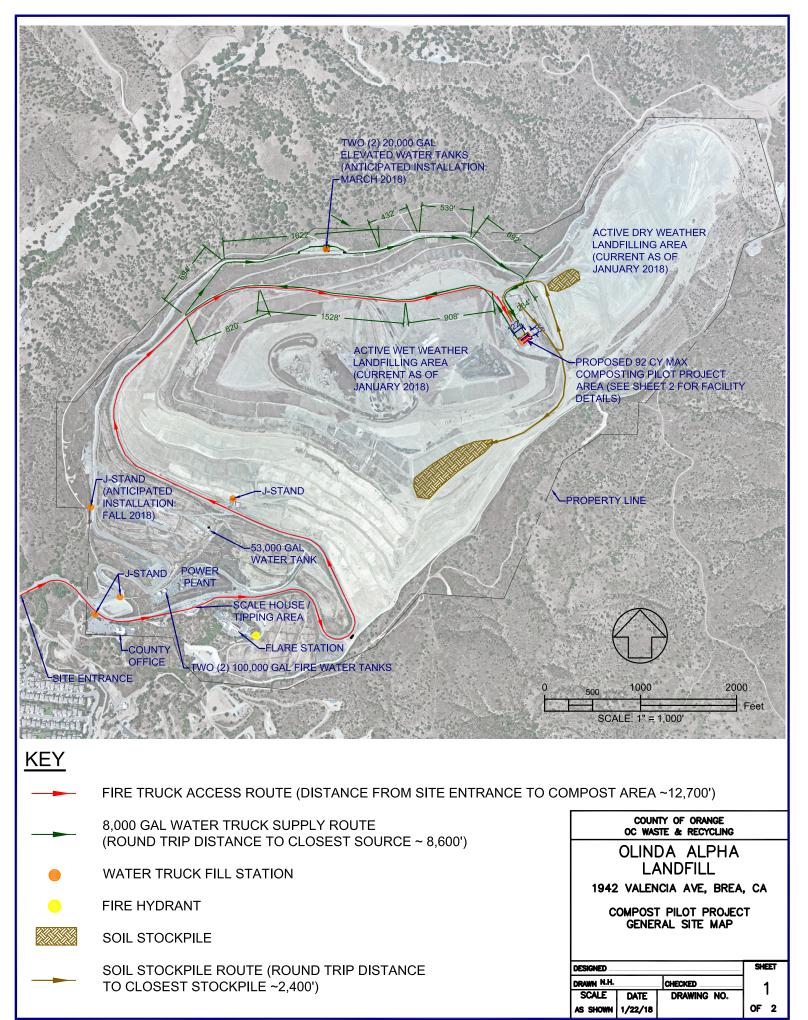
# **Appendix F: Pilot Projects Site Maps**



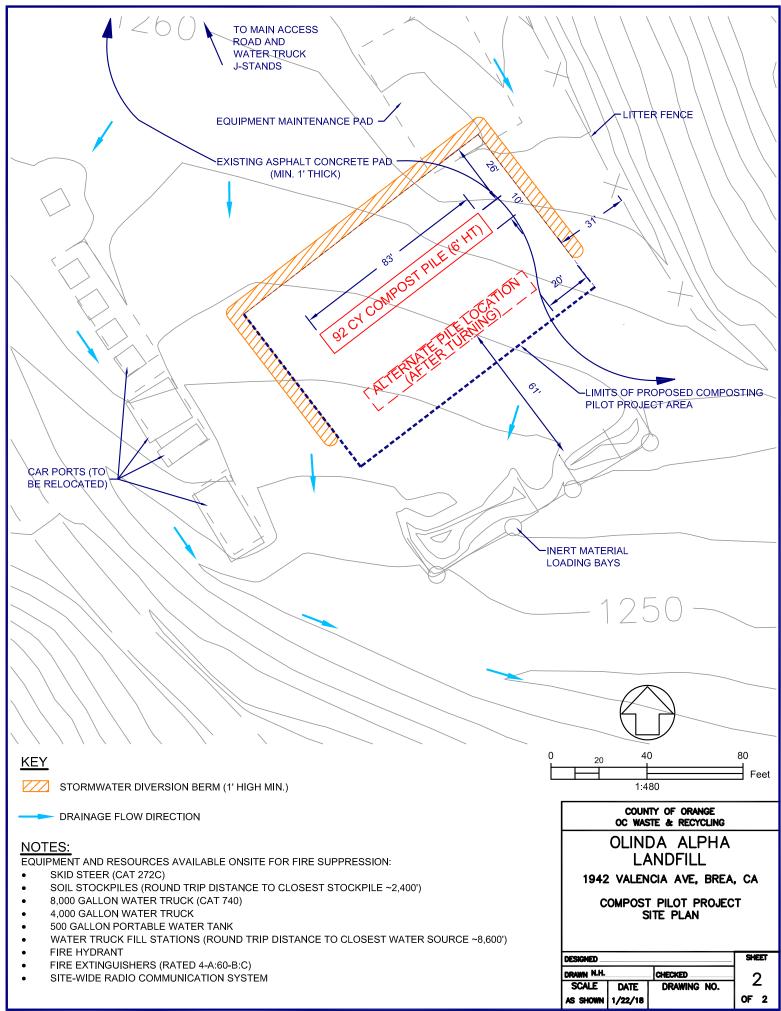








G:\!ENGINEERING\00\_ENGINEERING STAFF ACTIVE FOLDERS\NAN NATANOM-HARROLD\ORGANICS COMMITTEE\PILOT PROJECT\OLINDA COMPOST PILOT AREA





# **Appendix G: Process Flow Diagrams**

FEEDSTOCK DELIVERY	FEEDSTOCK WEIGH IN	QUALITY ASSURANCE	WINDROW CONSTRUCTION	COMPOSTING	СОМ
	Landfill Scales	Accept Load			
) FEEDSTOCK INFORMATION &	1) WEIGH IN & RECORD KEEPING	1) VISUAL INSPECTION	1) WINDROW BUILDING	1) TEMPERATURE & MOISTURE MONITORING	b) Moistur
SPECIFICATION A) Supplier/Generator: Hauler	<ul> <li>Feedstock hauler information and facility of origin shall be recorded</li> </ul>	A) Feedstock Material Specification	A) Designate an identification number for windrow pile	A) Temperature Monitoring	trends • Adjust mo
B) Type: Processed Green Material (PGM)	B) Feedstock shall be weighed in and	B) Level of Contamination	B) Windrow shall be built according to the	◆A 24" temperature probe shall be use in measuring pile temperatures at a	temperatu based on
C) Material Specification	shall be recorded in tons		following dimensions:	depth of 24" from the surface	B) Windrow F
<ul> <li>Particle size: 1/8 - 2 inch</li> <li>Acceptable contamination limit: &lt;10%</li> <li>Total Feedstock Volume: NTE 92 c.y.</li> </ul>	Return to Hauler/ Generator	Reject Load	<ul> <li>■Base width: 10 ft. Max.</li> <li>■Height: 6 ft. Max.</li> <li>■Length: 90 ft. Max.</li> </ul>	<ul> <li>At a minimum, 9 temperature readings shall be taken at the following approximate locations and points:</li> </ul>	Piles sha loader at
- Total Feedstock Volume. NTE 32 c.y.		2) REMOVAL OF VISIBLE CONTAMINANTS	C) Windrow shall be built in such a manner		minimize and align
		<ul> <li>As practical as possible, contaminants such as plastics, metals, &amp; glassetc. shall be sorted out and removed from</li> </ul>	that pile is uncompacted thereby increasing Free Air Space (FAS) and decreasing pile bulk density	shall be taken 5-10 ft. away from both ends of the entire length and at the middle of pile	<ul> <li>Turn over readings</li> </ul>
		the feedstock 3) FEEDSTOCK/ WINDROW PILE COMPOSITE SAMPLE COLLECTION	D) Windrow shall be built and situated as not to impede surface drainage run-off or allow surface drainage run-off to	<ul> <li>Monitoring Points – temperatures shall be taken at the middle of each side slope and top of pile per monitoring</li> </ul>	maintain 140—150 shall be t of 15 days
		<ul> <li>A) Composite Sample Collection- shall consist of at least 12 mixed samples of</li> </ul>	break or ran through windrow pile	<ul> <li>Frequency – temperatures shall be</li> </ul>	phase
		equal volume and extracted from the following sampling locations:		monitored daily until such time adjustments in the monitoring	in the fie ● If a rain
		<ul> <li>Four samples from one-half width of the pile each at a different cross section</li> </ul>		frequency are made based on established data trends for temperature	the pile v the pile is may be t
		<ul> <li>Four samples from one-fourth width of the pile each at a different cross section</li> </ul>		<ul> <li>Record keeping – temperature readings shall be recorded as composite readings per monitoring location and recorded in the field monitoring data sheet</li> </ul>	top half c depth, ap to mainta 45-60%
		<ul> <li>Four samples from one-eight width of the pile each at a different cross</li> </ul>		B) Moisture Monitoring	C) Windrow F
		section B) Composite samples shall be collected		<ul> <li>Once windrow pile had been watered or hydrated, moisture content shall be measured and monitored</li> </ul>	<ul> <li>Rewater p readings of content is</li> </ul>
		into a 5-gallon container for the purpose of:		<ul> <li>Moisture Content – Hydrate windrow until moisture content is consistently</li> </ul>	3) ACTIVE PH
		<ul> <li>Initial Feedstock Laboratory Analysis</li> </ul>		attained between 45-60%	A) Compostin
		<ul> <li>Initial Bulk Density Measurement</li> <li>Dry Weight Basis-bulk density shall</li> </ul>		<ul> <li>Guaging Moisture – samples shall be collected 3" below the surface and tested for moisture using the Squeeze Ball Method</li> </ul>	<ul> <li>Active Phase</li> <li>maintained</li> <li>minimum c</li> </ul>
		be measured and computed using a 5-gallon container and portable weighing scale		Moisture testing locations —shall be	<ul> <li>Moisture Co shall be ma</li> </ul>
		Dry Weight Bulk Density measurement		taken consistently within the vicinity of the temperature monitoring locations	minimum o
		shall be recorded in the field monitoring data sheet		<ul> <li>Frequency— moisture content shall be measured immediately after watering the pile</li> </ul>	<ul> <li>Maturity - S</li> <li>be use to</li> <li>completion</li> </ul>
				<ul> <li>Record keeping – date and volume of water used to hydrate windrow shall be recorded in the field monitoring data</li> </ul>	Solvita Mat indicates g phase othe until matur
				sheet 2) DATA EVALUATION, WINDROW TURNING, & REWATERING	attained a
				A) Monitoring Data Evaluation	• A compos
				<ul> <li>Temperature and moisture monitoring data obtained during the 1st and 2nd week shall be evaluated for:</li> </ul>	at a minir of the cor analysis
				a) Temperature Trends for wet and dry	

### CING PILOT PROJECT

#### **IPOSTING** (continued)



re evapration/dissipation rate for wet piles

onitoring frequency for ure & moisture as needed established trends

#### Pile Turning

Il be turned in-place using a t a 20 to 30 degree angle to disturbance to the orientation ment of pile

r piles if composite temperature are less than 140 F and ideal temperatures between F (Thermophilic stage) OR pile turned 5 times at a minimum ys interval during the active

over activities shall be recorded eld monitoring data sheet

event occurs prior to watering within six hours of watering and is wet  $3^{\circ}$  from the surface, pile turned without watering. If the of the pile is dry to the  $3^{\circ}$ oply additional water as needed ain moisture content between

#### Pile Rewatering

piles if composite temperature exceeds 155 F° or moisture is lower than 45%

ASE & MATURITY

ng Process Stage

ase— pile temperature shall be d between 122—150 F<sup>\*</sup> for a of 22 days

Content— pile moisture content naintained between 45—60% for a of 22 days

Solvita Maturity Kit and Index shal test and determine maturity or n of active phase

aturity Index of 5 or greater greenwaste has completed active herwise active phase shall continue urity index of 5 or greater is and curing phase has commenced

ing Process Sample Collection

site sample shall be collected imum 22 days from the start omposting process for laboratory

#### 1) CURING PHASE

- A) Curing Stage completion takes at a minimum of 40 days to several months
- Maturity- maturity and completion of the curing phase shall be tested and determined by using the Solvita Maturity Kit and Index

Solvita Maturity Index of 7 or greater indicates greenwaste has completed curing phase otherwise curing phase shall continue until an index reading of 7 or greater is attained

B) Completion of Curing Phase

• Characteristics (What to look for)

- a) Pile no longer generates heat after turning
- b) About 1/2 to 1/3 of its original volume
- c) Dark in color and smells earthy
- d) Original materials are no longer recognizable
- C) Final Compost Sample Collection

 Once curing phase had been completed and confirmed, a final composite sample shall be collected for laboratory analysis

SCREENING(by others) ) Compost Material Preparation

A) Compost Material shall be screened to allow materials through a seive size no greater than 3/8"

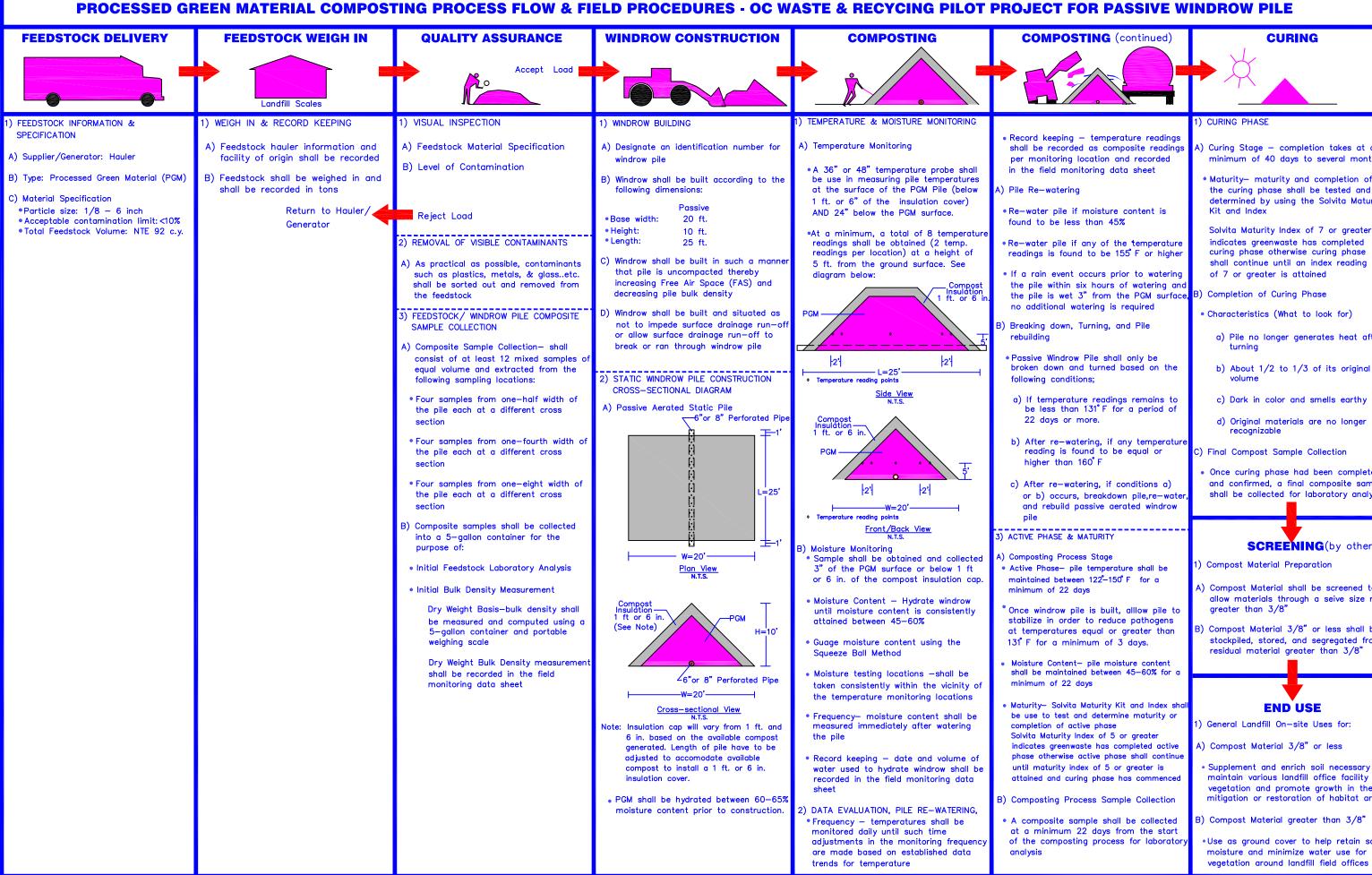
B) Compost Material 3/8" or less shall be stockpiled, stored, and segregated from residual material greater than 3/8"

#### END USE

1) General Landfill On-site Uses for:

- A) Compost Material 3/8" or less
- Supplement and enrich soil necessary to maintain various landfill office facility vegetation and promote growth in the mitigation or restoration of habitat areas
- B) Compost Material greater than 3/8"
- •Use as ground cover to help retain soil moisture and minimize water use for vegetation around landfill field offices

#### **CURING**



- A) Curing Stage completion takes at a minimum of 40 days to several months
- Maturity- maturity and completion of the curing phase shall be tested and determined by using the Solvita Maturit

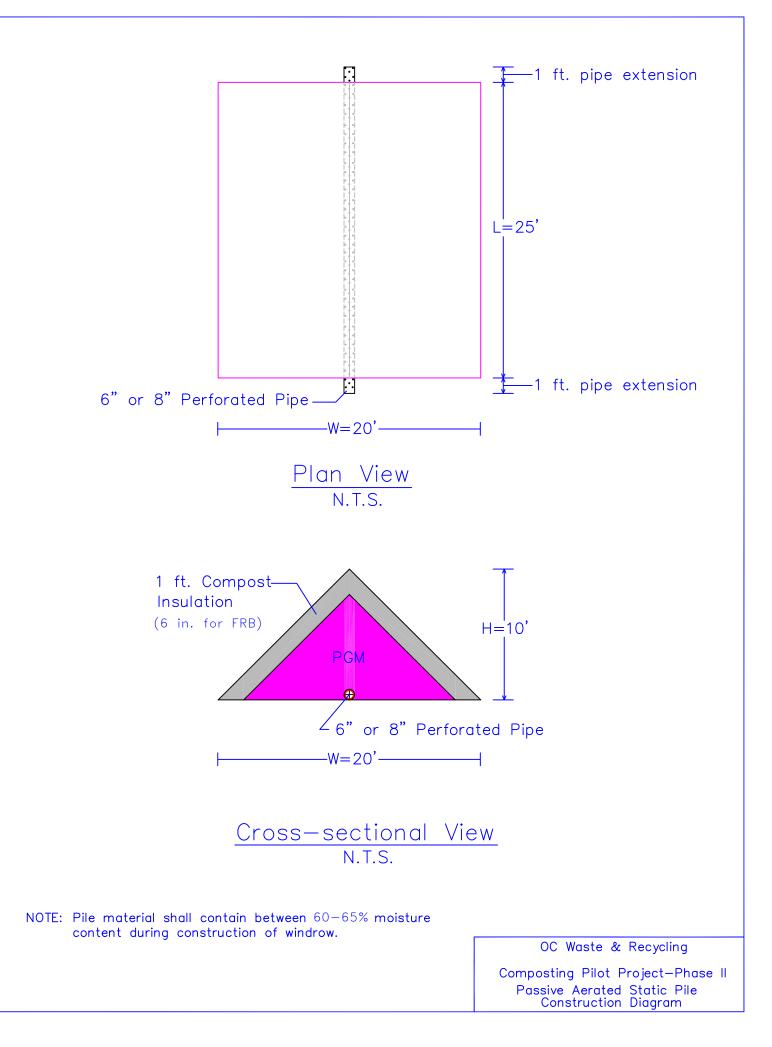
indicates greenwaste has completed curing phase otherwise curing phase shall continue until an index reading

- a) Pile no longer generates heat after
- b) About 1/2 to 1/3 of its original
- c) Dark in color and smells earthy
- d) Original materials are no longer
- Once curing phase had been completed and confirmed, a final composite samp shall be collected for laboratory analysi

#### SCREENING(by others)

- A) Compost Material shall be screened to allow materials through a seive size no
- B) Compost Material 3/8" or less shall be stockpiled, stored, and segregated from residual material areater than 3/8"

- Supplement and enrich soil necessary to maintain various landfill office facility vegetation and promote growth in the mitigation or restoration of habitat area
- B) Compost Material areater than 3/8"
- •Use as ground cover to help retain soil moisture and minimize water use for vegetation around landfill field offices





# **Appendix H: Field Data Sheets**

						V	VIND	RO	N D	AILY	MO	NIT	ORIN	G F	ORN	1							
Windrow ID	) (ex; Prima-No	o.1.):	#1	Capistra	ano Gree	enery			Feedsto	ick Sourc	e (ex; Re	epublic, f	Rainbow):	-	TVI								
Windrow St	tart Date:		3/27/2018							ılk Densi		920 lbs/	су			Free Air	Space (	FAS):	46.80%				
Windrow E	nd Date:	-	6/26/2018						End Bul	k Density	/*:					Final Co	ntamina	ation:					
		Phase								Ter	nperatur	re <sup>3,4,5</sup> an	d Moistur	e									
		(Active,			А		r				E	В	1		1			С					
	Inspector	PFRP, Curing)	S (Sout	th)	N (N	lorth)	т (т	op)	S (So	outh)	N (N	orth)	T (To	(qo	S (So	uth)	N (N	lorth)	т (те	(qo	Comp.	Water Applied	Turned
Date	Initials	0,	Temp.	Moist.				Moist.	Temp.				Temp.		Temp.			Moist.	Temp.	Moist.	Temp. <sup>2</sup>	(Gal)	(Y/N)
2/27/2010	10/00		70	50 550/	70	50 550/			70	50 550/	70	50 550/			70	F0 FF0/	70	50 550			70	4000 gal	
3/27/2018	LF/NB		/0	50-55%	70	50-55%			70	50-55%	70	50-55%			70	50-55%	70	50-55%			70	4000 gai	NU
3/28/2018	PV		70	50-55%	70	50-55%			100	50-55%	100	50-55%			92	50-55%	92	50-55%			87	0	NO
3/29/2018	lp/rb/jl/dm		137	50-55%	137	50-55%			126	50-55%	129	50-55%			140	50-55%	128	50-55%			133	0	NO
2/20/2018	10/11	PFRP	122		145				127	50-55%	140				122		125				137	0	NO
3/30/2018		FENF	132	50-55%	145	50-55%			157	50-55%	140	50-55%			152	50-55%	155	50-55%			157	0	NO
3/31/2018	LP	PFRP	NO TEMPERA	TURE GAU	JGE AVAI	LABLE															#VALUE!	0	
4/1/2018	LP	PFRP	NO TEMPERA	TURE GAU	JGE AVAI	LABLE- H	OLIDAY N	O OBSER	VATION												#VALUE!	0	
4/2/2018	LP		NO TEMPERA	TURE GAU	JGE AVAI	LABLE-Ac	tinomyce	te preser	nt when p	ile was ti	urned										#VALUE!	650 gal	YES
3-Apr	RB		NO TEMPERA	TURE GU	AGE AVAI	LABLE															#VALUE!	n	NO
4-Apr	LP/RB		138	50-55%	100	50-55%			132	50-55%	115	50-55%			122	50-55%	125	50-55%			122	200 gals	NO
5-Apr	RB	PRFP	140	50-55%	138	50-55%			140	50-55%	130	50-55%			132	50-55%	136	60-65%			136	0	NO
6-Apr	LP	PFRP	140	55-60%	148	55-60%			150	55-60%	142	55-60%			144	55-60%	142	55-60%			144	0	NO
7-Apr	LP	PFRP	138	55-66%	143	55-60%			142	55-60%	148	55-60%			135	55-60%	140	55-60%			141	0	NO
									100						100						100		
8-Apr	DM	PFRP	134	55-60%	140	55-60%			138	55-60%	142	50-60%			138	50-60%	135	50-60%			138	0	NO
9-Apr	RB	PFRP	123	45-50%	140	45-50%			142	50-55%	148	50-55%			148	50-55%	142	50-55%			141	0	YES
10-Apr	PV	PFRP	121	45-50%	137	45-50%			142	50-55%	144	50-55%			131	50-55%	138	50-55%			136	0	NO
11-Apr	RB/LP	PFRP	118	55-60%	140	60-65%			140	45-50%	148	55-60%			142	55-60%	138	55-60%			138	200 gals	NO
12-Apr	RB	PFRP	120	50-55%	124	45-50%			150	40-45%	152	40-45%			142	45-50%	148	45-50%			139	0	NO
									150						100								
4/13/2018	MR/LP	PFRP	142	55-60	143	55-60			152	50-55	158	50-55			138	55-60	141	55-60			146	850 gals	YES
4/13/2018	LP		84		74				94		81				100		86	j			87	NO	NO
4/14/2018	LP		110	60-65	85	60-65			119	60-65	100	60-65			100	60-65	104	60-65			103	No	No
4/15/2018	DM		109	55-60%	90	55-60%			115	55-60%	101	55-60%			120	50-55%	105	55-60%			107	No	No
4/16/2018	RB		122	45/50%	108	50/55%			132	55/60%	117	50/55%			115	50/55%	120	55/60%			119	no	no
4/17/2018				40/50%		50/55%				50/55%		55/60%				45/50%		55/60%			128		no
4/18/2018	RB	PFRP	133	40/45%	132	40/45%			134	40/50%	133	45/50%			132	50/55%	130	45/50%			132	no	no
4/19/2018	LP	PFRP	122	50%	138	50%			136	50%	133	50%			137	50%	133	50%			133	no	no
4/20/2018	lp/jl	PFRP	134	45%	140	55%			141	50%	132	55%			143	55%	131	. 55%			137	300 gal	no
4/21/2018	LP	PFRP	125	55%	132	55%			143	55%	138	55%			132	55%	138	55%			135	no	no
4/22/2018	RB	PFRP	142	50%	140	55%			130	55%	148	55%			148	55%	144	55%			142	no	no
+/22/2018	0	p i m	142	I 30%	I <sup>140</sup>	1 33%	1	1	130	33%	148	33%	i I	I	140	33%	1 <sup>144</sup>	1 33%	1 1	I I	142	10	10

						V	VINC	DRO\	N D/	AILY	MO	NIT	ORIN	IG FO	ORN	1							
Windrow ID	(ex; Prima-N	o.1.):		Capistra	ino Greei	nery							Rainbow)	: .	TVI								
Windrow St			3/27/2018						Start Bu			920 lbs/	су				Space (I		46.80%				
Windrow Er	id Date:		6/26/2018						End Bulk	Density	/:					Final Co	ntamina	tion:					
		Phase								Ten			d Moistu	re									
		(Active, PFRP,			A						E	3						С				Water	
	Inspector	Curing)	S (Sout	h)	N (No	orth)	т (т	op)	S (So	uth)	N (No	orth)	Т (Т	op)	S (So	uth)	N (N	orth)	т (т	op)	Comp.	Applied	Turned
Date	Initials		Temp.	Moist.	Temp.	Moist.	Temp.	Moist.	Temp.	Moist.	Temp.	Moist.	Temp.	Moist.	Temp.	Moist.	Temp.	Moist.	Temp.	Moist.	Temp. <sup>2</sup>	(Gal)	(Y/N)
4/23/2018	PP	PFRP	130	50%	140	45%			138	45%	144	55%			146	50%	150	55%			141	600	Voc
4/23/2018	ND	FTINF	130	50%	140	4378			138	4376	144	5578			140	50%	150	5578			141	000	103
4/24/2018	RB		115	55%	115	55%			115	55%	120	55%			118	55%	120	55%			117	no	no
4/25/2018	RB		117	45%	115	45%			118	45%	118	50%			122	45%	118	50%			118	no	no
4/26/2018	LP		118	45%	118	45%			120	45%	118	45%			129	45%	120	45%			121	no	no
4/27/2018	LP		124	45%	120	45%			114	45%	118	45%			126	45%	128	50%			122	500 gals	NO
4/28/2018	LP		134	50%	120	50%			132	50%	120	50%			131	50%	133	50%			128	NO	NO
4/29/2018	DM		105	50%	126	50%			130	50%	128	50%			131	50%	120	50%			123	NO	NO
4/30/2018	КВ		120	40%	119	50%			130	50%	125	45%			128	50%	120	50%			124	1000	YES
5/1/2018	RB		90	60%	102	60%			100	60%	108	60%			100	60%	100	60%			100	No	No
5/2/2018	RB		92	60%	102	60%			112	60%	115	60%			100	60%	110	60%			105	NO	No
5/3/2018	RB		102	60%	98	60%			113	60%	117	60%			114	60%	117	60%			110	NO	NO
5/5/2018	RB	Active	114	50%	124	50%			126	50%	128	50%			120	55%	124	45			123	300	NO
5/6/2018	AG	Active	132	50%	133	50%			124	50%	126	50%			126	45%	122	50%			127	NO	NO
5/7/2018	RB	PFRP	134	50%	132	45%			136	50%	132	50%			132	50%	134	50%			133	200	NO
5/8/2018	RB	PFRP	132	50%	136	50%			139	50%	134	50%			134	50%	140	50%			136	NO	NO
5/9/2018	RB	PFRP	132	50%	132	50%			132	50%	142	50%			136	50%	134	50%			135	50	NO
5/10/2018		Active	122	50%	134	50%			122	50%	142	50%			131	50%	140	50%			132	NO	NO
5/11/2018			108	60%	129	60%			122	60%	138	60%			118	60%	138	60%			126	500	NO
5/12/2018																							
5/12/2018			106	60%	128	60%			120	60%	136	60%			132	60%	138	60%			127	NU	NO
5/13/2018			96	55%	120	55%			116	55%	136	55%			120	55%	126	55%			119	NO	NO
5/14/2018		PFRP	120	50%	128	50%			131	50%	138	50%			130	45%	138	45%			131	NO	NO
5/15/2018		PFRP	132	50%	126	50%			130	50%	136	50%			132	45%	136	45%			132	NO	NO
5/17/2018	RB		136	50%	130	50%			138	50%	140	50%			136	45%	138	45%			136	NO	NO
5/18/2018	RB	Cure	119	45%	128	45%			128	45%	138	45%			134	45%	138	45%			131	NO	NO
5/19/2018		Cure	118	45%	128				131	45%	140	45%			132	45%	138				131		YES
5/20/2018	DM	Cure	104	45%	104	45%			106	45%	106	45%			100	45%	98	45%			103	NO	NO
5/21/2018	RB	Cure	120	45%	116	45%			118	45%	116	45%			116	45%	116	45%			117	NO	NO
5/24/2018	RB	Cure	138	45%	133	45%			139	45%	136	45%			129	45%	128	45%			134	NO	NO

						V	VINC	RO	N D	AILY	МО	NIT	ORIN	NG F	ORN	1							
Windrow ID	(ex; Prima-No	o.1.):	#1	Capistra	ino Gree	nery			Feedsto	ck Sourc	e (ex; Re	public, F	ainbow	):	TVI								
Windrow St	art Date:		3/27/2018						Start Bu	lk Densi	ty <sup>1</sup> :	920 lbs/	су	-		Free Air	Space (F	AS):	46.80%				
Windrow Er	nd Date:		6/26/2018						End Bull	C Density	/ <sup>1</sup> :					Final Co	ntamina	tion:					
		Phase								Ter	nperatur	e <sup>3,4,5</sup> an	d Moistu	ıre									
		(Active,			А						E			-				С					
	Inspector	PFRP, Curing)	S (Sout	h)	N (N	orth)	т (т	op)	S (So	uth)	N (No	orth)	т (т	on)	S (So	uth)	N (N	orth)	Т (Т	ion)	Comp.	Water Applied	Turned
Date	Initials	····.8/	Temp.	Moist.			Temp.		Temp.		Temp.		Temp.		Temp.			Moist.	Temp.		Temp. <sup>2</sup>	(Gal)	(Y/N)
5/25/2018	DM	Cure	125	45%	131	45%			140	45%	132	45%			131	45%	132	45%			132	NO	NO
5/26/2018	DM	Cure	121	45%	130	45%			138	45%	135	45%			135	45%	132	45%			132	200	NO
5/20/2018	DIVI	cure	121	4378	150	4378			155	4378	155	4378			155	4378	132	4378			152	500	NO
5/27/2018	DM	Cure	112	45%	125	45%			141	45%	140	45%			138	45%	138	45%			132	NO	NO
5/29/2018	RB	Cure	132	40%	144	40%			152	40%	152	40%			156	40%	152	40%			148	NO	NO
5 /20 /2010		<b>C</b>	400	4000		400/			450	4000	454	100/			457	100/	455	4000				200	VEC
5/30/2018	кв	Cure	133	40%	143	40%			152	40%	151	40%			157	40%	155	40%			149	200	YES
6/1/2018	LP	Cure	116	45%	120	45%			116	45%	122	40%			132	40%	109	45%			119	NO	NO
6/2/2018	LP	Cure	122	55%	130	55%			125	55%	122	55%			133	55%	112	55%			124	400	NO
c /2 /2 0 1 0															100								
6/3/2018	DM	Cure	115	55%	114	55%			112	55%	118	55%			120	55%	118	55%			116	NO	NO
6/4/2018	RB	Cure	115	50%	115	50%			116	50%	128	50%			117	50%	121	50%			119	NO	NO
																						-	
6/5/2018	RB	Cure	115	50%	117	50%			114	50%	125	50%			114	50%	121	50%			118	1000	YES
6/8/2018	DM	Cure	100	45%	106	50%			112	45%	114	45%			110	45%	118	45%			110	NO	NO
6/9/2018	DM	Cure	100	45%	109	45%			102	45%	115	45%			118	45%	120	45%			111	NO	No
0,0,0000																							
6/10/2018	DM	Cure	108	40%	112	40%			118	40%	116	40%			112	40%	122	40%			115	NO	NO
6/12/2018	RB	Cure	120	50%	122	50%			124	50%	128	50%			126	50%	120	50%			123	200	NO
6/14/2018	RB	Cure	128	50%	127	50%			128	50%	130	50%			125	50%	129	50%			128	NO	NO
																						-	
6/15/2018	LP	Cure	128	50%	132	40%			130	45%	136	45%			142	45%	130	45%			133	NO	NO
6/16/2018	LP	Cure	124	50%	115	50%			125	50%	135	50%			140	50%	124	50%			127	200	NO
6/19/2018	RB	Cure	124	50%	126	50%			132	50%	131	50%			134	50%	130	50%			130	200	NO
0, 20, 2020																							
6/20/2018	RB	Cure	124	45%	124	45%			120	45%	130	45%			128	45%	126	45%			125	NO	NO
6/21/2018	RB	Cure	124	45%	124	45%			124	45%	132	45%			131	45%	130	45%			128	NO	NO
6/22/2018	RB	Cure	125	45%	124	45%			124	45%	133	45%			134	45%	131	45%			129	300	YES
6/23/2018		Cure	119	45%	117	45%			116	45%	120	45%			120	45%	119	45%			119	NO	NO
Notes:		l																		L	0	<u> </u>	<u> </u>
	<sup>1</sup> Bulk Density																						
	<sup>2</sup> Comp. Temp							its [(A12'	'+A24")+	(B12"+B	24")+(C1	2"+C24'	')] ÷ 6										
	<sup>3</sup> For safety p <sup>4</sup> Active Phase					d 160°F																	
	<sup>5</sup> PFRP Phase																						
Definitions:	Active Phase	- First phas	e where tem	perature	s must h	e above	122°F fo	or a minir	num of 3	22 days													
	PFRP Phase -										nperature	es must	be above	e 131°F f	for a mini	mum of	15 days						

		WINDROW MON	ITORING FO	DRM - FIEL	D OBSER	VATIONS
Windrow ID:	#1	Capistrano Greenery		Windrow Start D	ate: 3-27-18	
Feedstock Sour	ce:	TVI PGM		Windrow End Da	te: 6-26-18	
Date	Inspector Initials	Weather (ex: Clear, Warm, Cool, Rain, Fog)	Odors (See odor wheel)	Standing or Seeping Liquids (Y/N)	Wind Direction (N,S,E,W, etc.)	Special Occurrences Log (Vermin, Smoke, Dust, etc.)
3/27/2018	LP/RB	Sunny Clear	Mild	NO	Southwest	No S/O
3/28/2018	PV	Sunny Clear	Mild	NO	Southeast	No S/O
3/29/2018	LP/JL/DM	Sunny & Clear	Mild (Isolated)	NO	Southwest	Light steam rising across the top of pile
3/30/2018	JL/LP	Sunny, Warm and Clear	Mild	Yes, S/E side, Min	Lt.S/W Wind	gnats present, Steam, Pile Noticeably Smaller
3/31/2018	LP	Sunny, Mild Temps, Fog in AM	Mild	No	S/W	Steam across top of pile
4/1/2018	LP	Overcast, Sunny in late afternoon				Holiday-No Filed Observation
4/2/2018	LP	Overcast	None	No	S/W	Steam across top of pile, turned today
4/3/2018	RB	Cool, Cloudy	Mild Earthy Odor	NO	S/E	Steam venting from top of pile
4/4/2018	RB/LP	Cool, Cloudy	Mild Earthy Odor	NO	S/E	Steam venting
4/5/2018	RB	Cool, Cloudy, Marine Layer	Very Mild	NO	North	No S/O
4/6/2018	LP	Warm, Clear, Mild Temps	No Odors	NO	North	No Steam, Site Looks Good
4/7/2018	LP	Overcast in AM, Clear in afternoon	No Odors	NO	Southwest	No Steam. Est.(10) fly's and one crickets
4/8/2018	DM	Warm,clear,mild	No Odors	NO	North	Slight steam
4/9/2018	RB	Clear,warm,sunny	Mild Earthy Odor	no	North	Light steam rising across the top of pile
4/10/2018	PV	Clear,warm,sunny	Mild Earthy Odor	no	North	No S/O
4/11/2018	RB/LP	Overcast, Cool	None	no	North	Light steam rising across the top of pile
4/12/2018	RB	Partly cloudy, Cool	Mild Earthy Odor	no	North	Light steam rising across the top of pile
4/13/2018	MR/LP	Sunny, Warm , Clear	None	No	No Wind	No S/O
4/14/2018	LP	Sunny, Clear, Lt. Wind	Mild	minimal	Southwest	gnats,
4/15/2018	DM	Overcast	None	Yes	North /West	gnats
4/16/2018	RB	Sunny/some clouds/warm	Mild Earthy Odor	Small seep	East	No S/O
4/17/2018	RB	Sunny/cool/light breeze	Mild Earthy Odor	Small seep	Noth	some gnats
4/18/2018	RB	Sunny/cool/light breeze	Mild Earthy Odor	Seeping less	North	Light steam rising top of pile
4/19/2018	LP	Rain early morning /Sunny by 10	None	None	SW mild wind	no flys /gnats

	WINDROW MONITORING FORM - FIELD OBSERVATIONS							
Windrow ID:	#1	Capistrano Greenery		Windrow Start Date: 3-27-18				
Feedstock Sour	ce:	TVI PGM		Windrow End Date: 6-26-18				
Date	Inspector Initials	Weather (ex: Clear, Warm, Cool, Rain, Fog)	Odors (See odor wheel)	Standing or Seeping Liquids (Y/N)	Wind Direction (N,S,E,W, etc.)	Special Occurrences Log (Vermin, Smoke, Dust, etc.)		
4/20/2018	LP	Clear warm	None	None	SW	No S/O		
4/21/2018	LP	Clear warm	None	None	Light SW	no flys /gnats		
4/22/2018	DM	Clear warm	Mild	None	North	Light steam		
4/23/2018	RB	Clear /cool/slight breeze	Mild earthy odor	None	North	Light steam		
4/24/2018	RB	Partly cloudy, Cool	Mild	None	North	Some gnats/no visable steam		
4/25/2018	RB	Clear, cool, sunny	Mild	None	North East	gnats		
4/26/2018	LP	Some clouds,sunny, cool	Mild	None	North East	gnats		
4/27/2018	LP	Overcast in AM, Sunny Afternoon	None	None	Light N/W	Pile looked smaller		
4/28/2018	LP	Sunny, Mild Temps	Mild	None	Light N/W	Pile looks good, Good even color, Clean		
4/29/2018	DM	Sunny Clear	None	None	SE	No S/O		
4/30/2018	RB	Cloudy cool	None	None	NW	No S/O		
5/1/2018	RB	Cloudy cool	Mild Earthy Odor	None	N	No S/O		
5/2/2018	RB	Light rain in the AM/ cloudy pm	Mild	None	N	No S/O		
5/3/2018	RB	Sunny Warm	Mild	None	NE	No S/O		
5/5/2018	RB	Sunny Warm	Mild	None	NW	No S/O		
5/6/2018	AG	Sunny/Clear	Mild	None	SE	No S/O		
5/7/2018	RB	Clear/sunny /warm	None	None	N	Light steam off of the pile		
5/8/2018	RB	Overcast / cool	Mild odor	None	NW	Light steam off of the pile		
5/9/2018	RB	Overcast/ cool	Mild odor	None	w	Light stean off of the pile		
5/10/2018	RB	Clear, sunny	Mild	None	N	No S/O		
5/11/2018	DM	Overcast, Cool	None	yes	N	No S/O		
5/12/2018	JL	Overcast	Mild odor	No	N	No S/O		
5/13/2018	DM	Sunny	Mild odor	No	No Wind	No S/O		
5/14/2018	RB	Clear, cool	None	None	N	No S/O		

		WINDROW MON	ITORING FO	ORM - FIEL	D OBSER\	/ATIONS	
Windrow ID:	#1	Capistrano Greenery		Windrow Start Date: 3-27-18			
Feedstock Sour	rce:	TVI PGM		Windrow End Date: 6-26-18			
Date	Inspector Initials	Weather (ex: Clear, Warm, Cool, Rain, Fog)	Odors (See odor wheel)	Standing or Seeping Liquids (Y/N)	Wind Direction (N,S,E,W, etc.)	Special Occurrences Log (Vermin, Smoke, Dust, etc.)	
5/15/2018	RB	Sunny, clear	Mild Earthy Odor	None	NE	No S/O	
5/17/2018	RB	Sunny windy	No Odors	None	N	No S/O	
5/18/2018	DM	Cloudy mild	None	None	N	No S/O	
5/19/2018	RB	Cloudy cool	None	None	No Wind	No S/O	
5/20/2018	DM	Cloudy	None	None	N	No S/O	
5/21/2018	RB	Cloudy & cool	None	None	N	No S/O	
5/24/2018	RB	Cloudy & cool	None	None	N	No S/O	
5/25/2018	DM	Cloudy & cool	None	None	N	No S/O	
5/26/2018	DM	Cloudy & cool	None	None	N	No S/O	
5/27/2018	DM	Sunny & cool	None	None	N	No S/O	
5/29/2018	RB	Cloudy, cool & windy	None	None	NE	No S/O	
5/30/2018	RB	Cloudy & cool	None	None	N	No S/O	
6/1/2018	LP	Clear/slight overcast	None	None	NE	Steam from top of pile	
6/2/2018	LP	Clear warm	None	None	NE	Some light steam	
6/3/2018	DM	Clear warm	None	None	No Wind	Some light steam	
6/4/2018	RB	Clear warm	None	None	N	No S/O	
6/5/2018	RB	Clear warm	None	None	N	Small bugs	
6/8/2018	DM	Clear warm	None	None	N	No S/O	
6/9/2018	DM	Clear warm	None	None	N	No S/O	
6/10/2018	DM	Clear warm	None	None	N	No S/O	
6/12/2018	RB	Clear warm	None	None	N	No S/O	
6/14/2018	RB	Cloudy cool	None	None	N	No S/O	
6/15/2018	LP	Sunny Warm	None	None	Light N	LEA Inspection by Jim Strozer no issues	
6/19/2018	RB	Sunny cool	None	None	N	No S/O	

Windrow ID:	ow ID: #1 Capistrano Greenery			Windrow Start Date: 3-27-18			
Feedstock Sour	rce:	TVI PGM		Windrow End Date: 6-26-18			
Date	Inspector Initials	Weather (ex: Clear, Warm, Cool, Rain, Fog)	Odors (See odor wheel)	Standing or Seeping Liquids (Y/N)	Wind Direction (N,S,E,W, etc.)	Special Occurrences Log (Vermin, Smoke, Dust, etc.)	
6/20/2018	RB	Sunny Warm	None	None	N	No S/O	
6/21/2018	RB	Sunny Warm	None	None	N	No S/O	
6/22/2018	RB	Sunny Warm	Mild	None	N	No S/O	
6/23/2018	RB	Overcast cool	Mild	None	Slight breeze N	No S/O	

Initial Weight:	33 tons	3/27/2018 * 1.5 loads from TVI. Load 1 - 22.66 tons. Load 2 - 20.92 tons
Initial Volume:	92 cy	
Initial Bulk Density:	920 lbs/cy	
Final Weight:	46.84 tons	6/25/2018 * Unscreened
Final Volume:	67 cy	
Final Bulk Density:	1,394 lbs/cy	Composite, Prior to Screening
Post Screening (Komptech Starso	creener)	6/27/2018
% Fine (<3/8''):	16.65 tons	36% % distribution by weight.
% Medium(3/8" to 1.0"):	17.85 tons	38%
% Coarse (>1.0")	12.34 tons	26%

Komptech	Table #1			Komptech Mo	del #L3	Table #2	
Summary of Field Parameters - Capistrano Greenery					Summary of Field Parameters - Capistrano Greener		
	Initial		Final			Initial	Final
	PGM	Fines	Mediums	Coarses		PGM	PGM
Date	3/27/2018		6/30/2018		Date	3/27/2018	6/30/2018
Bulk Density (lb/cy)	920	1,415	1,051	869	Bulk Density (lb/cy)	920	1394
Volume (cy)	92	24	34	28	Volume (cy)	92	67
Weight (tons)	33	17	18	12	Weight (tons)	33	47
% Volume Reduction		74%	63%	69%	% Volume Reduction	2	7%
% Weight Reduction		50%	46%	63%	% Weight Reduction	-4	42%

#### Date of Measurement = 06/26/2018

	34.5 lbs	1 ton = 2000 lbs
	0.668 ft3	1 ft3 = 0.037 cy
	0.025 cy	
	1,394 lbs/cy	
2.5	16 #	
b =	5 ft	
h =	7 ft	
Area =	73.5 ft2	
length =	41 ft	
ompost) =	3,014 ft3	
	111 cy with vo	pid space
	67 cy withou	t void space
	Area =	0.668 ft3 0.025 cy 1.394 lbs/cy a = 16 ft b = 5 ft Area = 73.5 ft2 length = 41 ft :compost) = 3,014 ft3 111 cy with vc

Date of Measurement = 06	5/28/2018						
		FINES	MEDIUMS	COARSES			
Weight (5 gal bucket)*:		35 lbs	26 lbs	21.5 lbs	*After Screening		
Volume (5 gal bucket):		0.668 ft3	0.668 ft3	0.668 ft3			
		0.025 cy	0.025 cy	0.025 cy			
Bulk Density (5 gal bucket)	:	1,415 lbs/cy	1,051 lbs/cy	869 lbs/cy			
Volume of Compost:	a =	15 ft					
(Before Screening - with	b =	5 ft					
void space)	h =	4.9 ft					
	Area =	49 ft2					
	length =	41 ft					
Volume	e (compost) =	2,009 ft3					
		74 cy with ve	oid space				
			After 1st S	rreening			After 2nd
	FIN	FS	MEDIUMS	COARSES	EIN	NES	MEDIUMS
Volume of Compost:	radius =	6.75 ft	11.25 ft	6.75 ft		8 ft	8.75
(with void space)	height =	8.04 ft	8.48 ft	9.31 ft		9.84 ft	8.92
,	Area =	143 ft2	397 ft2	143 ft2		201 ft2	240

 After 1st Screening
 After 1st Screening
 After 2nd Screening

 FINES
 MEDIUMS
 COARSES
 FINES
 MEDIUMS
 COARSES

 of Compost:
 radius =
 6.75 ft
 11.25 ft
 6.75 ft
 8 ft
 8.75 ft
 7 ft

 vid space)
 height =
 8.04 ft
 8.48 ft
 9.31 ft
 9.84 ft
 8.92 ft
 10.25 ft

 Volume =
 383 ft3
 1123 ft3
 444 ft3
 659 ft3
 715 ft3
 526 ft3

 14 cy
 42 cy
 16 cy
 24 cy
 26 cy
 19 cy

 % material screende
 19%
 56%
 22%
 33%
 36%
 26%
 % based on measured volume.

 Total % of materials =
 97%

 42 dt v1 st
 +14%\*\*
 -20%\*\*
 +4%\*\*

\*\*Performed a second screening of just the MEDIUMS compost materials. The amount of FINES and COARSES increased by 14% and 4% of total volume respectively. Note: calculated about 97% total volume after 1st screening was recovered and about 95% of total volume after 2nd screening.

Date of Calculation: 7/3	3/2018				
	Fines	Medium	Coarses		
	(6/29/18)	(6/30/18)	(calculated)	Total	
Weight (tons)	16.65	17.85	12.34	46.84	
Weight (Ibs)	33,300	35,700	24,680	93,680	
Volume (cy)	23.54	33.97	28.40	85.91	
% materials (post					
screening)	27%	40%	33%		% based on volume distribution.

\*\*The results were calculated using volume with no void space (i.e. individual bulk density).

## Capistrano Greenery Greenwaste Project Load Check

<u>Gross</u>	Tare	<u>Net</u>
22.76	13.2	9.56
22.24	13.2	9.04
21.35	13.2	8.15
20.66	13.2	7.46
22.14	13.2	8.94
16.89	13.2	3.69
	Net Total	46.84 tons

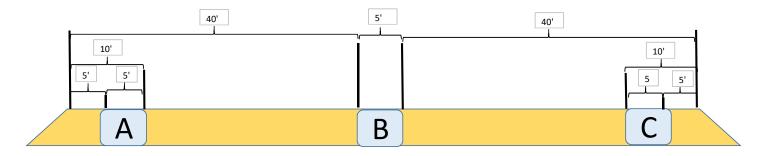
## Fine 6/29/18

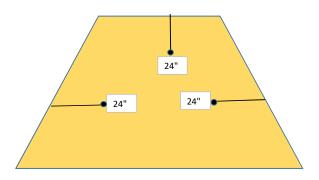
## Medium 6/30/18

Gross	Tare	Net
21	13.2	7.8
22.05	13.2	8.85
Net Total (Fine)	16	.65

Gross	Tare	Net
19.89	13.2	6.69
18.59	13.2	5.39
18.97	13.2	5.77
Net Total (Medium)	17	.85

1 ton = 2000 lbs







# **Appendix I: Job Hazard Analysis**

# HEALTH AND SAFETY PLAN





# Section 3.1 Compost Fire Prevention Plan

## COMPOST FIRE PREVENTION PLAN TABLE OF CONTENTS

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Housekeeping			
Training5			
Maintenance			

Section: Subject:	3.1 Compost Fire Prevention Plan	Effective Date Revision Date	05-18 N/A
PURPOSE:	To address the general fire safe employees.	ty guidelines for OC	WR
POLICY: SCOPE:	OCWR recognizes the need to comply with fire safety regulations, and the importance of adherence to sound fire prevention practices. All employees shall observe fire safety guidelines as stated here, and take action as is necessary to remediate such hazards.		
<b>REFERENCES:</b>	These guidelines are in complian local regulations, and apply to a		
	OCWR Health & Safety Plan: S OC Fire Authority Composting		

## Introduction

The Fire Prevention Plan was prepared as OCWR Health & Safety Plan: Section 3.0 (OCWR FPP) based primarily on the requirements of the Department of Occupational Safety and Health ("Cal/OSHA") as defined under the General Industry Safety Orders; more specifically, T8 §3221 - *Fire Prevention Plan*. In addition, this plan is also in compliance with the *California Fire Code* (T24 CCR Part 9)—which is based on the International Fire Code and California-specific amendments—and information from the National Fire Protection Association.

This document, Compost Fire Prevention Plan, OCWR Health & Safety Plan: Section 3.1 (Compost FPP) serves as an addendum to the OCWR FPP in order to incorporate compost-specific fire prevention activities.

## **General Fire Hazards and Control** – T8 CCR §3221(b)(1)

As described in OCWR FPP, OC Waste & Recycling (OCWR) must make every effort to control sources of heat (ignition) and minimize the amount of flammable and/or combustible materials present in the work environment. It is the responsibility of every OCWR employee to be aware of potential problems and to maintain his/her work area to keep it free of recognized fire hazards. If you feel there is a fire hazard in your workplace, but not sure how to address or correct the problem, contact your immediate supervisor, Designated Safety Representative (DSR), or the Safety and Training Officer.

All employees should be made aware of these situations, and should inspect their work locations for such potential hazards. The following are some general categories of fire hazards and their control measures.

### Fire Monitoring

- > Monitor Site for Signs of Fires.
  - If fire is identified, call 911.
  - Area of potential fire will be separated using heavy equipment and water shall be applied immediately.
  - On "Red Flag" days, a person shall be dedicated as a "Fire Watch."
  - The designated party shall be on site monitoring the compost piles and shall have no other duties.

## Life Safety

- Fire Department and other emergency responders must have 24-hour access to the facility.
- Site contact information shall be posted at the entrance to the facility for responding units
- > Site contact shall be available in emergency situations
- Aisles of travel shall be maintained at 20-feet wide or greater to facilitate unobstructed movement of personnel and/or fire protection equipment in the event of a fire.
- Ailes shall be all-weather surface and able to support 75,000 pounds of vehicle weight.
- A minimum of 14 feet clearance shall be maintained from the edge of the piles to the edge of the fire department access road.
- In order to limit fire spread and provide adequate access for firefighting efforts, a minimum of 28 feet around the pile is required.
- One-hundred (100) feet of defensible space shall be required from piles to flammable vegetation and SRA open space. Fire access road can be used as part of the defensible space zone.

Provide space to spread out piles in the event of a spontaneous combustion fire.

### Compost Conditions

- Within 24 hours, move processed materials to active composting with sufficient moisture (at least 50% to start).
- Maximum Pile Size
  - 6 feet high
  - 10 feet wide
  - 100 feet long
  - Max 92 cy total quantity
- Monitoring Requirements
  - Temperature must be measured on a daily basis
  - (1) If temperature exceeds 165° F, pile must be turned
  - A daily log noting date, time, and temperature must be kept and available for review

## **Potential Ignition Sources and Control** – **T8 CCR §3221(b)(1)**

Ignition (heat) sources must be controlled so as to prevent a potential fire.

Hot Loads

- > Conduct Load Checks to Identify Hot Loads.
  - Inspect for evidences of ash, embers, smoke or fire.
  - Material with temperature exceeding 165° F shall not be accepted on the site
  - If hot loads are regularly encountered, develop a "tipping area" or other appropriate place to isolate burning or smoldering loads

## **<u>Fire Protection Equipment and Systems</u> – T8 CCR §3221(b)(1)**

Fire protection equipment are effective ways to increase worker safety and to control fires during the early stages.

Fire Suppression Equipment

Fire suppression equipment utilized by OCWR is one of three types:

- Portable Fire Extinguishers with a minimum rating of 4A:60B:C shall be provided for all vehicles and equipment operating on piles and processing equipment
- Provide access to adequate water supply for firefighting operations if needed

**NOTE**: As stated in the *Emergency Action Plan*, <u>DO NOT</u> attempt to fight a fire unless you are sure it can be extinguished safely with available means.

## Housekeeping – T8 CCR §3221(c)

"The employer shall control accumulations of flammable and combustible waste materials and residues so that they do not contribute to a fire emergency."

## <u>General</u>

- All powered tools, appliances, and machinery shall be maintained in a safe and proper manner. All routine cleaning and maintenance procedures should be followed in accordance with the manufacture's instructions.
- Good maintenance and operating practices shall be followed to prevent the accidental release of flammable and combustible liquids; spills shall be cleaned up promptly.

## **<u>Training</u>** – T8 CCR §3221(d)(1) and (2)

"The employer shall apprise employees of the fire hazards of the materials and processes to which they are exposed. The employer shall review with each employee upon initial assignment those parts of the fire prevention plan which the employee must know to protect the employee in the event of an emergency."

Supervisors are required to inform their employees of any hazards—to include materials and/or industrial processes—within their work locations likely to cause a fire. In addition, any new fire hazard(s) must be brought to the attention of the employee within 30 calendar days of being introduced or from the time when the supervisor first becomes aware of the hazard.

The Safety and Training Officer will review the FPP with all new employees during New Hire Orientation. In addition, all supervisors shall ensure that each new employee has full access to the FPP for his/her later review; this will help ensure that employees are more capable of being able to recognize basic fire hazards and what corrective actions may be necessary. Refresher training may also be accomplished periodically through discussion of tailgate safety meetings. Initial training shall include:

- Basic information on fire classes.
- > Responsibilities for fire prevention as outlined in this Plan.
- Potential fire hazards (materials, processes) to which the employee may be exposed.
- > Proper methods for controlling and/or eliminating basic fire hazards.
- > General locations, care, and proper use of portable fire extinguishers.

Employees should have a basic understanding of fire prevention principles as they relate

to that employee's job function and work environment; this should be a requirement before the employee begins work or is given a new job assignment. <u>Employees must</u> <u>never engage in any activity for which he or she is not prepared</u>. If the immediate supervisor has reason to believe that retraining—or additional training—in fire prevention is necessary, he/she should contact the Designated Safety Representative and/or the Safety and Training Officer for further assistance.

## Maintenance – T8 CCR §3221(e)

"The employer shall regularly and properly maintain, according to established procedures, equipment and systems installed in the workplace to prevent accidental ignition of combustible materials."

Fire protection equipment—designed to control fires and/or aid in the escape of workers from affected areas—shall be properly maintained and in the appropriate location; this includes fire extinguishers, alarm systems / smoke detectors, and fire sprinklers. This is also in compliance with T8 CCR §3219, which states: *"All fire protection equipment, materials and assemblies, where required, shall be maintained in proper operating condition, and such periodic inspections and tests shall be made as are necessary to assure this."* 

- All fire suppression equipment shall be maintained in operating condition and serviced according to fire code requirements; <u>defective equipment shall be</u> <u>immediately replaced or tagged for service.</u>
- Testing shall be conducted as required by the fire code, and the Safety and Training Officer shall maintain copies of the required servicing / testing. Any fire protection-related questions should be directed to the Safety and Training Officer.

### Inspection (Maintenance) Process

Fire safety inspections will be conducted on a monthly basis by the Safety and Training Officer, or as necessary, by supervisors and employees to eliminate hazards. This will include not only the fire protection systems and equipment, but also any and all associated fire hazards.

The presence of fire hazards and/or noted deficiencies in fire protection equipment will be included—and documented—as part of the monthly safety inspection process. The inspections shall verify that the fire hazards and ignition sources are properly controlled as required by this Plan. If corrective actions are required, they will be documented in accordance with the standard inspection procedures as outlined in the Department's *Injury and Illness Prevention Program*, IIPP. Records of inspections will be retained for at least three (3) years.

JOB-TASK / EQ	UIPMEN	т:	Job-Task:	Handling Compost (ex; moisture testing, sample collection)
	2		Worksite:	Compost Pilot Work Area
		Job Title(s):		
	Analyzed By:			
			Date:	3/27/18

Minimum PPE includes safety shoes, safety gloves, hard hat and reflective vest. Optional PPE during windy weather includes dust mask and safety glasses or goggles.

## SKILLS VERIFICATION & SAFETY TRAINING (Before starting the job-task)

Temperature ready of compost pile

TASK SEQUENCE	POTENTIAL HAZARD	INJURY AVOIDANCE SOLUTION / PROCEDURE
Walking site area	Slips, trips and falls	The site has uneven ground surface. Identify walking hazards and wear safety shoes with ankle support. Ensure no heavy equipment is operating in the work area before entering.
Disturbing pile	Airborne dust	Stay out of the work area and/or up-wind of the work area if possible. If the weather is windy, wear a dust mask and safety glasses or goggles.
	Ingestion of pathogens	Do not eat, drink or smoke in the work area. Wash hands prior to handling food and drink.
	Sticks and cuts	Wear durable gloves to avoid injury.
Handling compost		Inspect content of material for hazards prior to handling or squeezing.
	Ingestion of pathogens	Wear rubber work gloves or nitrile gloves over work gloves when handling compost.
		Do not eat, drink or smoke in the work area. Wash hands prior to handling food and drink.
Taking pile temp	Temperature Probe	Use two hands when inserting probe into pile, also watch footing when removing probe from pile.
	Ingestion of pathogens	Do not eat, drink or smoke in thin work area. Wash hands prior to handling food and drink.

JOB-TASK / EQUIPI	MENT:	Job-Task:		Pile Hydration with Water Truck		
		Worksite:		Compost Pilot Work Area		
		Job Title(s):				
		Analyzed By	/:			
		Date:		3/27/18		
Minimum PPE includes and safety glasses or go		and reflective v	vest. Opt	ional PPE during windy weather includes dust mask		
SKILLS VERIFICATIO	ON & SAFETY TRAIN	ING (Before	startin	g the job-task)		
	_					
TASK SEQUENCE	POTENTIAL HAZA	RD	INJURY	Y AVOIDANCE SOLUTION / PROCEDURE		
Walking site area	Slips, trips and falls			site has uneven ground surface. Identify walking		
		· .		azards and wear safety shoes with ankle support.		
Backing Up Water Truck	Hitting surrounding equipment and infrastructure		All trucks and equipment moving in reverse must have a spotter.			
	Hitting personnel		All personnel excluding the spotter must be out of the work area while the truck is backing up.			
Moving Water Truck Around Pile	Hitting surrounding and infrastructure	equipment	•			
	Hitting personnel		All pers	onnel excluding the spotter must be out of the rea while the truck us moving.		

	MENIT.	Job-Task:		Pile Mixing		
JOB-TASK / EQUIPI				Compost Pilot Work Area		
		Worksite: Job Title(s):				
				Operations & Safety Committee		
		Analyzed B Date:	<u></u>	4/18/18		
Optional PPE during wi	ndy weather includes d	ust mask and	safety gla			
	ON & SAFETY TRAIN			g the Job-task) asks and steps will occur and to ask questions for		
-	t boundaries for observ		-			
TASK SEQUENCE	POTENTIAL HAZA	RD	INJUR	Y AVOIDANCE SOLUTION / PROCEDURE		
Walking site area	Slips, trips and falls			e has uneven ground surface. Identify walking s and wear safety shoes with ankle support.		
Moving heavy equipment around pile	Hitting surrounding equipment and personnel		Move equipment forward during mobilization. Avoid moving in reverse as much as possible. Use a spotter when moving in reverse. Create a Safe Zone utilizing signage and/or other means to clearly delineate the area.			
	Hitting personnel		All personnel excluding the spotter must be out of the work area while the truck us moving.			
Mixing pile	Airborne dust	e dust		environmentally controlled equipment cabin is in gorder.		
	Loss of hydraulics		All implements on equipment must be lowered and parking brake applied prior to personnel entering the pad area. Do not stand or pass below the buck when suspended.			
	Ingestion of pathoge	Ingestion of pathogens		Do not eat, drink or smoke in the work area. Wash hands prior to handling food and drink.		
Spreading of pathogens		ens				
	1		1			

JOB-TASK / EQUIPI	MENT:	Job-Task:		Collecting Compost Temperature Data		
		Worksite: Job Title(s): Analyzed By		Compost Pilot Work Area		
		Date:	-	3/30/18		
Minimum PPE includes includes dust mask and			and reflee	ctive vest. Optional PPE during windy weather		
SKILLS VERIFICATIO		•	startin	g the job-task)		
TASK SEQUENCE	POTENTIAL HAZA	RD	INJUR	Y AVOIDANCE SOLUTION / PROCEDURE		
Walking site area	Slips, trips and falls	lls T h n		The site has uneven ground surface. Identify walking hazards and wear safety shoes with ankle support. Ensure no heavy equipment is operating in the work area before entering.		
Taking pile temp	Temperature probe		Use two hands when inserting probe into pile also watch footing when removing probe from top of pile.			
with temp probe	Ingestion of pathoge	ens	Do not eat, drink or smoke in the work area. Wash hands prior to handling food and drink.			
	Sticks and cuts	Wear durable gloves to avoid hand injury. Inspect condition of temperature probe for hazards p to handling probe.				

JOB-TASK / EQUIPMENT:		b-Task:	Testing Bulk Density		
		orksite:	Compost Pilot Work Area		
		b Title(s):			
	An An	alyzed By:			
	Da	ite:	3/27/18		
includes dust mask and	safety shoes, safety gloves, safety glasses or goggles. ON & SAFETY TRAINING		ctive vest. Optional PPE during windy weather <b>ag the job-task)</b>		
TASK SEQUENCE	POTENTIAL HAZARD	INJUR	Y AVOIDANCE SOLUTION / PROCEDURE		
Walking site area	Slips, trips and falls	hazard no hea	The site has uneven ground surface. Identify walking hazards and wear safety shoes with ankle support. Ensure no heavy equipment is operating in the work area before entering.		
	Airborne dust	If not i	If not in an environmentally controlled equipment cabin,		
Disturbing pile		if possi	stay out of the work area and/or up-wind of the work area if possible. If the weather is windy, wear a dust mask and safety glasses or goggles.		
Ingestion of pathoge					
Handling compost Sticks and cuts		Wear of Inspect	Wear durable gloves to avoid injury. Inspect content of material for hazards prior to handling or squeezing.		
	Ingestion of pathogens	Wear r when h	Wear rubber work gloves or nitrile gloves over work glove when handling compost. Do not eat, drink or smoke in the work area. Wash hands		
			b handling food and drink.		
Placing Compost in 5-gallon bucket	Sticks or cuts	Minimi shovel	Minimize contact with compost by using a pitch fork or shovel to move compost into bucket		
		when r	Place pitch fork with the fork side down or stuck in pile when not in use.		
	Back injury from moving compost to bucket	while li	•		
Tamping compost in bucket	Back injury	avoidir	Use proper lifting techniques when lifting bucket to tamp, avoiding lifting with back.		
	Toe injury from dropping on toe	-	Wear safety shoes with reinforced toe		
		1.101	Lift bucket between legs, not in front of feet.		

JOB-TASK / EQUIPMENT:		Job-Task:		Unloading Feedstock	
		Worksite:		Compost Pilot Work Area	
		Job Title(s)	:		
		Analyzed B	y:		
		Date:		3/27/18	
Minimum PPE includes and safety glasses or go SKILLS VERIFICATIO	oggles.			tional PPE during windy weather includes dust mask g the job-task)	
TASK SEQUENCE	POTENTIAL HAZA	RD		Y AVOIDANCE SOLUTION / PROCEDURE	
Walking site area	Slips, trips and falls			e has uneven ground surface. Identify walking s and wear safety shoes with ankle support.	
Feedstock truck	Hitting surrounding	equipment	All truc	Il trucks and equipment moving in reverse must have a	
backing into	and infrastructure		spotter.		
unloading area	Hitting personnel			personnel excluding the spotter must be out of the rk area while the truck is backing up.	
Unloading feedstock	Airborne dust		Stay out of the work area and up-wind of the unloading area. If the weather is windy, wear a dust mask and safety glasses or goggles.		
U	Heavy material being unloaded		Stay clear of the back of the feedstock truck, and allow the driver to open the back gates.		
	Ingestion of pathoge	ens	Do not eat, drink or smoke in the unloading area. Wash hands prior to handling food and drink.		



# **Appendix J: Laboratory Data**

ANALYTICAL CHEMISTS and BACTERIOLOGISTS

BACTERIOLOGISTS Approved by State of California

SOIL CONTROL LAB

42 HANGAR WAY WATSONVILLE

CALIFORNIA 95076

USA

TEL: 831-724-5422 FAX: 831-724-3188 www.compostlab.com

Account #: 8060869-1/1-10222 Group: Jun18E #25 Reporting Date: July 11, 2018

Capistrano Greenery 300 North Flower St., Suite 400 Santa Ana, CA 92703 Attn: David Tieu

Date Received: 28 Jun. 18 Sample Identification: CG-1 Sample ID #: 8060869 - 1/1 Nutrients **Stability Indicator:** Dry wt. As Rcvd. Biologically units Total Nitrogen: **CO2** Evolution 0.71 0.37 % Respirometery Available C Ammonia (NH<sub>4</sub>-N): 20 10 mg/kg mg CO<sub>2</sub>-C/g OM/day 3.2 5.0 mg CO<sub>2</sub>-C/g TS/day Nitrate (NO<sub>3</sub>-N): 0.058 mg/kg 1.1 1.7 0.11 Org. Nitrogen (Org.-N): Stability Rating stable 0.71 0.36 % moderately unstable Phosphorus (as  $P_2O_5$ ): % 0.24 0.12 Phosphorus (P): 1000 540 mg/kg Maturity Indicator: Cucumber Bioassay Potassium (as K<sub>2</sub>O): Compost:Vermiculite (v:v) 0.69 0.35 % 1:2 Emergence (%) 100 Potassium (K): 5700 2900 mg/kg Seedling Vigor (%) Calcium (Ca): 0.55 103 1.1 % Magnesium (Mg): 0.44 0.23 % Description of Plants healthy Sulfate (SO<sub>4</sub>-S): mg/kg 250 130 Boron (Total B): 20 mg/kg Pathogens Units 10 Results Rating **Fecal Coliform** Moisture: 0 48.6 % 2700 MPN/q fail Sodium (Na): 0.11 0.058 % Salmonella < 3 MPN/4g pass Chloride (CI): 0.19 0.098 % Date Tested: 28 Jun. 18 pH Value: NA 8.05 unit Bulk Density : 23 44 lb/cu ft **Physical Contaminants\*\*** % by weight Carbonates (CaCO<sub>3</sub>): 9.4 4.8 lb/ton Hard Plastic < 0.1 Conductivity (EC5): 2.1 NA mmhos/cm Film Plastic < 0.1 Organic Matter: 35.1 18.0 % Glass < 0.1 % Metal Organic Carbon: 20.0 10.0 < 0.1 Ash: 64.9 33.4 % Sharps ND C/N Ratio 28 28 ratio Total < 0.5 5 ratio AgIndex 5 EPA Limit Size Distribution Metals Dry wt. units Alumnium (AI) 6300 mg/kg MM % by weight > 50 Arsenic (As): 3.8 41 mg/kg 0.0 25 to 50 Cadmium (Cd): < 1.0 39 mg/kg 0.0 Chromium (Cr): 23 mg/kg 16 to 25 1200 0.0 Cobalt (Co) 9.5 to 16 2.1 4.1 mg/kg mg/kg Copper (Cu): 18 1500 6.3 to 9.5 2.4 Iron (Fe): 7.6 12000 mg/kg 4.0 to 6.3 Lead (Pb): 5.3 300 mg/kg 2.0 to 4.0 22.2 Manganese (Mn): 190 mg/kg < 2.0 65.6 Mercury (Hg): < 1.0 17 mg/kg \*\*Greater than 4mm in size (Sharps greater than 2mm) Molybdenum (Mo): 2.8 18 mg/kg Analyst: Assaf Sadeh Nickel (Ni): 420 mg/kg 15 ang Salel Selenium (Se): 2.2 36 mg/kg mg/kg Zinc (Zn): 98 2800 \*Sample was received and handled in accordance with TMECC procedures.

Account No	.:	Date Received	28 Jun. 18	
8060869 - 1	/1 - 10222	Sample i.d.	CG-1	
Group:	Jun18E No. 25	Sample I.d. No.	1/1	8060869

## Is Your Compost Stable?

Respiration Rate	Biodegradation Rate of Your Pile							
3.2 mg CO2-C/	+++++++++++							
g OM/day	< Stable	>< Moderately Unstable ><	Unstable	> < High For Mulch				
Biologically Available Carb	on (BAC)	Optimum Degradation Rate						
5.0 mg CO2-C/	+++++++	++++++						
g OM/day	< Stable	>< Moderately Unstable ><	Unstable	> < High For Mulch				

Page one of three

## Is Your Compost Mature?

AmmoniaN/NitrateN ratio								
NA Ratio	Ratio does not apply due to low concentrations of both Ammonia N and Nitrate N.							
	VeryMature> <	Mature	> < Immature					
Ammonia N ppm								
<b>20</b> mg/kg	++							
dry wt.	VeryMature> <	Mature	> < Immature					
Nitrate N ppm	Pass							
<b>0.11</b> mg/kg	<mark>+</mark>							
dry wt.	< Immature	>	< Mature					
pH value								
8.05 units	+++++++++++++++++++++++++++++++++++++++	+++++++++++++++++++++++++++++++++++++++	++++++					
	< Immature		> < Mature > < Immature					
Cucumber Emergence								
100.0 percent	+++++++++++++++++++++++++++++++++++++++	+++++++++++++++++++++++++++++++++++++++	+++++++++++++++++++++++++++++++++++++++					
	< Immature		> < Mature					

# Is Your Compost Safe Regarding Health?

Fecal Coliform > 1000 MPN/g dry wt.	++++++++++++++++++++++++++++++++++++++	7
Salmonella Less than 3 /4g dry wt.	+++++++ <safe (none="" detected)=""> &lt; High Salmonella Count(&gt; 3 per 4 grams)</safe>	7
Metals US EPA 503 Pass dry wt.	++++++++ <all metals="" pass=""> &lt; One or more Metals Fail</all>	

## Does Your Compost Provide Nutrients or Organic Matter?

Nutrients (N+P2O5+K2O)	_					
1.6 Percent	++++++	++++				
dry wt.	<low< th=""><th>&gt; &lt; Average</th><th>&gt; &lt;  </th><th>ligh Nutrier</th><th>nt Content</th><th></th></low<>	> < Average	> <	ligh Nutrier	nt Content	
AgIndex (Nutrients / Sodiun	n and Chlo	oride Salts)	((N+P2O	5+K2O) / (N	la + Cl))	
5 Ratio	++++++	+++++++++++++++++++++++++++++++++++++++				
	Na & Cl	>< Nutrient and	Sodium and Chloride Pr	rovider	>< Nutrient Provider	
Plant Available Nitrogen (P	AN)	Estimated rele	ease for first season			
2 lbs/ton	<mark>+++</mark> ++++					
wet wt.	Low Nitro	gen Provider> <	Average Nitrogen Pro	ovider	>  <high nitrogen="" provider<="" th=""><th>•</th></high>	•
C/N Ratio						
28 Ratio			****************			
	< Nitroge	n Release > < N-	Neutral > < N-Demand>	·∣< <mark>High Ni</mark>	trogen Demand	
Soluble Available Nutrients	& Salts (E	EC5 w/w dw)				
2.1 mmhos/cm	++++++					
dry wt.	SloRelea	se> < Average Nut	trient Release Rate >	⊳  <high ava<="" th=""><th>ailable Nutrients</th><th></th></high>	ailable Nutrients	
Lime Content (CaCO3)						
9.4 Lbs/ton			+++++++++++++++++++++++++++++++++++++++			
dry wt.	< Low > <	< Medium > < Hig	gh Lime Content (as Ca	ICO3)		

## What are the physical properties of your compost?

#### Percent Ash

I CICCIII AGII	
64.9 Percent	+++++++++++++++++++++++++++++++++++++++
dry wt.	< High Organic Matter > < Average > < High Ash Content
Sieve Size % > 6.3 MM (0.25	")
4.5 Percent	+++++++++++++++++++++++++++++++++++++++
dry wt.	All Uses > < Size May Restrict Uses for Potting mix and Golf Courses

Account No	).:	Date Received 28 Jun. 18	
8060869 - 1	1/1 - 10222	Sample i.d. CG-1	
Group:	Jun18E No. 25	Sample I.d. No. 1/1	8060869

#### Is Your Compost Stable?

**Respiration Rate** 

Low: Good for all uses 3.2

mg CO2-C/g OM/day

The respiration rate is a measurement of the biodegradation rate of the organic matter in the sample (as received). The respiration rate is determined by measuring the rate at which CO2 is released under optimized moisture and temperature conditions.

### **Biologically Available Carbon**

Moderate-selected use mg CO2-C/g OM/day 5

Biologically Available Carbon (BAC) is a measurement of the rate at which CO2 is released under optimized moisture, temperature, porosity, nutrients, pH and microbial conditions. If both the RR and the BAC test values are close to the same value, the pile is optimized for composting. If both values are high the compost pile just needs more time. If both values are low the compost has stabilized and should be moved to curing. BAC test values that are higher than RR indicate that the compost pile has stalled. This could be due to anaerobic conditions, lack of available nitrogen due to excessive air converting ammonia to the unavailable nitrate from lack of nitrogen or other nutrients due to poor choice of feedstock, pH value out of range, or microbes rendered non-active. Is Your Compost Mature?

#### AmmoniaN:NitrateN ratio

NA	NA	(
		_ C
		tł
Ammonia N	ppm	S
20	very mature	ir
Nitrate N pp	m	a
0.11	immature	a
pH value		F
8.05	mature	c
		c
Cucumber F	Rinassav	

ssay 100.0 Percent

Ratio does not apply due to low concentrations of both Ammonia N and Nitrate N.) Composting to stabilize carbon can occur at such a rapid rate that sometimes phytotoxins remain in he compost and must be neutralized before using in high concentrations or in high-end uses. This step is called curing. Typically ammonia is in excess with the break-down of organic materials resulting n an increase in pH. This combination results in a loss of volatile ammonia (it smells). Once this toxic ammonia has been reduced and the pH drops, the microbes convert the ammonia to nitrates. A low ammonia + high nitrate score is indicative of a mature compost, however there are many exceptions. For example, a compost with a low pH (<7) will retain ammonia, while a compost with high lime content an lose ammonia before the organic fraction becomes stable. Composts must first be stable before curing indicators apply.

Cucumbers are chosen for this test because they are salt tolerant and very sensitive to ammonia and organic acid toxicity. Therefore, we can germinate seeds in high concentrations of compost to

measure phytotoxic effects without soluble salts being the limiting factor. Values above 80% for both percent emergence and vigor are indicative of a well-cured compost. Exceptions include very high salts that affect the cucumbers, excessive concentrations of nitrates and other nutrients that will be in range when formulated to make a growing media. In addition to testing a 1:1 compost: vermiculite blend, we also test a diluted 1:4 blend to indicate a more sensitive toxicity level.

# Is Your Compost Safe Regarding Health?

### Fecal Coliform

> 1000 / g dry wt. Fecal coliforms can survive in both aerobic and anaerobic conditions and is common in all initial compost piles. Most human pathogens occur from fecal matter and all fecal matter is loaded in fecal coliforms. Therefore fecal coliforms are used as an indicator to determine if the chosen method for pathogen reduction (heat for compost) has met the requirements of sufficient temperature, time and mixing. If the fecal coliforms are reduced to below 1000 per gram dry wt. it is assumed all others pathogens are eliminated. Potential problems are that fecal coliform can regrow during the curing phase or during shipping. This is because the conditions are now more favorable for growth than during the composting process.

### Salmonella Bacteria

3 / 4g dry wt. Salmonella is not only another indicator organism but also a toxic microbe. It has been used in the Less than 3 case of biosolids industry to determine adequate pathogen reduction.

Metals

Pass The ten heavy metals listed in the EPA 503 regulations are chosen to determine if compost can be applied to ag land and handled without toxic effects. Most high concentrations of heavy metals are derived from woodwaste feedstock such as chrome-arsenic treated or lead painted demolition wood. Biosolids are rarely a problem. Does Your Compost Provide Nutrients or Organic Matter?

#### Nutrients (N+P2O5+K2O) 1.6

low nutrient content

This value is the sum of the primary nutrients Nitrogen. Phosphorus and Potassium. Reported units are consistent with those found on fertilizer formulations. A sum greater than 5 is indicative of a compost with high nutrient content, and best used to supply nutrients to a receiving soil. A sum below 2 indicates low nutrient content, and is best-used to improve soil structure via the addition of organic matter. Most compost falls between 2 and 5.

Page two of three

Account No .:		Date Received	28 Jun. 18	
8060869 - 1/1	- 10222	Sample i.d.	CG-1	
Group:	Jun18E No. 25	Sample I.d. No.	1/1	8060869

AgIndex (Nutrients/Na+CI)

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5 Average nutrient ratio Composts with low AgIndex values have high concentrations of sodium and/or chloride compared to nutrients. Repeated use of a compost with a low AgIndex (< 2) may result in sodium and/or chloride acting as the limiting factor compared to nutrients, governing application rates. These composts may be used on well-draining soils and/or with salt-tolerant plants. Additional nutrients form another source may be needed if the application rate is limited by sodium or chloride. If the AgIndex is above 10, nutrients optimal for plant growth will be available without concern of sodium and/or chloride toxicity. Composts with an AgIndex of above 10 are good for increasing nutrient levels for all soils. Most composts score between 2 and 10. Concentrations of nutrients, sodium, and chloride in the receiving soil should be considered when determining compost application rates. The AgIndex is a product of feedstock quality. Feedstock from dairy manure, marine waste, industrial wastes, and halophytic plants are likely to produce a finished compost with a low AgIndex.

#### Plant Available Nitrogen (lbs/ton)

2 Low N Provider Plant Available Nitrogen (PAN) is calculated by estimating the release rate of Nitrogen from the organic fraction of the compost. This estimate is based on information gathered from the BAC test and measured ammonia and nitrate values. Despite the PAN value of the compost, additional sources of Nitrogen may be needed during he growing season to offset the Nitrogen demand of the microbes present in the compost. With ample nutrients these microbes can further breakdown organic matter in the compost and release bound Nitrogen. Nitrogen demand based on a high C/N ratio is not considered in the PAN calculation because additional Nitrogen should always be supplemented to the receiving soil when composts with a high C/N ratio are applied. **C/N Ratio** 

28 Indicates immaturity (As a guiding principal, a C/N ratio below 14 indicates maturity and above 14 indicates) immaturity, however, there are many exceptions. Large woodchips (>6.3mm), bark, and redwood are slow to breakdown and therefore can result in a relatively stable product while the C/N ratio value is high. Additionally, some composts with chicken manure and/or green grass feedstocks can start with a C/N ratio below 15 and are very unstable. A C/N ratio below 10 supplies Nitrogen, while a ratio above 20 can deplete Nitrogen from the soil. The rate at which Nitrogen will be released or used by the microbes is indicated by the respiration rate (BAC). If the respiration rate is too high the transfer of Nitrogen will not be controlable. **Soluble Nutrients & Salts (EC5 w/w dw - mmhos/cm)** 

2.1 Average salts This value refers to all soluble ions including nutrients, sodium, chloride and some soluble organic compounds. The concentration of salts will change due to the release of salts from the organic matter as it degrades, volatilization of ammonia, decomposition of soluble organics, and conversion of molecular structure. High salts + high AgIndex is indicative of a compost high in readily available nutrients. The application rate of these composts should be limited by the optimum nutrient value based on soil analysis of the receiving soil. High Salts + low AgIndex is indicative of a compost low in nutrients with high concentrations of sodium and/or chloride. Limit the application rate according to the toxicity level of thesodium and/or chloride. Low salts indicates that the compost can be applied without risking salt toxicity, is likely a good source of organic matter, and that nutrients will release slowly over time.

#### Lime Content (lbs. per ton)

9.4 Average lime content Compost high in lime or carbonates are often those produced from chicken manure (layers) ash materials, and lime products. These are excellent products to use on a receiving soil where lime has been recommended by soil analysis to raise the pH. Composts with a high lime content should be closely considered for pH requirements when formulating potting mixes.

#### Physical Properties

Percent Ash

64.9 High ash content (Ash is the non-organic fraction of a compost. Most composts contain approximately 50% ash (dry weight basis). Compost can be high in ash content for many reasons including: excess minerilzation(old compost), contamination with soil base material during turning, poor quality feedstock, and soil or mineral products added. Finding the source and reducing high ash content is often the fastest means to increasing nutrient quality of a compost.

#### Particle Size % > 6.3 MM (0.25")

4.5 May restrict use <a href="Large particles may restrict use for potting soils">Large particles may restrict use for potting soils, golf course topdressings, seed-starter</a> mixes, and where a fine size distribution is required. Composts with large particles can still be used as excellent additions to field soils, shrub mixes and mulches.

Appendix:		
	Estimated available nutrients for use when	n calculating application rates
Plant Available Nitrogen (PAN) calculations:		lbs/ton (As Rec'd)
PAN = (X * (organic N)) + ((NH4-N) + (NO3-N))		, , , , , , , , , , , , , , , , , , ,
X value = If BAC < 2 then X = 0.1	Plant Available Nitrogen (PAN)	2.2
If BAC =2.1 to 5 then X = 0.2	Ammonia (NH4-N)	0.02
If BAC = $5.1$ to $10$ then X = $0.3$	Nitrate (NO3-N)	0.00
If BAC > 10 then $X = 0.4$	Available Phosphorus (P2O5*0.64)	1.6
Note: If C/N ratio > 15 additional N should be applied.	Available Potassium (K2O)	7.0

ANALYTICAL CHEMISTS and BACTERIOLOGISTS Approved by State of California

SOIL CONTROL LAB

42 HANGAR WAY WATSONVILLE CALIFORNIA 95076 USA

28 Jun. 18

TEL: 831-724-5422 FAX: 831-724-3188 www.compostlab.com

www.compostlab

Bee Canyon Greenery 11002 Bee Canyon Access Road Irvine, CA 92602 Attn: Eli Esber

Sample Identification: BCG-001

Date Received:

Account #: 8060870-1/1-10224 Group: Jun18E #26 Reporting Date: July 11, 2018

Sample Identification: Sample ID #:	BCG-001 8060870 -	1/1				
Nutrients	Dry wt.	As Rcvd.	units	Stability Indicator:		Biologically
Total Nitrogen:	1.1	0.63	%	CO2 Evolution	Respirometery	Available C
Ammonia (NH <sub>4</sub> -N):	49	27	mg/kg	mg CO <sub>2</sub> -C/g OM/day	3.0	3.4
Nitrate (NO <sub>3</sub> -N):	14	7.9	mg/kg	mg CO <sub>2</sub> -C/g TS/day	0.91	1.0
Org. Nitrogen (OrgN):		0.61	%	Stability Rating	stable	stable
Phosphorus (as $P_2O_5$ ):	0.46	0.26	%	Clabindy Flating	otable	otable
Phosphorus (P):	2000	1100	mg/kg	Maturity Indicator: Cucu	mber Bioassav	
Potassium (as K <sub>2</sub> O):	0.77	0.43	%	Compost:Vermiculite (v:v)	1:2	
Potassium (K):	6400	3500	mg/kg	Emergence (%)	100	
Calcium (Ca):	1.8	1.0	%	Seedling Vigor (%)	101	
Magnesium (Mg):	0.52	0.29	%	Description of Plants	healthy	
Sulfate $(SO_4-S)$ :	170	93	mg/kg	Decemption of Flame	noullity	
Boron (Total B):	29	16	mg/kg	Pathogens Results	Units	Rating
Moisture:	0	44.5	%	Fecal Coliform 50	MPN/g	pass
Sodium (Na):	0.12	0.065	%	Salmonella < 3	MPN/4g	pass
Chloride (Cl):	0.15	0.081	%	Date Tested: 28 Jun. 18	in in ig	pace
pH Value:	NA	8.48	unit			
Bulk Density :	30	54	lb/cu ft	Physical Contaminants*	% by weight	
Carbonates (CaCO <sub>3</sub> ):	39	22	lb/ton	Hard Plastic	< 0.1	
Conductivity (EC5):	1.9	NA	mmhos/cm	Film Plastic	< 0.1	
Organic Matter:	30.4	16.9	%	Glass	< 0.1	
Organic Carbon:	17.0	9.6	%	Metal	< 0.1	
Ash:	69.6	38.6	%	Sharps	ND	
C/N Ratio	15	15	ratio			
AgIndex	9	9	ratio	Total	< 0.5	
Metals	Dry wt.	EPA Limit	units	Size Distribution		
Alumnium (Al)	7100	-	mg/kg	MM % by weig	ht	
Arsenic (As):	4.5	41	mg/kg	> 50 0.0		
Cadmium (Ćd):	0.96	39	mg/kg	25 to 50 0.0		
Chromium (Cr):	25	1200	mg/kg	16 to 25 0.0		
Cobalt (Co)	4.6	-	mg/kg	9.5 to 16 0.0		
Copper (Cu):	48	1500	mg/kg	6.3 to 9.5 1.9		
Iron (Fe):	12000	-	mg/kg	4.0 to 6.3 11.5		
Lead (Pb):	19	300	mg/kg	2.0 to 4.0 27.5		
Manganese (Mn):	250	-	mg/kg	< 2.0 59.0		
Mercury (Hg):	< 1.0	17	mg/kg	**Greater than 4mm in size	e (Sharps greater	than 2mm)
Molybdenum (Mo):	2.1	18	mg/kg			
Nickel (Ni):	16	420	mg/kg		Analyst	: Assaf Sadeh
Selenium (Se):	2.0	36	mg/kg		[1.000	Salel
Zinc (Zn): *Sample was received a	160	2800	mg/kg		Unit	:: Assaf Sadeh

\*Sample was received and handled in accordance with TMECC procedures.

Account No	).:	Date Received	28 Jun. 18	
8060870 - 1	1/1 - 10224	Sample i.d.	BCG-001	
Group:	Jun18E No. 26	Sample I.d. No.	1/1	8060870

## Is Your Compost Stable?

Respiration Rate		Biodegradation Rate of Your Pile				
3.0 mg CO2-C/	+++++++++	+++				
g OM/day	< Stable	>< Moderately Unstable ><	Unstable	> < High For Mulch		
Biologically Available Carb	on (BAC)	Optimum Degradation Rate				
3.4 mg CO2-C/	+++++++++	+++++				
g OM/day	< Stable	>< Moderately Unstable ><	Unstable	> < High For Mulch		

Page one of three

### Is Your Compost Mature?

-			
AmmoniaN/NitrateN ratio			
NA Ratio	Ratio does not apply	due to low concentrations of l	both Ammonia N and Nitrate N.
	VeryMature> <	Mature	> < Immature
Ammonia N ppm			
<b>49</b> mg/kg	++++		
dry wt.	VeryMature> <	Mature	> < Immature
Nitrate N ppm	Pass		
<b>14</b> mg/kg	++++++++++		
dry wt.	< Immature	> <	< Mature
pH value			
8.48 units	+++++++++++++++++++++++++++++++++++++++	+++++++++++++++++++++++++++++++++++++++	+++++++++++++++++++++++++++++++++++++++
	< Immature		> < Mature > < Immature
Cucumber Emergence			
100.0 percent	+++++++++++++++++++++++++++++++++++++++	******	***********
	< Immature		> < Mature

### Is Your Compost Safe Regarding Health?

Fecal Coliform		
< 1000 MPN/g dry wt.	++++++	
	< Safe	> < High Fecal Coliform
Salmonella		
Less than 3 /4g dry wt.	++++++	
	<safe (none="" detected)<="" th=""><th>&gt; &lt; High Salmonella Count(&gt; 3 per 4 grams)</th></safe>	> < High Salmonella Count(> 3 per 4 grams)
Metals US EPA 503		
Pass dry wt.	+++++++	
-	<all metals="" pass<="" th=""><th>&gt;l&lt; One or more Metals Fail</th></all>	>l< One or more Metals Fail

## Does Your Compost Provide Nutrients or Organic Matter?

Nutrients (N+P2O5+K2O)				
2.3 Percent	+++++++	*****		
dry wt.	<low< th=""><th>&gt; &lt; Average</th><th>&gt; &lt; High N</th><th>utrient Content</th></low<>	> < Average	> < High N	utrient Content
AgIndex (Nutrients / Sodiun	n and Chlo	oride Salts)	((N+P2O5+K2C	) / (Na + Cl))
9 Ratio	******	*****	******	ł
	Na & Cl	> < Nutrient and	Sodium and Chloride Provide	>< Nutrient Provider
Plant Available Nitrogen (P	AN)	Estimated rele	ase for first season	
3 lbs/ton	+++++++	+++		
wet wt.	Low Nitro	gen Provider> <	Average Nitrogen Provider	>  <high nitrogen="" provider<="" th=""></high>
C/N Ratio				
15 Ratio		*****		
	0		Neutral > < N-Demand> < Hiç	h Nitrogen Demand
Soluble Available Nutrients	& Salts (E	C5 w/w dw)		
1.9 mmhos/cm	+++++++			
dry wt.	SloReleas	se> Average Nut</th <th>rient Release Rate &gt; <higl< th=""><th>n Available Nutrients</th></higl<></th>	rient Release Rate >  <higl< th=""><th>n Available Nutrients</th></higl<>	n Available Nutrients
Lime Content (CaCO3)				
39 Lbs/ton				************
dry wt.	< Low $>$ $ <$	: Medium > < <mark>Hi</mark> g	h Lime Content (as CaCO3)	

## What are the physical properties of your compost?

#### Percent Ash

I EICEIIL ASII	
69.6 Percent	+++++++++++++++++++++++++++++++++++++++
dry wt.	< High Organic Matter > < Average > < High Ash Content
Sieve Size % > 6.3 MM (0.25	")
1.9 Percent	+++++++++++++++++++++++++++++++++++++++
dry wt.	All Uses > < Size May Restrict Uses for Potting mix and Golf Courses

Account No	.:	Date Received 28 Jun. 18	3
8060870 - 1	/1 - 10224	Sample i.d. BCG-001	
Group:	Jun18E No. 26	Sample I.d. No. 1/1	8060870

Is Your Compost Stable?

**Respiration Rate** 

3.0 Low: Good for all uses

mg CO2-C/g OM/day

The respiration rate is a measurement of the biodegradation rate of the organic matter in the sample (as received). The respiration rate is determined by measuring the rate at which CO2 is released under optimized moisture and temperature conditions.

#### **Biologically Available Carbon** 3

Low: Good for all uses mg CO2-C/g OM/day

Biologically Available Carbon (BAC) is a measurement of the rate at which CO2 is released under optimized moisture, temperature, porosity, nutrients, pH and microbial conditions. If both the RR and the BAC test values are close to the same value, the pile is optimized for composting. If both values are high the compost pile just needs more time. If both values are low the compost has stabilized and should be moved to curing. BAC test values that are higher than RR indicate that the compost pile has stalled. This could be due to anaerobic conditions, lack of available nitrogen due to excessive air converting ammonia to the unavailable nitrate from lack of nitrogen or other nutrients due to poor choice of feedstock, pH value out of range, or microbes rendered non-active. Is Your Compost Mature?

#### AmmoniaN:NitrateN ratio

NA	NA	(
		C
		tł
Ammonia N	ppm	S
49	very mature	ir
Nitrate N pp	m	a
14	immature	a
pH value		F
8.48	immature	C
		С
Cucumber F	Rinassav	

ssay 100.0 Percent

Ratio does not apply due to low concentrations of both Ammonia N and Nitrate N.) Composting to stabilize carbon can occur at such a rapid rate that sometimes phytotoxins remain in he compost and must be neutralized before using in high concentrations or in high-end uses. This step is called curing. Typically ammonia is in excess with the break-down of organic materials resulting n an increase in pH. This combination results in a loss of volatile ammonia (it smells). Once this toxic ammonia has been reduced and the pH drops, the microbes convert the ammonia to nitrates. A low ammonia + high nitrate score is indicative of a mature compost, however there are many exceptions. For example, a compost with a low pH (<7) will retain ammonia, while a compost with high lime content an lose ammonia before the organic fraction becomes stable. Composts must first be stable before curing indicators apply.

Cucumbers are chosen for this test because they are salt tolerant and very sensitive to ammonia and organic acid toxicity. Therefore, we can germinate seeds in high concentrations of compost to

measure phytotoxic effects without soluble salts being the limiting factor. Values above 80% for both percent emergence and vigor are indicative of a well-cured compost. Exceptions include very high salts that affect the cucumbers, excessive concentrations of nitrates and other nutrients that will be in range when formulated to make a growing media. In addition to testing a 1:1 compost: vermiculite blend, we also test a diluted 1:4 blend to indicate a more sensitive toxicity level.

# Is Your Compost Safe Regarding Health?

#### **Fecal Coliform**

< 1000 / g dry wt. Fecal coliforms can survive in both aerobic and anaerobic conditions and is common in all initial compost piles. Most human pathogens occur from fecal matter and all fecal matter is loaded in fecal coliforms. Therefore fecal coliforms are used as an indicator to determine if the chosen method for pathogen reduction (heat for compost) has met the requirements of sufficient temperature, time and mixing. If the fecal coliforms are reduced to below 1000 per gram dry wt. it is assumed all others pathogens are eliminated. Potential problems are that fecal coliform can regrow during the curing phase or during shipping. This is because the conditions are now more favorable for growth than during the composting process.

#### Salmonella Bacteria

3 / 4g dry wt. Salmonella is not only another indicator organism but also a toxic microbe. It has been used in the Less than 3 case of biosolids industry to determine adequate pathogen reduction.

### Metals

The ten heavy metals listed in the EPA 503 regulations are chosen to determine if compost Pass can be applied to ag land and handled without toxic effects. Most high concentrations of heavy metals are derived from woodwaste feedstock such as chrome-arsenic treated or lead painted demolition wood. Biosolids are rarely a problem. Does Your Compost Provide Nutrients or Organic Matter? Nutrients (N+P2O5+K2O)

#### Average nutrient content 2.3

This value is the sum of the primary nutrients Nitrogen. Phosphorus and Potassium. Reported units are consistent with those found on fertilizer formulations. A sum greater than 5 is indicative of a compost with high nutrient content, and best used to supply nutrients to a receiving soil. A sum below 2 indicates low nutrient content, and is best-used to improve soil structure via the addition of organic matter. Most compost falls between 2 and 5.

Page two of three

Account No.:		Date Received	28 Jun. 18	
8060870 - 1/1	- 10224	Sample i.d.	BCG-001	
Group:	Jun18E No. 26	Sample I.d. No.	1/1	8060870

AgIndex (Nutrients/Na+CI)

Page three of three

9 Average nutrient ratio Composts with low AgIndex values have high concentrations of sodium and/or chloride compared to nutrients. Repeated use of a compost with a low AgIndex (< 2) may result in sodium and/or chloride acting as the limiting factor compared to nutrients, governing application rates. These composts may be used on well-draining soils and/or with salt-tolerant plants. Additional nutrients form another source may be needed if the application rate is limited by sodium or chloride. If the AgIndex is above 10, nutrients optimal for plant growth will be available without concern of sodium and/or chloride toxicity. Composts with an AgIndex of above 10 are good for increasing nutrient levels for all soils. Most composts score between 2 and 10. Concentrations of nutrients, sodium, and chloride in the receiving soil should be considered when determining compost application rates. The AgIndex is a product of feedstock quality. Feedstock from dairy manure, marine waste, industrial wastes, and halophytic plants are likely to produce a finished compost with a low AgIndex.

### Plant Available Nitrogen (lbs/ton)

3 Low N Provider Plant Available Nitrogen (PAN) is calculated by estimating the release rate of Nitrogen from the organic fraction of the compost. This estimate is based on information gathered from the BAC test and measured ammonia and nitrate values. Despite the PAN value of the compost, additional sources of Nitrogen may be needed during he growing season to offset the Nitrogen demand of the microbes present in the compost. With ample nutrients these microbes can further breakdown organic matter in the compost and release bound Nitrogen. Nitrogen demand based on a high C/N ratio is not considered in the PAN calculation because additional Nitrogen should always be supplemented to the receiving soil when composts with a high C/N ratio are applied. **C/N Ratio** 

15 Indicates immaturity As a guiding principal, a C/N ratio below 14 indicates maturity and above 14 indicates immaturity, however, there are many exceptions. Large woodchips (>6.3mm), bark, and redwood are slow to breakdown and therefore can result in a relatively stable product while the C/N ratio value is high. Additionally, some composts with chicken manure and/or green grass feedstocks can start with a C/N ratio below 15 and are very unstable. A C/N ratio below 10 supplies Nitrogen, while a ratio above 20 can deplete Nitrogen from the soil. The rate at which Nitrogen will be released or used by the microbes is indicated by the respiration rate (BAC). If the respiration rate is too high the transfer of Nitrogen will not be controlable. **Soluble Nutrients & Salts (EC5 w/w dw - mmhos/cm)** 

1.9 Average salts This value refers to all soluble ions including nutrients, sodium, chloride and some soluble organic compounds. The concentration of salts will change due to the release of salts from the organic matter as it degrades, volatilization of ammonia, decomposition of soluble organics, and conversion of molecular structure. High salts + high AgIndex is indicative of a compost high in readily available nutrients. The application rate of these composts should be limited by the optimum nutrient value based on soil analysis of the receiving soil. High Salts + low AgIndex is indicative of a compost low in nutrients with high concentrations of sodium and/or chloride. Limit the application rate according to the toxicity level of thesodium and/or chloride. Low salts indicates that the compost can be applied without risking salt toxicity, is likely a good source of organic matter, and that nutrients will release slowly over time.

#### Lime Content (lbs. per ton)

39 High lime content Compost high in lime or carbonates are often those produced from chicken manure (layers) ash materials, and lime products. These are excellent products to use on a receiving soil where lime has been recommended by soil analysis to raise the pH. Composts with a high lime content should be closely considered for pH requirements when formulating potting mixes.

#### Physical Properties

#### Percent Ash

69.6 High ash content Ash is the non-organic fraction of a compost. Most composts contain approximately 50% ash (dry weight basis). Compost can be high in ash content for many reasons including: excess minerilzation(old compost), contamination with soil base material during turning, poor quality feedstock, and soil or mineral products added. Finding the source and reducing high ash content is often the fastest means to increasing nutrient quality of a compost.

#### Particle Size % > 6.3 MM (0.25")

1.9 May restrict use Large particles may restrict use for potting soils, golf course topdressings, seed-starter mixes, and where a fine size distribution is required. Composts with large particles can still be used as excellent additions to field soils, shrub mixes and mulches.

Appendix:		
	Estimated available nutrients for use whe	en calculating application rates
Plant Available Nitrogen (PAN) calculations:		lbs/ton (As Rec'd)
PAN = (X * (organic N)) + ((NH4-N) + (NO3-N))		· · · ·
X value = If BAC < 2 then X = 0.1	Plant Available Nitrogen (PAN)	2.6
If BAC =2.1 to 5 then X = 0.2	Ammonia (NH4-N)	0.05
If BAC =5.1 to 10 then X = 0.3	Nitrate (NO3-N)	0.02
If BAC > 10 then $X = 0.4$	Available Phosphorus (P2O5*0.64)	3.2
Note: If C/N ratio > 15 additional N should be applied.	Available Potassium (K2O)	8.4

ANALYTICAL CHEMISTS and BACTERIOLOGISTS Approved by State of California

SOIL CONTROL LAB

42 HANGAR WAY WATSONVILLE CALIFORNIA 95076 USA

TEL: 831-724-5422 FAX: 831-724-3188 www.compostlab.com

Account #: 8060868-1/1-10220 Group: Jun18E #24 Reporting Date: July 11, 2018

Valencia Greenery 1942 North Valencia Avenue Brea, CA 92823 Attn: Nan Natanom-Harrold

Date Received: 28 Jun. 18 Sample Identification: Valencia-1 Sample ID #: 8060868 - 1/1 Nutrients Drv wt. As Rcvd.

Nutrients	Dry wt.	As Rcvd.	units	Stability Indicator:		Biologically
Total Nitrogen:	0.88	0.59	%	CO2 Evolution	Respirometery	Available C
Ammonia (NH <sub>4</sub> -N):	390	260	mg/kg	mg CO <sub>2</sub> -C/g OM/day	6.0	6.9
Nitrate (NO <sub>3</sub> -N):	51	34	mg/kg	mg CO <sub>2</sub> -C/g TS/day	1.7	1.9
Org. Nitrogen (OrgN):	0.84	0.56	%	Stability Rating	moderately unstable	moderately unstable
Phosphorus (as $P_2O_5$ ):	0.37	0.25	%			
Phosphorus (P):	1600	1100	mg/kg	Maturity Indicator: Cucu	nber Bioassay	
Potassium (as K <sub>2</sub> O):	0.68	0.45	%	Compost:Vermiculite (v:v)	1:2	
Potassium (K):	5600	3800	mg/kg	Emergence (%)	100	
Calcium (Ca):	1.9	1.3	%	Seedling Vigor (%)	108	
Magnesium (Mg):	0.46	0.31	%	Description of Plants	healthy	
Sulfate (SO <sub>4</sub> -S):	990	660	mg/kg		•	
Boron (Total B):	26	17	mg/kg	Pathogens Results	Units	Rating
Moisture:	0	33.4	%	Fecal Coliform 170	MPN/g	pass
Sodium (Na):	0.14	0.095	%	Salmonella < 3	MPN/4g	, pass
Chloride (Cl):	0.16	0.11	%	Date Tested: 28 Jun. 18	Ū	
pH Value:	NA	7.95	unit			
Bulk Density :	33	49	lb/cu ft	Physical Contaminants**	% by weight	
Carbonates (CaCO <sub>3</sub> ):	46	30	lb/ton	Hard Plastic	0.35	
Conductivity (EC5):	3.3	NA	mmhos/cm	Film Plastic	< 0.1	
Organic Matter:	27.6	18.3	%	Glass	2.1	
Organic Carbon:	16.0	11.0	%	Metal	0.19	
Ash:	72.5	48.2	%	Sharps	ND	
C/N Ratio	18	18	ratio	Tatal	0.04	
AgIndex	6	6	ratio	Total	<mark>2.64</mark>	
Metals	Dry wt.	EPA Limit	units	Size Distribution		
Alumnium (Al)	7800	-	mg/kg	MM % by weig	ht	
Arsenic (As):	3.8	41	mg/kg	> 50 0.0		
Cadmium (Cd):	1.3	39	mg/kg	25 to 50 0.0		
Chromium (Cr):	27	1200	mg/kg	16 to 25 0.0		
Cobalt (Co)	5.7	-	mg/kg	9.5 to 16 3.1		
Copper (Cu):	68	1500	mg/kg	6.3 to 9.5 9.6		
Iron (Fe):	13000	-	mg/kg	4.0 to 6.3 14.6		
Lead (Pb):	43	300	mg/kg	2.0 to 4.0 18.7		
Manganese (Mn):	250	-	mg/kg	< 2.0 54.0	(6)	
Mercury (Hg):	< 1.0	17	mg/kg	**Greater than 4mm in size	e (Sharps greater	than 2mm)
Molybdenum (Mo):	3.7	18	mg/kg		<b>.</b> .	
Nickel (Ni):	19	420	mg/kg		Analys	t: Assaf Sadeh
Selenium (Se):	1.8	36	mg/kg		(1 so	Sale
Zinc (Zn): *Sample was received ar	190	2800	mg/kg	ECC procedures	Un	

\*Sample was received and handled in accordance with TMECC procedures.

Account No	.:	Date Received	28 Jun. 18	
8060868 - 1	/1 - 10220	Sample i.d.	Valencia-1	
Group:	Jun18E No. 24	Sample I.d. No.	1/1	8060868

### Is Your Compost Stable?

Respiration Rate		Biodegradation Rate of Your F	Pile	
6.0 mg CO2-C/	++++++++	+++++		
g OM/day	< Stable	>< Moderately Unstable ><	Unstable	> < High For Mulch
Biologically Available Carb	on (BAC)	Optimum Degradation Rate		
6.9 mg CO2-C/	++++++++	++++++		
g OM/day	< Stable	>< Moderately Unstable ><	Unstable	> < High For Mulch

### Is Your Compost Mature?

AmmoniaN/NitrateN ratio 7.6 Ratio	+++++++++++++++++++++++++++++++++++++++	+++++++++++++++++++++++++++++++++++++++	+++++++++++++++++++++++++++++++++++++++	+++++++++++++++++++++++++++++++++++++++
	VeryMature> <	Mature	>	< Immature
Ammonia N ppm				
<b>390</b> mg/kg	+++++++++++++++++++++++++++++++++++++++	+++++++++++++++++++++++++++++++++++++++	++++++	
dry wt.	VeryMature> <	Mature	> <	mmature
Nitrate N ppm	Pass			
<b>51</b> mg/kg	+++++++++++++++++++++++++++++++++++++++	+++++++++++++++++++++++++++++++++++++++	+++	
dry wt.	< Immature	:	>< Mature	
pH value				
7.95 units	******	+++++++++++++++++++++++++++++++++++++++	*****	++++++
	< Immature		> < Mature	> < Immature
Cucumber Emergence				
100.0 percent	+++++++++++++++++++++++++++++++++++++++	+++++++++++++++++++++++++++++++++++++++	****	+++++++++++++++++++++++++++++++++++++++
	< Immature			> < Mature

### Is Your Compost Safe Regarding Health?

Fecal Coliform < 1000 MPN/g dry wt.	++++++	
	< Safe	> < High Fecal Coliform
Salmonella		
Less than 3 /4g dry wt.	++++++	
	<safe (none="" detected)<="" th=""><th>&gt; &lt; High Salmonella Count(&gt; 3 per 4 grams)</th></safe>	> < High Salmonella Count(> 3 per 4 grams)
Metals US EPA 503		
Pass dry wt.	++++++++	
	<all metals="" pass<="" th=""><th>&gt; &lt; One or more Metals Fail</th></all>	> < One or more Metals Fail

## Does Your Compost Provide Nutrients or Organic Matter?

Nutrients (N+P2O5+K2O)						
1.9 Percent	++++++++++	+++++				
dry wt.	<low< th=""><th>&gt; &lt; Average</th><th>&gt; &lt;</th><th>&lt; High Nutrien</th><th>t Content</th><th></th></low<>	> < Average	> <	< High Nutrien	t Content	
AgIndex (Nutrients / Sodium	n and Chlorid	e Salts)	((N+P2	:05+K2O) / (N	a + Cl))	
6 Ratio		********				
	Na & Cl 😕	< Nutrient and S	Sodium and Chloride	Provider	>< Nutrient Provider	
Plant Available Nitrogen (PA	AN)	Estimated relea	ase for first season			
4 lbs/ton	+++++++++	+++++				
wet wt.	Low Nitrogen	Provider> <	Average Nitrogen	Provider	>  <high nitrogen="" provider<="" th=""><th></th></high>	
C/N Ratio						
18 Ratio			+++++++++++++++++++++++++++++++++++++++	_		
	0		Neutral > < <mark>N-Deman</mark>	<mark>d</mark> >∣< High Nitı	rogen Demand	
Soluble Available Nutrients	& Salts (EC5	w/w dw)				
3.3 mmhos/cm	+++++++++					
dry wt.	SloRelease>	< Average Nuti	rient Release Rate	>  <high avai<="" th=""><th>ilable Nutrients</th><th></th></high>	ilable Nutrients	
Lime Content (CaCO3)						
46 Lbs/ton					******	-++++
dry wt.	< Low $>$ $<$ M	edium > < Hig	h Lime Content (as	CaCO3)		

### What are the physical properties of your compost?

P	erc	ent	As	h

I CICCIII ASII	
72.5 Percent	+++++++++++++++++++++++++++++++++++++++
dry wt.	< High Organic Matter > < Average > < High Ash Content
Sieve Size % > 6.3 MM (0.25	")
12.7 Percent	***************************************
dry wt.	All Uses > < Size May Restrict Uses for Potting mix and Golf Courses

Page one of three

Account No	).:	Date Received 28	3 Jun. 18
8060868 - 1	1/1 - 10220	Sample i.d. Va	alencia-1
Group:	Jun18E No. 24	Sample I.d. No. 1/	1 8060868

#### Is Your Compost Stable?

**Respiration Rate** 

6.0 Moderate-selected use

mg CO2-C/g OM/day

The respiration rate is a measurement of the biodegradation rate of the organic matter in the sample (as received). The respiration rate is determined by measuring the rate at which CO2 is released under optimized moisture and temperature conditions.

#### **Biologically Available Carbon** 7

Moderate-selected use mg CO2-C/g OM/day

Biologically Available Carbon (BAC) is a measurement of the rate at which CO2 is released under optimized moisture, temperature, porosity, nutrients, pH and microbial conditions. If both the RR and the BAC test values are close to the same value, the pile is optimized for composting. If both values are high the compost pile just needs more time. If both values are low the compost has stabilized and should be moved to curing. BAC test values that are higher than RR indicate that the compost pile has stalled. This could be due to anaerobic conditions, lack of available nitrogen due to excessive air converting ammonia to the unavailable nitrate from lack of nitrogen or other nutrients due to poor choice of feedstock, pH value out of range, or microbes rendered non-active. Is Your Compost Mature?

#### AmmoniaN:NitrateN ratio

immature 7.6

		C
		tł
Ammonia N	l ppm	S
390	mature	ir
Nitrate N p	om	а
51	mature	a
pH value		F
7.95	mature	C
		С
Cucumber	Rinassav	

ssay 100.0 Percent Composting to stabilize carbon can occur at such a rapid rate that sometimes phytotoxins remain in he compost and must be neutralized before using in high concentrations or in high-end uses. This step is called curing. Typically ammonia is in excess with the break-down of organic materials resulting n an increase in pH. This combination results in a loss of volatile ammonia (it smells). Once this toxic ammonia has been reduced and the pH drops, the microbes convert the ammonia to nitrates. A low ammonia + high nitrate score is indicative of a mature compost, however there are many exceptions. For example, a compost with a low pH (<7) will retain ammonia, while a compost with high lime content an lose ammonia before the organic fraction becomes stable. Composts must first be stable before curing indicators apply.

Cucumbers are chosen for this test because they are salt tolerant and very sensitive to ammonia and organic acid toxicity. Therefore, we can germinate seeds in high concentrations of compost to

measure phytotoxic effects without soluble salts being the limiting factor. Values above 80% for both percent emergence and vigor are indicative of a well-cured compost. Exceptions include very high salts that affect the cucumbers, excessive concentrations of nitrates and other nutrients that will be in range when formulated to make a growing media. In addition to testing a 1:1 compost: vermiculite blend, we also test a diluted 1:4 blend to indicate a more sensitive toxicity level.

# Is Your Compost Safe Regarding Health?

### Fecal Coliform

< 1000 / g dry wt. Fecal coliforms can survive in both aerobic and anaerobic conditions and is common in all initial compost piles. Most human pathogens occur from fecal matter and all fecal matter is loaded in fecal coliforms. Therefore fecal coliforms are used as an indicator to determine if the chosen method for pathogen reduction (heat for compost) has met the requirements of sufficient temperature, time and mixing. If the fecal coliforms are reduced to below 1000 per gram dry wt. it is assumed all others pathogens are eliminated. Potential problems are that fecal coliform can regrow during the curing phase or during shipping. This is because the conditions are now more favorable for growth than during the composting process. Salmonella Bacteria

Salmonella is not only another indicator organism but also a toxic microbe. It has been used in the Less than 3 3 / 4g dry wt. case of biosolids industry to determine adequate pathogen reduction.

### Metals

Pass The ten heavy metals listed in the EPA 503 regulations are chosen to determine if compost can be applied to ag land and handled without toxic effects. Most high concentrations of heavy metals are derived from woodwaste feedstock such as chrome-arsenic treated or lead painted demolition wood. Biosolids are rarely a problem. Does Your Compost Provide Nutrients or Organic Matter?

#### Nutrients (N+P2O5+K2O) 1.9 low nutrient content

This value is the sum of the primary nutrients Nitrogen. Phosphorus and Potassium. Reported units are consistent with those found on fertilizer formulations. A sum greater than 5 is indicative of a compost with high nutrient content, and best used to supply nutrients to a receiving soil. A sum below 2 indicates low nutrient content, and is best-used to improve soil structure via the addition of organic matter. Most compost falls between 2 and 5.

Page two of three

Account No .:		Date Received	28 Jun. 18	
8060868 - 1/1	- 10220	Sample i.d.	Valencia-1	
Group:	Jun18E No. 24	Sample I.d. No.	1/1	8060868

#### INTERPRETATION: AgIndex (Nutrients/Na+CI)

Page three of three

6 Average nutrient ratio Composts with low AgIndex values have high concentrations of sodium and/or chloride compared to nutrients. Repeated use of a compost with a low AgIndex (< 2) may result in sodium and/or chloride acting as the limiting factor compared to nutrients, governing application rates. These composts may be used on well-draining soils and/or with salt-tolerant plants. Additional nutrients form another source may be needed if the application rate is limited by sodium or chloride. If the AgIndex is above 10, nutrients optimal for plant growth will be available without concern of sodium and/or chloride toxicity. Composts with an AgIndex of above 10 are good for increasing nutrient levels for all soils. Most composts score between 2 and 10. Concentrations of nutrients, sodium, and chloride in the receiving soil should be considered when determining compost application rates. The AgIndex is a product of feedstock quality. Feedstock from dairy manure, marine waste, industrial wastes, and halophytic plants are likely to produce a finished compost with a low AgIndex.

#### Plant Available Nitrogen (lbs/ton)

4 Low N Provider Plant Available Nitrogen (PAN) is calculated by estimating the release rate of Nitrogen from the organic fraction of the compost. This estimate is based on information gathered from the BAC test and measured ammonia and nitrate values. Despite the PAN value of the compost, additional sources of Nitrogen may be needed during he growing season to offset the Nitrogen demand of the microbes present in the compost. With ample nutrients these microbes can further breakdown organic matter in the compost and release bound Nitrogen. Nitrogen demand based on a high C/N ratio is not considered in the PAN calculation because additional Nitrogen should always be supplemented to the receiving soil when composts with a high C/N ratio are applied. **C/N Ratio** 

18 Indicates immaturity (As a guiding principal, a C/N ratio below 14 indicates maturity and above 14 indicates) immaturity, however, there are many exceptions. Large woodchips (>6.3mm), bark, and redwood are slow to breakdown and therefore can result in a relatively stable product while the C/N ratio value is high. Additionally, some composts with chicken manure and/or green grass feedstocks can start with a C/N ratio below 15 and are very unstable. A C/N ratio below 10 supplies Nitrogen, while a ratio above 20 can deplete Nitrogen from the soil. The rate at which Nitrogen will be released or used by the microbes is indicated by the respiration rate (BAC). If the respiration rate is too high the transfer of Nitrogen will not be controlable. **Soluble Nutrients & Salts (EC5 w/w dw - mmhos/cm)** 

3.3 Average salts This value refers to all soluble ions including nutrients, sodium, chloride and some soluble organic compounds. The concentration of salts will change due to the release of salts from the organic matter as it degrades, volatilization of ammonia, decomposition of soluble organics, and conversion of molecular structure. High salts + high AgIndex is indicative of a compost high in readily available nutrients. The application rate of these composts should be limited by the optimum nutrient value based on soil analysis of the receiving soil. High Salts + low AgIndex is indicative of a compost low in nutrients with high concentrations of sodium and/or chloride. Limit the application rate according to the toxicity level of thesodium and/or chloride. Low salts indicates that the compost can be applied without risking salt toxicity, is likely a good source of organic matter, and that nutrients will release slowly over time.

#### Lime Content (lbs. per ton)

46 High lime content

Compost high in lime or carbonates are often those produced from chicken manure (layers)

ash materials, and lime products. These are excellent products to use on a receiving soil where lime has been recommended by soil analysis to raise the pH. Composts with a high lime content should be closely considered for pH requirements when formulating potting mixes.

### Physical Properties

Percent Ash

72.5 High ash content Ash is the non-organic fraction of a compost. Most composts contain approximately 50% ash (dry weight basis). Compost can be high in ash content for many reasons including: excess minerilzation(old compost), contamination with soil base material during turning, poor quality feedstock, and soil or mineral products added. Finding the source and reducing high ash content is often the fastest means to increasing nutrient quality of a compost.

#### Particle Size % > 6.3 MM (0.25")

12.7 May restrict use Large particles may restrict use for potting soils, golf course topdressings, seed-starter mixes, and where a fine size distribution is required. Composts with large particles can still be used as excellent additions to field soils, shrub mixes and mulches.

Appendix:		
	Estimated available nutrients for use when	n calculating application rates
Plant Available Nitrogen (PAN) calculations:		lbs/ton (As Rec'd)
PAN = (X * (organic N)) + ((NH4-N) + (NO3-N))		х, , , , , , , , , , , , , , , , , , ,
X value = If BAC < 2 then X = 0.1	Plant Available Nitrogen (PAN)	4.0
If BAC =2.1 to 5 then X = 0.2	Ammonia (NH4-N)	0.52
If BAC =5.1 to 10 then X = 0.3	Nitrate (NO3-N)	0.07
If BAC > 10 then $X = 0.4$	Available Phosphorus (P2O5*0.64)	3.2
Note: If C/N ratio > 15 additional N should be applied.	Available Potassium (K2O)	9.2



# **Appendix K: Commercial Scale Timeline**

# **OCWR Organics Initiative Timeline**

# 2016

- JanuaryLocal jurisdictions required to adopt an organic waste recycling<br/>program for commercial businesses (AB 1826)AprilCommercial businesses required to arrange for the recycling of
- August OCWR adopts 2016 Update to 2014-2019 Strategic Plan to include an organic material management plan element

organic waste (AB 1826)

# 2017

FebruaryOCWR forms Organics Management CommitteeMarchOCWR meets with internal and external stakeholders to<br/>introduce the organics initiativeAugustCalRecycle requires jurisdictions to develop and submit plans<br/>for organics recycling capacity over a 15-year periodNovemberOCWR completes waste characterization study of processed<br/>green material used as alternative daily coverDecemberOCWR launches Organic Management Subcommittees

# 2018

March Twelve OCWR employees attends the US Composting Council Certified Compost Operations Management course
 March Categorical Exemptions for Compost Pilot Projects approved and filed with Clerk-Recorder's Office
 March Enforcement Agency (EA) Notifications received for Compost Pilot Projects. Rule 1133 Registrations submitted to the South

	Coast Air Quality Management Districts. Permitting with Regional Water Quality Control Boards completed.
March	OCWR launches Compost Pilot Projects and names each: Valencia Greenery (Olinda), Bee Canyon Greenery (FRB), and Capistrano Greenery (Prima)
April	OCFA issues Composting Facility Conditions
June	Processed compost put through screeners
July	California Department of Food and Agriculture issues Compliance Agreements for Bee Canyon and Capistrano Greeneries
November	OCWR partners with US Composting Council to host Certified

November OCWR partners with US Composting Council to host Certified Compost Operations Management Course at Frank R. Bowerman Landfill. Draft Initial Study Prepared for Bee Canyon Greenery Full Scale Commercial Operations.

# 2019

January	Preparing of Draft Report of Composting Site Information/Odor Impact Minimization Plan and Technical Report. Development of Fire Prevention Plan.
February	Completed Non-Disposal Facility Element (NDFE) for All Three Organic Facilities
April	Resolution signed by the Orange County Board of Supervisors supporting the organics initiatives efforts of OC Waste & Recycling
June	Begin Regulatory Review of Report of Composting Site Information/Odor Impact Minimization Plan and Technical Report

July	Draft Initial Study/Mitigated Negative Declaration Prepared
August	Regulatory Administrative Review of Initial Study
September	State Clearing House Review. 30 day Public Review Period.
October	Permits issued from Orange County Fire Authority
December	Board of Supervisor Approval of MND/Notice of Determination Filed. Submit Application for Full Solid Waste Facility Permit and Notice of Intent for Bee Canyon Greenery.
Winter	Tentative Adoption of SB 1383 regulations by CalRecycle

\* Timeframes for Valencia and Capistrano Greenery contingent on regulatory review of Bee Canyon Greenery

# 2020

January 1	Deadline to meet statewide goal of 75% diversion (AB 341)
January 1	Processed Green Material (PGM) used as Alternative Daily Cover (ADC) counted as disposal (AB 1594)
January 1	Statewide organics to be reduced by 50% below 2014 levels (SB 1383)
July 1	CalRecycle reports progress of achieving SB 1383 goals to legislature
Summer	Solid Waste Facility Permit Issued for Bee Canyon Greenery and Commenced Operations

# 2022

January 1 SB 1383 Regulations take effect and becomes enforceable

# 2025

- January 1 Statewide organics to be reduced by 75% below 2014 levels (SB 1383)
- January 1 Statewide edible foodwaste to be recovered by 20% that is generated (SB 1383)



MARCH

graduates.

Twelve OCWR

employees become US Composting Council **Certified Compost Operations Management** 

Categorical Exemptions for Compost Pilot Projects approved and filed with Clerk-

Recorder's Office

(EA) Notifications

Pilot Projects

OCWR launches

Enforcement Agency

received for Compost

**Compost Pilot Projects** 

Greenery (Olinda), Bee

Canyon Greenery (FRB),

and Capistrano Greenery

and names each: Valencia

# **Organics Initiative Timeline**

# **JANUARY**

Local jurisdictions required to adopt an organic waste recycling program (AB 1826)

# **APRIL**

Commercial businesses required to arrange for the recycling of organic waste (AB 1826)

2016

# **FEBRUARY**

OCWR forms Organics Management Committee)

# MARCH

OCWR meets with stakeholders to introduce the organics initiative

internal and external

2017

# 2018

# AUGUST

OCWR adopts 2016 Update to 2014-2019 Strategic Plan to include an organic material management plan element.

# AUGUST

CalRecycle requires iurisdictions to develop and submit plans for organics recycling capacity over a 15-year period.

# **NOVEMBER**

OCWR completes waste characterization study of processed green material used as alternative daily cover.

# DECEMBER

OCWR launches Organic Management Subcommittees

# JUNE?

(Prima)

Processed compost put through screeners.

# JULY?

Second wave of compost.

# **NOVEMBER**

OCWR partners with US Composting Council to hold Certified Compost **Operations Management** Course at Frank R. Bowerman Landfill

Resolution signed by the Orange County Board of Supervisors supporting the organics initiatives efforts of OC Waste & Recycling

# **SPRING**

Adoption of SB 1383 regulations by CalRecycle

2019

# **JANUARY 1**

Deadline to meet statewide goal of 75% diversion

# 2020

# **JANUARY 1**

Processed Green Material (PGM) used as Alternative Daily Cover (ADC) counted as disposal (AB 1594).

Statewide organics to be reduced by 50% below 2014 levels (SB 1383)

# **JANUARY 1**

Statewide organics to be reduced by 75% below 2014 levels (SB 1383)

Statewide edible foodwaste to be recovered by 20% that is generated (SB 1383)





# **Appendix L: BOS Resolution**

Agenda Item



# AGENDA STAFF REPORT

# ASR Control 19-000469

MEETING DATE:	
TO:	
LEGAL ENTITY TAKING ACTION:	
SUBMITTING AGENCY/DEPARTMENT:	
DEPARTMENT CONTACT PERSON(S):	

04/23/19 Orange County Clerk of the Board Board of Supervisors Supervisor Bartlett Victor Cao, (714) 834-3550 James Dinwiddie, (714) 834-3550

# **CATEGORY:** Discussion

SUBJECT: Approve Resolution Directing OCWR to Achieve State Imposed Organics Mandates

# **RECOMMENDED ACTION:**

Approve Resolution Directing OC Waste & Recycling (OCWR) to Utilize Available County Resources to Research Opportunities and Develop Strategies to Achieve State Imposed Organics Recycling Mandates.

# SUMMARY/BACKGROUND:

# **SUMMARY:**

Approval of the Resolution will help OCWR achieve compliance with state-mandated recycling goals; expand the County's role as a regional leader in waste reduction and recycling activities; and promote increased regional recycling and diversion efforts.

# **BACKGROUND INFORMATION:**

OC Waste & Recycling (OCWR) is responsible for managing the County's solid waste disposal system. The system consists of three active regional landfill operations, 20 closed solid waste disposal sites and four household hazardous waste collection centers.

The California Integrated Waste Management Act of 1989 (Assembly Bill 939) mandates that cities and counties reduce the amount of waste disposed in landfills by 50 percent by 2000, or incur fines of up to \$10,000 per day. Through the passage of recent legislation including AB 341, AB 1594, AB 1826 and SB 1383, the Department of Resources Recycling and Recovery (State) is making a concerted effort to further mandate waste diversion from landfills. AB 341 implemented mandatory commercial recycling for businesses under specified conditions, and set a statewide goal to divert from landfills 75 percent of waste by 2020. AB 1594 eliminated diversion credit for green waste used as alternative daily cover at landfills beginning in 2020. AB 1826 implemented mandatory organics recycling requirements on businesses and requires certain entities to subscribe to organics recycling programs. In 2016 the State enacted Senate Bill 1383 which establishes statewide targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020, and a 75 percent reduction by 2025.

In 2016, OCWR established a strategic initiative to create and implement an organic material management plan. This plan is currently in development and has identified the lack of organics recycling

and processing capacity as a major issue facing Orange County and the State as a whole. The number of facilities required to process organic waste due to the new legislation is grossly insufficient. The number of organics processing facilities statewide, would need to more than double, at a minimum, to meet statewide organic waste diversion mandates.

Approval of the resolution will enable OCWR to utilize available county resources in order to maintain compliance with the regulations adopted by the State. OCWR will develop strategies and programs to achieve state-imposed organics recycling mandates. OCWR will work transparently with all stakeholders including cities, businesses, and the waste industry to achieve compliance. This resolution will also allow the OCWR Director to seek opportunities for organics recycling grants to help offset the costs of organics recycling research, program implementation and other related expenses. OCWR will comply with County policies on applying for and accepting any grants that the OCWR Director identifies as potentially beneficial to the County.

**Compliance With CEQA:** This action is not a project within the meaning of CEQA Guidelines Section 15378 and is therefore not subject to CEQA, since it does not have the potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment. Any future action connected to this approval that constitutes a project will be reviewed for compliance with CEQA.

**FINANCIAL IMPACT:** N/A

**STAFFING IMPACT:** N/A

**ATTACHMENT(S):** Attachment A - 2019 Resolution

### **RESOLUTION NO. 19-031**

# RESOLUTION OF THE BOARD OF SUPERVISORS OF ORANGE COUNTY, CALIFORNIA DIRECTING OC WASTE & RECYCLING TO UTILIZE EXISTING COUNTY RESOURCES TO RESEARCH OPPORTUNITIES AND DEVELOP STRATEGIES TO ACHIEVE STATE IMPOSED ORGANICS RECYCLING MANDATES.

WHEREAS, in 1989 the State of California enacted AB 939 (Sher), The Integrated Waste Management Act, requiring jurisdictions to divert a minimum of 50% of waste then going to landfills;

WHEREAS, in 2014 the State of California enacted AB 1594 (Williams, Chapter 719, Statutes of 2014), mandating that as of January 1, 2020, the use of green material as alternative daily cover will no longer constitute diversion through recycling and will instead be considered disposal in terms of measuring a jurisdiction's annual 50% per capita disposal rate;

WHEREAS, in 2018, Orange County cities delivered approximately 513,000 tons of processed green material to Orange County landfills accepted for free to be used as alternative daily cover, saving the residents of Orange County more than \$17,000,0000 over the comparable cost of disposal;

WHEREAS, beginning in 2020, due to the new influx of previously diverted processed green material several Orange County cities will have difficulty meeting the mandated 50% diversion rate due to a lack of organics processing infrastructure within Orange County;

WHEREAS, in 2016 the 5tate of California enacted SB 1383 (Lara, Chapter 395, Statues of 2016), establishing methane emissions reduction targets, to be achieved via even greater diversion of organics from landfills, in a statewide effort to reduce emissions of short-lived climate pollutants;

WHEREAS, the state continually increases the type and volume of organics that must be diverted from landfills and recycled;

WHEREAS, transportation is the most significant cost component to managing any waste stream, and the County Landfill system is well suited to receive and process organic material;

WHEREAS, the Orange County Board of Supervisors has considered the needs of Orange County and the need for additional organic recycling infrastructure;

WHEREAS, the Orange County Board of Supervisors supports protecting consumers via the creation of an organics recycling infrastructure within Orange County;

WHEREAS, the Orange County Board of Supervisors is committed to fulfilling its legal obligations to meet state mandates in a manner that is least burdensome to taxpayers;

NOW, THEREFORE BE IT RESOLVED, the Orange County Board of Supervisors acknowledges that the County has an interest in utilizing County resources to support the region in developing additional organics recycling infrastructure. The Board HEREBY ORDERS as follows:

**SECTION 1.** OC Waste & Recycling (OCWR) shall research opportunities and use available county resources to develop strategies and programs to achieve state-imposed organics recycling mandates for County unincorporated areas and where feasible leverage and extend similar opportunities to serve other public agencies and incorporated portions of Orange County.

SECTION 2. OCWR shall work transparently with all stakeholders to achieve the above-stated goals.

**SECTION 3.** Authorize OCWR to seek opportunities for organics recycling grants to help offset the costs of organics recycling research, program implementation and other related expenses. OCWR shall comply with County policies in applying for and accepting grants.

The foregoing was passed and adopted by the following vote of the Orange County Board of Supervisors, on April 23, 2019, to wit:

AYES:

Supervisors:

NOES:Supervisor(s):EXCUSED:Supervisor(s):ABSTAINED:Supervisor(s):

S: Butter

LISA A. BARTLETT, ANDREW DO, MICHELLE STEEL

CHAIRWOMAN

DONALD P. WAGNER, DOUG CHAFFEE

STATE OF CALIFORNIA ) ) COUNTY OF ORANGE )

I, ROBIN STIELER, Clerk of the Board of Orange County, California, hereby certify that a copy of this document has been delivered to the Chairman of the Board and that the above and foregoing Resolution was duly and regularly adopted by the Orange County Board of Supervisors

IN WITNESS WHEREOF, I have hereto set my hand and seal.



ROBIN STIELER Clerk of the Board County of Orange, State of California

Resolution No: 19-031

Agenda Date: 04/23/2019

Item No: 48



I certify that the foregoing is a true and correct copy of the Resolution adopted by the Board of Supervisors, Orange County, State of California

Robin Stieler, Clerk of the Board of Supervisors

Ву. \_

Deputy

# ORANGE COUNTY BOARD OF SUPERVISORS MINUTE ORDER April 23, 2019

# Submitting Agency/Department: Chairwoman Bartlett

Adopt resolution directing OC Waste & Recycling to utilize available County resources to research opportunities and develop strategies to achieve State imposed organics recycling mandates

The following is action taken by the Board of Supervisors:APPROVED AS RECOMMENDED ☑OTHER □

**Unanimous** ☑ (1) DO: Y (2) STEEL: Y (3) WAGNER: Y (4) CHAFFEE: Y (5) BARTLETT: Y Vote Key: Y=Yes; N=No; A=Abstain; X=Excused; B.O.=Board Order

## Documents accompanying this matter:

Resolution(s) 19-031
Ordinances(s)
Contract(s)

Item No. 48

Special Notes:

Copies sent to:

District 5

4/25/19



I certify that the foregoing is a true and correct copy of the Minute Order adopted by the Board of Supervisors, Orange County, State of California. Robin Stieler, Clerk of the Board

By:\_\_\_\_\_

Deputy



# Appendix M: Commercial Scale Conceptual Design Plans

# 1. FACILITY INFORMATION

Owner: OC Waste & Recycling Address: 32250 Avenida La Pata San Juan Capistrano, 92675 Operator: OC Waste & Recycling Operating Days: Monday-Sunday 24 Hours Material Acceptance: 7:00 a.m. to 5:00 p.m. M. – Sa. SWFP Issue Date: N/A

SWFP No.: N/A

# 2. <u>TYPE OF FACILITY</u>

- CalRecycle: Green Material Composting Facility (14CCR, Section 17857.1(c); Full Solid Waste Facility Permit (SWFP) required (>12,500 cy in-place). Option 1: Stand-Alone SWFP; Option 2: Fold into SWFP for Landfill. Will need **Report of Composting Site** Information (RCSI) and Odor Impact Minimization Plan (OIMP)
- SWRCB: Tier 2 (>25,000 cy in-place) under the State Water Resources Control Board, Order WQ 2015-0121-DWQ, General Waste Discharge Requirements for Composting Operations. Facility will need a Technical Report.
- **SCAQMD: Permit to Operate** Equipment with Internal Combustion Engines or Portable Equipment Registration Permit if allowed for equipment shared by all three sites.
- OCFA: Fire Protection Requirements F Occupancy; Chipping, Composting, or Recycling Operation (PR315; a PR145 may also be required)
  - **PR 145** Fire Master Plan (Emergency access and fire hydrant location, fire lane markings, or vehicle gates across emergency access drives)
  - PR 315 Hazardous Material Process/Storage for Non H Occupancies

# 3. <u>CAPACITY</u>

- 200 tons per day (TPD)
- Approximately 53,000 cubic yards (cy) of feedstock, compost (active, curing and final product), additives and amendments on site at any given time (see Table 1). As operational processes are fine-tuned the feedstock, compost (active, curing and final product), additives, and amendment volumes will fluctuate.

# 4. <u>TECHNOLOGY TYPE</u>

**Open Windrow Composting** – Per CalRecycle, Windrow Composting Process means "the process in which compostable material is placed in elongated piles. The piles or "windrows" are aerated and/or mechanically turned on a periodic basis."

# 5. <u>PERMITTED WASTE TYPES</u>

Green Material – Per CalRecycle, Green Material means "any plant material except food material and vegetative food material that is separated at the point of generation, contains no greater than 1.0 percent of physical contaminants by dry weight, and meet maximum contamination requirements." Green material **includes** but is not limited to tree and yard trimmings, untreated wood wastes, natural fiber product, wood waste from silviculture and manufacturing and construction and demolition wood waste. Green material **does not include** food material, vegetative food material, biosolids, mixed material, material separated from commingled solid waste collection or processing, wood containing lead-based paint or wood preservatives, or mixed construction and demolition debris.

# 6. <u>EQUIPMENT</u>

- Windrow Turner
- Mobile Screen (to be used at three sites)
- (2) Two Front-End Loaders
- Water Truck
- Truck

# 7. UTILITIES

Operations Water Supply. There is no existing water source in the immediate area of the proposed composting facility location on the landfill. There is an existing City of San Juan Capistrano Water District 24" domestic water main located along the landfill ridgeline, approximately 600 feet west of the proposed composting facility location. A new 8" to 12" waterline would need to be constructed to bring water from the 24" waterline to the proposed composting facility location. The new waterline would connect to a water distribution system within the composting area to provide operations water throughout the facility. Assumptions for operations water demand are presented in Table 2. The estimated process water demand ranges from approximately 46,000 to 80,000 gallons per day.

- Fire Water Supply: It is TTBAS' understanding that the OCFA will be preparing new fire prevention and control requirements specific to composting facilities. Since there are no OCFA fire codes or requirements available at this time specific to composting facilities, TTBAS used Standard 14.9.1 from the Ventura County Fire Prevention District for Composting, Mulch and Organic Processing, as the guidance for the composting facility conceptual design based on similarities between the climate and environment of Ventura and Orange Counties. Section 4.11 Fire Flow/Water Supply requirements are as follows:
  - Facilities with over 200 cubic yards shall provide a water supply. The minimum fire flow shall be no less than 500 GPM @ 20 PSIR for a minimum of two (2) hour duration. If there is no water purveyor, an alternate water supply with storage tank(s) shall be provided for fire suppression. The water supply tank(s) shall provide a minimum capacity of 2,500 gallons per pile (maximum 30,000 gallons) for piles not exceeding six (6) feet in height and 5,000 gallons per pile (maximum 60,000) for piles exceeding six (6) feet in height. Water tank(s) shall not be used for any other purpose unless the required fire flow is left in reserve at all times. An approved method shall be provided to maintain the required amount of water within the tank(s).

Based on conversations with the City of San Juan Capistrano Water District, it is understood that there is sufficient capacity in the waterline to provide both the required 500 gpm fire flow and the necessary operations water. While data on the actual flow and pressure in the line was not available, the size of the line would suggest that this assumption is reasonable and potentially conservative. As with the operations water line, a waterline (likely 8" to 12") would be required to connect to the 24" City water line to deliver fire water to the compost facility. Fire hydrants, with a 2  $\frac{1}{2}$ " outlet, would be located around the perimeter of the facility at approximately 1,000 foot spacing based on the following Section 4.12 of the Ventura Standard:

 When a water supply is required by Section 4.11, fire hydrant(s) with at least one (1) 2-1/2 inch outlet shall be located within 500 feet of all pile edges (1,000 foot spacing). Fire hydrant(s) shall be set back a minimum of 20 feet from any pile. When using an on-site water storage tank, required fire hydrant(s) may be located on the tank. Signs, minimum of 4 inch high letters, shall be posted at all fire hydrant outlets stating "WATER FOR FIRE DEPARTMENT USE ONLY".

# 8. STORM WATER MANAGEMENT

The compost pond depth was determined based on NOAA precipitation data for a 25-year, 24-hour storm event (required by Order WQ 2015-0121-DWQ, General Waste Discharge Requirements for Composting Operations) and the approximate tributary boundary of the compost area. Based on these assumptions, the compost pond would need to be approximately 6 feet deep to hold a capacity of 7.85 acre-feet. The compost area would need perimeter berms approximately two (2) to three (3) feet high, depending on the location, to also be able to retain the 25-year, 24-hour storm event.

# 9. BIOLOGICAL MITIGATION AREA

Due to proximity to an adjacent biological mitigation area (Habitat Conservation Plan Pre-Mitigation Area 1 for La Pata), monitoring during the bird nesting season (primarily for coastal California gnatcatcher and least Bell's vireo) is required within 500 feet of western limit of the compost facility. Noise mitigation measures may need to be employed if nesting birds are disturbed by noise from compost operations. (Biological Opinion No. 1-6-02-F-703 [February 8, 2002] and applicable aspects of California Fish and Game Code and the Migratory Bird Treaty Act)

# OC WASTE AND RECYCLING TABLE 1 CAPISTRANO GREENERY 200 TONS PER DAY OPEN WINDROW COMPOSTING FACILITY AREA AND VOLUME CALCULATIONS

Materials Receiving	Amount	Unit	Notes
Vaterials Received per Day	200	Tons	
Density of Pile (pre-grind)	0.40	Tons/CY	800 lbs./CY
Days of Storage Needed	2	Days	
Required On-Site Storage	400 1,000	Tons CY	
Fotal Volume of Storage Required	27,000	ft <sup>3</sup>	
Pile Height	15	Feet	
	1,800	Sq. Ft.	
Footprint –	0.04	Acres	
Active Windrow Piles	Amount	Unit	Notes
Density of Pile (post-grind)	0.40	Tons/CY	800 lbs./CY
Compost to Windrow/day	500.0	CY	
	13,500	ft <sup>3</sup>	
	20	FT Wide	
Pile Dimensions	150	FT Long	
	8	FT High	
Pile Area	3,000	Sq. Ft.	
Pile Capacity Each	667	CY	
	18,000	ft <sup>3</sup>	Assume almost "oval" shape pile
Piles Built per Day	0.75		Build less than 1 pile per day
otal Daily Capacity	13,500	ft <sup>3</sup>	
	72	Days	(6 days/week, 12 weeks, 14,400 tons)
Required On-Site Storage - Required Residence Time (Assumes 3 Months)	14,400	Tons	(200 tpd x 72 days)
required on site storage inequired residence rime (rissumes s months)	36,000	CY	(14,400 tons / 0.4 tons per cy)
	972,000	ft <sup>3</sup>	(972,000 ft <sup>3</sup> / 18,000 ft <sup>3</sup>
Ainimum # of Piles in Design	54.00	plies	
‡ of Piles in Design	54.00	piles	round up
Compost Piles Footprint	162,000	Sq. Ft.	Deservatively de fine encoderate
	3.7	Acres	Does not include fire access lanes
- Fire Lanes	<u>12</u> 150	FT Wide FT Long	
	1,800	Sq. Ft.	
	55	lanes	
# of Fire Lanes in Design	99,000	Sq. Ft.	
, i i i i i i i i i i i i i i i i i i i	2.3	Acres	
Total Footprint	6.0	Acres	
Compost Curing Piles	Amount	Unit	Notes
Density of Pile (post-pathogen reduction)			
Required Residence Time	0.625 48	Tons/CY Days	1,250 lbs./CY (6 days per week, 8 weeks)
	40	Days	to days per week, o weeks

Density of Pile (post-pathogen reduction)	0.625	Tons/CY	1,250 lbs./CY
Required Residence Time	48	Days	(6 days per week, 8 weeks)
	9,600	Tons	200 tons per day X 48 days
Total Required Curing Capacity	15,360	CY	
	414,720	ft <sup>3</sup>	
	3,927	FT L	Total Pile Length Required
	20	FT W	Bottom of Pile
	8	FT H	
	105.6	Sq. Ft.	Cross Section Area
# of Piles in Design	26.2		300 foot long piles
Compost Piles Footprint	78,545	Sq. Ft.	
	1.8	Acres	Does not include fire access lanes
	12	FT Wide	
Fire Lanes	150	FT Long	
	1,800	Sq. Ft.	
	27.2	lanes	
# of Fire Lanes in Design	48,927	Sq. Ft.	
	1.1	Acres	
Total Footprint	2.9	Acres	

Compost Screening, Blending, and Storage	Amount	Unit	Notes
Density of Pile (post-pathogen reduction/curing)	0.75	Tons/CY	1,500 lbs./CY
Single Cured Compost Pile	1,760	СҮ	
Compost Storage	1,408	CY	Assumes 20% Reduction in Volume
Area Required for Compost Screening and Storage	15,000	Sq. Ft.	100' x 150' Pad
Area Required for compost screening and storage	0.3	Acres	Compost Storage Capacity
Composting Operations Footprint	9.30	Acres	Assumes the utilization of windrow turner. If front-end loader is used, additional space will be required for circulation and horizontal shift as piles are turned.
40% Area Contingency for Circulation	3.72	Acres	
Total Composting Facility Area	13	Acres	Does not account for permiter fire lanes/buffer or storm water improvements.
Total Amount of Materials On-Site	53,768	СҮ	

#### OC WASTE AND RECYCLING TABLE 2 CAPISTRANO GREENERY PROCESS (OPERATIONS) WATER DEMAND

		OW PILE		
By weight 500 CY	0.4 Tons CY	2000 Lbs 1 ton	400,000.00	lbs of Feed stock
400,000.00 Lbs of Feedstock	25% water		100,000.00	Lbs of water
25% of water 100,000.00	CF 62.4 Lbs of H2O		1,602.56	CF of water
			11,987.18	gallons
Initial wetting to b	ring feed stock to 50% moisture by v	weight		
	11,987.18 gallons			
Α	CTIVE COMPOST WINDROW 1%	WATER REPI	LENISHMENT	
35,500 CY	0.4 Tons CY	2000 Lbs 1 ton	28,400,000.00	lbs of Feed stock
28,400,000.00 Lbs of Feedstock	1% water		284,000.00	Lbs of water
<u>1% of water</u> 284,000.00	CF		4,551.28	CF of water
	62.4 Lbs of H2O			
			34,043.59	gallons
A	CTIVE COMPOST WINDROW 2%	WATER REPL	LENISHMENT	
35,500 CY	0.4 Tons CY	2000 Lbs 1 ton	28,400,000.00	lbs of Feed stock
28,400,000.00 Lbs of Feedstock	2% water		568,000.00	Lbs of water
<u>2% of water</u> 568,000.00	CF 62.4 Lbs of H2O		9,102.56 <b>68,087.18</b>	CF of water gallons
Process Water Demand:	46,031 to 86	0,074 galloı	ns/day	

Assumptions:

- Feedstock is Curbside green waste (yard trimming) with an estimated moisture content of 25-percent by weight.

- Target moisture is 50-percent initially and through the active composting phase.

- Estimated moisture loss that would need to be replenished during the active composting phase is estimated at one to two-percent (1% to 2%) per day.

- Feedstock and seasonal variations will impact initial moisture and daily loss, affecting water utilization.

# Fact Sheet 2 Capistrano SSO Processing (@ Prima Deshecha Landfill)

#### 1. FACILITY INFORMATION

Owner: OC Waste & Recycling Address: 32250 Avenida La Pata San Juan Capistrano, 92675 SWFP No.: N/A Operator: OC Waste & Recycling Operating Days: Monday-Saturday 7:00 a.m. to 5:00 p.m. SWFP Issue Date: N/A

#### 2. <u>TYPE OF FACILITY</u>

Compostable Material Handling Operation, per CalRecycle means "an operation or facility that processes, transfers, or stores compostable material."

Transfer/Processing Facility is perhaps more applicable due to composting regulations primarily applying to composting or chipping and grinding.

- Enclosed Operation (see Figures 1, 5 and 6)
- Proposed Operations Building: 5,400 square feet
- Proposed Office/Lab and Restroom: 300 square feet
- Design and Operational description provided as part of Report of Facility Information;
  - Included as part of RDSI (JTD), or potentially under the Registration Tier (stand-alone with a TPR under the Transfer/Processing regulations for <100 TPD).</li>
  - An Odor Impact Minimization Plan (OIMP) will also prepared.

#### 3. <u>CAPACITY</u>

• 99 tons per day (TPD) of incoming feedstock (see Figure 7 SSO Processing Flow Diagram).

#### 4. <u>PERMITTED WASTE TYPES</u>

Source Separated Organics (SSO) - (Food Material as defined under 14 CCR, Section 17852(a)(20))

# Fact Sheet 2 Capistrano SSO Processing (@ Prima Deshecha Landfill)

#### 5. EQUIPMENT

- Front-End Loader
- Hopper
- Bio Separator
- Pump System
- Tanks

#### 6. UTILITIES

- Water
  - Domestic and fire water can be provided from a tee in the 12" water line being installed for the new Materials Storage Building. All required backflow prevention is being installed on this line which will enable it to be used for domestic water. Additional backflow prevention will be required for the SSO Processing Operation in order to protect the existing system from backflow contamination.
- Electricity
  - The SDG&E service behind the Administration Building is a 600A, 480Y/277V system and is currently serving the Maintenance Yard on an existing 100A, 480V feeder.
    - This board will serve the future Storage Building and existing Fuel Island, and the potential SSO Processing Building via a new 400A, 480V underground feeder to be routed from this service.
    - This board uses an existing 100A, 480V feeder to serve the Household Hazardous Waste and Main Gate areas with a second transformer for the Scales area.
    - The existing 250A spare breaker will be replaced by a new 400A new breaker to provide power to the potential SSO Processing Building and adjacent areas listed above.
    - The possibility has been raised that this service will also be used to provide power to the existing Administration Building which would not be possible if the SSO Processing Building is on this service. Alternates to this possibility are being investigated as a separate project.

# Fact Sheet 2 Capistrano SSO Processing (@ Prima Deshecha Landfill)

- Storage/Maintenance Electrical Panel:
  - The Maintenance yard is served by a 30kVA transformer and 208Y/120V system plus a 60A 480V spare disconnect. This area has a maximum load of 36A based on transformer size.
  - The Storage Building has a 45kVA transformer which serves two
     (2) items:
    - The Storage Building panel which has 22.2kVA of connected load;
    - Panel CY serves the Gas Pumps and Exterior Lighting, this load is unknown but has a 60A, 208Y/120V disconnect.
    - The maximum load on this feeder is estimated at 53A at 480V 3 phase. This load is based on connected load on Storage building plus full load on Panel CY. This load will be added to the SSO Processing Building load on the 400A feeder.

The total anticipated load on the new 400A, 480V feeder is 270A for the SSO Processing Building plus 53A for the Storage Building and Panel CY or 323A, 480V, 3 phase. This load review will require further investigation during design.

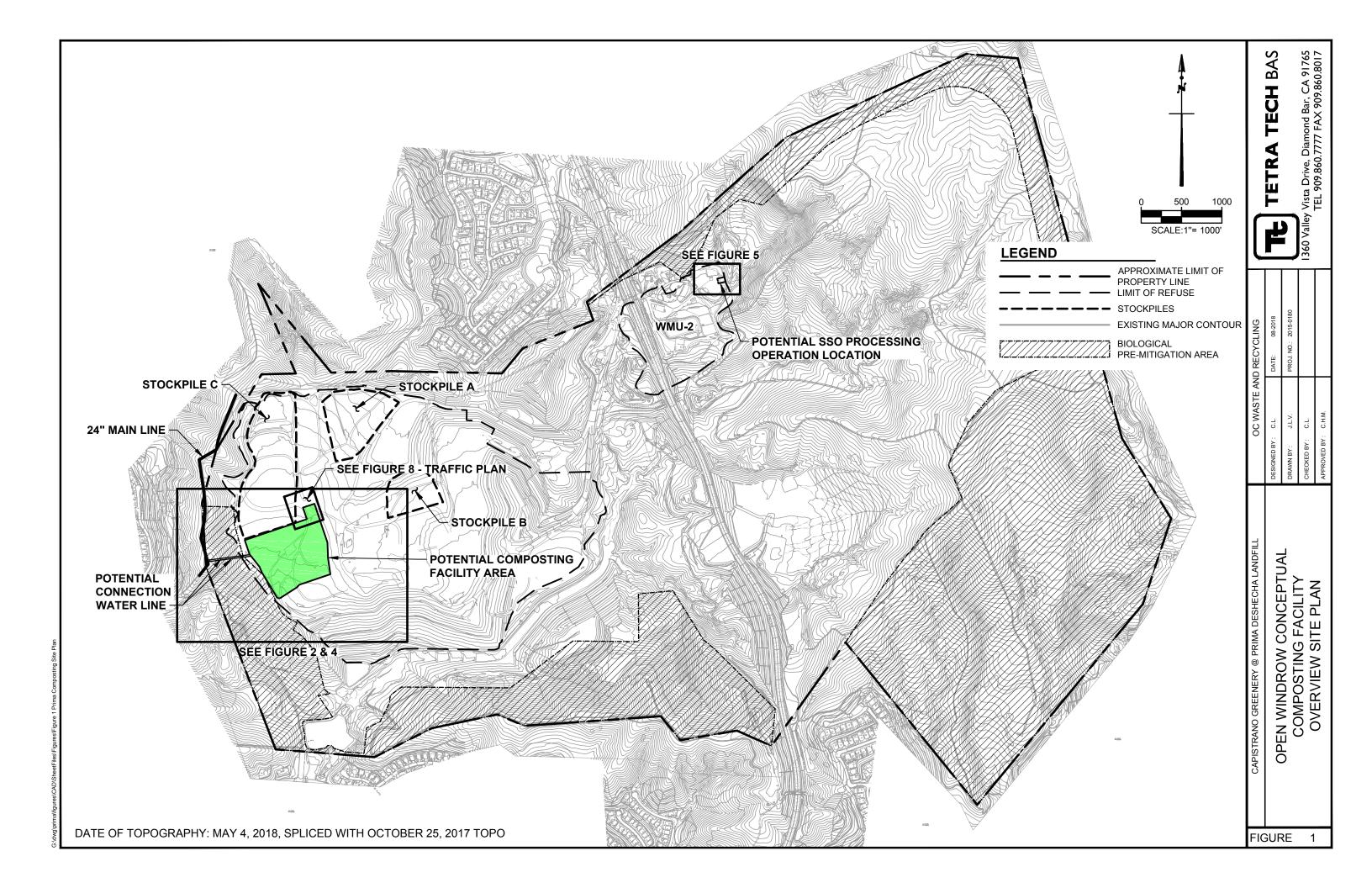
Note: Please be aware that the LFGTE decommissioning project may affect the design of this service.

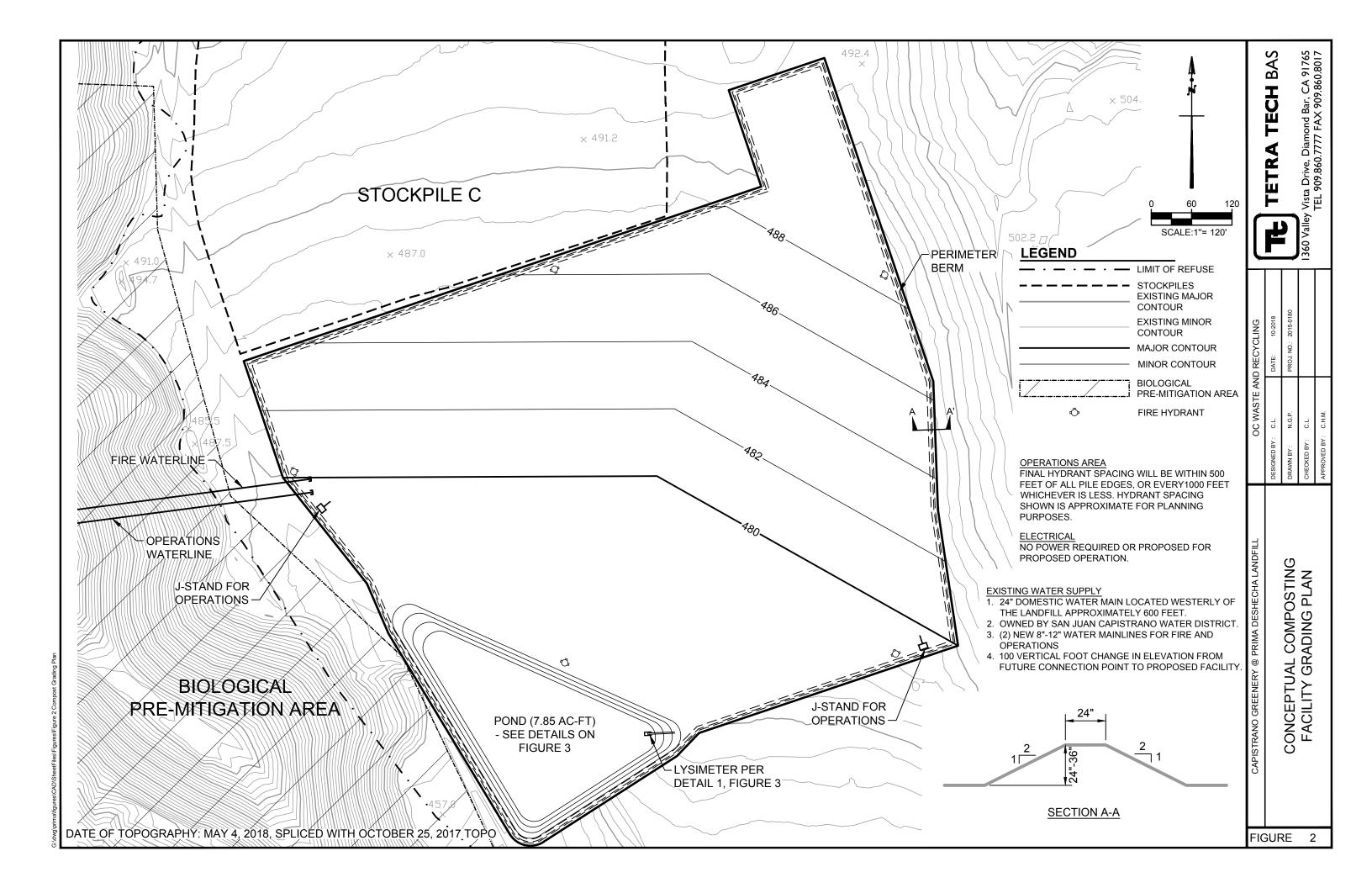
Sewer

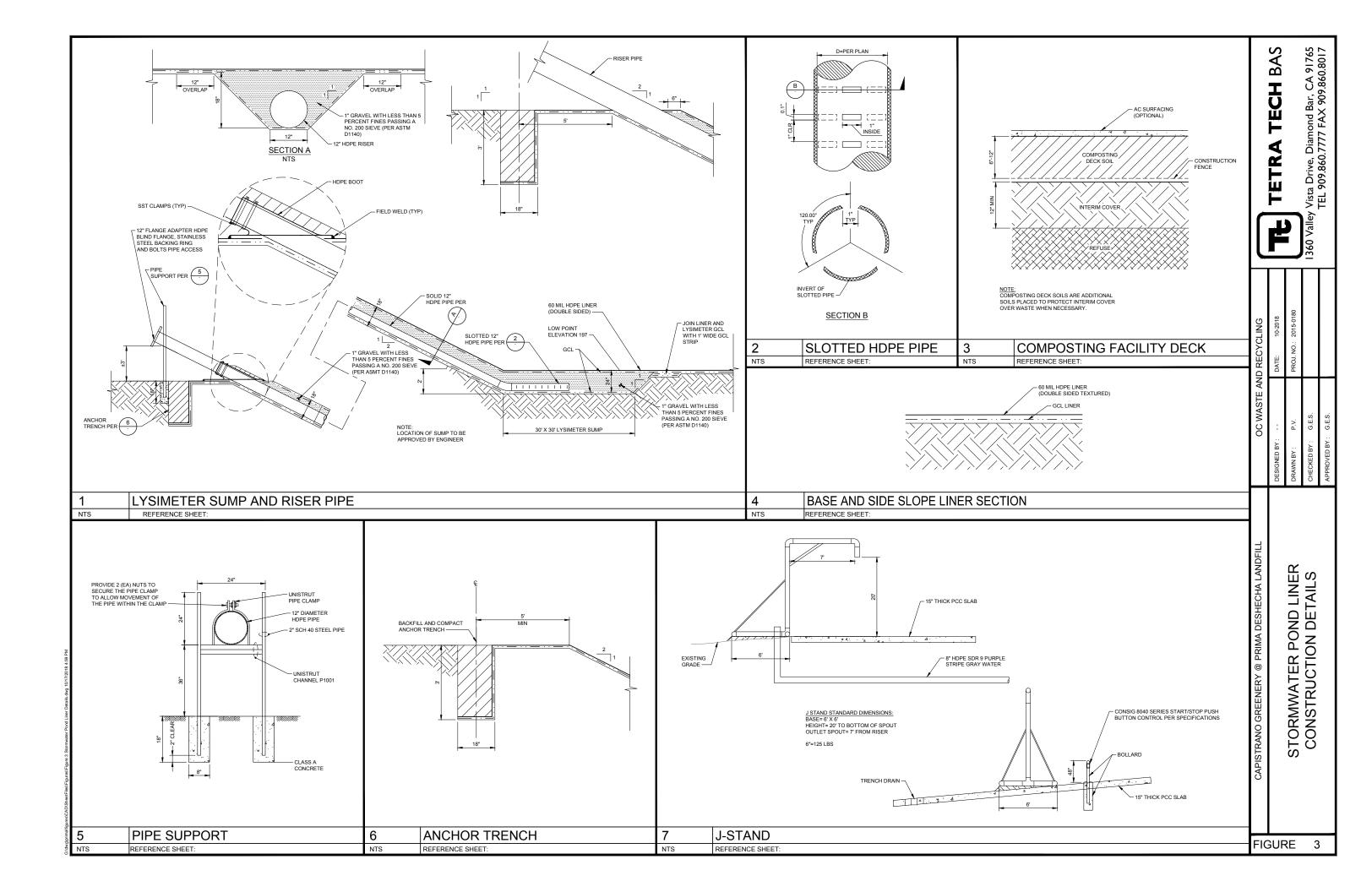
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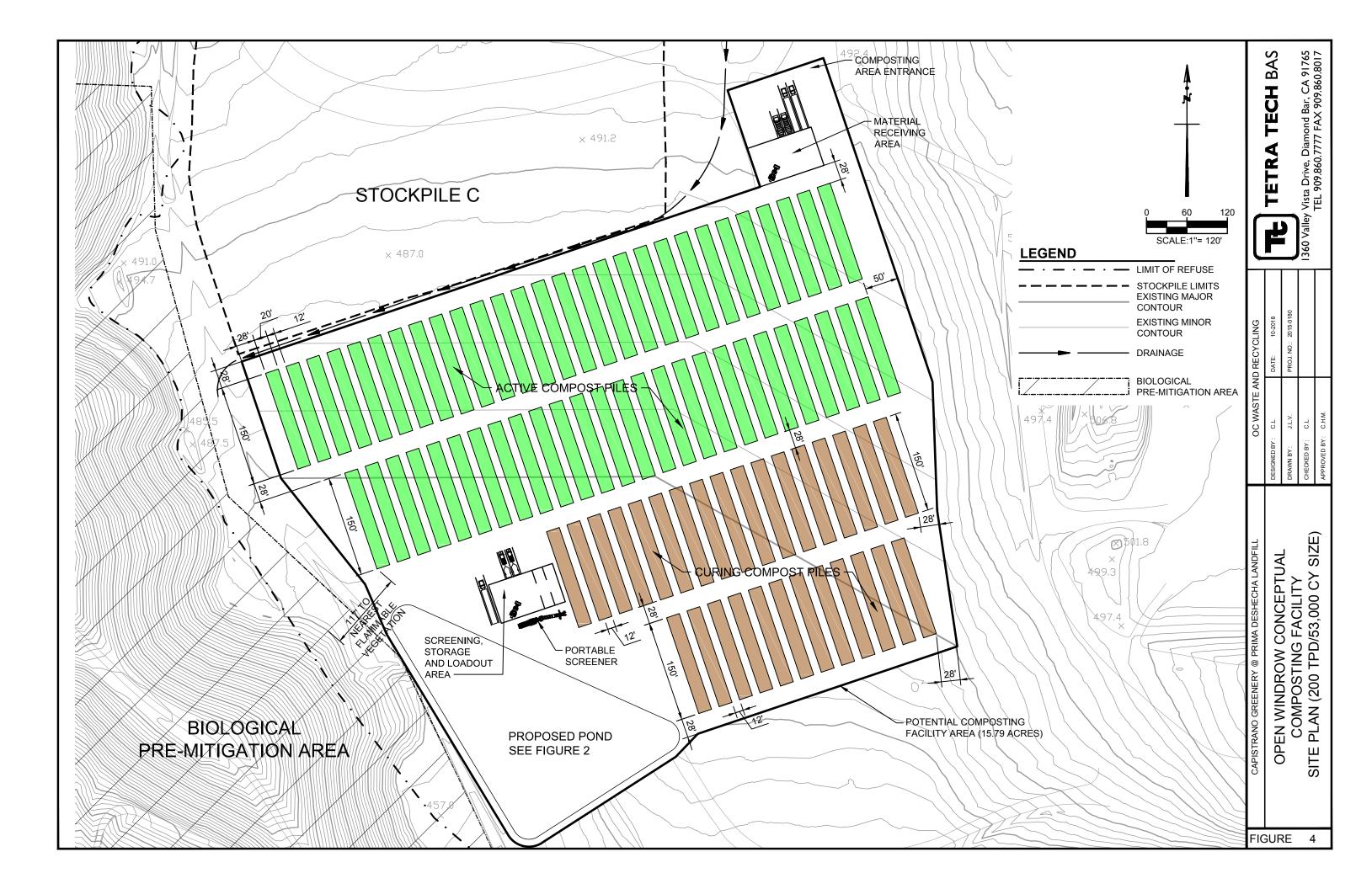
#### 7. OTHER REQUIREMENTS

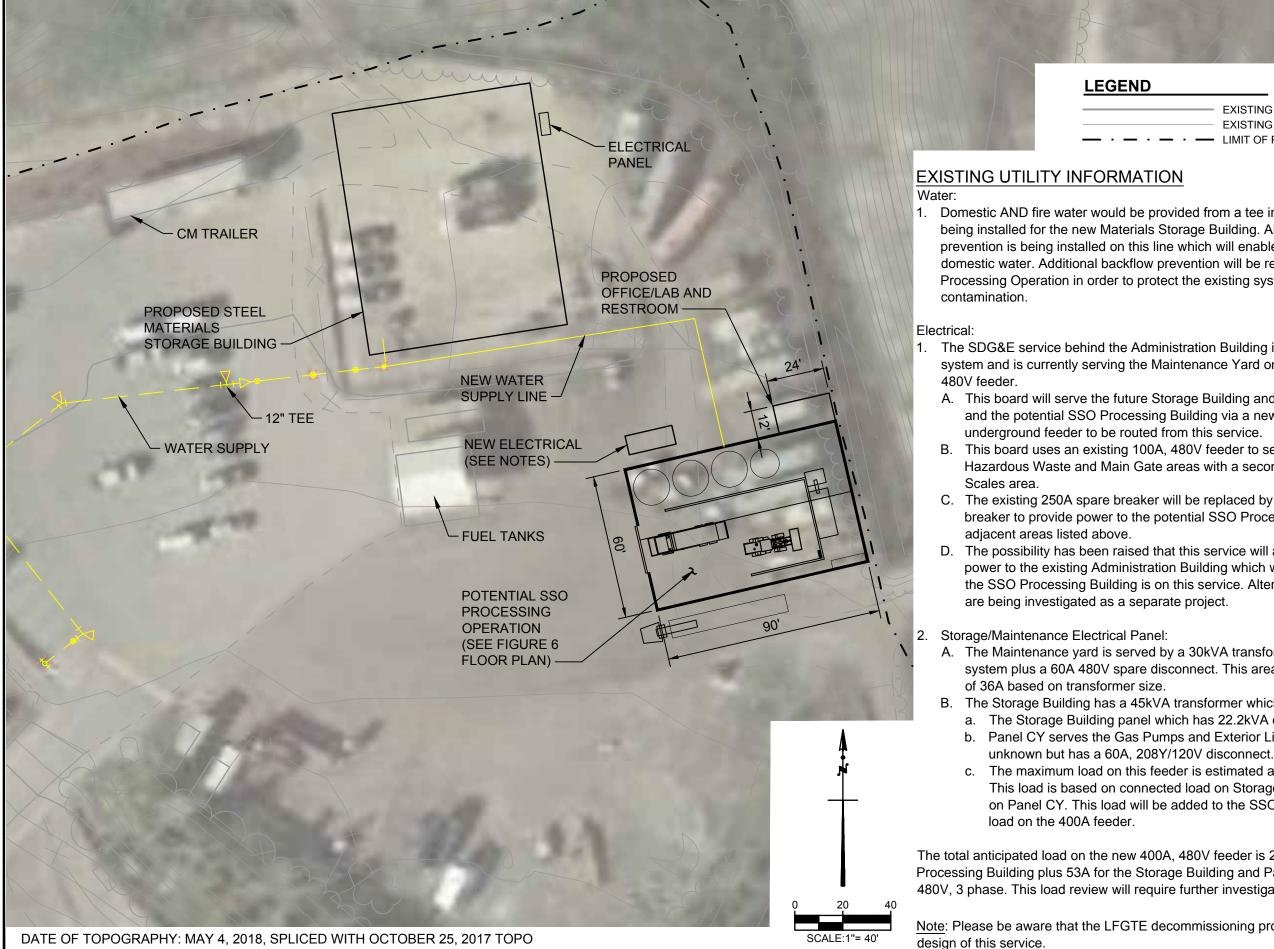
- Parking
  - o Regular
  - o ADA Compliant
- Office/Lab
- Restroom











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EXISTING MAJOR CONTOUR EXISTING MINOR CONTOUR LIMIT OF REFUSE

1. Domestic AND fire water would be provided from a tee in the 12" water line being installed for the new Materials Storage Building. All required backflow prevention is being installed on this line which will enable it to be used for domestic water. Additional backflow prevention will be required for the SSO Processing Operation in order to protect the existing system from backflow

1. The SDG&E service behind the Administration Building is a 600A, 480Y/277V system and is currently serving the Maintenance Yard on an existing 100A,

A. This board will serve the future Storage Building and existing Fuel Island, and the potential SSO Processing Building via a new 400A, 480V

B. This board uses an existing 100A, 480V feeder to serve the Household Hazardous Waste and Main Gate areas with a second transformer for the

C. The existing 250A spare breaker will be replaced by a new 400A new breaker to provide power to the potential SSO Processing Building and

D. The possibility has been raised that this service will also be used to provide power to the existing Administration Building which would not be possible if the SSO Processing Building is on this service. Alternates to this possibility

A. The Maintenance yard is served by a 30kVA transformer and 208Y/120V system plus a 60A 480V spare disconnect. This area has a maximum load

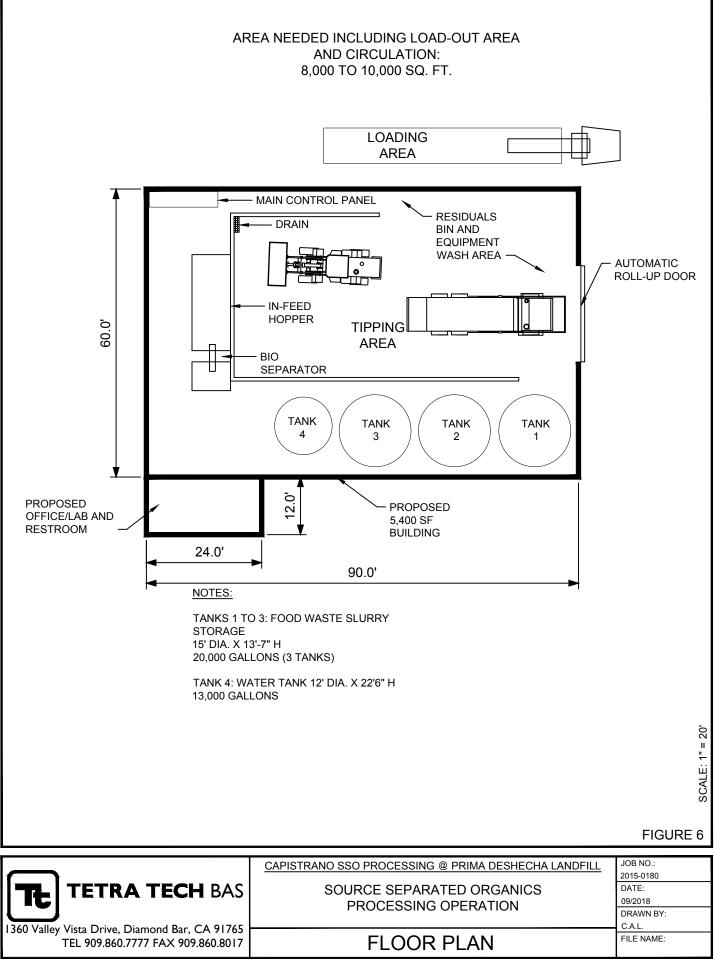
B. The Storage Building has a 45kVA transformer which serves two (2) items: a. The Storage Building panel which has 22.2kVA of connected load; b. Panel CY serves the Gas Pumps and Exterior Lighting, this load is

c. The maximum load on this feeder is estimated at 53A at 480V 3 phase. This load is based on connected load on Storage building plus full load on Panel CY. This load will be added to the SSO Processing Building

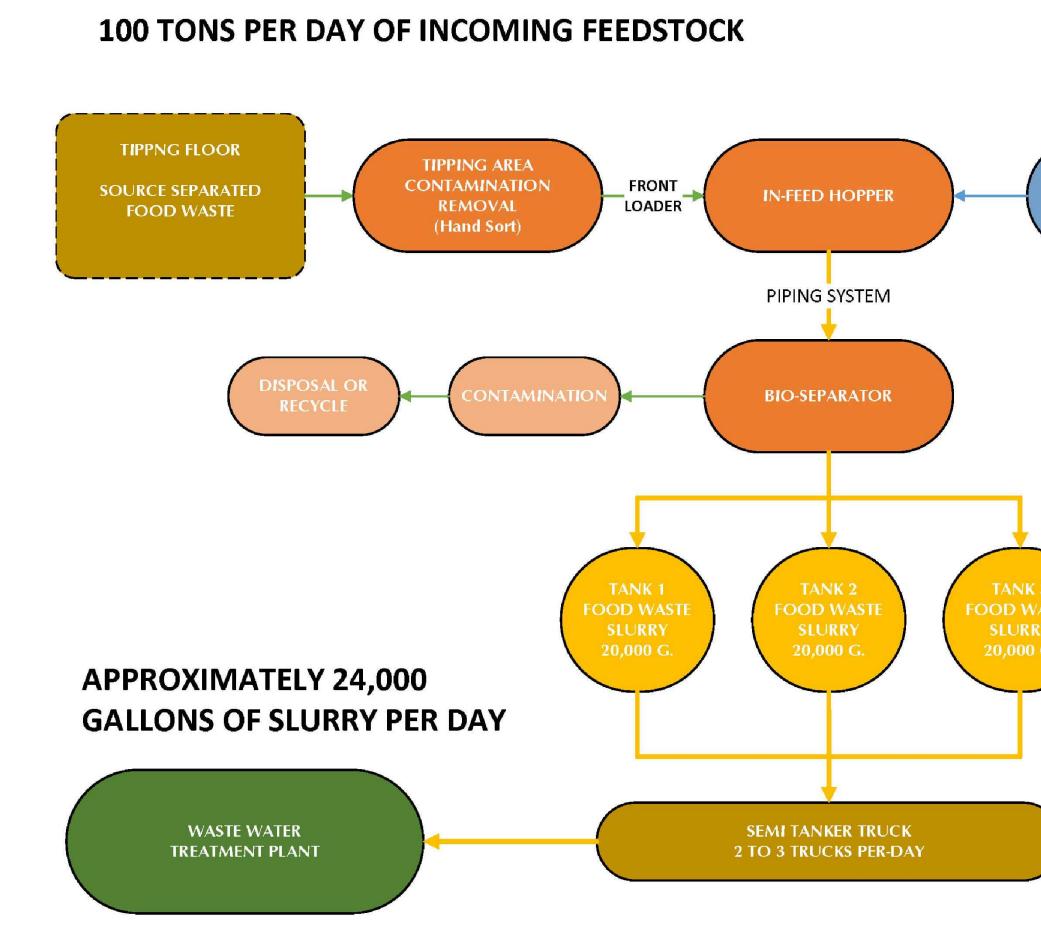
The total anticipated load on the new 400A, 480V feeder is 270A for the SSO Processing Building plus 53A for the Storage Building and Panel CY or 323A, 480V, 3 phase. This load review will require further investigation during design.

Note: Please be aware that the LFGTE decommissioning project may affect the

	<b>  The TETRA TECH</b> BAS		1360 Valley Vista Drive, Diamond Bar, CA 91765	TEL 909.860.7777 FAX 909.860.8017
OC WASTE AND RECYCLING	DATE: 10-2018	PROJ. NO.: 2015-0180		
OC WASTE	DESIGNED BY : C.L.	DRAWN BY : J.L.V.	CHECKED BY : C.L.	APPROVED BY : C.H.M.
CAPISTRANO SSO PROCESSING @ PRIMA DESHECHA LANDFILL	SUINVUQU UJI VAVAJS JUAI IUS	DUNCE SELANATED UNGANICO		SI I E FLAIN

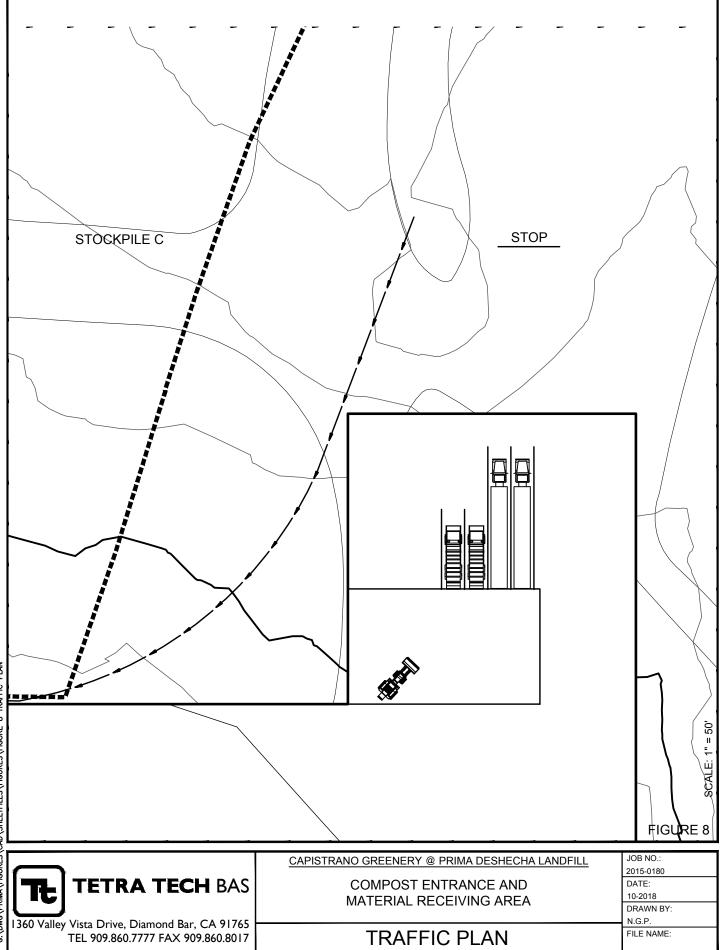


G:\DWG\PRIMA\FIGURES\CAD\SHEETFILES\FIGURES\FIGURE 6 SSO PROCESSING SITE PLAN



3wg\prima\figures\CAD\SheetFiles\Figures\Figures\Figure 7 Process Flow Diagram

TANK 1 PROCESS WATER 13,000 G.		TETRA TECH BAS		1360 Valley Vista Drive, Diamond Bar, CA 91765	TEL 909.860.7777 FAX 909.860.8017
	OC WASTE AND RECYCLING	DATE: 10-2018	PROJ. NO.: 2015-0180		
	OC WASTE AI	DESIGNED BY : C.L.	DRAWN BY : J.L.V.	CHECKED BY : C.L.	APPROVED BY : C.H.M.
3 ASTE Y G.	CAPISTRANO SSO PROCESSING @ PRIMA DESHECHA LANDFILL				
		GUF			,



#### 1. FACILITY INFORMATION

Owner: OC Waste & Recycling Address: 11002 Bee Canyon Drive, Irvine, CA 92676 Operator: OC Waste & Recycling Operating Days: Monday-Sunday 24 Hours Material Acceptance: 7:00 a.m. to 5:00 p.m. M. – Sa. SWFP Issue Date: N/A

SWFP No.: N/A

#### 2. <u>TYPE OF PERMITTED FACILITY</u>

- CalRecycle: Green Material Composting Facility (14CCR, Section 17857.1(c); Full Solid Waste Facility Permit (SWFP) required (>12,500 cy in-place). Option 1: Stand-Alone SWFP; Option 2: Fold into SWFP for Landfill. Will need **Report of** Composting Site Information (RCSI) and Odor Impact Minimization Plan (OIMP).
- SWRCB: Tier 2 (>25,000 cy in-place) under the State Water Resources Control Board, Order WQ 2015-0121-DWQ, General Waste Discharge Requirements for Composting Operations. Facility will need a Technical Report.
- **SCAQMD: Permit to Operate** Equipment with Internal Combustion Engines or Portable Equipment Registration Permit if allowed for equipment shared by all three sites.

## OCFA: Fire Protection Requirements: F Occupancy; Chipping, Composting, or Recycling Operation (PR315; a PR145 may also be required)

- PR 315 Hazardous Material Process/Storage for Non H Occupancies
- **PR 145** Fire Master Plan (Emergency access and fire hydrant location, fire lane markings, or vehicle gates across emergency access drives)

## 3. <u>CAPACITY</u>

- 280 tons per day (TPD) (see Figures 1 and 4)
- Approximately 73,500 cubic yards (cy) of feedstock, compost (active, curing and final product), additives and amendments on site at any given time (see Table 1). As operational processes are fine-tuned the feedstock, compost (active, curing and final product), additives, and amendment volumes will fluctuate.

#### 4. TECHNOLOGY TYPE

**Open Windrow Composting** – Per CalRecycle, Windrow Composting Process means "the process in which compostable material is placed in elongated piles. The piles or "windrows" are aerated and/or mechanically turned on a periodic basis."

#### 5. <u>PERMITTED WASTE TYPES</u>

Green Material – Per CalRecycle, Green Material means "any plant material except food material and vegetative food material that is separated at the point of generation, contains no greater than 1.0 percent of physical contaminants by dry weight, and meet maximum contamination requirements." Green material **includes** but is not limited to tree and yard trimmings, untreated wood wastes, natural fiber product, wood waste from silviculture and manufacturing and construction and demolition wood waste. Green material **does not include** food material, vegetative food material, biosolids, mixed material, material separated from commingled solid waste collection or processing, wood containing lead-based paint or wood preservatives, or mixed construction and demolition debris.

#### 6. EQUIPMENT

- Windrow Turner
- Mobile Screen (to be used at three sites)
- (2) Two Front-End Loaders
- Water Truck
- Truck

#### 7. <u>UTILITIES</u>

**Operations Water Supply:** Currently, the only viable water supply for the proposed Composting Facility at the site would be the existing 100,000-gallon reclaimed water tank. It would require special OC Fire Authority approval to use this as the fire source because it is reclaimed water, but previously they have agreed to using reclaimed water as a fire water supply at the site (i.e., the storage building project). The system would likely consist of a new water line from the existing reclaimed water tank to a new tank located near the composting facility. At this time, it is assumed that the fire flow required for such an operation is the same as the storage building or 1500 gpm for 2 hours at 20 psi residual. This equates to 180,000 gallons, however, the final volume of water required will be based on the amount required by OCFA. The distance from the existing 100,000-gallon tank to the proposed Composting Facility location is approximately 3,800 feet and an

elevation difference of 200 vertical feet. Providing the fire water from this location to the proposed composting facility by pumping it directly would be power intensive and the tank is too small to provide the necessary flow. Therefore, water, would need to be pumped to a tank or tanks located near the composting facility. Assumptions for operations water demand are presented in Table 2. The estimated process water demand ranges from approximately 64,000 to 112,000 gallons per day.

**Fire Water Supply:** It is TTBAS' understanding that the OCFA will be preparing new fire prevention and control requirements specific to composting facilities. Since there are no OCFA fire codes or requirements available at this time specific to composting facilities, TTBAS used Standard 14.9.1 from the Ventura County Fire Prevention District for Composting, Mulch and Organic Processing, as the guidance for the composting facility conceptual design based on similarities between the climate and environment of Ventura and Orange Counties. Section 4.11 Fire Flow/Water Supply requirements are as follows:

- Facilities with over 200 cubic yards shall provide a water supply. The minimum fire flow shall be no less than 500 GPM @ 20 PSIR for a minimum of two (2) hour duration. If there is no water purveyor, an alternate water supply with storage tank(s) shall be provided for fire suppression. The water supply tank(s) shall provide a minimum capacity of 2,500 gallons per pile (maximum 30,000 gallons) for piles not exceeding six (6) feet in height and 5,000 gallons per pile (maximum 60,000) for piles exceeding six (6) feet in height. Water tank(s) shall not be used for any other purpose unless the required fire flow is left in reserve at all times. An approved method shall be provided to maintain the required amount of water within the tank(s). Fire hydrants, with a 2 ½" outlet, would be located around the perimeter of the facility at approximately 1,000 foot spacing based on the following Section 4.12 of the Ventura Standard:
- When a water supply is required by Section 4.11, fire hydrant(s) with at least one (1) 2-1/2 inch outlet shall be located within 500 feet of all pile edges (1,000 foot spacing). Fire hydrant(s) shall be set back a minimum of 20 feet from any pile. When using an on-site water storage tank, required fire hydrant(s) may be located on the tank. Signs, minimum of 4 inch high letters, shall be posted at all fire hydrant outlets stating "WATER FOR FIRE DEPARTMENT USE ONLY".

 One water tank will be provided to meet both operations and fire water needs. The tank will be filled at a rate to provide necessary operations water and to maintain 60,000 gallons in reserve for fire water needs.".

#### 8. STORM WATER MANAGEMENT

The compost pond depth was determined based on NOAA precipitation data for a 25-year, 24-hour storm event (per Order WQ 2015-0121-DWQ, General Waste Discharge Requirements for Composting Operations requirements) and the approximate tributary boundary of the compost area. Based on these assumptions, the compost pond will need to be approximately 10 feet deep to hold a capacity of 9.35 acre-feet. The compost area will require perimeter berms approximately two (2) to three (3) feet high, depending on the location, to also be able to hold flows from a 25-year, 24-hour storm event.

## OC WASTE AND RECYCLING TABLE 1 BEE CANYON GREENERY 280 TONS PER DAY OPEN WINDROW COMPOSTING FACILITY AREA AND VOLUME CALCULATIONS

Materials Receiving	Amount	Unit	Notes
Materials Received per Day	280	Tons	
Density of Pile (pre-grind)	0.40	Tons/CY	800 lbs./CY
Days of Storage Needed	2	Days	
	560	Tons	
Required On-Site Storage	1,400	CY	
Total Volume of Storage Required	37,800	ft <sup>3</sup>	
Pile Height	15	Feet	
Footprint	2,520	Sq. Ft.	
	0.06	Acres	
Active Windrow Piles	Amount	Unit	Notes
Density of Pile (post-grind)	0.40	Tons/CY	800 lbs./CY
Compost to Windrow/day	700.0	CY	
Jompost to Willulow/uay	18,900	ft <sup>3</sup>	
Dile Dimensions	20	FT Wide	
Pile Dimensions	150 8	FT Long FT High	
Pile Area	3,000	Sq. Ft.	
	667	CY	
Pile Capacity Each	18,000	ft <sup>3</sup>	Assume almost "oval" shape pile
Piles Built per Day	1.05		Build 1 pile per day
otal Daily Capacity	18,900	ft <sup>3</sup>	
	72	Days	(6 days/week, 12 weeks, 21,600 tons)
Required On-Site Storage - Required Residence Time (Assumes 3 Months)	20,160	Tons	(300 tpd x 72 days)
required on-site storage - required residence time (Assumes 5 Months)	50,400	CY	(21,600 tons / 0.4 tons per cy)
	1,360,800	ft <sup>3</sup>	(1,458,000 ft <sup>3</sup> / 18,000 ft <sup>3</sup>
Minimum # of Piles in Design	75.60	plies	
t of Piles in Design	76.00	piles	round up
Compost Piles Footprint	228,000 <b>5.2</b>	Sq. Ft. <b>Acres</b>	Does not include fire access lanes
	<b>3.2</b>	FT Wide	
ire Lanes	150	FT Long	
	1,800	Sq. Ft.	
	77	lanes	
t of Fire Lanes in Design	138,600	Sq. Ft.	
	3.2	Acres	
Total Footprint	8.4	Acres	
Compost Curing Piles	Amount	Unit	Notes
Density of Pile (post-pathogen reduction)	0.625	Tons/CY	1,250 lbs./CY
Required Residence Time	48	Days	(6 days per week, 8 weeks)
	13,440	Tons	300 tons per day X 48 days
otal Required Curing Capacity	21,504	CY	
	580,608	ft <sup>3</sup>	
	5,498	FTL	Total Pile Length Required
	20 8	FT W FT H	Bottom of Pile
	105.6	Sq. Ft.	Cross Section Area
ŧ of Piles in Design	36.7		150 foot long piles
	109,964	Sq. Ft.	
Compost Piles Footprint	2.5	Acres	Does not include fire access lanes
	12	FT Wide	
ire Lanes	150	FT Long	
	1,800	Sq. Ft.	
	37.7	lanes	
t of Fire Lanes in Design	67 778	Sa Ft	
# of Fire Lanes in Design	67,778 <b>1.6</b>	Sq. Ft. Acres	

Compost Screening, Storage, and Loadout	Amount	Unit	Notes
Density of Pile (post-pathogen reduction/curing)	0.75	Tons/CY	1,500 lbs./CY
Single Cured Compost Pile	587	СҮ	
Compost Storage	469	СҮ	Assumes 20% Reduction in Volume
Area Required for Compost Screening, Storage, and Loadout	15,000	Sq. Ft.	100' x 150' Pad
Area Required for compost screening, storage, and Loadout	0.3	Acres	Compost Storage Capacity
Composting Operations Footprint	12.90	Acres	Assumes the utilization of windrow turner. If front-end loader is used, additional space will be required for circulation and horizontal shift as piles are turned.
40% Area Contingency for Circulation	5.16	Acres	
Total Composting Facility Area	18	Acres	Does not account for permiter fire lanes/buffer or storm water improvements.
Total Amount of Materials On-Site	73,773	СҮ	

#### OC WASTE AND RECYCLING TABLE 2 BEE CANYON GREENERY PROCESS (OPERATIONS) WATER DEMAND

	INITIAL WIN	DROW PILE		
By weight 700 CY	0.4 Tons CY	2000 Lbs 1 ton	560,000.00	lbs of Feed stock
560,000.00 Lbs of Feedstock	25% water		140,000.00	Lbs of water
25% of water 140,000.00	CF 62.4 Lbs of H2O		2,243.59	CF of water
			16,782.05	gallons
Initial wetting to br	ing feed stock to 50% mositu 16,782.05 gallons	re by weight		
ACTI	VE COMPOST WINDROW	1% WATER R	EPLENISHMENT	
49,700 CY	0.4 Tons CY	2000 Lbs 1 ton	39,760,000.00	lbs of Feed stock
39,760,000.00 Lbs of Feedstock	1% water		397,600.00	Lbs of water
2% of water 397,600.00	CF 62.4 Lbs of H2O		6,371.79	CF of water
Process Water Need:	47,661.03 gallons/day		47,661.03	gallons
ACTI	VE COMPOST WINDROW	2% WATER R	EPLENISHMENT	
49,700 CY	0.4 Tons CY	2000 Lbs 1 ton	39,760,000.00	lbs of Feed stock
39,760,000.00 Lbs of Feedstock	2% water		795,200.00	Lbs of water
2% of water 795,200.00	CF 62.4 Lbs of H2O		12,743.59	CF of water
			95,322.05	gallons
Process Water Demand:	64,443.08 to 112	,104.10	gallons/day	

Assumptions:

- Feedstock is Curbside green waste (yard trimming) with an estimated moisture content of 25-percent by weight.

- Target moisture is 50-percent initially and through the active composting phase.

- Estimated moisture loss that would need to be replenished during the active composting phase is estimated at one to two-percent

- Feedstock and seasonal variations will impact initial moisture and daily loss, affecting water utilization.

# Fact Sheet 2 Bee Canyon SSO Processing (@ Frank R. Bowerman Landfill)

#### 1. FACILITY INFORMATION

Owner: OC Waste & RecyclingOperator: OC Waste & RecyclingAddress: 11002 Bee Canyon Drive, Irvine, CA 92676Operating Days: Monday-Saturday<br/>7:00 a.m. to 5:00 p.m.SWFP No.: N/ASWFP Issue Date: N/A

#### 2. <u>TYPE OF PERMITTED FACILITY</u>

Compostable Material Handling Operation, per CalRecycle means "an operation or facility that processes, transfers, or stores compostable material."

Transfer/Processing Facility is perhaps more applicable due to composting regulations primarily applying to composting or chipping and grinding.

- Enclosed Operation (see Figures 1, 5 and 6)
- Design and Operational description provided as part of Report of Facility Information;
  - Included as part of RDSI (JTD), or potentially under the Registration Tier (stand-alone with a TPR under the Transfer/Processing regulations for <100 TPD).</li>
  - An Odor Impact Minimization Plan (OIMP) will also be prepared.

#### 3. <u>CAPACITY</u>

• 99 tons per day (TPD) of incoming feedstock (see Figure 7 SSO Processing Flow Diagram)

#### 4. <u>PERMITTED WASTE TYPES</u>

Source Separated Organics (Food Material as defined under 14 CCR, Section 17852(a)(20))

#### 5. <u>EQUIPMENT</u>

- Front-End Loader
- Hopper

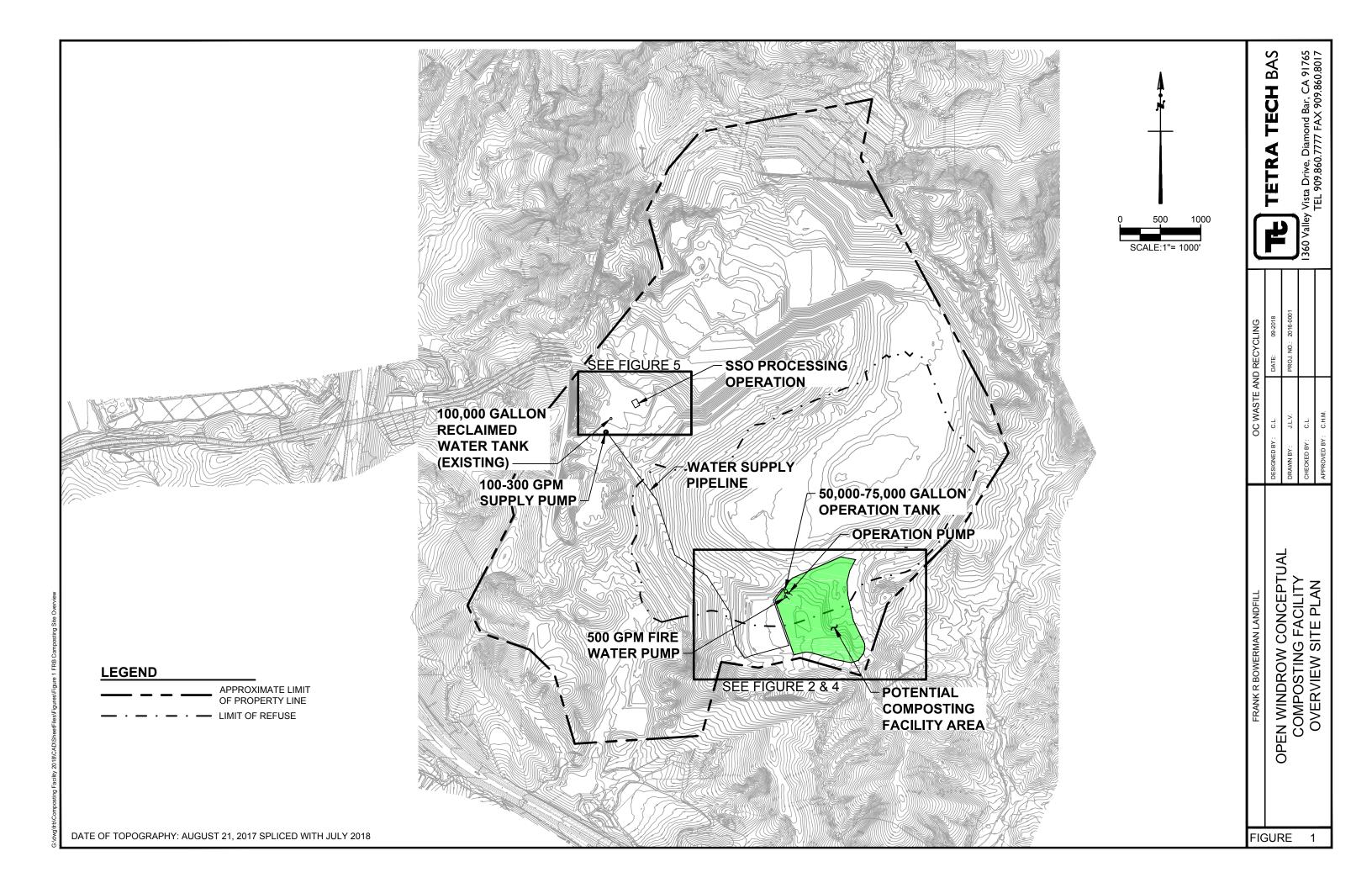
- Bio Separator
- Pump System
- Tanks
- Odor Control System

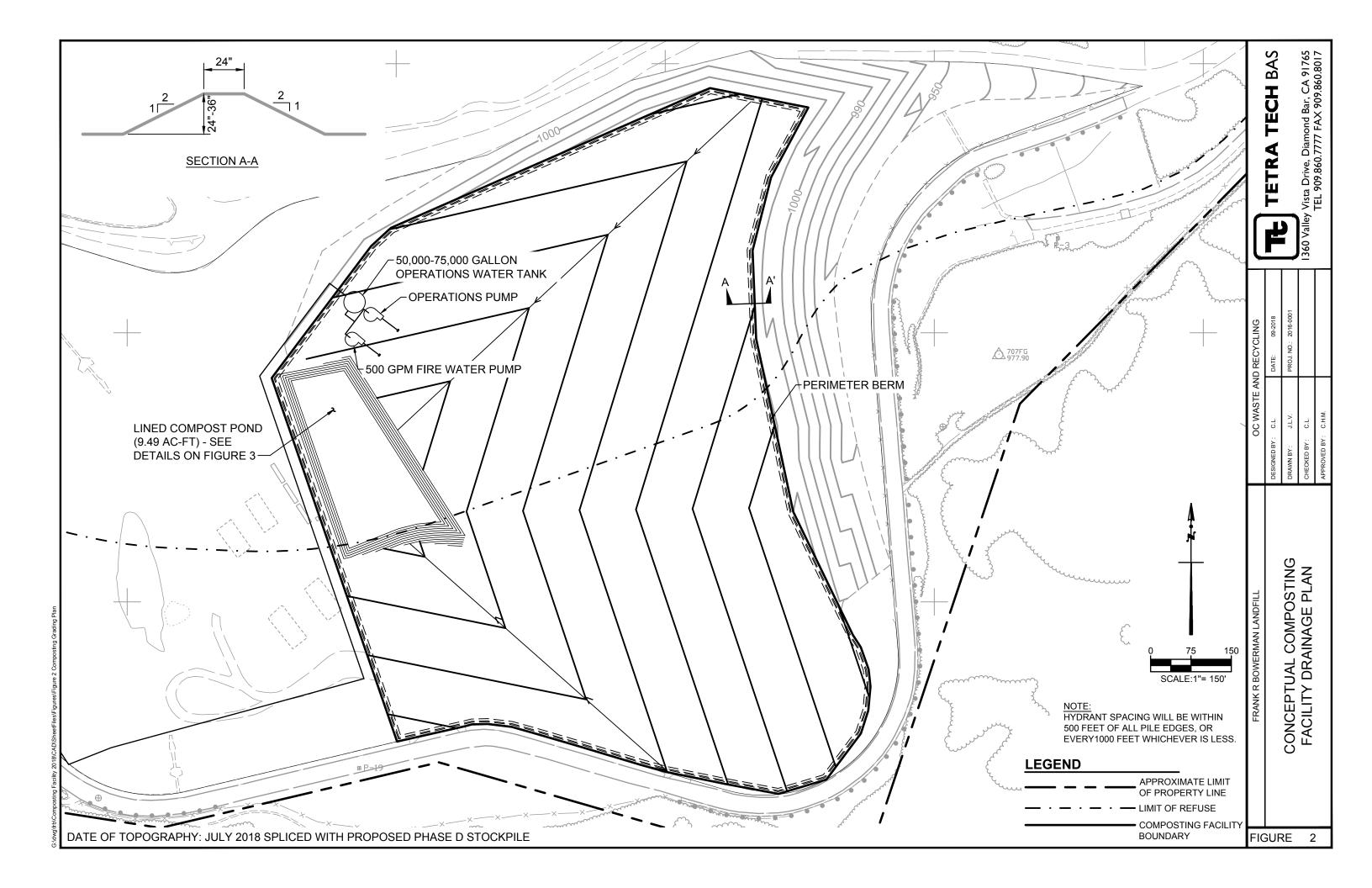
#### 6. <u>UTILITIES</u>

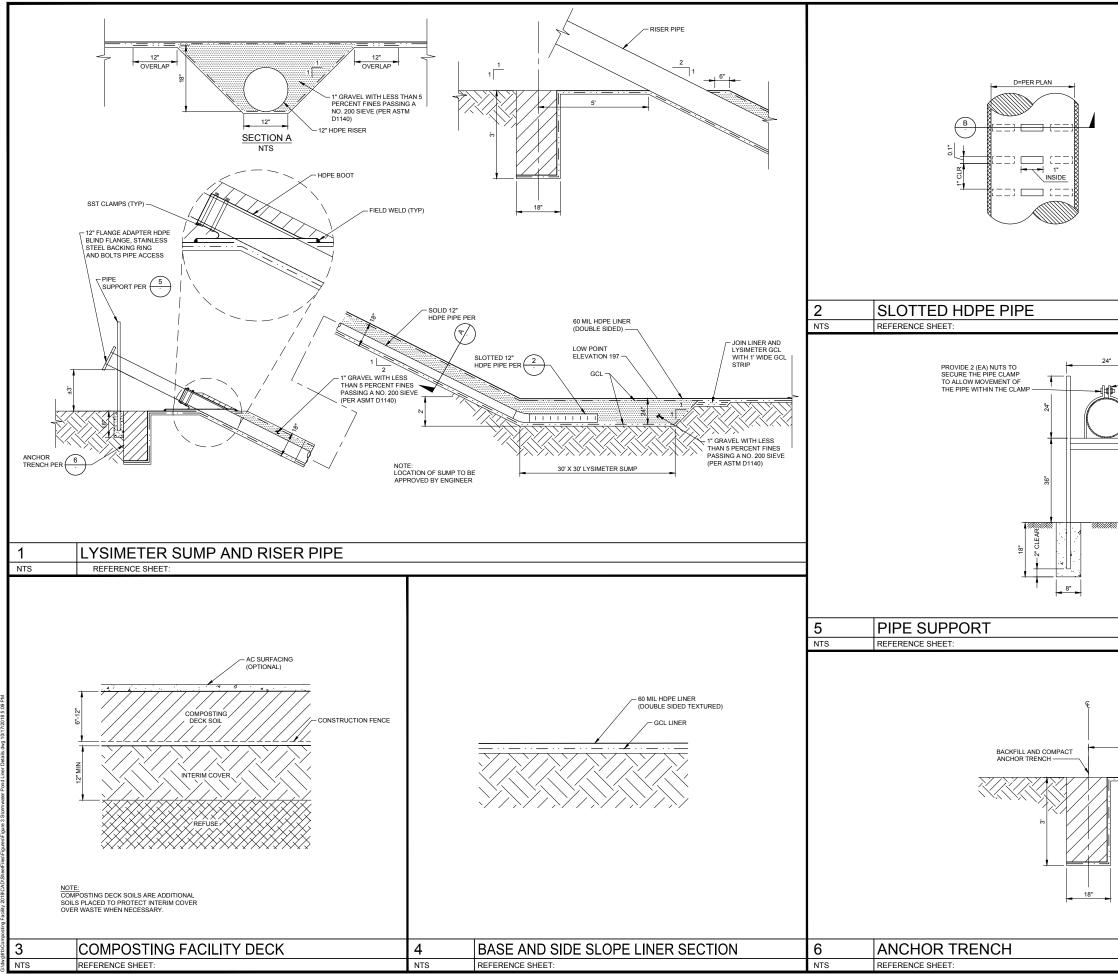
- Water
  - There is an existing 2" domestic water service to the Administration Building at the site. This water line would not have enough capacity for operations water, but could possibly be used for supply to a restroom and drinking fountain. This would need to be confirmed.
  - Operations water would need to come from the 100,000 gallon reclaimed water storage tank. Demand on this tank is high, but there should be adequate water for the processing operation.
- Electricity
  - Existing Service: 600 Amp 208Y/120V
  - Existing estimated demand load: 464 Amps 208Y/120V
  - o Remaining capacity: 136 Amps 208Y/120V
- Gas
  - $\circ$   $\,$  No service at this time.
- Sewer
  - The restroom facility at the SSO Processing facility will require a sewer service (i.e. connection to an existing sewer service or a leach pit. The system will be determined during more detailed design.

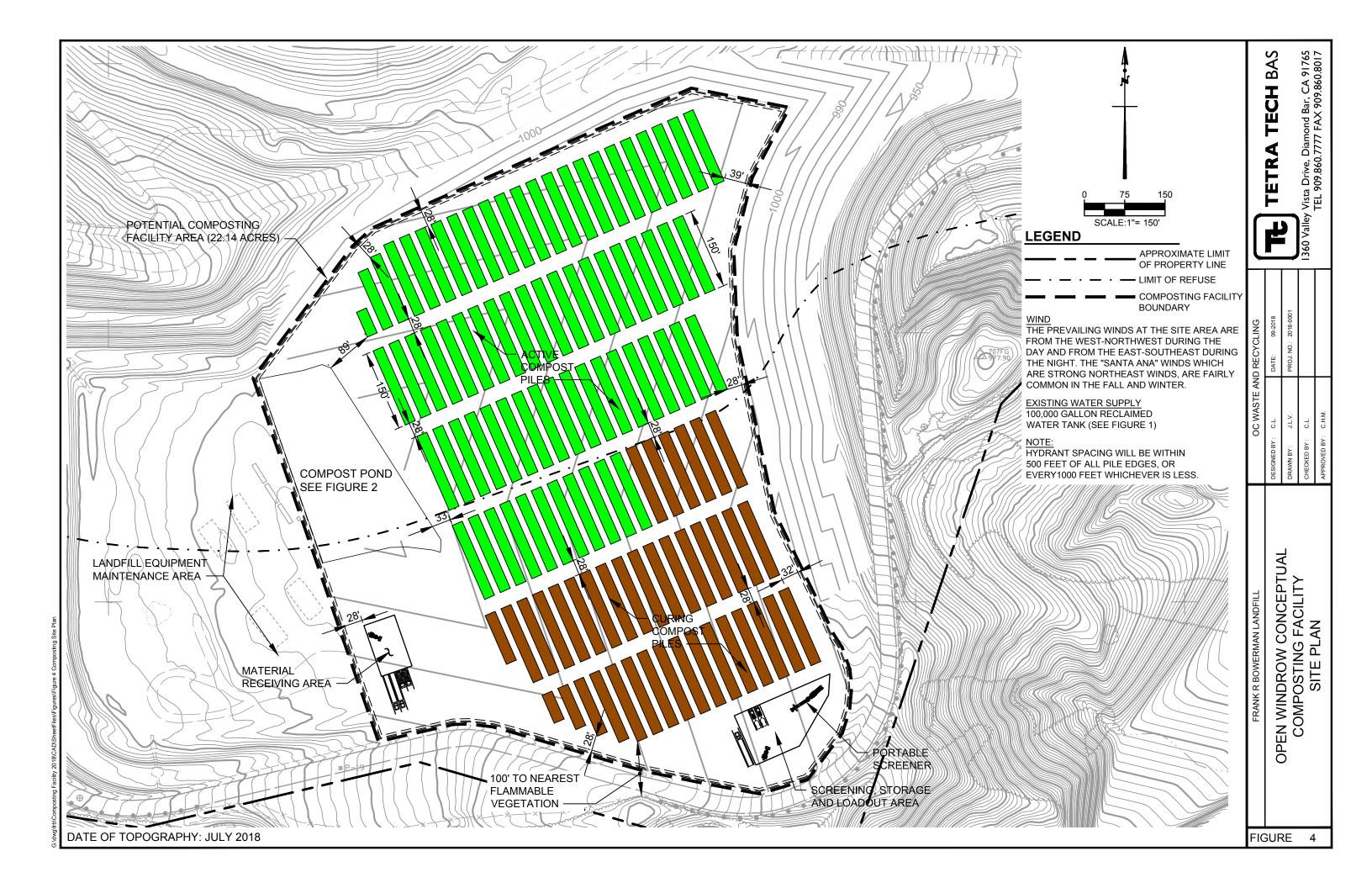
#### 7. OTHER REQUIREMENTS

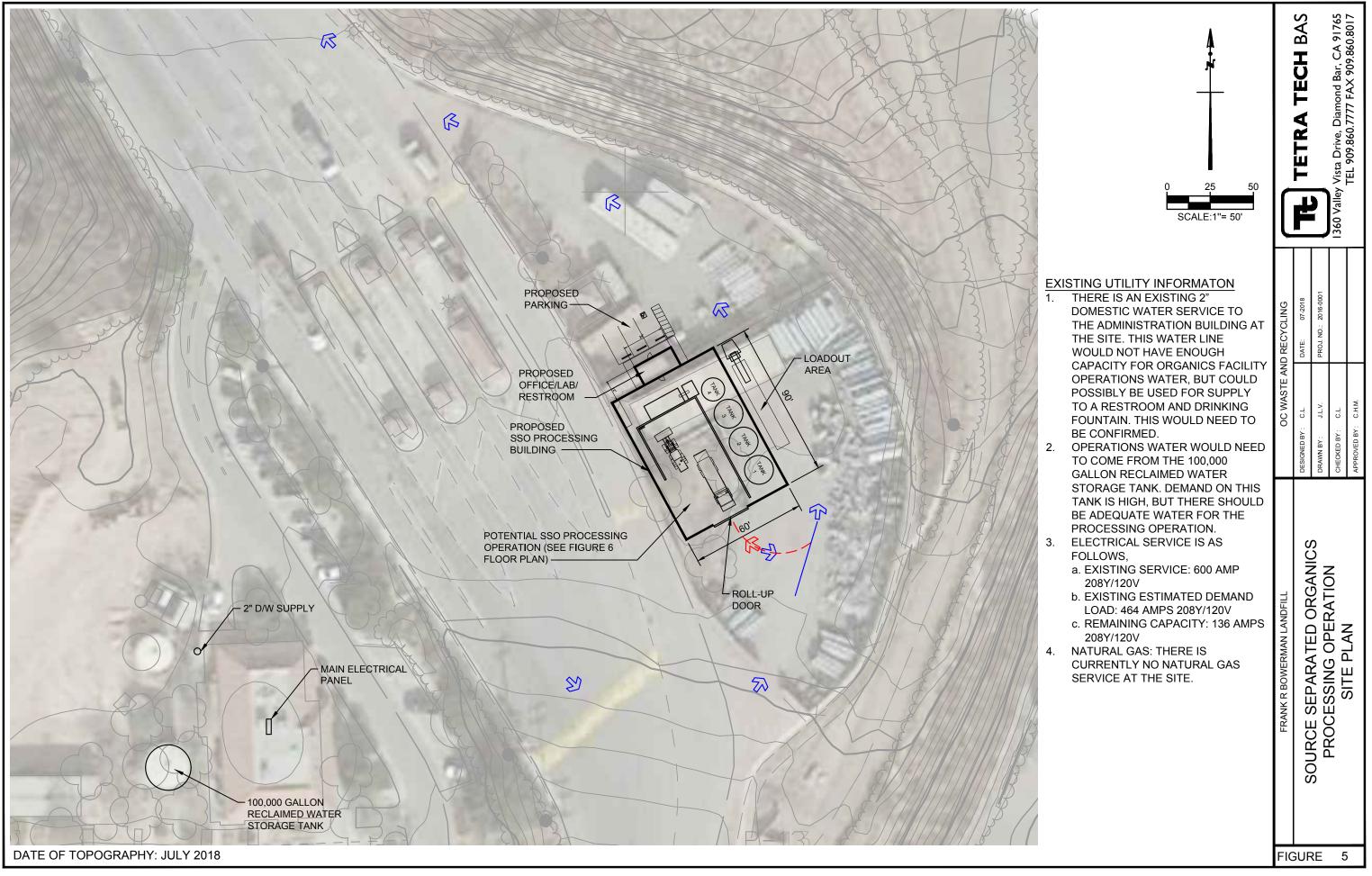
- Parking
  - o Regular
  - o ADA Compliant
- Office/Lab
- Restroom



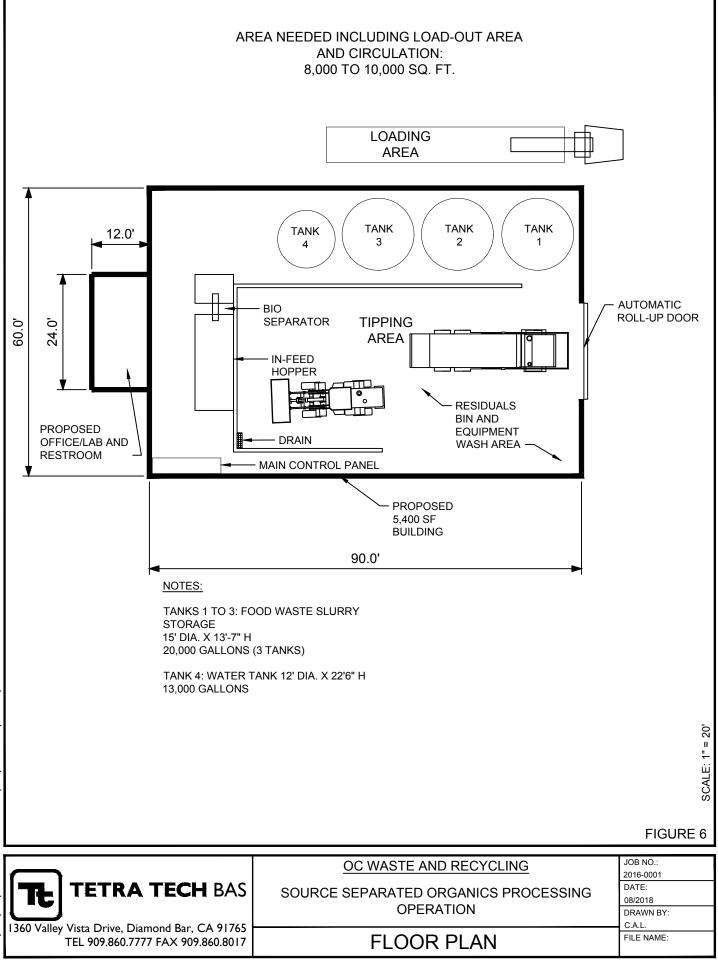






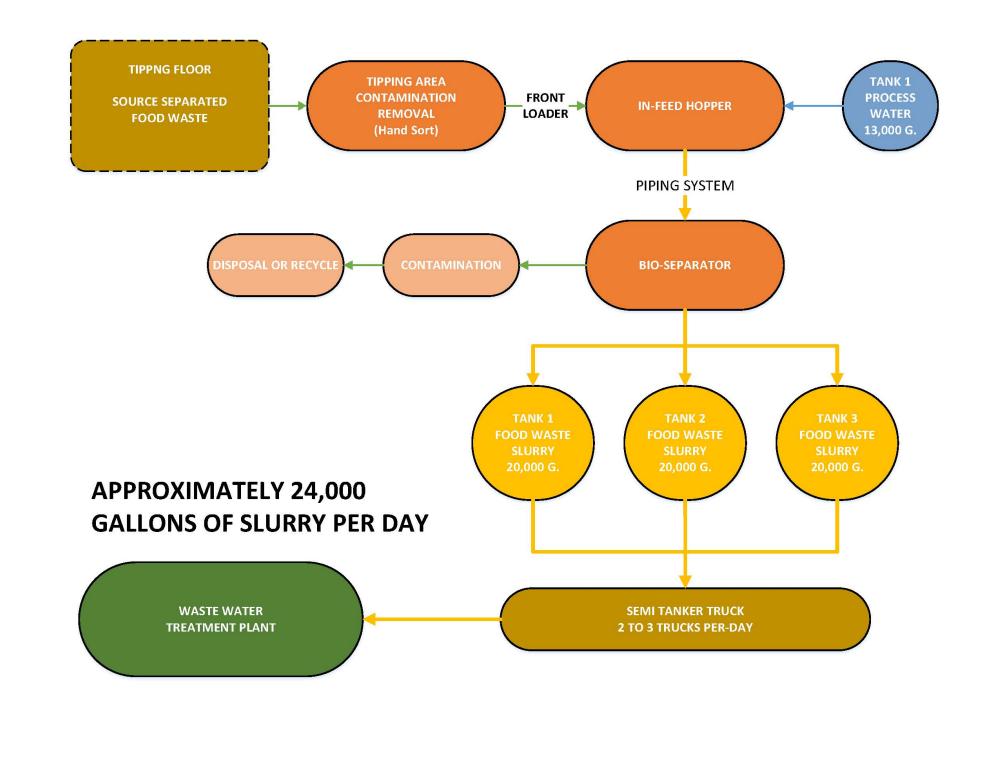


\dwg\frb\Composting Facility 2018\CAD\SheefFiles\Figures\Figure 5 Bio Separ



G:\DWG\FRB\COMPOSTING FACILITY 2018\CAD\SHEETFILES\FIGURES\FIGURE 6 SSO PROCESSING SITE PLAN

# 99 TONS PER DAY OF INCOMING FEEDSTOCK



			1360 Valley Vista Drive, Diamond Bar, CA 91765	TEL 909.860.7777 FAX 909.860.8017
OC WASTE AND RECYCLING	DATE: 08-2018	PROJ. NO.: 2015-0180		
OC WASTE AN	DESIGNED BY : C.L.	DRAWN BY : J.L.V.	CHECKED BY : C.L.	APPROVED BY : C.H.M.
SSO PROCESSING FACILITY				

#### **1. FACILITY INFORMATION**

**Owner:** OC Waste & Recycling **Operator:** OC Waste & Recycling Address: 1942 N Valencia Ave. **Operating Days:** Monday-Sunday 24 Hours Material Acceptance: 7:00 a.m. to 5:00 p.m. M. – Sa. SWFP Issue Date: N/A

SWFP No.: N/A

#### 2. TYPE OF PERMITTED FACILITY

- CalRecycle: Green Material Composting Facility (14CCR, Section 17857.1(c); Full Solid Waste Facility Permit (SWFP) required (>12,500 cy in-place). Option 1: Stand-Alone SWFP; Option 2: Fold into SWFP for Landfill. Will need Report of **Composting Site Information** (RCSI) and Odor Impact Minimization Plan (OIMP).
- Tier 2 (>25,000 cy in-place) under the State Water Resources Control Board, SWRCB: Order WQ 2015-0121-DWQ, General Waste Discharge Requirements for Composting Operations. Facility will need a Technical Report.
- SCAQMD: Permit to Operate Equipment with Internal Combustion Engines or Portable Equipment Registration Permit if allowed for equipment shared by all three sites.

#### **Fire Protection Requirements** OCFA: F Occupancy; Chipping, Composting, or Recycling Operation (PR315; a PR145 may also be required)

- PR 315 Hazardous Material Process/Storage for Non H Occupancies
- **PR 145** Fire Master Plan (Emergency access and fire hydrant location, fire lane markings, or vehicle gates across emergency access drives)

#### 3. CAPACITY

- **150 tons per day (TPD)** (see Figures 1 and 4)
- Approximately 40,000 cubic yards (cy) of feedstock, compost (active, curing and • final product), additives and amendments on site at any given time (see Table 1). As operational processes are fine-tuned the feedstock, compost (active, curing and final product), additives, and amendment volumes will fluctuate.

#### 4. <u>TECHNOLOGY TYPE</u>

**Open Windrow Composting** – Per CalRecycle, Windrow Composting Process means "the process in which compostable material is placed in elongated piles. The piles or "windrows" are aerated and/or mechanically turned on a periodic basis."

#### 5. PERMITTED WASTE TYPES

Green Material – Per CalRecycle, Green Material means "any plant material except food material and vegetative food material that is separated at the point of generation, contains no greater than 1.0 percent of physical contaminants by dry weight, and meet maximum contamination requirements." Green material **includes** but is not limited to tree and yard trimmings, untreated wood wastes, natural fiber product, wood waste from silviculture and manufacturing and construction and demolition wood waste. Green material **does not include** food material, vegetative food material, biosolids, mixed material, material separated from commingled solid waste collection or processing, wood containing lead-based paint or wood preservatives, or mixed construction and demolition debris.

#### 6. EQUIPMENT

- Windrow Turner
- Mobile Screen (to be used at three sites)
- (2) Two Front-End Loaders
- Water Truck
- Truck

#### 7. UTILITIES

The location identified for the potential composting facility at the Olinda Alpha Landfill is the far northeast portion of the landfill on the top deck, once "close to" final refuse fill grades have been achieved (one lift short of final grades). Utilities required for this proposed windrow composting operation include fire protection and operations water. Since there is no water located in the area, water will have to be pumped so electrical power will be required.

• **Operations Water:** There is currently no source for reclaimed water at the Olinda Alpha Landfill. Therefore, water for the composting facility will need to be provided by the existing domestic water system. Currently, water for the site is provided by an

existing water line which enters the site on Valencia Avenue. Water is then run through booster pumps and distributed to several locations throughout the landfill. This system is the source of water for landfill operations, fire protection and domestic water. The closest point of connection to the proposed composting operation location is at the two 20,000 gallon elevated tanks located along the westerly access road, that were installed during the Phase 2 Partial Final Closure project. Assumptions for operations water demand are presented in Table 2. The estimated process water demand ranges from approximately 34,000 to 60,000 gallons per day.

- Fire Water Supply: It is TTBAS' understanding that the OCFA will be preparing new fire prevention and control requirements specific to composting facilities. Since there are no OCFA fire codes or requirements available at this time specific to composting facilities, TTBAS used Standard 14.9.1 from the Ventura County Fire Prevention District for Composting, Mulch and Organic Processing, as the guidance for the composting facility conceptual design based on similarities between the climate and environment of Ventura and Orange Counties. Section 4.11 Fire Flow/Water Supply requirements are as follows:
  - Facilities with over 200 cubic yards shall provide a water supply. The minimum fire flow shall be no less than 500 GPM @ 20 PSIR for a minimum of two (2) hour duration. If there is no water purveyor, an alternate water supply with storage tank(s) shall be provided for fire suppression. The water supply tank(s) shall provide a minimum capacity of 2,500 gallons per pile (maximum 30,000 gallons) for piles not exceeding six (6) feet in height and 5,000 gallons per pile (maximum 60,000) for piles exceeding six (6) feet in height. Water tank(s) shall not be used for any other purpose unless the required fire flow is left in reserve at all times. An approved method shall be provided to maintain the required amount of water within the tank(s). Fire hydrants, with a 2 ½" outlet, would be located around the perimeter of the facility at approximately 1,000 foot spacing based on the following Section 4.12 of the Ventura Standard:
  - When a water supply is required by Section 4.11, fire hydrant(s) with at least one (1) 2-1/2 inch outlet shall be located within 500 feet of all pile edges (1,000 foot spacing). Fire hydrant(s) shall be set back a minimum of 20 feet

from any pile. When using an on-site water storage tank, required fire hydrant(s) may be located on the tank. Signs, minimum of 4 inch high letters, shall be posted at all fire hydrant outlets stating "WATER FOR FIRE DEPARTMENT USE ONLY".

 One water tank will be provided to meet both operations and fire water needs. The tank will be filled at a rate to provide necessary operations water and to maintain 60,000 gallons in reserve for fire water needs.".

#### 8. STORM WATER MANAGEMENT

The compost pond depth was determined based on NOAA precipitation data for a 25-year, 24-hour storm event (per Order WQ 2015-0121-DWQ, General Waste Discharge Requirements for Composting Operations requirements) and the approximate tributary boundary of the compost area. Based on these assumptions, the compost pond will need to be approximately 8 feet deep to hold a capacity of 7.43 acre-feet. The compost area will require perimeter berms approximately two (2) to three (3) feet high, depending on the location, to also be able to hold storm water flows from a 25-year, 24-hour storm event.

#### OC WASTE AND RECYCLING TABLE 1 VALENCIA GREENERY 150 TONS PER DAY OPEN WINDROW COMPOSTING FACILITY AREA AND VOLUME CALCULATIONS

Materials Receiving	Amount	Unit	Notes
Naterials Received per Day	150	Tons	
Density of Pile (pre-grind)	0.40	Tons/CY	800 lbs./CY
Days of Storage Needed	2	Days	
Required On-Site Storage	300	Tons	
	750	CY	
Total Volume of Storage Required	20,250	ft <sup>3</sup>	
Pile Height	15	Feet	
Footprint	1,350	Sq. Ft.	
ootprint	0.03	Acres	
Active Windrow Piles	Amount	Unit	Notes
Density of Pile (post-grind)	0.40	Tons/CY	800 lbs./CY
Compost to Windrow/day	375.0	CY	
	10,125	ft <sup>3</sup>	
	20	FT Wide	
Pile Dimensions	150	FT Long	
	8	FT High	
Pile Area	3,000	Sq. Ft.	
Pile Capacity Each	667	CY	
	18,000	ft <sup>3</sup>	Assume almost "oval" shape pile
Piles Built per Day	0.56		Build 1 pile per day
Total Daily Capacity	10,125	ft <sup>3</sup>	
	72	Days	(6 days/week, 12 weeks, 21,600 tons)
Required On-Site Storage - Required Residence Time (Assumes 3 Months)	10,800	Tons	(300 tpd x 72 days)
required on site storage required residence rine (rissumes s wonths)	27,000	CY	(21,600 tons / 0.4 tons per cy)
	729,000	ft <sup>3</sup>	(1,458,000 ft <sup>3</sup> / 18,000 ft <sup>3</sup>
Minimum # of Piles in Design	40.50	plies	
# of Piles in Design	41.00	piles	round up
Compost Piles Footprint	123,000	Sq. Ft.	
	2.8	Acres	Does not include fire access lanes
Fire Lanes	12 150	FT Wide	
	1,800	FT Long Sq. Ft.	
	42	lanes	
# of Fire Lanes in Design	75,600	Sq. Ft.	
	1.7	Acres	
Total Footprint	4.6	Acres	

Compost Curing Piles	Amount	Unit	Notes
Density of Pile (post-pathogen reduction)	0.625	Tons/CY	1,250 lbs./CY
Required Residence Time	48	Days	(6 days per week, 8 weeks)
	7,200	Tons	300 tons per day X 48 days
Total Required Curing Capacity	11,520	CY	
	311,040	ft <sup>3</sup>	
	2,945	FT L	Total Pile Length Required
	20	FT W	Bottom of Pile
	8	FT H	
	105.6	Sq. Ft.	Cross Section Area
# of Piles in Design	19.6		150 foot long piles
Compost Piles Footprint	58,909	Sq. Ft.	
	1.4	Acres	Does not include fire access lanes
	12	FT Wide	
Fire Lanes	150	FT Long	
	1,800	Sq. Ft.	
	20.6	lanes	
# of Fire Lanes in Design	37,145	Sq. Ft.	
	0.9	Acres	
Total Footprint	2.2	Acres	

Compost Screening, Storage, and Loadout	Amount	Unit	Notes
Density of Pile (post-pathogen reduction/curing)	0.75	Tons/CY	1,500 lbs./CY
Single Cured Compost Pile	587	СҮ	
Compost Storage	469	CY	Assumes 20% Reduction in Volume
Area Required for Compost Screening, Storage, and Loadout	15,000	Sq. Ft.	100' x 150' Pad
Area required for compost screening, storage, and coadout	0.3	Acres	Compost Storage Capacity
Composting Operations Footprint	7.14	Acres	Assumes the utilization of windrow turner. If front-end loader is used, additional space will be required for circulation and horizontal shift as piles are turned.
40% Area Contingency for Circulation	2.86	Acres	
Total Composting Facility Area	10	Acres	Does not account for permiter fire lanes/buffer or storm water improvements.
Total Amount of Materials On-Site	39,739	СҮ	

#### OC WASTE AND RECYCLING TABLE 2 VALENCIA GREENERY PROCESS (OPERATIONS) WATER DEMAND

INITIAL WINDROW PILE								
By weight 375 CY	0.4 Tons CY	2000 Lbs 1 ton	300,000.00	lbs of Feed stock				
300,000.00 Lbs of Feedstock	25% water		75,000.00	Lbs of water				
25% of water 75,000.00	CF 62.4 Lbs of H	120	1,201.92	CF of water				
			8,990.38	gallons				
Initial wetting to br	-	nositure by weight						
	By weight         2000 Lbs         300,000.00 lbs of Feed stock           10         Lbs of Feedstock         25% water         75,000.00 Lbs of water           10         Lbs of Feedstock         25% water         75,000.00 Lbs of water           75,000.00         CF         1,201.92 CF of water           62.4 Lbs of H2O         8,990.38 gallons           Initial wetting to bring feed stock to 50% mositure by weight           8,990.38 gallons           ACTIVE COMPOST WINDROW 1% WATER REPLENISHMENT           25 CY         0.4 Tons         2000 Lbs         21,300,000.00 lbs of Feed stock           10         Lbs of Feedstock         1% water         213,000.00 Lbs of water           213,000.00         CF         3,413.46 CF of water           213,000.00         CF         3,413.46 CF of water           213,000.00         CF         25,532.69 gallons           Process Water Need: 25,532.69 gallons/day           ACTIVE COMPOST WINDROW 2% WATER REPLENISHMENT           25 CY         0.4 Tons         2000 Lbs         21,300,000.00 lbs of Feed stock           C           25,532.69 gallons/day           ACTIVE COMPOST WINDROW 2% WATER REPLENISHMENT            21,30							
	L COMPOST WINDI							
26,625 CY	0.4 Tons CY	2000 Lbs 1 ton	21,300,000.00	lbs of Feed stock				
21,300,000.00 Lbs of Feedstock	1% water		213,000.00	Lbs of water				
2% of water 213,000.00	CF 62.4 Lbs of H	120	3,413.46	CF of water				
8,990.38 gallons           ACTIVE COMPOST WINDROW 1% WATER REPLENISHMENT           26,625 CY         0.4 Tons         2000 Lbs         21,300,000.00 lbs of Feed stock           21,300,000.00 Lbs of Feedstock         1% water         213,000.00 Lbs of water           2% of water         213,000.00         CF         3,413.46 CF of water           2% of water         213,000.00         CF         3,413.46 CF of water           C5,532.69 gallons           Process Water Need:         25,532.69 gallons/day           ACTIVE COMPOST WINDROW 2% WATER REPLENISHMENT           ACTIVE COMPOST WINDROW 2% WATER REPLENISHMENT           26,625 CY         0.4 Tons         2000 Lbs         CF         21,300,000.00         lbs of Feed stock								
ACTIV	E COMPOST WINDR	OW 2% WATER F	REPLENISHMENT					
26,625 CY	0.4 Tons CY	2000 Lbs 1 ton	21,300,000.00	lbs of Feed stock				
21,300,000.00 Lbs of Feedstock	2% water		426,000.00	Lbs of water				
2% of water 426,000.00		120	6,826.92	CF of water				
			51,065.38	gallons				
Process Water Demand:	water         213,000.00         CF         3,413.46         CF of water           62.4 Lbs of H2O         3,413.46         CF of water <b>25,532.69 gallons Process Water Need:</b> 25,532.69 gallons/day <b>ACTIVE COMPOST WINDROW 2% WATER REPLENISHMENT</b> 26,625 CY         0.4 Tons         2000 Lbs         21,300,000.00         lbs of Feed stock           300,000.00         Lbs of Feedstock         2% water         426,000.00         Lbs of water           water         426,000.00         CF         6,826.92         CF of water           62.4 Lbs of H2O         6,826.92         CF of water         51,065.38 gallons							

Assumptions:

- Feedstock is Curbside green waste (yard trimming) with an estimated moisture content of 25-percent by weight.

- Target moisture is 50-percent initially and through the active composting phase.

- Estimated moisture loss that would need to be replenished during the active composting phase is estimated at one to two-percent

- Feedstock and seasonal variations will impact initial moisture and daily loss, affecting water utilization.

# Fact Sheet 2 Valencia SSO Processing (@ Olinda Alpha Landfill)

#### 1. FACILITY INFORMATION

Owner: OC Waste & Recycling Address: 1942 N Valencia Avenue, Brea, CA 92823 Operator: OC Waste & Recycling Operating Days: Monday-Saturday 7:00 a.m. to 5:00 p.m. SWFP Issue Date: N/A

SWFP No.: N/A

#### 2. <u>TYPE OF PERMITTED FACILITY</u>

Compostable Material Handling Operation, per CalRecycle means "an operation or facility that processes, transfers, or stores compostable material."

Transfer/Processing Facility is perhaps more applicable due to composting regulations primarily applying to composting or chipping and grinding.

- Enclosed Operation (see Figures 1, 5 and 6)
- Design and Operational description provided as part of Report of Facility Information;
  - Included as part of RDSI (JTD), or potentially under the Registration Tier (stand-alone with a TPR under the Transfer/Processing regulations for <100 TPD).</li>
  - An Odor Impact Minimization Plan (OIMP) will also be prepared.

#### 3. <u>CAPACITY</u>

• 99 tons per day (TPD) of incoming feedstock (see Figure 7 SSO Processing Flow Diagram).

#### 4. <u>PERMITTED WASTE TYPES</u>

Source Separated Organics (Food Material as defined under 14 CCR, Section 17852(a)(20))

#### 5. EQUIPMENT

• Front-End Loader

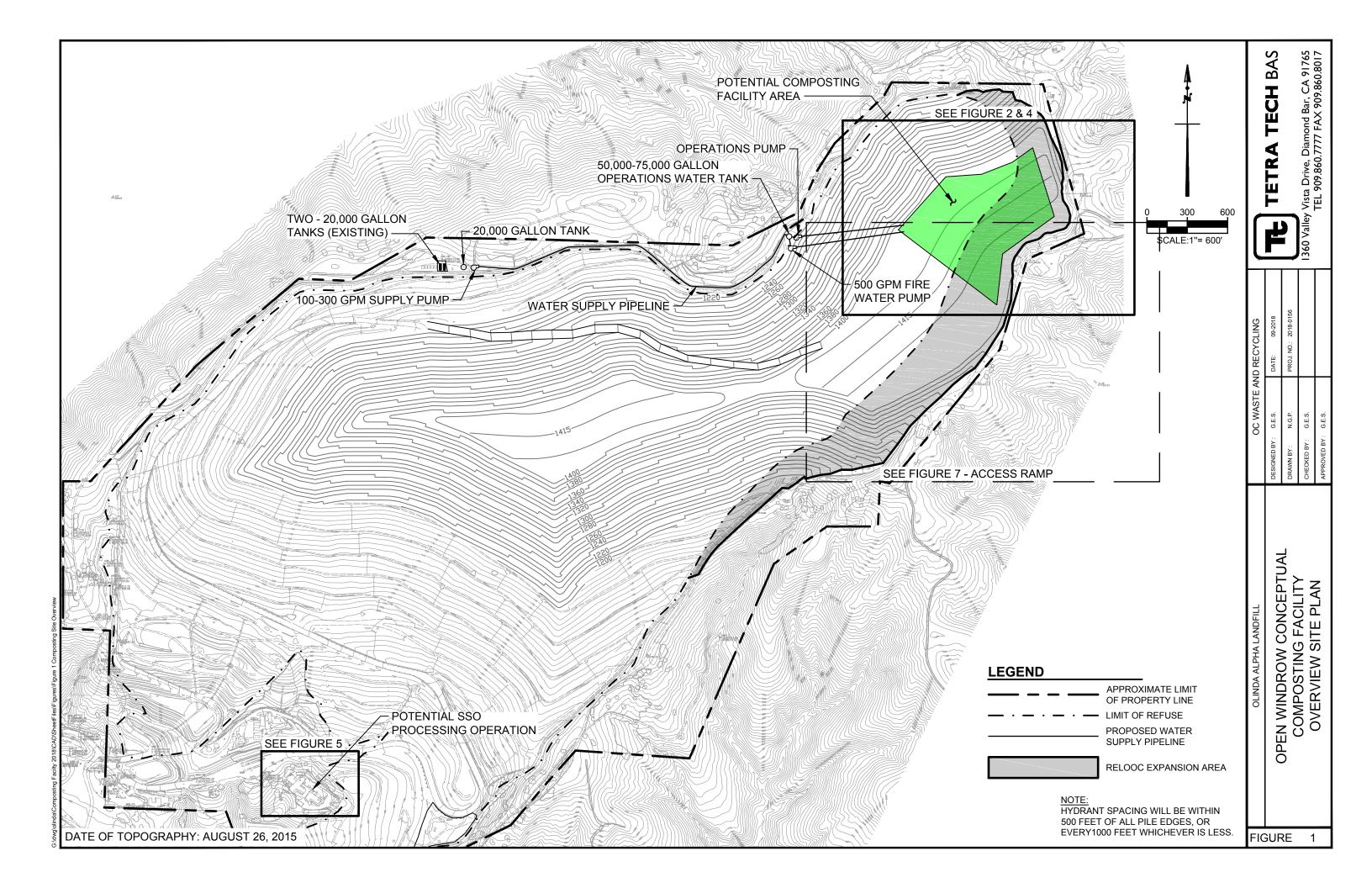
- Hopper
- Bio Separator
- Pump System
- Tanks
- Odor Control System

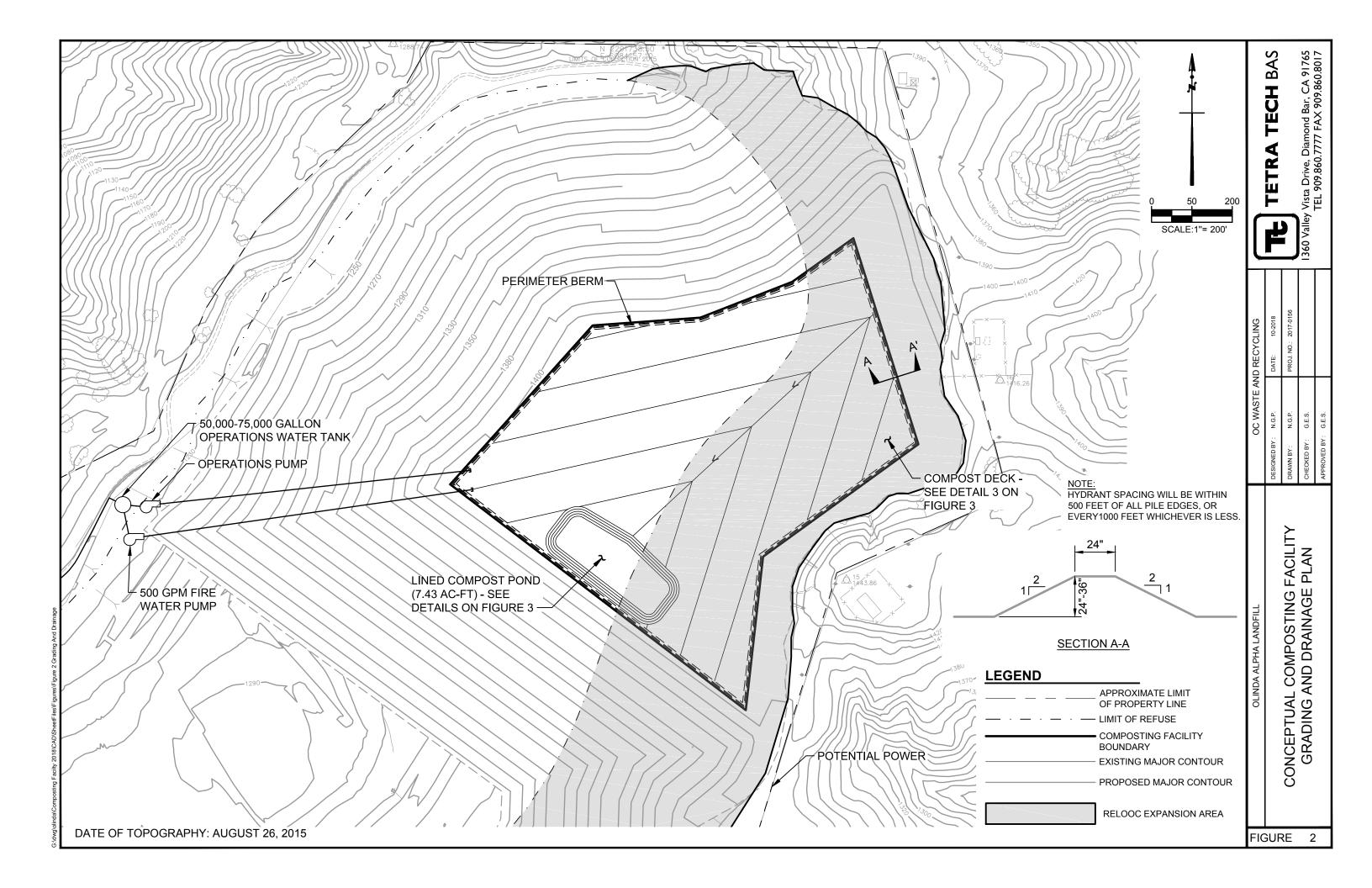
#### 6. UTILITIES

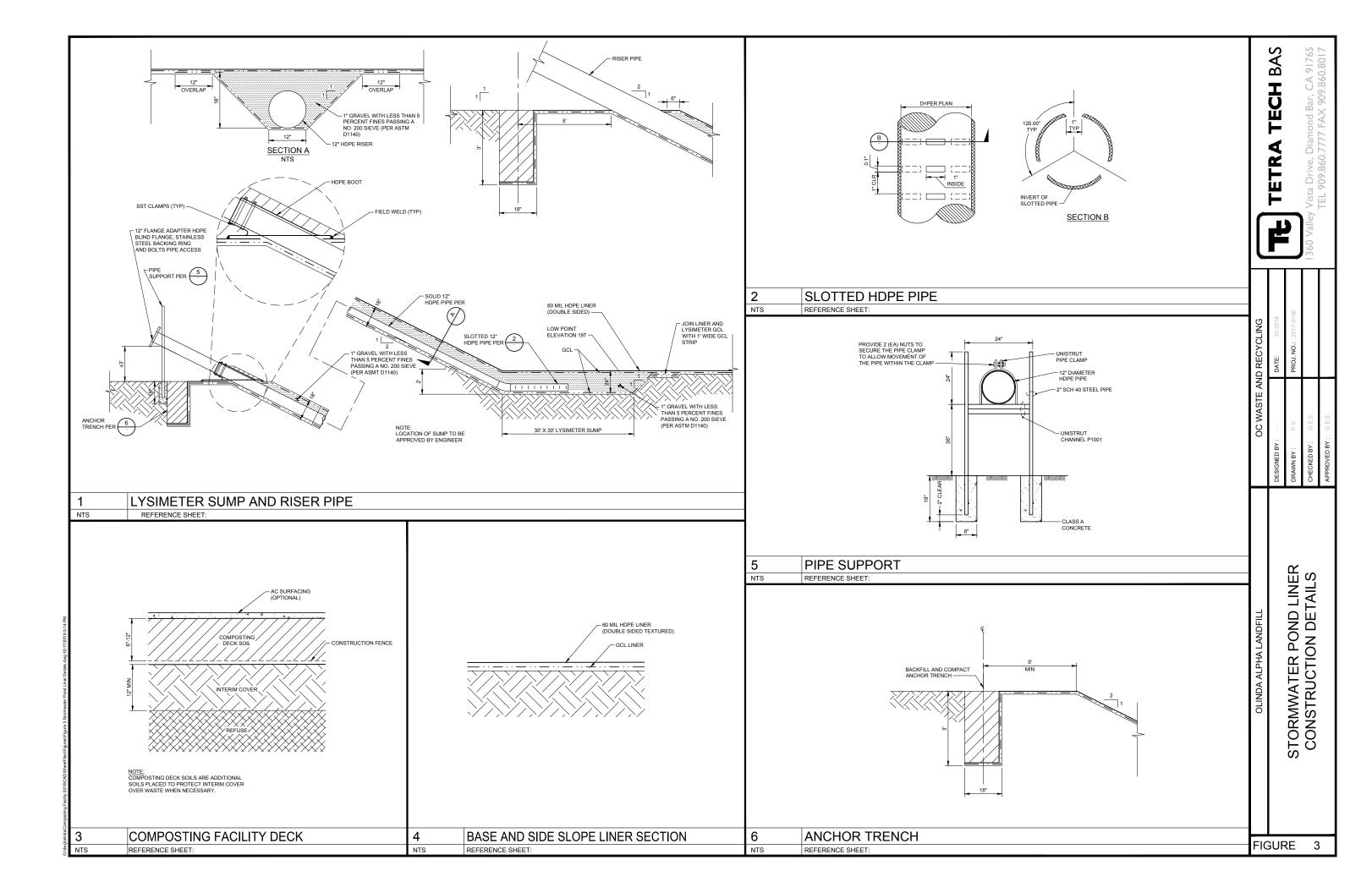
- Water
  - Fire Protection. Fire protection would be provided via the existing fire hydrant located at the end of the access road, adjacent to Storm Water Basin A. This fire hydrant is connected to the existing two 100,000 gallon water tanks. It is assumed that OCFA will require fire sprinklers to be installed and functional in the building. If the existing structure can be reused for the SSO processing operation then part of the building modifications should include either installation of a sprinkler system or evaluation of the existing sprinkler system and upgrading the sprinklers as required. Pressure and flow tests indicate adequate water supply for the sprinklers and the fire hydrant.
  - Domestic Water. The current facility was not inspected but It is assumed that the existing building currently has domestic water service for use in personnel facilities (i.e. restrooms and drinking fountains). This supply will need to be confirmed.
- Electricity. The existing transformer located near the proposed SSO processing operation building is assumed to provide electricity for the existing facility. Based on the amount of equipment (blowers, flare station etc.) that are no longer in use, it is assumed that the electrical supply that was available for the current facility will provide adequate power for the SSO processing operation. However, the existing system will need to be evaluated to verify it can provide the necessary power.
- **Gas.** No service at this time.
- Sewer. The restroom facility at the SSO Processing facility will require a sewer service (i.e. connection to an existing sewer service or a leach pit. The system will be determined during more detailed design.

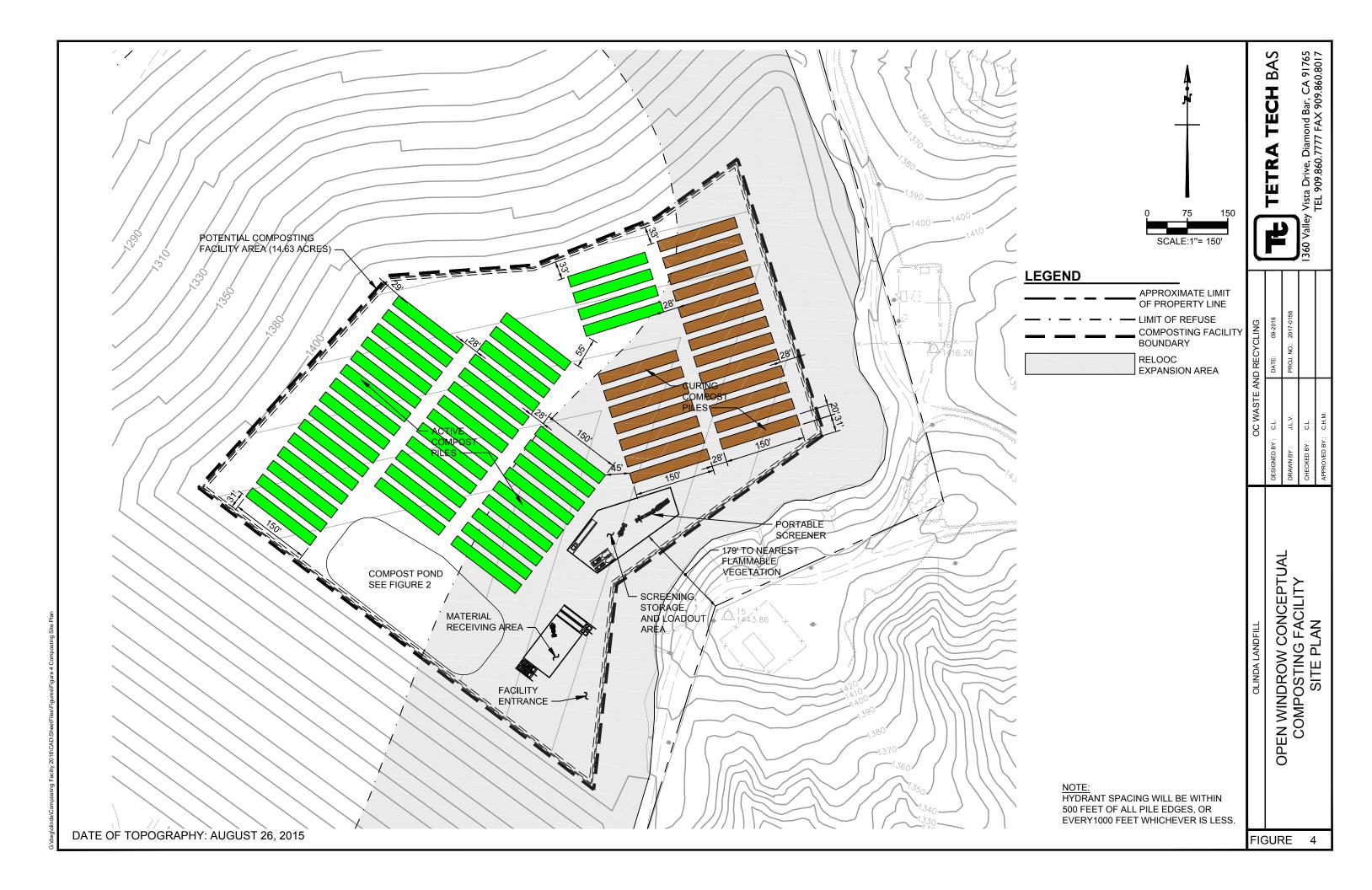
## 7. OTHER REQUIREMENTS

- Parking
  - o Regular
  - ADA Compliant
- Office/Lab
- Restroom









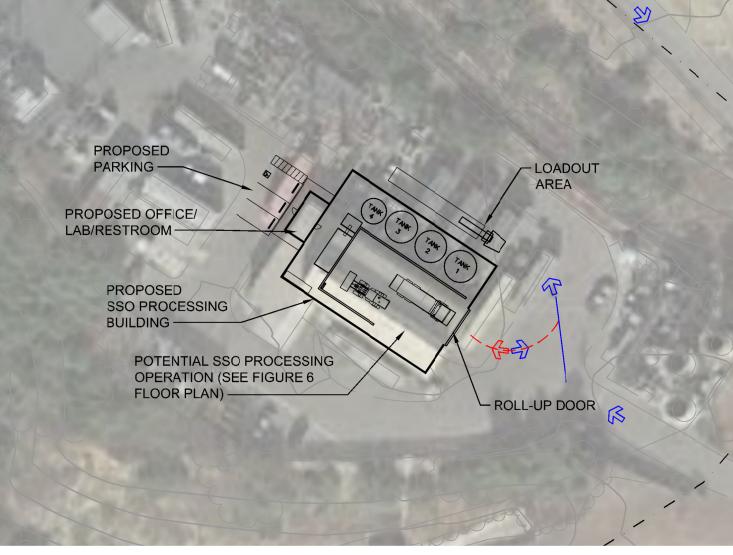
#### EXISTING UTILITY INFORMATION WATER

• FIRE PROTECTION. FIRE PROTECTION WOULD BE PROVIDED VIA THE EXISTING FIRE HYDRANT LOCATED AT THE END OF THE ACCESS ROAD, ADJACENT TO STORM WATER BASIN A. THIS FIRE HYDRANT IS CONNECTED TO THE EXISTING TWO 100,000 GALLON WATER TANKS. IT IS ASSUMED THAT OCFA WILL REQUIRE FIRE SPRINKLERS TO BE INSTALLED AND FUNCTIONAL IN THE BUILDING. PRESSURE AND FLOW TESTS INDICATE ADEQUATE WATER SUPPLY FOR THE SPRINKLERS AND THE FIRE HYDRANT.

• DOMESTIC WATER. THE CURRENT FACILITY WAS NOT INSPECTED BUT IT IS ASSUMED THAT THE EXISTING BUILDING CURRENTLY HAS DOMESTIC WATER SERVICE FOR USE IN PERSONNEL FACILITIES (I.E. RESTROOMS AND DRINKING FOUNTAINS). THIS SUPPLY WILL NEED TO BE CONFIRMED.

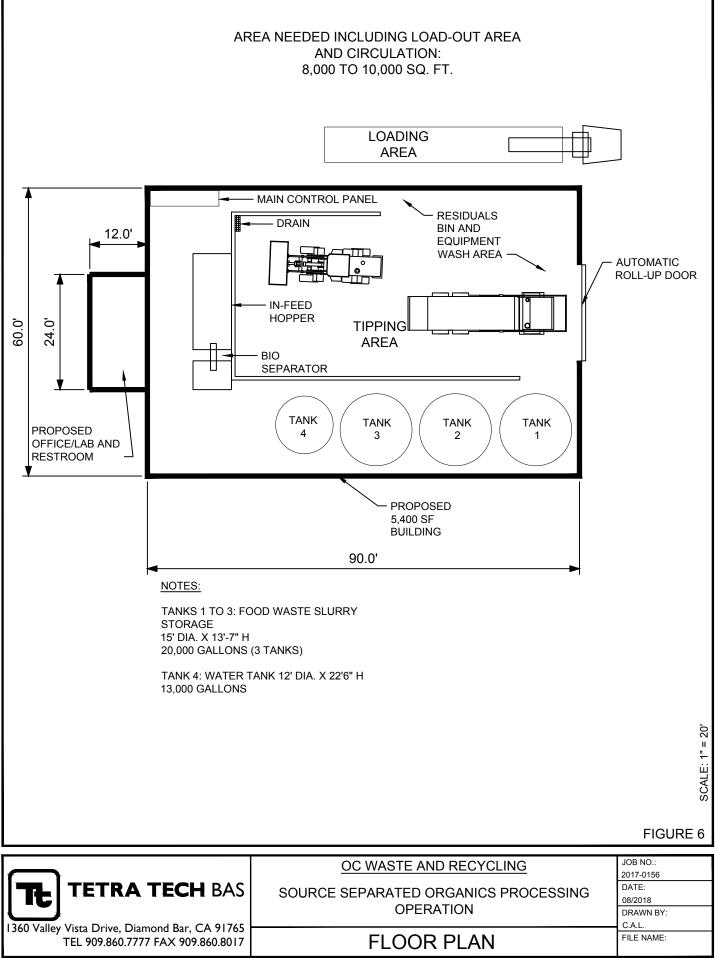
ELECTRICITY. THE EXISTING TRANSFORMER LOCATED NEAR THE PROPOSED SSO ORGANICS PROCESSING BUILDING IS ASSUMED TO PROVIDE ELECTRICITY FOR THE EXISTING FACILITY. BASED ON THE AMOUNT OF EQUIPMENT (BLOWERS, FLARE STATION ETC.) THAT ARE NO LONGER IN USE, IT IS ASSUMED THAT THE ELECTRICAL SUPPLY THAT WAS AVAILABLE FOR THE CURRENT FACILITY WILL PROVIDE ADEQUATE POWER FOR THE SSO PROCESSING OPERATION. HOWEVER, THE EXISTING SYSTEM WILL NEED TO BE EVALUATED TO VERIFY IT CAN PROVIDE THE NECESSARY POWER.

DATE OF TOPOGRAPHY: AUGUST 26, 2015

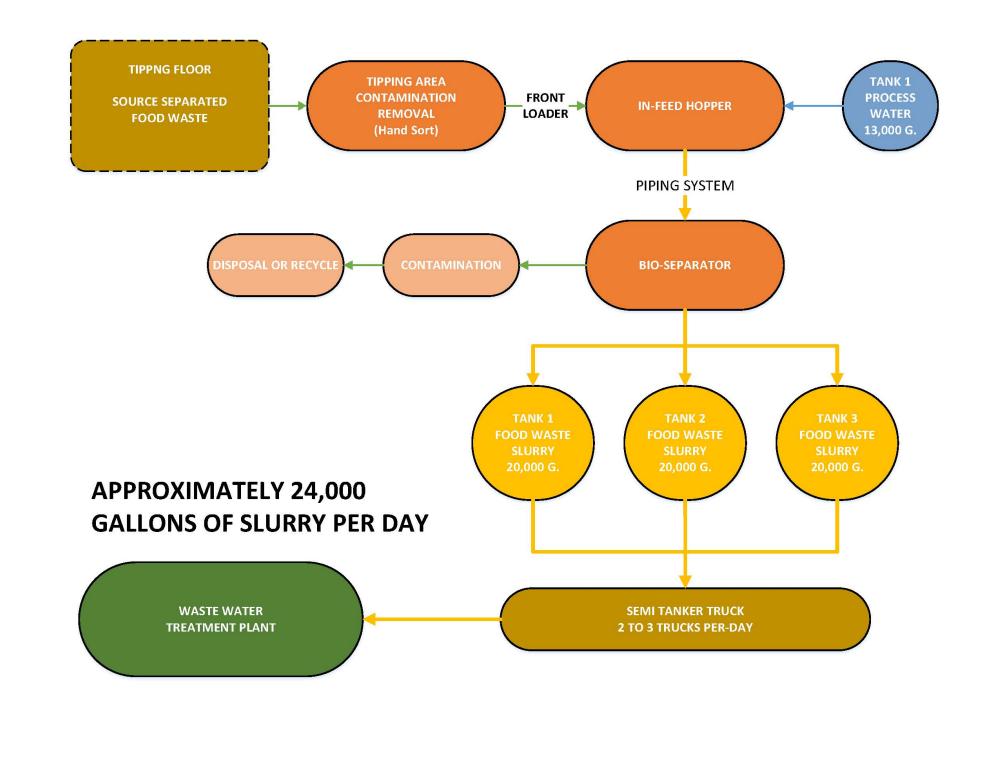


# G:lowglolinda\Composting Facilty 2018\CAD\SheetFiles\Figures\Figure 5 Bio Separation Fac





# 99 TONS PER DAY OF INCOMING FEEDSTOCK



			1360 Valley Vista Drive, Diamond Bar, CA 91765	TEL 909.860.7777 FAX 909.860.8017	
OC WASTE AND RECYCLING	DATE: 08-2018	PROJ. NO.: 2015-0180			
OC WASTE AN	DESIGNED BY : C.L.	DRAWN BY : J.L.V.	CHECKED BY : C.L.	APPROVED BY : C.H.M.	
SSO PROCESSING FACILITY	PROCESS FLOW DIAGRAM				

