



TETRA TECH

Feasibility Analyses for New Infrastructure



Organic Waste Processing Facility

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Agenda

- Facility Types
- Initial Site Assessment Criteria
- Initial Site Assessment Status
- Findings
- Next Steps



Facility Types - Organic Waste Processing Facility



Anaerobic Digestion (AD) Facility



SSO Pre-Processing for Stabilization at a WWTP



Open Windrow Composting



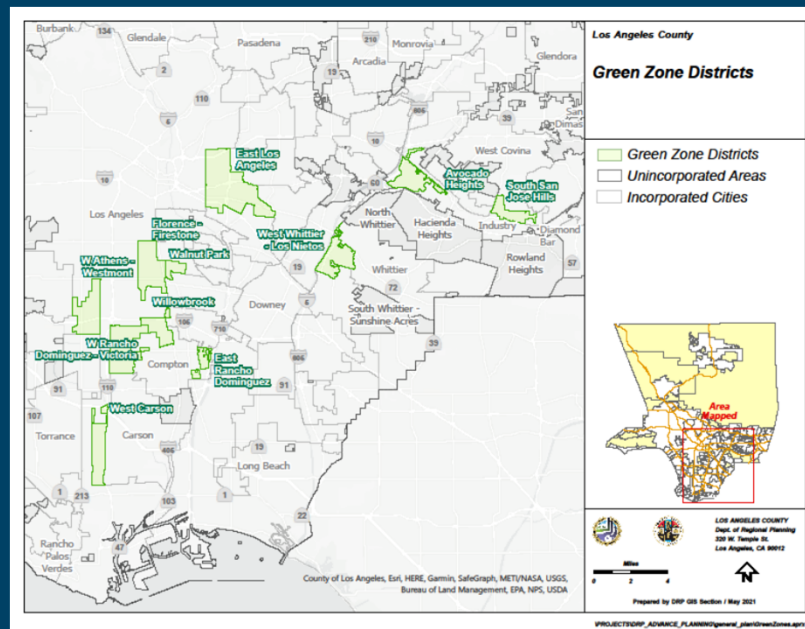
Covered Aerated Static Pile Composting



Community Composting

Initial Site Assessment Criteria

- Green Zone Ordinance



D. Application Requirement. Organic waste facilities that meet the criteria specified in Table 22.140.740-A, below, shall require a Conditional Use Permit (Chapter 22.158) application:

TABLE 22.140.740-A: REQUIREMENTS FOR ORGANIC WASTE FACILITIES

	<u>Chipping and Grinding or Mulching Facilities</u>	<u>Composting Facilities, including In-vessel Composting</u>	<u>Anaerobic Digestion Facilities, Non-combustion Biomass Conversion Facilities¹</u>	<u>Combustion Biomass Conversion Facilities</u>
<u>Permitted Zones</u>	M-1, M-1.5, M-2, M-2.5 and A-2	M-1 ² , M-1.5 ² , M-2, M-2.5, and A-2	M-2, M-2.5, and A-2	M-2, M-2.5, and A-2
<u>Prohibition¹</u>	SEA, High Fire Hazard Severity Zone, or Very High Fire Hazard Severity Zone	SEA	SEA, ARA	SEA, ARA
<u>Distance to the nearest sensitive uses</u>	1500' from the lot line of the nearest sensitive use, unless entirely enclosed	500' ³ or 1500' from the lot line of the nearest sensitive use	500' or 1500' ⁵ from the lot line of the nearest sensitive use	1500' from the lot line of the nearest sensitive use, unless entirely enclosed
<u>Minimum Lot Size</u>	1.5 acres	3 acres	3 acres	3 acres

- Any portion of the facility and operation areas are prohibited in specified areas.
- A composting facility that accepts green materials only may be permitted in zones M-1 and M-1.5.
- A composting facility that accepts green materials only or is fully enclosed within a building and accessory to a legally established use, and processes waste generated on-site only, may be located within 500 feet of a lot containing a sensitive use. Otherwise a composting facility shall be located at least 1,500 feet from a lot containing a sensitive use.
- Anaerobic digestion facilities and non-combustion biomass conversion facilities that are co-located with an existing landfill are exempt from the zoning requirements.
- An anaerobic digestion or non-combustion biomass conversion facility that is fully enclosed within a building, processes waste produced on-site only, and is accessory to a legally established use may be located within 500 feet from a lot containing a sensitive use. Otherwise an anaerobic digestion or non-combustion biomass conversion facility shall be located at least 1,500 feet from a lot containing a sensitive use.

E. Co-location. An organic waste facility that co-locates as a primary use on a parcel with an existing solid or recycling waste facility may be permitted to apply for a

Initial Site Assessment Criteria

Siting Criteria Objectives	Siting Factors for Each Siting Criteria Objective	Criteria for the Siting Factor
A. Protect the residents.	<ul style="list-style-type: none"> Distance to the nearest sensitive uses (Green Zone Ordinance (GZO)). Proximity to residents Proximity to public facilities General Plan Zoning Green Zone District Structures within 1,000 ft. of landfill are prohibited 	<ul style="list-style-type: none"> Site must have a 1,500-foot buffer zone between any residential developments (from the lot line of the nearest sensitive use). Preferable if the site has a significant buffer zone between any public facilities (schools, churches, parks, or any location where large groups congregate). The facility must be in conformance with local land use and zoning requirements of a county or city planning agency. Site general land use designation allows the development of an AD and/or organic waste processing facility with minimal constraints. The facility should be located where the zoning and existing land use are compatible with the proposed use. The facility must comply with additional development requirements if located in a current Green Zone District. Organic waste are allowed in Industrial and Agricultural zones only (M2 Heavy Manufacturing, M2.5 Aircraft Heavy Manufacturing, and A2 Heavy Agriculture if in unincorporated County areas). The facility must not be constructed or developed on or within 1,000 ft. of a land disposal facility unless the facility is isolated by an approved natural or manmade protection system.
B. Ensure the structural stability and safety of the facility.	<ul style="list-style-type: none"> Flood hazard areas Floodplains Areas subject to tsunamis, seiches, and storm surges Proximity to active or potentially active faults 	<ul style="list-style-type: none"> The facility must be designed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return period The facility must not reduce the flow of a 100-year flood or reduce the temporary storage capacity of the flood plain The facility must not be constructed or operated in areas subject to tsunamis, seiches, and storm surges unless designed, constructed, operated, and maintained to preclude failure due to such events. The facility must not be constructed or operated above a Holocene Fault.
C. Protect surface water	Not Applicable	Not Applicable
D. Protect groundwater	Not Applicable	Not Applicable
E. Protect air quality	Not Applicable	Not Applicable
F. Protect environmentally sensitive areas	<ul style="list-style-type: none"> Significant Ecological Areas, Agricultural Resource Areas, and Hillside Management Areas (GZO) Wetlands Proximity to habitats of threatened and endangered species Agricultural lands Natural, recreational, cultural, and aesthetic resources Significant ecological areas, Coastal zones. 	<ul style="list-style-type: none"> The facility should avoid locating in current Significant Ecological Areas and Agricultural Resource Areas per GZO. The facility should avoid locating in current wetland areas unless (a) industrial usage is permitted by the local government's land use planning or zoning, and (b) fish, plant, and wildlife resources can be maintained and enhanced in a portion of the site or preserved elsewhere in the area. The minimum site size must be exclusive of any endangered or threatened species or the destruction or adverse modification of their critical habitat. The facility must be in conformance with a local jurisdiction's General Plan and abide by federal and state regulations regarding protected species and their habitats. The minimum site size must be exclusive of areas protected for endangered species. The facility must obtain a local land use permit from the local jurisdiction if zoned in an area zoned for agricultural uses. The facility should avoid locating in areas sited as "natural, recreational, and aesthetic resources" unless compatible with the land use in the area. The facility should avoid locating in current coastal zone.
G. Ensure safe and economic transportation of solid waste	<ul style="list-style-type: none"> Proximity to areas of waste generation Distance from major transportation routes 	<ul style="list-style-type: none"> Facilities should be centrally located near watershed areas to minimize potential impacts associated with greater travel distances. The site should be readily accessible via major transportation routes, with limited or no access through areas that contain sensitive receptors (e.g., residential, schools, hospitals).

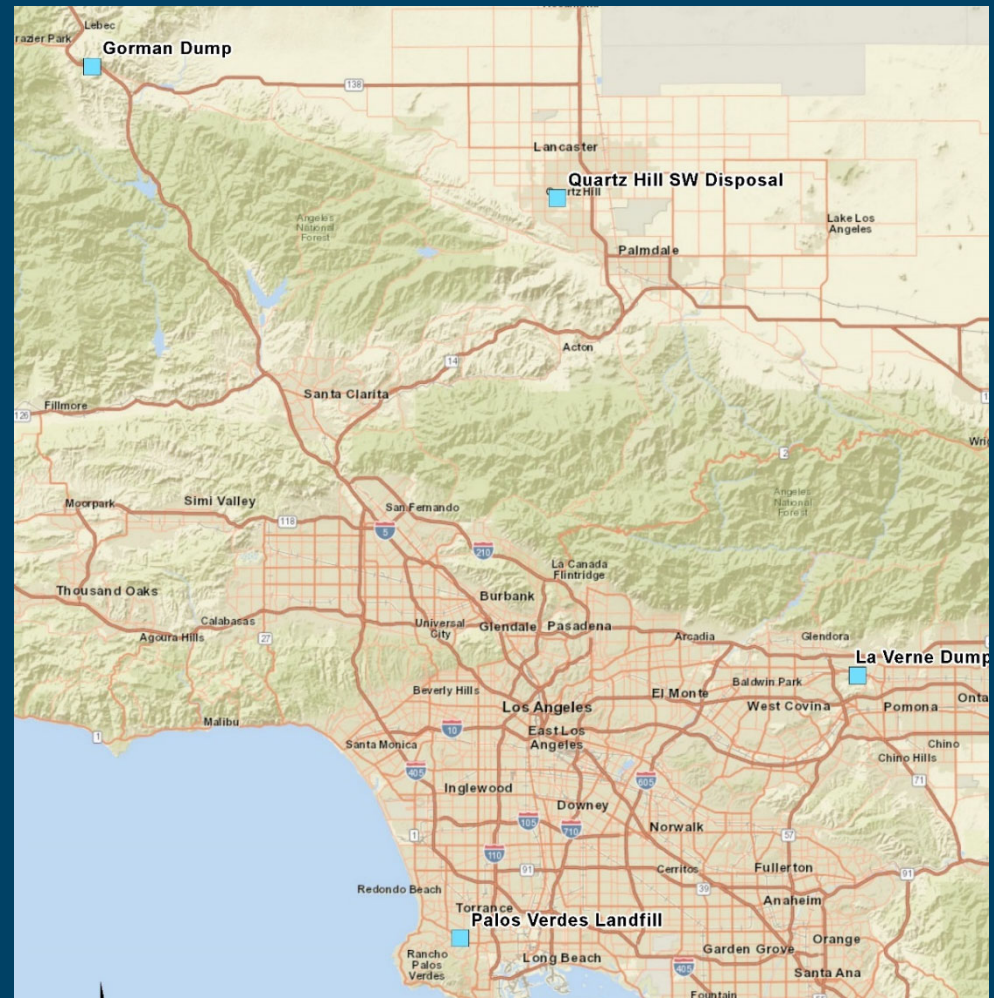
Initial Site Assessment Criteria

Siting Criteria Objectives	Siting Factors for Each Siting Criteria Objective	Criteria for the Siting Factor
H. Protect social and economic development goals of the community	<ul style="list-style-type: none"> Consistency with the General Plan Permitting and environmental considerations 	<ul style="list-style-type: none"> Consistency with the General Plan. Preferable if the site is not designated as Williamson Act land. Preferable if the site is not located in an Environmental Justice zone.
I. Ensure compliance with federal, state, and local requirements	<ul style="list-style-type: none"> Legal Considerations 	<ul style="list-style-type: none"> Permitting constraints and approval considerations (i.e. closure and post-closure status, potential environmental impacts).
J. Site Characteristics	<ul style="list-style-type: none"> Site Size GZO Minimum Lot Size Utilities Interconnection Availability 	<ul style="list-style-type: none"> Site Size (Anaerobic Digestion): Minimum of three (3) to eight (8) acres of land suitable for development(*) with a preference for a larger site, depending on facility size, ideally up to thirty-six (36) acres for the largest facility size. Suitable area for development would exclude floodplains, wetlands, and habitats for endangered species as well as filled areas at landfills. Minimum 3 acres per GZO. Utilities (water or reclaimed water, sewer, gas, and electricity) are nearby or available at the site but may need to be upgraded to meet facility needs. The potential for interconnection to a gas main and/or the power grid for sale of energy products is within proximity to the site. For an electricity generating project, the requirement would be for an adequately sized transmission line (13.8kv or larger) or a substation to be in proximity to the site.

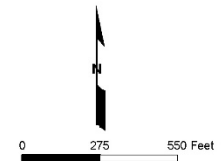
Initial Site Assessment Criteria: The purpose of the Initial Site Assessment Criteria is to identify fatal flaws and eliminate parcels which do not meet primary requirements for the location of a potential organic waste processing facility(s).

Initial Site Assessments Status

- Board Motion of June 8, 2021, Agenda Item No. 5 Enhancing Countywide Solid Waste Management Through Expanded Program and Infrastructure Investment
- Preliminary Feasibility
 - Gorman Dump
 - Quartz Hills Solid Waste Disposal
 - La Verne Dump
 - Palos Verdes Landfill



Gorman Dump



Legend

 Property Boundary

Figure 2

Los Angeles County Public Works
Four Site Assessment

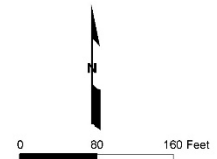
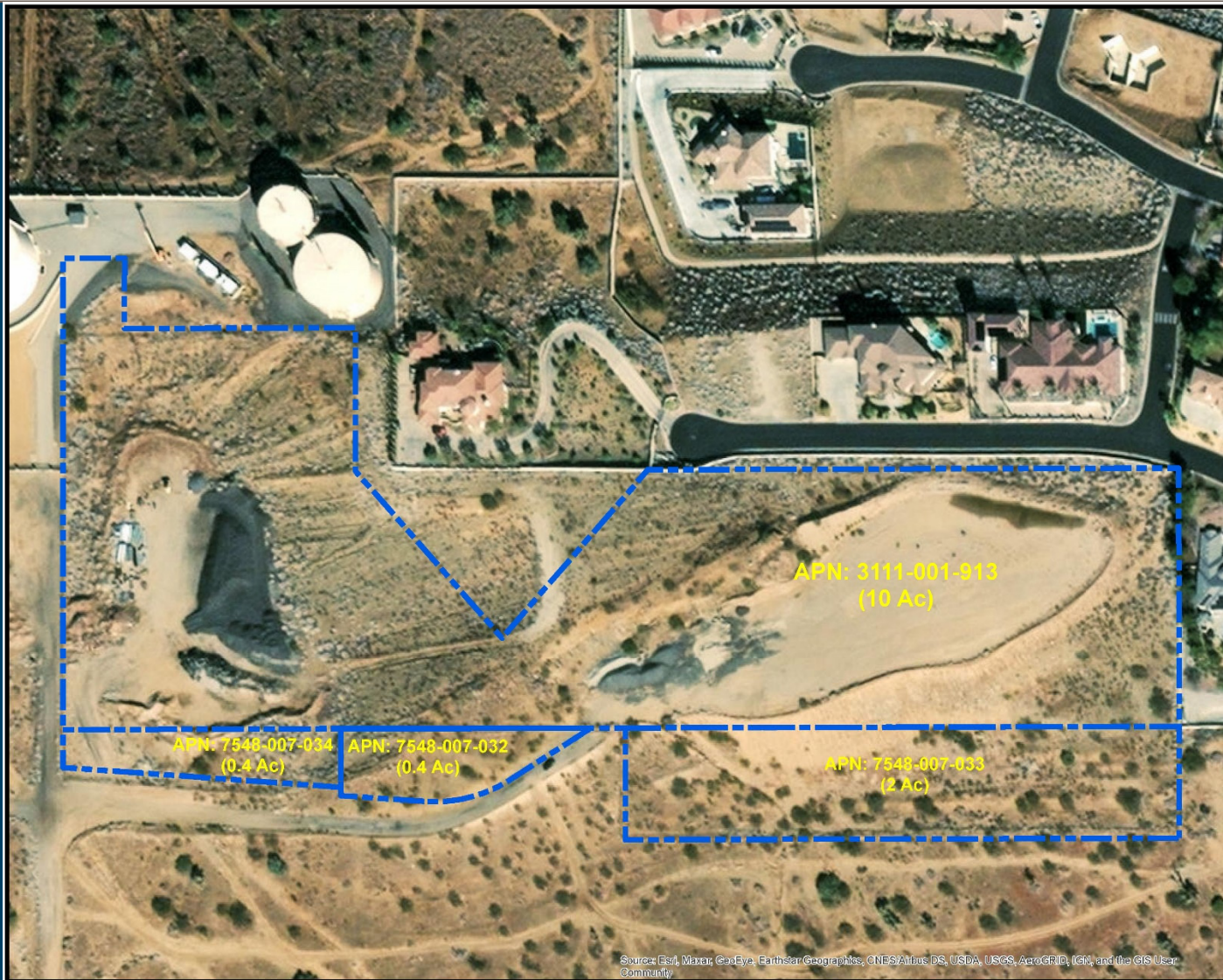
Gorman Dump

February 2022

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Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Quartz Hills Solid Waste Disposal



Legend
 Property Boundary

Figure 5

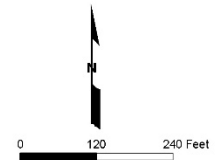
Los Angeles County Public Works
 Four Site Assessment

**Quartz Hill
 Solid Waste Disposal**

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Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

La Verne Dump



Legend


 Property Boundary

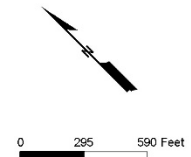
Figure 7

Los Angeles County Public Works
Four Site Assessment

La Verne City Dump

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Palos Verdes Landfill



Legend



-  Property Boundary
-  Limit of Refuse

Figure 9

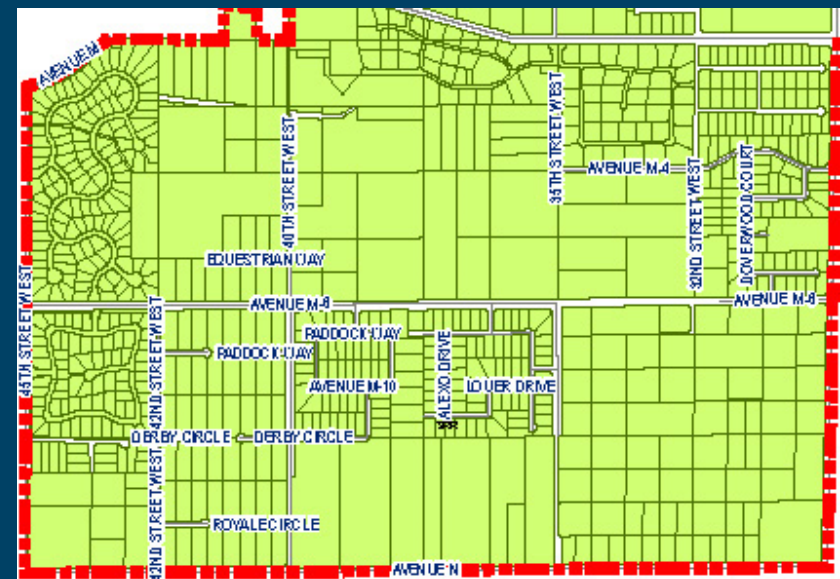
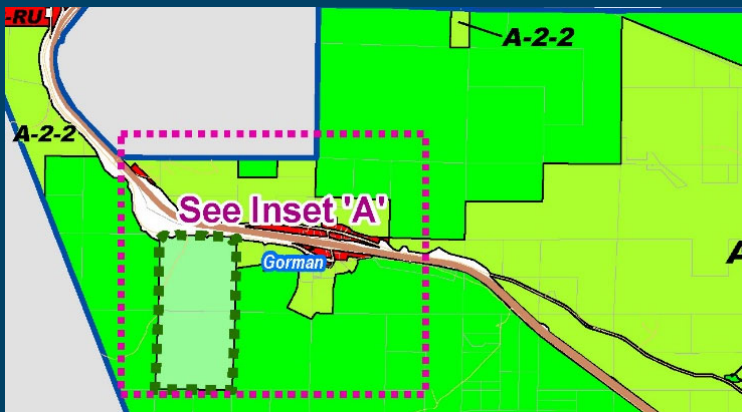
Los Angeles County Public Works
Four Site Assessment

Palos Verde Landfill

February 2022

Initial Findings

- Gorman Dump
 - Jurisdiction: Unincorporated Los Angeles County
 - Zoning: Open Space
 - San Andreas Fault bisect the parcel
 - Residence within 1,000 ft.; Elementary School with 500 ft.
- Quartz Hill Solid Waste Disposal
 - Jurisdiction: City of Lancaster
 - Zoning: Semi-Rural Residential
 - Residence within 50 ft.



Initial Findings

• La Verne Dump

- Jurisdiction: City of La Verne
- Zoning: **Business Park**
 - (Not Permitted: Recycling facilities; Scrap yard, batch plants)
- Residence within 300 ft.
- University baseball field within 50 ft.



• Palos Verdes Landfill

- Jurisdiction: City of Rolling Hills Estates/Unincorporated County of Los Angeles
- Zoning: Agricultural and Open Space Recreation (RHE)/Light Manufacturing (County)
- Residence within 10 ft.
- Church within 150 ft



Next Steps

- Palos Verdes Landfill
 - **Light Manufacturing** would allow for the development of: Chipping/Grinding or mulching; Composting Vermiculture, Composting green waste only; Composting mixed waste or food waste; and In-Vessel Composting
 - Pending identification of native land areas
 - Discuss feasibility with the Cities



Thank you!

