

TULARE LAKE COMPOST

EXCEPTIONAL QUALITY COMPOST



FOR THE CENTRAL VALLEY



Class A Exceptional Quality Compost Enhances:

- Soil Fertility and Crop Yield
- Slow Release Nitrogen
- Water Retention Capacity
- Resistance to Plant Diseases
- Nitrogen, Phosphorous, and Potassium (NPK)
- Micronutrients and Trace Elements



TULARE LAKE COMPOST

Helping the Central Valley Grow Sustainably

Welcome to Tulare Lake Compost, fondly referred to as “TLC” by those who know it best. TLC is a state-of-the-art, 175-acre composting facility located near Kettleman City in Kings County, California. At the facility, an environmentally friendly process is used to combine agricultural and green waste from the Central Valley with biosolids from Los Angeles County to create an optimal mixture for composting.

TLC employs the covered aerated static pile (ASP) composting process in which air is forced through piles of compost feedstock to provide oxygen for microbial decomposition. Engineered fabric covers are placed over the composting piles to capture and reduce odors and organic emissions from the piles.

Composting produces a stabilized, humus-like soil conditioner that, when incorporated into farm land, improves water retention, nutrient conditions, and agricultural productivity. Greater water retention translates into reduced irrigation demand, conserving California’s precious water supply. The finished product complies with the EPA Part 503 standards for Class A Exceptional Quality Compost, which can be used for commercial agriculture, landscaping, and gardening.

TLC currently has the capacity to convert up to 100,000 wet tons per year (wtpy) of anaerobically digested and dewatered biosolids into valuable, nutrient rich compost. The facility is owned and operated by the Sanitation Districts of Los Angeles County (www.lacsd.org) as part of their diversified biosolids management program. TLC is another example of the Sanitation Districts’ commitment to converting waste into resources.

The TLC journey began when the Sanitation Districts purchased approximately 14,500 acres of land near Kettleman City. The majority of the land was then leased to a farmer to use the Class A Exceptional Quality Compost for growing crops, enhancing pasture production for livestock, and reclaiming depleted soil. While the Sanitation Districts’ farm is large enough to receive 100 percent of the compost, TLC’s products are suitable for other commercial agricultural operations, as well as for municipal landscaping and residential gardening.

The Kings County Board of Supervisors certified the Environmental Impact Report and authorized a conditional use permit for the composting facility in 2004. The maximum permitted operational capacity for TLC is 500,000 wtpy of biosolids and 400,000 wtpy of agricultural and green waste.

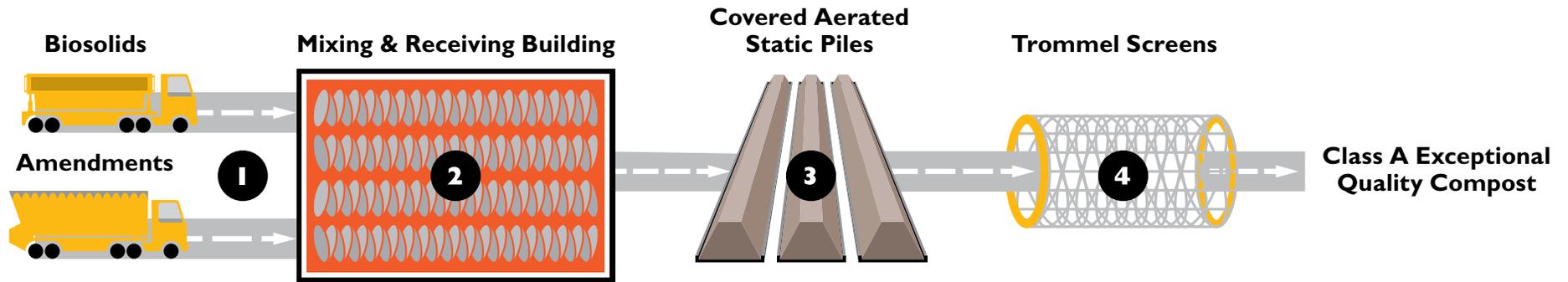




FROM START TO FINISH

The **TLC Standard Cure Process** takes 8 weeks to create a valuable, nutrient rich Class A Exceptional Quality Compost.

The **TLC Premium Cure Process** utilizes extended cure durations to produce a finer Class A Exceptional Quality Compost.



1. Hauling: Natural gas fueled trucks arrive at the facility with biosolids and agricultural and green waste, called “amendments,” which add carbon that is necessary to complete the composting process.

2. Mixing: The biosolids and amendments are combined using stationary mixers located inside the Mixing and Receiving Building or in a specialized mixer truck.

3. Composting: The blended material is delivered to the composting area where it is laid out in piles, covered with a breathable fabric, and broken down by the activity of tiny microbes.

4. Screening: After the composting process is completed, the composted material is screened to produce a consistent product. Material too large to pass through the screen is returned to the composting process.

TLC's COMMITMENT TO PROTECTING THE



A Green Facility

Every aspect of TLC was designed with the environment and our neighbors in mind. This commitment to being green starts with the facility's isolated location, which is approximately 4 miles from the nearest community. The truck route to the facility from Interstate 5 is a short trip that avoids passing by any homes or businesses. In addition, TLC's Administrative Office Building is LEED (Leadership in Energy and Environmental Design) Certified.

The composting process utilizes specially engineered probes and controls to optimize temperature and oxygen levels. This results in significantly lower energy requirements. TLC's Class A Exceptional Quality Compost greatly exceeds EPA standards. For example, pathogens are destroyed for a period six times longer than required, and treatment for Vector Attraction Reduction (VAR) is double the amount required by EPA.

Biosolids processed for compost production avoids disposal of the biosolids at a solid waste landfill and contributes to California's diversion goals and mandates for recycling. Composting is a viable, environmentally responsible alternative for managing the Central Valley's agricultural and green waste. Recycling of these materials and utilization of Class A Exceptional Quality Compost as a soil amendment is an EPA-approved practice that provides benefits to both municipalities and the agricultural community.

Water Conservation and Quality

In order to preserve the Central Valley's water resources, a strong emphasis was placed on water conservation. All stormwater, process water, and compost leachate at the site is recycled back into the composting process. The resulting net water usage of TLC is less than one-half the water used to cultivate almonds or most other orchard trees on the same acreage. The underlying groundwater, which is poor quality, is protected by a 12-inch compacted clay liner beneath the entire site and will be routinely monitored. The site has been graded for onsite runoff to flow into storm basins sized for a 100-year, 24-hour storm event. Class A Exceptional Quality Compost produced at TLC reduces irrigation demand, conserving the valley's precious water.



ENVIRONMENT AND BEING A GOOD NEIGHBOR

Clean Air and Odor Control

TLC's haul trucks are fueled by natural gas, resulting in a 17-percent reduction in the emission of pollution causing compounds that are released by diesel-powered trucks. To limit odors, the biosolids truck trailers are fully covered and unload biosolids indoors in the Mixing and Receiving Building. After unloading, the trailers are washed down with water cannons to remove residuals. The building utilizes high speed roll up doors that close automatically as trucks and other mobile equipment enter and exit the facility. This reduces the release of odors and emissions from the building.

The Mixing and Receiving Building is also under negative pressure (vacuum) to further prevent odors and emissions from escaping the building. An air ventilation system forces the indoor air to an outdoor biofilter, which is made of natural, organic materials, such as wood chips, that allow odor- and pollutant-reducing microorganisms to grow. The biofilter reduces odors and removes up to 80 percent of the volatile organic compounds and 90 percent of the ammonia. All material handling surfaces at the site are lined and covered with asphalt or cement to limit dust.

Prior to the composting process, the biosolids and amendments are mixed by either electric-powered stationary mixers or a mixer truck that exceeds the highest California Air Resources Board on-road vehicle emissions standards. During the composting process, which fully complies with stringent air quality permit requirements, the aerated static piles of mixed biosolids and amendments are covered with an engineered fabric that provides excellent odor control, 80-percent reduction in volatile organic compounds, and a 99-percent retention rate of particulate matter and bacteria.

After the composting process, a trommel screen is used to separate the finished Class A Exceptional Quality Compost from larger, bulky material. For mobility and flexibility in operations, the screen can be powered by electricity or by a diesel engine that meets the most stringent state and federal emission standards for off-road equipment (Tier IV Final). In addition, loaders and other heavy equipment used at the site are also powered by engines that meet Tier IV Final requirements.





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