

**DRAFT PROGRAM ENVIRONMENTAL IMPACT REPORT  
for CITY ORDINANCE:**

**CITY-WIDE EXCLUSIVE FRANCHISE SYSTEM for  
MUNICIPAL SOLID WASTE COLLECTION  
and HANDLING**

**SCH #2013021052**

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**NOVEMBER 21, 2013**

This Draft Program Environmental Impact Report (EIR) analyzes the potential for significant environmental impacts associated with the Proposed Project to establish and implement a Citywide Exclusive Franchise System for Solid Resources Collection and Handling for large multifamily residential units, commercial, industrial, and institutional establishments (Commercial Establishments) within the City of Los Angeles (City), California. The City of Los Angeles, Bureau of Sanitation (Sanitation) collects Solid Resources, with its own publicly owned collection trucks, from single-family homes and smaller multifamily complexes. Sanitation will continue to provide these services, which are not part of the Proposed Project.

### **ES.1 PROPOSED PROJECT**

The City proposes to adopt an authorizing ordinance to establish and implement an Exclusive Franchise System on a Citywide basis for collection and handling of Solid Resources (which includes Solid Waste, Commingled Recyclables and Organics) from Commercial Establishments serviced by Solid Waste Haulers. This system would replace the City's current open market collection and handling system for these sectors.

Under the existing system approximate 45 private waste haulers collect Solid Resources from commercial businesses and larger multifamily complexes. These waste haulers currently operate under the following conditions:

- Permitted Haulers must obtain an annual waste hauler permit issued by the City.
- Permitted Haulers can operate throughout the entire City with no geographical restrictions.
- Permitted Haulers compete for individual service accounts.
- Permitted Haulers negotiate rates with each individual Commercial Establishment. The City does not set minimum or maximum rates that can be charged by Permitted Haulers.
- Permitted Haulers pay an AB939 fee of 10 percent of gross receipts.
- There is no limit on the number of accounts a Permitted Hauler can maintain, although no Permitted Hauler currently has more than 40 percent of accounts within the City.
- The City does not require Permitted Haulers to provide or offer recycling services, or meet specific diversion requirements.
- The City does not require Permitted Haulers to operate late model, low-emission, or clean-fuel vehicles.

Under the Proposed Project, Franchised Waste Haulers would operate under the following conditions:

- The City would establish 11 geographical franchise collection zones. These zones would delineate the boundaries in which the Franchised Hauler would be allowed to operate.
- The City would award a Franchise Hauler the exclusive rights to operate in 1 of the 11 franchise collection zones.
- A single Franchised Hauler may be awarded more than one franchise collection zone.

- The City would establish a fair and equitable rate structure for each collection zone. The rate structure may be similar for multiple or all franchise collection zones. This rate structure would detail the rate schedule for Solid Resources collection services that Commercial Establishments will pay.
- The City would establish a formula and caps on how rates charged for Solid Resources collection services to Commercial Establishments can be increased annually.
- Under the Proposed Project, three collection streams are anticipated: Blue Bin Commingled Recyclables, Green Bin Organics, and Black Bin Solid Waste.
- Recycling services would include a blue bin system for the collection of commingled recyclables.
- Existing Organics recycling will be preserved. This includes restaurants participating in Sanitation's existing commercial food waste diversion program, existing green waste diversion from multifamily properties, and other recycling programs such as organics recycling from grocery stores. Haulers would be required, in a phased manner, to offer expanded Organics recycling as the necessary processing capacity is established.
- The City would mandate that every Commercial Establishment is provided a recycling service.
- The City would mandate maximum annual disposal levels and specific diversion requirements for each franchise zone to promote Solid Resources diversion from landfills.
- The City would mandate that all Solid Resources collection vehicles operated by the Franchised Hauler be late model, low-emission, clean-fuel vehicles.
- The City would require employees working under the franchise agreements to be paid, at a minimum, a living wage, in accordance with the City's Living Wage Ordinance.
- The Franchised Hauler would assist the City in complying with existing and new regulations.
- The Franchised Hauler would assist the City in citywide public education.
- The Franchised Hauler will provide consistent reporting on all downstream recycling activities.
- Provide a partnership between the City and the franchised hauler to increase diversion and identify challenges.
- New or expanded material recovery facilities (MRFs) would be needed as recycling increases under the Proposed Project.
- New or expanded facilities that support collection activities, such as transfer stations and truck base yards, would be required.
- The location and processing capacity of the new or expanded MRFs, Organics processing facilities, and the locations of transfer stations and truck base yards are not known at this time.
- The following material types will not be collected as part of the Proposed Project:
  - Construction and Demolition (C&D) Waste, debris generated from construction activities
  - Medical Waste
  - Hazardous Waste

- Radioactive Waste
- Pharmaceutical Waste
- Recyclables that have value to the generator, and are sold or donated
- Green waste removed and recycled from a site as incidental to a landscaping business
- Other specialty waste as designated by Sanitation (e.g., biosolids, fats, oils, and grease)

The expansion of existing, or the construction of new MRFs and Organics processing facilities will be needed under the Proposed Project, as the amount of Solid Resources diverted from landfills is expected to increase over time. Although the City estimates that two new commingled “Blue Bin” MRFs and four new Organics processing facilities will eventually be needed, their locations and capacities are not known at this time. The initial implementation of the Proposed Project is not contingent on these new facilities. While it is expected that new or expanded facilities will be needed to reach the City’s Zero Waste Goals, initial diversion efforts can be implemented under the Proposed Project, prior to additional facilities becoming available. Meeting the City’s other Project Goals and Objectives, such as requiring late model, clean fuel, low emission vehicles, and fair and equitable rates, is not contingent on new or expanded facilities.

As the location of expanded or new facilities are not known they cannot be evaluated under this Draft Program EIR at a site-specific level. Rather, new facilities are evaluated at a conceptual level. In addition, expanded or new facilities will be further addressed in the project-specific environmental documentation prepared by the lead agency for the jurisdiction in which such new or expanded facilities are located. This Draft Program EIR may be used upon approval, as appropriate as a tiering document for future facilities.

### Project Goals

The City’s Franchise Implementation Plan (FIP) Final Report provides goals for Proposed Project. These goals mirror many of the needs expressed by stakeholders, including the waste haulers, environmental organizations, business groups, labor groups, and community groups. These 10 Project Goals encompass the major elements of the program.

1. Meet the City’s Zero Waste Goals by establishing the maximum disposal for each zone, and implementing waste diversion programs that are consistent with Solid Waste Integrated Resources Plan (SWIRP) goals (see Section 2.6.2, Solid Waste Integrated Resources Plan).
2. Meet and exceed California requirements for waste diversion and mandatory commercial and multifamily recycling.
3. Improve health and safety for Solid Resource workers under City contract provisions.
4. Improve efficiency of the City’s Solid Resource system by maximizing the system’s waste collection route efficiencies.
5. Improve the City’s air quality by requiring late model, low emission, clean fuel vehicles for collection fleets and using exclusive zones to optimize routes and minimize vehicle miles traveled.
6. Provide the highest level of customer service through communication and delivery of services.



7. Create a consistent, clearly defined system with fair and equitable rates and contingency plans to ensure reliable service.
8. Create an environment that ensures long-term competition by utilizing a Request for Proposal (RFP) process that yields the best value service template for customers and allowing no more than 49% of the service to any individual hauler.
9. Ensure sufficient staffing to meet Program Goals.
10. Ensure reliable system infrastructure to provide uninterrupted service to customers.

#### **Proposed Project Relationship to Other City Programs**

Concurrently with the Proposed Project, the City is developing the Solid Waste Integrated Resources Plan (SWIRP). The goals of SWIRP are to eliminate use of urban landfills, develop alternative technologies for long-term waste disposal, increase recycling and resource recovery, and convert the Sanitation's entire waste collection fleet (including the fleet of private waste haulers collecting Solid Resources in the City) to clean fuel vehicles, such as liquefied natural gas (LNG) and/or compressed natural gas (CNG). The policies, programs and facilities needs were evaluated for all generator sectors, including single-family residences, multifamily complexes, commercial, industrial and institutional establishments, and construction and demolition sites. SWIRP documents the process for identifying these initiatives and projects the future program and infrastructure needs. The Proposed Project is consistent with the goals and objectives detailed in the SWIRP process.

The SWIRP process consists of three phases including:

Phase I: stakeholder outreach and development of guiding principles and vision;

Phase II: preparation of the Facilities Plan, preparation of a Program EIR, and preparation of a Financial Plan; and,

Phase III: take the actions necessary to implement the SWIRP. Actions could include implementing new Sanitation programs, adding to or modifying current Solid Resources infrastructure (new construction), and introducing new legislation to add or change existing laws related to Solid Resources.

The location and nature of future facilities are contemplated in Phase II of the SWIRP process. An analysis was performed utilizing the assumptions developed through the SWIRP process to analyze the facility needs associated with the Proposed Project. The policies and programs associated with the Proposed Project used to analyze future facility needs was a subset of SWIRP's overall facility analysis.

## **ES.2 BACKGROUND INFORMATION**

The City's right and responsibility to manage Solid Resources collection is derived from the California Public Resources Code (PRC) and the Los Angeles Municipal Code. The City's Bureau of Sanitation (Sanitation) operates one of the largest municipal systems for the collection of Solid Resources in the nation and has prioritized diversion (Department of Public Works, February 2012). In 2006, the City adopted a Zero Waste goal defined as 90 percent diversion by 2025.

Currently, Solid Resources collection, management, and disposal in the City are handled both by Sanitation crews and by various permitted private haulers. Sanitation provides solid waste

collection, recycling, and green waste collection services primarily to single-family properties and multifamily properties of four units or less. Some larger multifamily dwellings were “grandfathered” into public collection and are assumed to continue to receive City services under the proposed Exclusive Franchise System.

In 2002, Sanitation established a private sector permit system for the collection and management of waste and recovered materials from commercial establishments (City of Los Angeles Department of Public Works, 2012). Under the existing open market system, approximately 45 private waste haulers collect approximately 2 million tons annually of Solid Resources from Commercial Establishments (approximately 63,000 accounts). Permitted Haulers are required only to provide annual reporting and pay quarterly fees to the City. There are no additional requirements.

Sanitation was directed by the City Council on November 14, 2012 (Council file 10-1797) to proceed with the development of an implementation plan and perform California Environmental Quality Act (CEQA) environmental review for the Exclusive Commercial and Multifamily Solid Waste Franchise system, including the consideration of 23 motions in the adopted Energy and Environment/Ad Hoc on Waste Reduction and Recycling Joint Committee Report. Sanitation prepared a series of preliminary reports that were discussed at length in additional joint committee meetings. Discussions were conducted on February 20, 2013, March 20, 2013, and April 17, 2013 by the joint Energy & Environment and Ad Hoc on Waste Reduction and Recycling committees. In addition, Sanitation held an open house on April 4, 2013 to accept comments on the proposed franchise zone boundaries. Information was gathered and refined through research, information requests, and public meetings. On April 24, 2013, the City Council approved the Implementation Plan, including the goals and objectives of the proposed franchise system, and directed Sanitation to proceed with the CEQA process as part of the consideration by the City Council of the proposed franchise ordinance.

### **ES.3 ALTERNATIVES TO THE PROPOSED PROJECT**

As a result of the formulation process for the proposed ordinances, the City explored alternatives to the proposed ordinance to assess its ability to meet most of the basic objectives of the proposed ordinance and provide additional beneficial impacts to the environment. Alternatives to the proposed ordinance were recommended by the City Council during the scoping process and were evaluated in relation to the project objectives and the ability of the alternatives to meet most of the basic objectives of the proposed ordinance. This evaluation included determining if an alternative could result in additional beneficial impacts to the environment. In addition to the Proposed Project and the No Project Alternative, three alternatives to the Proposed Project have been carried forward for detailed analysis in this Draft EIR:

- Alternative 1: Non-exclusive system
- Alternative 2: Exclusive system with multiple haulers per wasteshed
- Alternative 3: City collection of all materials

Section 4, Alternatives to the Proposed Project, of this Draft Program EIR describes the alternatives, evaluates potential environmental impacts of each alternative, and analyzes the ability of each alternative to meet the most of the basic objectives of the Proposed Project. This Draft Program EIR assumes a best-case scenario for all of the alternatives for purposes of the analysis, that all alternatives have the ability to achieve diversion goals similar to the Proposed Project.

### No Project Alternative

Under the No Project Alternative, collection of Solid Resources from Commercial Establishments would continue to occur under the existing open market system. The No Project Alternative would not accomplish the Project Goals and Objectives adopted by the City Council on April 24, 2013, as discussed in Section 2.2.

### Alternative 1: Non-Exclusive System

Under Alternative 1: Non-Exclusive System, there would be a Citywide franchise agreement for the collection of Solid Resources, but there would not be franchise zones aside from the City boundaries. An unlimited number of Franchised Haulers could provide collection services, provided they meet franchise agreement terms. Franchised Haulers would set rates for the collection and diversion of Commingled Recyclables and Organics, and there would not likely be uniform rates or a certainty of customer base. As described in Section 2.1, numerous overlapping collection truck routes collect Solid Resources from the same geographical areas under the open market system, and Alternative 1 would replace this system with a non-exclusive franchise system that also allows overlapping collection routes throughout the City. As a consequence, Alternative 1 would not introduce routing efficiencies. It would result in substantially greater vehicle miles traveled (VMTs) than the Proposed Project and would not meet the objective to improve the efficiency of the City's Solid Resources system.

### Alternative 2: Exclusive System with Multiple Franchised Haulers per Wasteshed

Under Alternative 2: Exclusive Franchise System with Multiple Haulers, a franchise hauling system would be established with 11 franchise zones (same as Proposed Project) but would allow up to 5 Franchised Haulers (2 large and 3 small) per zone. Franchised Haulers would set rates for the collection and diversion of Commingled Recyclables and Organics, and uniform rates would be unlikely. Alternative 2 would replace the open market system of overlapping collection routes, which an exclusive franchise system that also allows up to five Franchised Haulers to service each zone. Thus, some overlapping collection routes would still occur within each zone under Alternative 2. As a consequence, this Alternative would not introduce the degree of routing efficiencies since it would result in greater VMT and more vehicle hours traveled (VHT) than the Proposed Project. Alternative 2 would not meet the objective to improve the efficiency of the City's Solid Resources system.

### Alternative 3: City Collection of All Solid Resources

Under Alternative 3: City collection, the City would provide Solid Resources services to Commercial Establishments. Collection would occur based on the existing wastesheds. Private haulers would be excluded from performing collections. Under Alternative 3, the City would establish uniform rates. This alternative would comply with AB 341 requirements and Zero Waste Goals. Under Alternative 3, the City would purchase a new fleet collection of trucks designed for front-end collection and would provide/replace waste and recyclable receptacles/bins at all multifamily and commercial account locations because the existing ones are owned by private haulers.

## **ES.4 ALTERNATIVES CONSIDERED AND WITHDRAWN**

A number of alternatives were considered during preparation of this Draft Program EIR, but were eliminated from further discussion and analysis. These alternatives are described in Section 2.4.4

of this Draft Program EIR, along with the rationale leading to their exclusion from further analysis. Alternatives considered but eliminated from further evaluation include the following:

1. 15 to 20 Franchise Zones
2. 25 Franchise Zones
3. 8 to 10 Franchise Zones
4. Mixed Waste Material Recovery Facility ("dirty" MRF) Processing Instead of Source Separation
5. Alternative: Multi-Streams, Single-Streams, and Mixed-Waste Stream Collection

## ES.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Based upon the analysis conducted in Section 3 and the comparative analysis conducted in Section 4 (summarized Table ES-1), the Proposed Project and Alternative 3 are both deemed to be Environmentally Superior Alternatives in comparison to the No Project Alternative and Alternatives 1 and 2. Section 4.3 provides a detailed explanation of the Environmentally Superior Alternative. The No Project Alternative indicates a higher comparative analysis. However, this is due to avoided impacts because new or expanded facilities would not be needed because the No Project Alternative would not increase diversion from landfills. The No Project Alternative does not meet any of the City adopted Project Goals. As indicated in Section 3.1.1 (Air Quality) the No Project Alternative, Proposed Project, and Alternative 3 would increase VMT and idling hours by 12 to 15 percent, and Alternatives 1 and 2 would increase the VMT and idling hours by up to 76 percent in 2030 from the 2012 baseline condition.

**TABLE ES-1  
COMPARISON OF ENVIRONMENTAL ISSUE AREAS BY ALTERNATIVE**

<b>EIR Section</b>	<b>Environmental Resource Area</b>	<b>Proposed Project</b>	<b>No Project</b>	<b>Alternative 1 - Non-Exclusive</b>	<b>Alternative 2 - Exclusive</b>	<b>Alternative 3 - City Control</b>
3.2.1	Aesthetics	0	1	0	0	0
3.2.2	Agriculture	0	1	0	0	0
3.1.1	Air Quality	0	0	-1	-1	0
3.2.3	Biological Resources	0	1	0	0	0
3.1.2	Cultural Resources	0	1	0	0	0
3.2.4	Geology and Soils	0	1	0	0	0
3.1.3	Greenhouse Gases	0	+1	-2	-2	0
3.2.5	Hazards and Hazardous Materials	0	1	0	0	0
3.2.6	Hydrology and Water Quality	0	1	0	0	0
3.2.7	Land Use and Planning	0	1	0	0	0
3.2.8	Mineral Resources	0	1	0	0	0
3.2.9	Noise	0	1	0	0	0
3.2.10	Population and Housing	0	1	0	0	0
3.2.11	Public Services	0	1	0	0	0

**TABLE ES-1**  
**COMPARISON OF ENVIRONMENTAL ISSUE AREAS BY ALTERNATIVE**

<b>EIR Section</b>	<b>Environmental Resource Area</b>	<b>Proposed Project</b>	<b>No Project</b>	<b>Alternative 1 - Non-Exclusive</b>	<b>Alternative 2 - Exclusive</b>	<b>Alternative 3 - City Control</b>
3.2.12	Recreation	0	1	0	0	0
3.1.4	Transportation	0	2	-1	-1	0
3.2.13	Utilities and Service Systems	0	-2	0	0	0
	<b>TOTAL</b>	<b>0</b>	<b>14</b>	<b>-4</b>	<b>-4</b>	<b>0</b>

Comparison of Impacts to Proposed Project

0 Adverse Impacts similar to Proposed Project

-1 Adverse Impacts slightly greater than Proposed Project (or beneficial impacts less than the Proposed Project).

-2 Adverse Impacts moderately greater than Proposed Project (or beneficial impacts less than the Proposed Project).

+1 Adverse Impacts slightly less than Proposed Project

+2 Adverse Impacts moderately less than Proposed Project

## **ES.6 AREAS OF KNOWN CONTROVERSY**

The Proposed Project involves several areas of known controversy. Several public comments were received during the scoping period for Initial Study for the Proposed Project that can be grouped into seven broad categories:

- Failure to allow market competition and eliminate choice for customers, redundancy for inadequate services
- Public health impacts
- Air quality and odor impacts
- Noise impacts
- Traffic impacts and parking shortages
- Land use impacts, especially related to existing disposal facility expansion
- Monitoring and reporting

## **ES.7 SUMMARY OF IMPACTS FOR THE PROPOSED PROJECT**

This Draft Program EIR evaluated whether implementation of the Proposed Project would cause significant adverse impacts. Table ES-2, *Summary of Environmental Effects*, summarizes the impacts related to each issue area analyzed that might result or can be reasonably expected to result from implementation of the Proposed Project. Impacts related to Air Quality, Cultural Resources, Greenhouse Gases, and Transportation potentially would cause significant impact. Impacts to other resource areas have been determined to be significant but mitigable to less than significant impact.

The significant impacts as determined in this analysis result from the construction and operation of new or expanded facilities necessary to reach the City's Zero Waste goals. The collection activities of the Proposed Project would not result in significant impacts.

**TABLE ES-2  
SUMMARY OF ENVIRONMENTAL EFFECTS  
EXCLUSIVE FRANCHISE SYSTEM**

Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures*	Impact after Mitigation
<b>Aesthetics (AES)</b>				
Proposed Project	<b>AES-1 Scenic Vista:</b> <ul style="list-style-type: none"> <li>• Diversion of materials from Solid Resources collection activities would not result in development that could adversely affect a scenic resource, including scenic vistas, which form the basis for designation as a scenic highway.</li> <li>• Expanded or new processing facilities could adversely affect a scenic view or vista.</li> </ul>	Potentially Significant	VR-1: Future facilities will be sited in accordance with all applicable zoning and planning restrictions. VR-2: Future facilities will include design features that allow the facility to blend in with nearby buildings. VR-3: Existing natural aesthetic features proposed for removal will be replaced. VR-4: Grading of natural and semi-natural open space will be minimized to the maximum extent. VR-5: Design features will be incorporated into the project, which effectively integrates natural aesthetics. VR-6: New utilities will be placed underground, where appropriate. VR-7: Rooftop mechanical equipment, garbage dumpsters, and other outdoor equipment will be screened from public view.	Less Than Significant
	<b>AES-2 Scenic Resources:</b> <ul style="list-style-type: none"> <li>• Diversion of materials from the Solid Resources collection activities would not result in development that could damage a scenic resource, including trees, rock outcroppings, or historic buildings.</li> <li>• Expanded or new processing facilities could damage scenic resources.</li> </ul>	Potentially Significant	VR-1 through VR-7	Less Than Significant

**TABLE ES-2  
SUMMARY OF ENVIRONMENTAL EFFECTS  
EXCLUSIVE FRANCHISE SYSTEM**

Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures*	Impact after Mitigation
	<b>AES-3 Visual Character:</b> <ul style="list-style-type: none"> <li>• Diversion of materials from the Solid Resources collection activities would not result in development that could degrade the existing visual character of the areas along collection routes throughout the City and their surroundings.</li> <li>• Expanded or new processing facilities could degrade the visual character of their surroundings.</li> </ul>	Potentially Significant	VR-1 through VR-7	Less Than Significant
	<b>AES-4 Light and Glare:</b> <ul style="list-style-type: none"> <li>• Diversion of materials from the Solid Resources collection activities would not result in development, including the placement of new lighting.</li> <li>• New lighting associated with expanded or new processing facilities could adversely affect day or nighttime views.</li> </ul>	Potentially Significant	VR-2, VR-6 and VR-7	Less Than Significant

**TABLE ES-2  
SUMMARY OF ENVIRONMENTAL EFFECTS  
EXCLUSIVE FRANCHISE SYSTEM**

Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures*	Impact after Mitigation
<b>Agricultural Resources (AG)</b>				
Proposed Project	<b>AG-1 Convert Farmland to Non-Agricultural Uses:</b> <ul style="list-style-type: none"> <li>Diversion of materials from the Solid Resources collection activities would not result in physical changes that could convert the isolated locations of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within the City of Los Angeles to non-agricultural uses.</li> <li>Expanded or new future processing facilities could convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses.</li> </ul>	Potentially Significant	AG-1: Future facilities will be sited away from Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. If facilities are sited on such farmland, impacts to the farmland will be mitigated at a 1:1 ratio or through payment of fees into an agricultural conservation trust. AG-2: Future facilities will be sited away from lands under a Williamson Act Contract or within a Farmland Security Zone to the maximum extent. AG-3: Future facilities (except for composting facilities) will be sited away from areas that are zoned for agricultural use to the maximum extent possible. AG-4: Future facilities will be sited away from areas zoned for Timberland Production to the maximum extent. If facilities are sited on such farmland, impacts to the farmland will be mitigated at a 1:1 ratio or through payment of fees into a forest conservation trust.	Less Than Significant
	<b>AG-2 Conflict with Agricultural Zoning or a Williamson Act Contract:</b> <ul style="list-style-type: none"> <li>Diversion of materials from the Solid Resources collection activities would not result in physical changes or new development that could convert farmland to non-agricultural uses.</li> <li>Expanded or new future processing facilities could potentially affect agricultural lands subject to Williamson Act contracts.</li> </ul>	Potentially Significant	AG-1 through AG-4	Less Than Significant



**TABLE ES-2  
SUMMARY OF ENVIRONMENTAL EFFECTS  
EXCLUSIVE FRANCHISE SYSTEM**

Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures*	Impact after Mitigation
	<b>AG-3 Conflict with Zoning for Forest Land:</b> <ul style="list-style-type: none"> <li>No forest land or lands used for timber production are located within the City of Los Angeles. Future facilities could adversely affect forest land outside the City.</li> </ul>	Potentially Significant	AG-1 through AG-4	Less Than Significant
	<b>AG-4 Loss of Forest Land:</b> <ul style="list-style-type: none"> <li>No forest land or lands used for timber production are located within the City of Los Angeles. Future facilities could adversely affect forest land outside the City.</li> </ul>	Potentially Significant	AG-1 through AG-4	Less Than Significant
	<b>AG-5 Otherwise affect Agricultural Lands or Timberlands:</b> <ul style="list-style-type: none"> <li>Diversion of materials from the Solid Resources collection activities would not result in physical changes or new development that could convert farmland to non-agricultural uses or forest land to non-forest uses.</li> <li>Expanded or new future processing facilities could affect land currently zoned or used for agriculture or forest uses.</li> </ul>	Potentially Significant	AG-1 through AG-4	Less Than Significant

**TABLE ES-2  
SUMMARY OF ENVIRONMENTAL EFFECTS  
EXCLUSIVE FRANCHISE SYSTEM**

Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures*	Impact after Mitigation
<b>Air Quality (AQ)</b>				
	<b>AQ-1 Conflict with Air Quality Plan:</b> <ul style="list-style-type: none"> <li>Collection activities under the Proposed Project will not cause a conflict with an air quality plan.</li> <li>Facilities under the Proposed Project could result in a conflict with an air quality plan.</li> </ul>	Potentially Significant	<p>AQ-14: During the facility design phase, a review of local AQMD/APCD rules will be conducted to determine site-specific permit requirements for waste processing or handling facilities that may emit or potentially emit VOCs, particulates, CO, NOx or, SOx. Emissions of nonconventional pollutants and HAPs (Title V-Major Sources) will comply with federal and state permitting rules.</p> <p>AQ-15: Future facility applicant(s) will properly maintain ROG emission control devices within the gasoline/fueling dispensing station.</p> <p>AQ-16: Future facility applicant(s) will ensure combustion operational emissions are minimized.</p> <p>AQ-17: All diesel truck operators will strictly abide by the applicable state law requirements for idling. Idling of the primary engine will be limited to 5 minutes.</p>	Less Than Significant With Mitigation

**TABLE ES-2  
SUMMARY OF ENVIRONMENTAL EFFECTS  
EXCLUSIVE FRANCHISE SYSTEM**

Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures*	Impact after Mitigation
			<p>AQ-18: Energy-efficient design will be provided for buildings, including automated control systems for heating, air conditioning, and energy efficiency beyond California Code of Regulations (CCR) Title 24 (California Building Standards Code) requirements, lighting controls and energy-efficient lighting in buildings, increased insulation beyond Title 24 requirements, and light-colored roof materials to reflect heat.</p> <p>AQ-19: Landscaping will be used to maximize building protection from energy-consuming environmental conditions and to shade paved areas. Such landscaping could include planting of shade trees to shade 50 percent of paved areas within 15 years and planting deciduous trees on the south- and west-facing sides of buildings.</p> <p>AQ-20: Implement measures to reduce the amount of vehicle traffic to and from future facilities. This could include provisions such as encouraging employees to rideshare or carpool to the project site, or incentives for employees to use alternative transportation.</p>	

**TABLE ES-2  
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EXCLUSIVE FRANCHISE SYSTEM**

Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures*	Impact after Mitigation
	<b>AQ-2 Violate Air Quality Standard:</b> <ul style="list-style-type: none"> <li>Emission reductions would occur with implementation of the Proposed Project.</li> </ul>	Potentially Significant	<p>For facility operations: AQ-14 through AQ-20.</p> <p>For facility construction:</p> <p>AQ-1: Future facilities within the SCAQMD will prepare and implement a fugitive dust control program pursuant to the provisions of SCAQMD Rules 402 and 403 prior to any ground disturbance. For future facilities outside of the SCAQMD, adherence to any applicable fugitive dust control programs will be required.</p> <p>AQ-2: Minimize combustion emissions during construction activities.</p> <p>AQ-3: Low VOC paintings and coatings will be used on future facilities.</p> <p>AQ-4: Excavation, grading, and other construction activity will be limited to one activity or phase at a time.</p> <p>AQ-5: Hours of operation of heavy-duty equipment will be limited to a maximum of 8 hours per day, 5 days per week.</p>	Potentially Significant

**TABLE ES-2  
SUMMARY OF ENVIRONMENTAL EFFECTS  
EXCLUSIVE FRANCHISE SYSTEM**

Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures*	Impact after Mitigation
			<p>AQ-6: Fossil-fueled equipment will be replaced with electrically driven equivalents (provided they are not run via a portable generator set) or clean fuel options, to the maximum extent practicable.</p> <p>AQ-7: All diesel engines will be shut off when not in use to reduce emissions from idling.</p> <p>AQ-8: Curtail construction during periods of high ambient pollutant concentrations as determined by local air districts. Activities may include ceasing construction activity during the peak hour of vehicular traffic on adjacent roadways.</p> <p>AQ-9: Implement activity management (e.g., rescheduling activities to reduce short-term impacts) to minimize concurrent operation of construction equipment and concurrent construction of project phases.</p>	

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EXCLUSIVE FRANCHISE SYSTEM**

Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures*	Impact after Mitigation
			<p>AQ-10: During smog season (May through October), lengthen the construction period to minimize the vehicles and equipment operating at the same time.</p> <p>AQ-11: Minimize the obstruction of traffic on adjacent roadways.</p> <p>AQ-12: Power construction equipment with diesel engines fueled by alternative diesel fuel blends or ultra-low sulfur diesel (ULSD). Only fuels that have been certified by the ARB should be used. The ARB has verified specific alternative diesel fuel blends for NOx and PM emissions reduction. The applicant also should use ARB-certified alternative fueled (e.g., compressed natural gas, liquid natural gas [LNG], liquid propane gas, electric motors, or other ARB-certified off-road technologies) engines in construction equipment where practicable.</p> <p>AQ-13: Use construction equipment that meets the current off-road engine emission standard (as certified by the ARB) or that is re-powered with an engine that meets this standard. Tier I, Tier II, and Tier III engines have significantly less NOx and PM emissions compared to uncontrolled engines.</p>	

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Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures*	Impact after Mitigation
	<b>AQ-3 Cumulative Increase in Criteria Pollutant:</b> <ul style="list-style-type: none"> <li>Overall emissions are estimated to drop as a result of the Proposed Project.</li> </ul>	Potentially Significant	AQ-1 through AQ-21	Potentially Significant
	<b>AQ-4 Sensitive Receptor Exposure:</b> <ul style="list-style-type: none"> <li>Sensitive receptors will not be exposed to air pollutants.</li> </ul>	Potentially Significant	AQ-1 through AQ-20	Potentially Significant
	<b>AQ-5 Objectionable Odors:</b> <ul style="list-style-type: none"> <li>Sensitive receptors will not be exposed to objectionable odors from the Proposed Project.</li> </ul>	Potentially Significant	AQ-21: An odor analysis will be prepared as part of future project-specific air quality analysis. Should the odor analysis identify the potential for impacts, the facility will incorporate odor-reducing design features. Such features could include, but are not limited to: <ul style="list-style-type: none"> <li>Provision of exhaust fans to provide multiple air exchanges every hour'</li> <li>Treatment of air leaving the building by an odor neutralizing misting system' and</li> <li>Maintaining negative pressure at the building entrances to minimize the amount of untreated air leaving the building.</li> </ul>	Less Than Significant

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Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures*	Impact after Mitigation
<b>Biological Resources (BIO)</b>				
Proposed Project	<b>BIO-1 Threatened or Sensitive Species:</b> <ul style="list-style-type: none"> <li>Diversion of materials from the Solid Resources collection activities would not result in development or physical changes that could damage or otherwise modify habitat that supports candidate, sensitive, or special status species.</li> <li>Expanded or new processing facilities sited on undisturbed lands could result in adverse impacts directly or to habitat that supports candidate, sensitive or special status species.</li> </ul>	Potentially Significant	BIO-1: A qualified Biologist will conduct a habitat assessment to evaluate the site's potential to support special status plant and wildlife species and jurisdictional wetlands/waters. BIO-2: Prior to commencement of any earth-moving activities, the Lead Agency will conduct the appropriate focused survey(s) to determine the presence or absence of special status species (i.e., plant and/or wildlife surveys) that could be significantly impacted by the Proposed Project. If special status species are identified on or adjacent to the facility site, then appropriate avoidance and/or mitigation measures will be implemented, as approved by the resource agencies with jurisdiction over that species.	Less Than Significant
	<b>BIO-2 Riparian Habitat:</b> <ul style="list-style-type: none"> <li>Diversion of materials from the Solid Resources collection activities would not result in development, and would not occur in a manner that could adversely affect riparian habitat or other sensitive natural communities.</li> <li>Expanded or new processing facilities could adversely affect riparian habitat or other sensitive natural communities.</li> </ul>	Potentially Significant	BIO-1 and BIO-2	Less Than Significant



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	<b>BIO-3 Wetlands:</b> <ul style="list-style-type: none"> <li>• Diversion of materials from the Solid Resources collection activities would not result in development, and would not occur in a manner that could adversely affect wetlands.</li> <li>• Expanded or new processing facilities could adversely affect wetlands.</li> </ul>	Potentially Significant	BIO-1 and BIO-2	Less Than Significant
	<b>BIO-4 Wildlife Migration:</b> <ul style="list-style-type: none"> <li>• Diversion of materials from the Solid Resources collection activities would not result in development, and would not occur in a manner that could physically impede the movement of wildlife species or the migration of wildlife through wildlife corridors.</li> <li>• Expanded or new processing facilities could interfere with the movement of any wildlife species or with movement along wildlife corridors or otherwise impede the use of native wildlife nursery sites.</li> </ul>	Potentially Significant	BIO-1, BIO-2, and:  BIO-3: All project-related ground-disturbing activities will comply with all applicable federal, state, regional, and local biological resource protection regulations in order to avoid and/or minimize potential impacts to biological resources including, but not limited to, use of BMPs during construction and in the design of project facilities; protection of native trees as required by local tree ordinances; and pre-construction nesting bird surveys and nesting raptor surveys (if appropriate based on season and habitat present) in compliance with the Migratory Bird Treaty Act and/or California Department of Fish and Wildlife regulations.	Less Than Significant

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	<b>BIO-5 Local Policies or Ordinances Protecting Resources:</b> <ul style="list-style-type: none"> <li>• Diversion of materials from the Solid Resources collection activities would not result in development that could affect protected trees, and would occur in already developed areas devoid of protected trees.</li> <li>• Expanded or new processing facilities could potentially damage or require removal of protected trees.</li> </ul>	Potentially Significant	BIO-3	Less Than Significant
	<b>BIO-6 Conservation Plans:</b> <ul style="list-style-type: none"> <li>• The diversion of materials from the Solid Resources collection activities would not result in development and would not occur in areas under a habitat management plan or a natural community conservation plan.</li> <li>• Expanded or new processing facilities are not expected to conflict with a habitat management plan or natural community conservation plans.</li> </ul>	Less Than Significant	None Required	Less Than Significant

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Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures*	Impact after Mitigation
<b>Cultural Resources (CUL)</b>				
Proposed Project	<b>CUL-1 Historical Resources:</b> <ul style="list-style-type: none"> <li>• Diversion of materials from the Solid Resources collection activities would not result in physical changes or new development that could damage or otherwise adversely affect a historic resource.</li> <li>• Expanded or new processing facilities could potentially damage, demolish, or otherwise adversely affect historic resources.</li> </ul>	Potentially Significant	CR-1: Prior to development, the project applicant will employ a cultural resource professional who meets the Secretary of the Interior's Professional Qualifications Standards for Architectural History to determine if the project would cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the CEQA Guidelines. The cultural resource professional in conjunction with the Lead Agency will determine if any significant historical resources would be adversely affected by the proposed development.	Potentially Significant

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	<p><b>CUL-2 Archaeological Resources:</b></p> <ul style="list-style-type: none"> <li>• Diversion of materials from the Solid Resources collection activities would not result in physical changes or new development that could damage or otherwise adversely affect an archaeological resource.</li> <li>• Construction of new or expanded processing facilities could potentially encounter or damage archaeological resources.</li> </ul>	Potentially Significant	<p>CR-2: Future developments that could result in earth-disturbing activities within native sediments with the potential for producing archaeological materials, or projects located near known cultural resources, will implement the following:</p> <ol style="list-style-type: none"> <li>1. Prior to commencement of any earth-disturbing activities, a Phase I study will be undertaken to evaluate the current conditions of a project site.</li> <li>2. If archaeological sites or resources are discovered as a result of the Phase I study, a Phase II study of the significance of any prehistoric material that is present will be undertaken.</li> <li>3. If the Phase II study indicates that a significant site is present, the qualified Archaeologist will determine appropriate actions, in cooperation with the Lead Agency, for preservation and/or data recovery of the resource.</li> <li>4. Monitoring of ground-disturbing activities will be undertaken by a qualified Archaeologist as a final mitigation measure in areas that contain or are sensitive for the presence of cultural resources.</li> </ol>	Less Than Significant

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	<p><b>CUL-3 Paleontological Resources:</b></p> <ul style="list-style-type: none"> <li>• Diversion of materials from the Solid Resources collection activities would not result in physical changes or new development that could damage or otherwise adversely affect a unique geologic resources or paleontological resource.</li> <li>• Construction of new or expanded processing facilities could encounter or damage paleontological resources.</li> </ul>	Potentially Significant	<p>CR-3: For future development that could result in disturbances to sites that might contain paleontological resources, implement the following:</p> <ol style="list-style-type: none"> <li>1. Prior to any earth-disturbing activities, conduct an archival records search at an appropriate institution to determine the depositional environment within the project area and to evaluate the likelihood of fossils being present.</li> <li>2. Conduct a field survey prior to ground-disturbing activities in areas of potential but unknown sensitivity to evaluate the site for the presence of significant fossil resources and to establish the need for paleontological salvage and/or monitoring.</li> <li>3. If significant fossils are discovered, a qualified Paleontologist and Lead Agency will determine appropriate actions for the preservation and/or salvage of the resource.</li> <li>4. Monitoring activities will be accomplished by a qualified Paleontologist.</li> <li>5. A qualified Paleontologist will prepare collected specimens to the point of identification and curate the specimens.</li> <li>6. Document actions in a technical report prepared by a qualified Paleontologist.</li> </ol>	Less Than Significant

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	<p><b>CUL-4 Human Remains:</b></p> <ul style="list-style-type: none"> <li>• Diversion of materials from the Solid Resources collection activities would not result in physical changes or new development that could encounter interred human remains.</li> <li>• Construction of the new or expanded processing facilities could encounter interred human remains.</li> </ul>	Potentially Significant	<p>CR-4: If human remains are encountered, no further excavation or disturbance of the site or any nearby will occur until the County Coroner has determined the appropriate treatment and disposition of the human remains consistent with Section 7050.5 of the California Health and Safety Code. If remains are determined by the Coroner to be of Native American origin, the Coroner must notify the NAHC within 24 hours, which in turn must identify the person or persons it believes to be the most likely descended from the deceased Native American, in compliance with Section 5097.98 of the Public Resources Code. The descendants will complete their inspection within 48 hours of being granted access to the site. The designated Native American representative would then determine, in consultation with the property owner, the disposition of the human remains.</p>	Less Than Significant

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Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures*	Impact after Mitigation
<b>Geology and Soils (GEO)</b>				
Proposed Project	<b>GEO-1 Earthquake Faults:</b> <ul style="list-style-type: none"> <li>• Diversion of materials from the Solid Resources collection activities would not result in physical changes or new development that could expose people to injury or risks associated with earthquake faults.</li> <li>• Construction of the new or expanded processing or other facilities could result in potential impacts related to proximity to active mapped faults.</li> </ul>	Potentially Significant	GS-1: Future new or expanded facilities will not be located within a mapped Alquist-Priolo Earthquake Fault Zone. Placement of structures for human occupancy will be restricted from areas designated as an Alquist-Priolo Earthquake Fault Zone.	Less Than Significant
	<b>GEO-2 Seismic Ground Shaking:</b> <ul style="list-style-type: none"> <li>• Diversion of materials from the Solid Resources collection activities would not result in physical changes or new development that could expose people to injury or risks associated with strong seismic ground shaking.</li> <li>• New or expanded processing or other facilities could result in potential impacts related to seismic ground shaking.</li> </ul>	Potentially Significant	GS-2: During facilities planning, site-specific geotechnical reports will be prepared. Mitigation measures and design recommendations identified in the site-specific reports will be implemented.	Less Than Significant
	<b>GEO-3 Seismic-Related Ground Failure:</b> <ul style="list-style-type: none"> <li>• Diversion of materials from the Solid Resources collection activities would not result in physical changes or new development that could expose people to injury or risks associated with seismic-related ground failure, including liquefaction.</li> <li>• New or expanded processing or other facilities could result in potential impacts related to seismic-related ground failure (including liquefaction).</li> </ul>	Potentially Significant	GS-2 and; GS-3: Future new or expanded facilities will not be located within an area known for or designated with a high liquefaction potential. Placement of structures for human occupancy will be restricted from areas known for ground failure or liquefaction.	Less Than Significant

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	<b>GEO-4 Landslides:</b> <ul style="list-style-type: none"> <li>• Diversion of materials from the Solid Resources collection activities would not result in physical changes or new development that could expose people to injury or risks associated with landslides, or slope failures.</li> <li>• New or expanded processing or other facilities could result in potential impacts related to geologic hazards, including landslides.</li> </ul>	Potentially Significant	GS-4: Future new or expanded facilities will not be located in areas mapped as a landslide or mudslide hazard area in local planning documents (e.g., General Plans).	Less Than Significant
	<b>GEO-5 Loss of Topsoil:</b> <ul style="list-style-type: none"> <li>• Diversion of materials from the Solid Resources collection activities would not result in physical changes or new development that could cause substantial soil erosion or the loss of top soil.</li> <li>• New or expanded processing or other facilities are not expected to result in significant impacts related to soil erosion of top soil.</li> </ul>	Less Than Significant	None Required	Less Than Significant
	<b>GEO-6 Unstable Geologic Unit:</b> <ul style="list-style-type: none"> <li>• Diversion of materials from the Solid Resources collection activities would not result in physical changes or new development on unstable geologic units or unstable soil that could result in additional geologic impacts such as landslides, lateral spreading, subsidence, or collapse.</li> <li>• New or expanded processing or other facilities could result in potential impacts related to unstable geologic conditions.</li> </ul>	Potentially Significant	GS-2	Less Than Significant
	<b>GEO-7 Expansive Soil:</b> <ul style="list-style-type: none"> <li>• Diversion of materials from the Solid Resources collection activities would not result in physical changes or new development that could be affected by expansive soil conditions.</li> <li>• New or expanded processing or other facilities could result in potential impacts related to expansive soils.</li> </ul>	Potentially Significant	GS-2	Less Than Significant



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	<b>GEO-8 Alternative Wastewater Disposal Systems:</b> <ul style="list-style-type: none"> <li>• Diversion of materials from the Solid Resources collection activities would not result in physical changes or new development, including septic systems or alternative wastewater disposal systems.</li> <li>• New or expanded processing or other facilities are not expected to result in significant impacts related to alternative wastewater disposal systems, including septic systems.</li> </ul>	Less Than Significant	None Required	Less Than Significant
<b>Greenhouse Gases (GHG)</b>				
	<b>GHG-1 Greenhouse Gas Emissions:</b> <ul style="list-style-type: none"> <li>• The Proposed Project would not have a substantial adverse effect by generating greenhouse gas emissions that could have a significant impact on the environment.</li> </ul>	Less Than Significant	None Required	Less Than Significant
	<b>GHG-2 Conflict With Plan or Policy:</b> <ul style="list-style-type: none"> <li>• The Proposed Project would not conflict with or obstruct the implementation of the applicable plan, policy, or regulation.</li> </ul>	Less Than Significant	None Required	Less Than Significant
<b>Hazards and Hazardous Materials (HAZ)</b>				
Proposed Project	<b>HAZ-1 Transport, Use, or Disposal of Hazardous Materials:</b> <ul style="list-style-type: none"> <li>• Hazardous materials such as lubricants and solvents to maintain fleets would be used at fleet yards in compliance with applicable laws and regulations governing their use, storage, transport, and disposal.</li> <li>• Compliance with applicable laws and regulations regarding storage of hazardous materials at new or expanded processing or other facilities would minimize the potential for accidental releases at new or expanded processing facilities.</li> </ul>	Less Than Significant	None Required	Less Than Significant

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	<b>HAZ-2 Release of Hazardous Materials:</b> <ul style="list-style-type: none"> <li>Diversion of materials from the Solid Resources collection activities would not involve the collection or transport of hazardous materials.</li> </ul> <p>Compliance with applicable laws and regulations regarding storage of hazardous materials would minimize the potential for accidental releases at new or expanded processing or other facilities.</p>	Less Than Significant	None Required	Less Than Significant
	<b>HAZ-3 Hazardous Emissions Near Schools:</b> <ul style="list-style-type: none"> <li>Diversion of materials from the Solid Resources collection activities would not involve the use or processing of materials that could emit hazardous materials or emissions during collection activities.</li> <li>Processing of recyclable or Organics at new or expanded processing facilities is not expected to emit hazardous emissions, including hazardous emissions within one-quarter mile of a public school.</li> </ul>	Less Than Significant	None Required	Less Than Significant
	<b>HAZ-4 Hazardous Materials Sites:</b> <ul style="list-style-type: none"> <li>Collection activities would not create a significant hazard to the public or the environment by disturbing hazardous materials sites.</li> <li>Future materials processing facility capacity could be located at a hazardous materials site that could create a significant hazard to the public or the environment.</li> </ul>	Potentially Significant	HAZ-1: Prior to siting waste facilities, a Phase I Environmental Site Assessment (ESA) will be conducted in conformance with industry-accepted practices, American Society of Testing Materials (ASTM) Designation E1527-05, and the EPA All Appropriate Inquiry Rule.	Less Than Significant

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	<b>HAZ-5 Safety Hazards - Airport Land Use Plan:</b> <ul style="list-style-type: none"> <li>Collection activities could occur from establishments within 2 miles of a public airport, but would occur at ground level and would not pose a threat to flight safety or result in hazards to people working or residing in the vicinity of an airport.</li> <li>New processing facility capacity and other facilities could result in hazards to people working or residing in the vicinity of an airport, depending on site locations.</li> </ul>	Potentially Significant	HAZ-2: If future facilities are sited within an area governed by an airport land use plan or within 2 miles of a public or private airport, analysis will be undertaken to assess if the proposed facility would result in any impacts to airport operations or if it would subject people to a significant risk due to airport operations. If potential impacts are identified, a different site will be selected or mitigation measures will be implemented during the project-level environmental analysis to reduce the potential impact to airport operations to below a level of significance. Such mitigation measures could include maintaining certain percentages of low-occupancy areas (e.g., undeveloped areas, parking areas), building heights and building lights.	Less Than Significant
	<b>HAZ-6 Safety Hazards – Private Airstrip:</b> <ul style="list-style-type: none"> <li>Collection activities could occur from establishments within the vicinity of a private airport, but would occur at ground level and would not pose a threat to flight safety or result in hazards to people working or residing in the their vicinity.</li> <li>New processing facility capacity and other facilities could result in hazards to people working or residing in the vicinity of a private or public facility airport.</li> </ul>	Potentially Significant	HAZ-2	Less Than Significant

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	<p><b>HAZ-7 Emergency Response or Evacuation:</b></p> <ul style="list-style-type: none"> <li>Collection vehicles would use existing transportation infrastructure, would not block streets, highways, or freeways, and are not expected to impair implementation or physically interfere with emergency response or evacuation plans or activities.</li> <li>New materials processing and other facilities capacity would not be located in a manner that would block or impair transportation on streets and highways that could be used for emergency response or evacuation activities.</li> <li>Hazardous materials inventory documentation and business emergency plans may need to be updated for emergency response purposes.</li> </ul>	Potentially Significant	<p>HAZ-3: Upon approval of future facilities, an applicable community emergency plan will be developed, reviewed, and updated, as needed, to account for new waste facilities and updated routes for the transportation of hazardous wastes.</p> <p>HAZ-4: Future facilities will provide barriers, as needed, to contain hazardous materials.</p> <p>HAZ-5: At future facilities, hazardous substances will be stored away from site boundaries.</p> <p>HAZ-6: A Health and Safety Plan will be developed in accordance with local, state, and federal occupational health regulations.</p> <p>HAZ-7: Spill containment measures will be developed and implemented onsite for any new facility.</p>	Less Than Significant
	<p><b>HAZ-8 Wildland Fires:</b></p> <ul style="list-style-type: none"> <li>Diversion of materials from the Solid Resources collection activities would occur in the largely urbanized areas of the City and are not expected to expose people or structures to a significant risk of loss, injury, or death involving wildland fires.</li> <li>New materials processing and other facilities capacity could expose people or structures to a significant risk of loss, injury, or death involving wildland fires.</li> </ul>	Potentially Significant	HAZ-8: A Fire Safety Plan will be developed for use during construction and operation of any new facility.	Less Than Significant

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<b>Hydrology and Water Quality (WQ)</b>				
Proposed Project	<b>WQ-1 Water Quality Standards:</b> <ul style="list-style-type: none"> <li>• Diversion of materials from the Solid Resources collection activities would not result in discharges within the watersheds that could violate water quality standards or waste discharge requirements.</li> <li>• Potential discharges from future new or expanded handling facilities could violate water quality standards or waste discharge requirements.</li> </ul>	Potentially Significant	<p>WQ-1: During facilities planning, a project-specific water quality study will be prepared to address impacts on water quality and identify BMPs or measures to mitigate water quality impacts and ensure that water quality standards are not violated.</p> <p>WQ-2: A construction Stormwater Pollution Prevention Plan (SWPPP) will be prepared, in accordance with the State General Construction Permit. Comply with the General Industrial Activities Stormwater Permit, which requires development and implementation of operational SWPPPs to control discharges from industrial sites.</p> <p>WQ-3: BMPs into site design that address source control, and treatment. Low Impact Development design features required by jurisdictions shall be implemented to address water quality concerns through the use of multiple sustainable BMP alternatives at the local level.</p>	Less Than Significant

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	<b>WQ-2 Groundwater:</b> <ul style="list-style-type: none"> <li>Diversion of materials from the Solid Resources collection activities would not result in the extraction of groundwater or the placement of impervious surfaces upon established groundwater recharge areas.</li> <li>Local permitting processes would prevent new facilities from encroaching on designated groundwater recharge areas, and water needed for operation of new processing capacity would not likely be obtained through local groundwater extraction.</li> </ul>	Less Than Significant	None Required	Less Than Significant
	<b>WQ-3 Erosion:</b> <ul style="list-style-type: none"> <li>Diversion of materials from the Solid Resources collection activities would not result in alterations to existing drainage patterns, would not affect streams or rivers, and would not cause erosion or siltation.</li> <li>Expanded or new materials handling or other facilities could potentially alter existing drainage patterns or alter the course of a stream or river in a manner that could cause erosion.</li> </ul>	Potentially Significant	WQ-4: Future facilities will include the construction of new or improved stormwater management facilities to reduce or retard the amount of peak runoff from the facility sites. WQ-5 Future facilities will reduce impervious surfaces and materials and maximize landscaped and natural areas.	Less Than Significant
	<b>WQ-4 Flooding:</b> <ul style="list-style-type: none"> <li>Diversion of materials from the Solid Resources collection activities would not result in alternations to existing drainage patterns, or affect streams or rivers that could in turn result in flooding.</li> <li>Expanded or new materials handling or other facilities could alter existing drainage patterns or the course of a stream or river in a manner that could cause flooding.</li> </ul>	Potentially Significant	WQ-4 and WQ-5	Less Than Significant

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	<b>WQ-5 Storm Drain Capacity / Runoff Quality:</b> <ul style="list-style-type: none"> <li>• Diversion of materials from the Solid Resources collection activities would not create or contribute to runoff within the City, and would therefore not adversely affect stormwater conveyance capacity or runoff quality.</li> <li>• Expanded or new materials handling or other facilities could contribute to runoff flows that exceed the capacity of existing storm drains.</li> </ul>	Potentially Significant	WQ-4, WQ-5, and WQ-6: A project-specific drainage study that evaluates existing drainage facility capacity, project flows and develop alternatives will be prepared to safely convey site runoff under design storm conditions without overburdening the drainage system.	Less Than Significant
	<b>WQ-6 Water Quality Degradation:</b> <ul style="list-style-type: none"> <li>• The Proposed Project would not otherwise substantially degrade water quality</li> </ul>	No Impact	None Required	No Impact
	<b>WQ-7 Housing in Flood Hazard Areas:</b> <ul style="list-style-type: none"> <li>• The Proposed Project would not result in the placement of any housing within a 100-year flood hazard area.</li> </ul>	Less Than Significant	None Required	Less Than Significant

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	<b>WQ-8 Structures that Could Impede Flood Flows:</b> <ul style="list-style-type: none"> <li>Collection activities would not result in the development of any new structures.</li> <li>Expanded or new materials handling or other facilities could impede or redirect flood flows.</li> </ul>	Potentially Significant	<p>WQ-7: For future facilities proposed in a floodplain, a floodplain study will be prepared to address FEMA or jurisdictional floodplain management requirements. The study will identify feasible measures to meet FEMA water surface elevation requirements. These measures will be implemented as part of the facility design and/or construction.</p> <p>WQ-8: Future facilities will be designed so that structures and other important facilities that would be adversely affected by flooding are no longer located within flood hazard areas.</p> <p>WQ-9: Future facilities will raise the building pad or ground floor of proposed structures to an elevation above flood prone areas.</p>	Less Than Significant
	<b>WQ-9 Expose People to Flood Hazards:</b> <ul style="list-style-type: none"> <li>Collection activities would not result in the development of any new structures or housing.</li> <li>Development of handling/processing or other facilities would not expose people or structures to significant flood hazard risks.</li> </ul>	Less Than Significant	None Required	Less Than Significant
	<b>WQ-10 Inundation by Seiche, Tsunami, or Mudflow:</b> <ul style="list-style-type: none"> <li>Collection activities would not result in development subject to inundation by seiches, tsunamis, or mudflows.</li> <li>Development of handling/processing or other facilities would not result in significant impacts related to a seiche, tsunami, or mudflow.</li> </ul>	Less Than Significant	None Required	Less Than Significant



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Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures*	Impact after Mitigation
<b>Land Use and Planning (LU)</b>				
Proposed Project	<b>LU-1 Physically Divide An Established Community:</b> <ul style="list-style-type: none"> <li>• Diversion of materials from the Solid Resources collection activities would not result in development that could physically divide an established community.</li> <li>• Expanded or new processing or other facilities would be located on lands zoned for industrial, commercial-manufacturing, or agricultural uses and would not physically divide an established community.</li> </ul>	Less Than Significant	None Required	Less Than Significant
	<b>LU-2 Conflicts with Land Use Plans:</b> <ul style="list-style-type: none"> <li>• Diversion of materials from the Solid Resources collection activities would not result in development that could conflict with the General Plan.</li> <li>• Siting of the expanded or new processing or other facilities could result in conflicts with the applicable General Plan or the zoning designation of the future sites or conflict with nearby uses.</li> </ul>	Potentially Significant	LU-1: Future facilities will be sited in locations that support the appropriate General Plan and Zoning designations for the use being proposed. LU-2: Future facilities will be fully enclosed to the maximum extent practicable to minimize nuisance issues. If a nuisance is found to occur as result of facility operations, certain restrictions on the operational characteristics of the facility will be implemented to reduce or eliminate impacts, such as limiting hours of operation or placing restrictions on specific types of uses or activities proposed for the facility. LU-3: Project design, configuration, visual screening, setbacks, building heights, etc., will be compatible with surrounding uses.	Less Than Significant

**TABLE ES-2  
SUMMARY OF ENVIRONMENTAL EFFECTS  
EXCLUSIVE FRANCHISE SYSTEM**

Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures*	Impact after Mitigation
	<b>LU-3 Conflicts with Conservation Plan:</b> <ul style="list-style-type: none"> <li>• Diversion of materials from the Solid Resources collection activities would not result in development and would not occur in areas under a habitat management plan or natural community conservation plan.</li> <li>• Siting of the expanded or new processing or other facilities could potentially conflict with a habitat management plan or natural community conservation plan.</li> </ul>	Potentially Significant	LU-1 through LU-3	Less Than Significant
<b>Mineral Resource (MR)</b>				
	<b>MR-1 Loss of Mineral Resource Availability of Statewide Importance:</b> <ul style="list-style-type: none"> <li>• Diversion of materials from the Solid Resources collection activities would not result in development that could result in loss of availability of mineral resources.</li> <li>• Siting of expanded or new materials processing or other facilities could adversely affect availability of mineral resources.</li> </ul>	Potentially Significant	<p>MR-1: Future facilities will be sited so as to avoid areas mapped as MRZ-2, MRZ-3, and MRZ-3a by the California Mineral Land Classification System.</p> <p>MR-2: Future facilities will be sited so as to avoid active oil, gas or geothermal operations.</p> <p>MR-3: Future facilities will be sited so as to avoid area mapped as locally important mineral resources on general plans, specific plans, or other land use plans.</p> <p>MR-4: Easements will be established, when necessary, to preserve possible future use of mineral resources.</p>	Less Than Significant

**TABLE ES-2  
SUMMARY OF ENVIRONMENTAL EFFECTS  
EXCLUSIVE FRANCHISE SYSTEM**

Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures*	Impact after Mitigation
	<p><b>MR-2 Loss of Mineral Resource Availability of Local Importance:</b></p> <ul style="list-style-type: none"><li>• Diversion of materials from the Solid Resources collection activities would not result in development that could result in loss of availability of mineral resources.</li><li>• Siting of expanded or new materials processing or other facilities could adversely affect availability of locally important mineral resources</li></ul>	Potentially Significant	MR-1 through MR-2	Less Than Significant

**TABLE ES-2  
SUMMARY OF ENVIRONMENTAL EFFECTS  
EXCLUSIVE FRANCHISE SYSTEM**

Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures*	Impact after Mitigation
<b>Noise (NOI)</b>				
	<b>NOI-1 Generate Noise Levels Exceeding Applicable Standards:</b> <ul style="list-style-type: none"> <li>Collection activities under the Proposed Project would not result in substantively increased noise levels that could result in an exceedence of recommended General Plan noise levels.</li> <li>Operations of future new processing capacity could result in elevated noise levels that also exceed applicable General Plan noise standards.</li> </ul>	Potentially Significant	<p>N-1: A noise study will be prepared for future facilities that quantifies the facility's noise contribution to the ambient environment for both the construction and operation phase. If impacts are identified, measures will be implemented to reduce sound levels to a level that is consistent with the applicable jurisdiction's noise ordinance or noise element.</p> <p>N-7: Operational activities at future facilities will not produce noise levels at the property line that exceed the levels identified in the applicable jurisdiction's noise ordinance. Implement noise attenuation measures to reduce the operational noise level at the property line noise levels to the applicable community noise standard level.</p>	Less than Significant
	<b>NOI-2 Groundborne Vibration and Noise:</b> <ul style="list-style-type: none"> <li>Collection activities under the Proposed Project are not expected to substantively or noticeably change the existing levels of groundborne noise or groundborne vibration any area of the City.</li> <li>New processing capacity is not expected to result in excessive groundborne vibration or groundborne noise levels.</li> </ul>	Less Than Significant	None Required	Less Than Significant

**TABLE ES-2  
SUMMARY OF ENVIRONMENTAL EFFECTS  
EXCLUSIVE FRANCHISE SYSTEM**

<b>Resource Areas and Alternatives</b>	<b>Environmental Impacts</b>	<b>Significance Determination</b>	<b>Mitigation Measures*</b>	<b>Impact after Mitigation</b>
	<p><b>NOI-3 Permanent Increase in Ambient Noise Levels:</b></p> <ul style="list-style-type: none"><li>• Changes in collection activity trips relative to baseline would be minor and would not approach a doubling of the existing traffic; and therefore, would not substantively or noticeably change the existing noise levels (CNEL) in any area of the City.</li><li>• Future new processing capacity could result in elevated noise levels that could permanently increase noise levels in the vicinity of sensitive receptors.</li></ul>	Potentially Significant	NOI-1 and NOI-7	Less Than Significant

**TABLE ES-2  
SUMMARY OF ENVIRONMENTAL EFFECTS  
EXCLUSIVE FRANCHISE SYSTEM**

Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures*	Impact after Mitigation
	<b>NOI-4 Temporary Increase in Ambient Noise Levels:</b> <ul style="list-style-type: none"> <li>Short-term elevations in noise related to materials transfer from bins to collection vehicles would not represent a substantial temporary or periodic increase in ambient community noise levels.</li> <li>Construction of future new processing or other facilities could result in elevated noise levels that could temporarily increase noise levels in the vicinity of sensitive receptors.</li> </ul>	Potentially Significant	NOI-1 and: N-2: Construction activities will be limited to 7:00 AM to 7:00 PM, Monday through Saturday. If the local jurisdiction has more stringent construction timing limits, those limits will be applied. N-3: The construction contractor will operate and maintain a City-approved haul truck traffic route along major traffic arteries. N-4: All construction equipment will be equipped, operated, and maintained with manufacturer-recommended mufflers or the equivalent. N-5: Mobile and stationary construction equipment will be turned-off when not in operation. N-6: All stationary noise-generating construction equipment will be located as far as possible from nearby noise-sensitive receptors. Noise-generating equipment will be shielded from nearby noise sensitive receptors by noise-attenuating buffers.	Less Than Significant
	<b>NOI-5 Excessive Noise Levels in Airport Land Use Plan Areas:</b> <ul style="list-style-type: none"> <li>Collection would not result in changes in airport noise contours.</li> <li>Expanded or new materials handling and processing or other facilities could expose people to excessive noise if located in noise airport noise contours.</li> </ul>	Potentially Significant	N-1 and: N-8: For future facilities within 2 miles of a public or private airport, the project-specific noise study will include address excessive noise levels due to airport noise, and develop measures to reduce interior noise levels to acceptable levels.	Less Than Significant

**TABLE ES-2  
SUMMARY OF ENVIRONMENTAL EFFECTS  
EXCLUSIVE FRANCHISE SYSTEM**

Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures*	Impact after Mitigation
	<b>NOI-6 Excessive Noise Levels Near Private Airstrips:</b> <ul style="list-style-type: none"> <li>Collection would not result in changes in airport noise contours.</li> <li>Expanded or new materials processing or other facilities could expose people to excessive noise if located close to private airports.</li> </ul>	Potentially Significant	N-1 and N-8	Less Than Significant
<b>Population and Housing (PH)</b>				
	<b>PH-1 Population Growth:</b> <ul style="list-style-type: none"> <li>Collection activities would not result in residential development that could in turn induce population growth.</li> <li>New or expanded processing or other facilities would not include a residential component that could induce population growth.</li> </ul>	Less Than Significant	None Required	Less Than Significant
	<b>PH-2 Displace Housing:</b> <ul style="list-style-type: none"> <li>Collection activities would not result in removal or displacement of any housing.</li> <li>New or expanded processing or other facilities could displace housing.</li> </ul>	Potentially Significant	PH-1: If future new or expanded facilities result in the displacement of existing residential units or persons, appropriate compensation to property owners or relocation of displaced people will occur. PH-2: If acquisition of public or private residences are necessary for construction of future new or expanded facilities, all applicable federal, state, and local laws regarding acquisition of property, compensation to displaced property owners or tenants, and relocation assistance and benefits for persons who may be displaced will be adhered to or exceeded, as appropriate.	Less Than Significant

**TABLE ES-2  
SUMMARY OF ENVIRONMENTAL EFFECTS  
EXCLUSIVE FRANCHISE SYSTEM**

Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures*	Impact after Mitigation
	<b>PH-3 Displace People:</b> <ul style="list-style-type: none"> <li>Collection activities are not expected to result in removal or displacement of people.</li> <li>New or expanded processing or other facilities could potentially displace housing or people.</li> </ul>	Potentially Significant	PH-1 and PH-2	Less Than Significant
<b>Public Services (PS)</b>				
	<b>PS-1 Fire Protection Facilities:</b> <ul style="list-style-type: none"> <li>Collection activities would not result in any development that could increase demand for fire protection services.</li> <li>Compliance with applicable sections of the Fire Code and the California Fire Code during the building permit process and payment of development impact fees is expected to keep future processing facilities from resulting in the need for new or expanded physically altered fire protection facilities.</li> </ul>	Less Than Significant	None Required	Less Than Significant
	<b>PS-2 Police Protection Facilities:</b> <ul style="list-style-type: none"> <li>Collection activities would not result in any development that could increase demand for police protection services.</li> <li>New or expanded processing or other facilities would likely be added in areas already within established police service areas; and payment of development impact fees to are expected to minimize demand for police services.</li> </ul>	Less Than Significant	None Required	Less Than Significant
	<b>PS-3 Schools:</b> <ul style="list-style-type: none"> <li>Collection activities would not result in any development that could increase demand for school services.</li> <li>New or expanded processing or other facilities would not substantively increase demand for school services.</li> </ul>	Less Than Significant	None Required	Less Than Significant



**TABLE ES-2  
SUMMARY OF ENVIRONMENTAL EFFECTS  
EXCLUSIVE FRANCHISE SYSTEM**

Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures*	Impact after Mitigation
	<b>PS-4 Park Facilities:</b> <ul style="list-style-type: none"> <li>Collection activities would not result in any development that could substantively increase demand for park or recreational facilities.</li> <li>New or expanded processing or other facilities would not substantively increase demand for or provision of new or expanded park facilities.</li> </ul>	Less Than Significant	None Required	Less Than Significant
	<b>PS-5 Other Public Facilities:</b> <ul style="list-style-type: none"> <li>Collection activities would not result in any development that could substantively increase demand for other public facilities.</li> <li>New or expanded processing or other facilities would not substantively increase demand for other public services.</li> </ul>	Less Than Significant	None Required	Less Than Significant
<b>Recreation (REC)</b>				
	<b>REC-1 Physical Deterioration of Recreational Facilities:</b> <ul style="list-style-type: none"> <li>Collection activities would not result in development that could increase the use of existing neighborhood and regional parks, or otherwise cause deterioration of existing recreational facilities.</li> <li>New or expanded processing or other facilities on industrial or commercial-manufacturing lands is not expected to increase the use of existing neighborhood and regional parks, or otherwise cause deterioration of existing recreational facilities.</li> </ul>	Less Than Significant	None Required	Less Than Significant
	<b>REC-2 Construction of New or Expanded Recreational Facilities:</b> <ul style="list-style-type: none"> <li>Collection activities would not result in any development, including the construction or expansion of recreational facilities.</li> <li>New or expanded processing or other facilities could adversely affect existing recreational facilities.</li> </ul>	Potentially Significant	REC-1: If future new or expanded facilities are located on a site that results in an impact to existing recreation facilities, replacement recreation facilities will be acquired or constructed prior to demolition of existing recreational facilities.	Less Than Significant

**TABLE ES-2  
SUMMARY OF ENVIRONMENTAL EFFECTS  
EXCLUSIVE FRANCHISE SYSTEM**

Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures*	Impact after Mitigation
<b>Traffic (TRA)</b>				
	<b>TR-1 Conflict with Plan, Ordinance or Policy:</b> <ul style="list-style-type: none"> <li>Collection activities would not result in any development, including the construction or expansion of transportation facilities.</li> <li>Trips associated with new or expanded processing or other facilities could result in conflicts with applicable transportation plans.</li> </ul>	Potentially Significant	TR-1: Prior to the approval of any future facility, a project-level traffic impact report will be prepared by a qualified traffic consultant. The traffic report will identify mitigation measures to reduce project- and cumulative-level impacts to the maximum extent practicable.	Potentially Significant
	<b>TR-2 Conflict with Congestion Management Plan:</b> <ul style="list-style-type: none"> <li>Collection activities would not cause a conflict with a congestion management plan.</li> <li>Trips associated with new or expanded processing or other facilities could result in conflicts with applicable congestion management plan.</li> </ul>	Potentially Significant	TR-1	Potentially Significant
	<b>TR-3 Change in Air Traffic Patterns:</b> <ul style="list-style-type: none"> <li>The Proposed Project would not cause a conflict with air traffic patterns.</li> </ul>	Less Than Significant	None Required	Less Than Significant
	<b>TR-4 Increase Hazards:</b> <ul style="list-style-type: none"> <li>Collection activities would not result in any development, including the construction or expansion of transportation facilities.</li> <li>Local transportation agency review of new or expanded processing or other facilities would ensure proper design principles that avoid transportation hazards.</li> </ul>	Less Than Significant	None Required	Less Than Significant
	<b>TR-5 Inadequate Emergency Access:</b> <ul style="list-style-type: none"> <li>Collection activities would not result in any development, including the construction or expansion of transportation facilities.</li> <li>Local transportation agency review of new or expanded processing or other facilities would ensure proper design principles that ensures adequate emergency access</li> </ul>	Less Than Significant	None Required	Less Than Significant

**TABLE ES-2  
SUMMARY OF ENVIRONMENTAL EFFECTS  
EXCLUSIVE FRANCHISE SYSTEM**

Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures*	Impact after Mitigation
	<b>TR-6 Conflict with Public Transit, Bicycle or Pedestrian Facilities:</b> <ul style="list-style-type: none"> <li>Collection activities would not result in any development, including the construction or expansion of transportation facilities.</li> <li>Local transportation agency review of new or expanded processing or other facilities would prevent impacts to alternative transportation</li> </ul>	Less Than Significant	None Required	Less Than Significant
<b>Utilities (UT)</b>				
	<b>UT-1 Exceed Wastewater Treatment Requirements of the Applicable RWQCB:</b> <ul style="list-style-type: none"> <li>Collection activities would not result in generation of wastewater that could result in exceedences of wastewater treatment requirements of the applicable Regional Water Quality Control Board.</li> <li>Within the City, wastewater generated by new processing capacity is not expected to result in exceedences of wastewater treatment requirements of the Regional Water Quality Control Board. Outside the City, wastewater treatment requirements would be subject to the applicable RWQCB</li> </ul>	Less Than Significant	None Required	Less Than Significant
	<b>UT-2 Require New Wastewater Treatment Facilities:</b> <ul style="list-style-type: none"> <li>Collection activities under the Proposed Project would not result in the need to construct new or expanded water or wastewater treatment facilities.</li> <li>The City has developed a wastewater facilities plan to ensure that adequate treatment capacity is available (City of Los Angeles, 2006). The DWP has adequate water supplies to accommodate the water demand within the City for the 25-year planning horizon under the Urban Water Management Plan (UWMP). Outside the City, new or expanded facilities could contribute to the need for new water or wastewater treatment facilities.</li> </ul>	Potentially Significant	UT-1: Future processing facilities will incorporate water conservation design features. UT-2: Development applications for future new facilities greater than 40 acres of land, having more than 650,000 square feet of floor area, or employing more than 1,000 persons will include a water supply assessment.	Less Than Significant

**TABLE ES-2  
SUMMARY OF ENVIRONMENTAL EFFECTS  
EXCLUSIVE FRANCHISE SYSTEM**

Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures*	Impact after Mitigation
	<b>UT-3 Require New Storm Water Drainage Facilities:</b> <ul style="list-style-type: none"> <li>Collection activities would not create or contribute to runoff within the City and would not result in the need to construct new or expanded storm drainage facilities.</li> <li>New or expanded material handling facilities could be expected to substantially contribute to runoff that could exceed the capacity of existing or planned stormwater drainage systems.</li> </ul>	Potentially Significant	WQ-4, WQ-5, and WQ-6	Less Than Significant
	<b>UT-4 Water Supplies:</b> <ul style="list-style-type: none"> <li>Collection activities are not expected to increase water use or result in the need to secure new water supplies.</li> <li>The City's DWP has adequate water supplies through the 25-year planning period of the 2010 UWMP, water usage from new processing facilities is not expected to require new or expanded water entitlements. Outside the City, new or expanded facilities could result in the need to secure new water supplies</li> </ul>	Potentially Significant	UT-1 and UT-2	Less Than Significant
	<b>UT-5 Wastewater Treatment Capacity:</b> <ul style="list-style-type: none"> <li>Collection activities would not result in discharges of wastewater, or any development that could discharge wastewater.</li> <li>Small amounts of wastewater would be generated by new processing capacity, but there is adequate wastewater treatment capacity within the City's treatment plant service areas to accommodate wastewater flows. New or expanded facilities outside the City could necessitate the construction of new water or wastewater treatment facilities, or expansion of existing facilities, which could cause significant environmental effects.</li> </ul>	Potentially Significant	UT-1 and UT-2	Less Than Significant
	<b>UT-6 Landfill Capacity:</b> <ul style="list-style-type: none"> <li>Source-separated recyclables and Organics would be collected and diverted from solid waste landfills thereby prolonging remaining landfill capacity.</li> </ul>	Less Than Significant	None Required	Less Than Significant

**TABLE ES-2  
SUMMARY OF ENVIRONMENTAL EFFECTS  
EXCLUSIVE FRANCHISE SYSTEM**

Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures*	Impact after Mitigation
	<b>UT-7 Solid Waste Regulations:</b> <ul style="list-style-type: none"> <li>The Proposed Project implements solid waste reduction policies, goals, and requirements put forth in state and local laws, ordinances, and plans, and would therefore be in compliance with solid waste regulations.</li> </ul>	Less Than Significant	None Required	Less Than Significant
	<b>UT-8 Energy:</b> <ul style="list-style-type: none"> <li>The Proposed Project is not expected to require new (offsite) energy supply facilities but could require energy conservation measures in the project design and/or facility operations.</li> </ul>	Potentially Significant	UT-3: Future new or expanded materials processing facilities, transfer stations, and truck base yards shall be required to incorporate energy efficient design features.	Less Than Significant
<b>Cumulative Impacts</b>				
	Siting of future facilities under the Proposed Project could make a cumulatively considerable contribution to a significant cumulative impact in the following areas: <ul style="list-style-type: none"> <li>Agricultural Resources</li> <li>Aesthetic Resources</li> <li>Air Quality</li> <li>Biological Resources</li> <li>Cultural Resources</li> <li>Hazardous Materials</li> <li>Hydrology and Water Quality</li> <li>Land Use</li> <li>Mineral Resources</li> <li>Noise</li> <li>Population and Housing</li> <li>Public Services</li> <li>Recreation</li> <li>Transportation</li> <li>Utilities</li> <li>Greenhouse Gas Emissions</li> </ul>	Potentially Significant	Project-level mitigation for each resource area; for cumulative impacts related to Greenhouse Gas emissions, implement Air Quality mitigation measures (AQ-1 through AQ-20).	Less Than Significant for all resource areas except for the following resource areas, which remain potentially significant: <ul style="list-style-type: none"> <li>Air Quality</li> <li>Cultural Resources</li> <li>Transportation</li> <li>Greenhouse Gas Emissions</li> </ul>

\* Mitigation measures are summarized in this table; please see the applicable resource area section for complete descriptions of the mitigation measures.

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- B Implementation Plan
- C Franchise Initiative Facility Analysis
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- E Traffic Analysis
- F Special-Status Plant / Wildlife Species Tables

## **ACRONYMS AND ABBREVIATIONS**

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µg/m <sup>3</sup>	micrograms per cubic meter
AB	Assembly Bill
ADT	average daily traffic
APS	auxiliary power system
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
ARMR	Archaeological Resources Management Report
ARP	Accidental Release Prevention
ATCM	air toxic control measure
ATSAC	Automated Traffic Surveillance and Control
B.P.	before present
BACT	best available control technology
basin	South Coast Air Basin
BEP	Business Emergency Plan
Black Bin waste	Solid Waste (trash)
Blue Bin waste	recyclable materials (single-stream, recyclables)
BMP	best management practice
BNSF	Burlington Northern Santa Fe
C&D	construction and demolition
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CalARP	California Accidental Release Prevention
CalEPA	California Environmental Protection Agency
California Register	California Register of Historical Resources
CalOSHA	California Occupational Safety and Health Administration
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CAS	Climate Adaptation Strategy
CCAR	California Climate Action Registry
CCR	California Code of Regulations

CDFW	California Department of Fish and Wildlife
CDMG	California Department of Conservation Division of Mines and Geology (now known as California Geological Survey)
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFC	chlorofluorocarbons
CFR	Code of Federal Regulations
CGS	California Geological Survey (formerly Division of Mines and Geology)
CHRIS	California Historical Resources Information System
CIU	Categorical Industrial User
City	City of Los Angeles
CMAQ	Congestion and Mitigation and Air Quality Program
CMP	<i>Congestion Management Program</i>
CNG	compressed natural gas
CNPS	California Native Plant Society
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> e	carbon dioxide equivalent
CH <sub>4</sub>	methane
Cl	chlorine
CRHR	California Register of Historical Resources
CWA	Clean Water Act
cy	cubic yards
D/C	demand to capacity
DCTWRP	Donald C. Tillman Water Reclamation Plant
DDT	dichlorodiphenyltrichloroethane
Delta	Sacramento-San Joaquin River Delta
DPM	diesel particulate matter
DTSC	California Department of Toxic Substances Control
DVBE	disabled veteran business enterprise
DWR	California Department of Water Resources
EBE	emerging business enterprise
EFZ	Earthquake Fault Zone

EIR	Environmental Impact Report
EO	Executive Order
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIP	Federal Implementation Plan
FMMP	Farmland Mapping and Monitoring Program
General Plan	City of Los Angeles General Plan
GHG	greenhouse gas
GPS	global positioning system
Green Bin waste	organic materials (single-stream, organics)
GWP	global warming potential
HAZWOPER	Hazardous Waste Operations and Emergency Response
HCFC	hydro-chlorofluorocarbons
HPOZ	Historic Preservation Overlay Zone
HSC	Health and Safety Code
HTP	Hyperion Treatment Plant
I-	Interstate
LAA	Los Angeles Aqueduct
LADWP	Los Angeles Department of Water and Power
LAFC	Los Angeles Fire Code
LAGWRP	Los Angeles - Glendale Water Reclamation Plant
LAMC	Los Angeles Municipal Code
LADOT	City of Los Angeles Department of Transportation
LID	Low Impact Development
LNG	liquefied natural gas
LOS	level of service
m	meters
Ma	million years before present
MBE	minority business enterprise
MBTA	Migratory Bird Treaty Act
MCL	maximum contaminant level
MEP	maximum extent practicable

Metro	Los Angeles County Metropolitan Transportation Authority
mgd	million gallons per day
MMT	million metric tons
MPO	metropolitan planning organizations
MRF	material recovery facility
MRZ-2	Mineral Resources Zone-2
MS4	Municipal Separate Storm Sewer System
msl	mean sea level
MWD	Metropolitan Water District
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCSIU	Non-Categorical Significant Industrial User
NHPA	National Historic Preservation Act of 1966, as amended
NHTSA	National Highway Traffic Safety Administration
N <sub>2</sub> O	nitrous oxide
NO <sub>2</sub>	nitrogen dioxide
NO <sub>x</sub>	nitrogen oxide
NOA	Notice of Availability
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
OBE	other business enterprise
OH	hydroxyl radicals
OHP	California Office of Historic Preservation
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Act
PCB	polychlorinated biphenyls
PCE	perchloroethylene
PEL	permissible exposure limits
PFC	perfluorocarbons
PM	particulate matter
PM <sub>10</sub>	particulate matter less than 10 microns in aerodynamic diameter
PM <sub>2.5</sub>	particulate matter less than 2.5 microns in aerodynamic diameter
ppb	parts per billion

ppm	parts per million
PRC	Public Resources Code
RCRA	Resource Conservation and Recovery Act
RFP	request for proposals
RMP	Risk Management Plan
ROC	reactive organic compound
ROG	reactive organic gas
RTAC	Regional Targets Advisory Committee
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
Sanitation	City of Los Angeles, Department of Public Works, Bureau of Sanitation
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCRRA	Southern California Regional Rail Authority
SCS	Sustainable Communities Strategy
SEA	Significant Ecological Area
SF <sub>6</sub>	sulfur hexafluoride
SIP	State Implementation Plan
SIU	Significant Industrial User
SO <sub>2</sub>	sulfur dioxide
Solid Resources	entire waste stream, including commingled and organics
SOx	oxides of sulfur
SR-	State Route
STIP	State Transportation Improvement Program
SWCV	solid waste collection vehicle
SWIRP	Solid Waste Integrated Resources Plan
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TCE	trichloroethylene
TCRP	Traffic Congestion Relief Program
TIWRP	Terminal Island Water Reclamation Plant

TMDL	total maximum daily load
ULARA	Upper Los Angeles River Area
ULSD	ultra-low sulfur diesel
UPRR	Union Pacific Railroad
U.S.C.	United States Code
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
UWMP	Urban Water Management Plan
V/C	volume to capacity
Valley	San Fernando Valley
VHT	vehicle hours traveled
VMT	vehicle miles traveled
VOC	volatile organic compound
WDR	Waste Discharge Requirements
WMA	Watershed Management Area
WBE	woman-owned business enterprise



## DEFINITIONS

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Assembly Bill (AB) 341: (Chapter 476, Statutes of 2011 [Chesbro, AB 341]), among other actions, directs CalRecycle to develop and adopt regulations for mandatory commercial recycling, with compliance beginning July 2012. AB 341 also requires CalRecycle to submit a report to the Legislature with a plan for reaching a statewide 75 percent diversion rate by 2020.

AB 939: AB 939 (Chapter 1095, Statutes of 1989) is also known as the Integrated Waste Management Act. It created the California Integrated Waste Management Board, now known as CalRecycle. AB 939 required each jurisdiction in the state to submit detailed solid waste planning documents for CalRecycle approval and set diversion requirements of 25 percent by 1995 and 50 percent by 2000. AB 939 established a comprehensive statewide system of permitting, inspections, enforcement, and maintenance for solid waste facilities, and it authorized local jurisdictions to impose fees based on the types or amounts of solid waste generated. A more detailed description of the Integrated Waste Management Act is found at the CalRecycle Web site (<http://www.calrecycle.ca.gov/Laws/Legislation/CalHist/1985to1989.htm>).

AB 939 Compliance Permit: A permit issued to the provisions of subsection (a) of Section 66.32.1 (of the Los Angeles Municipal Code).

Board: The City of Los Angeles Board of Public Works

Blue Bin: Blue recycling containers for the collection of commingled recyclables (single stream).

California Register: California Register of Historical Resources

CalRecycle: The Department of Resources Recycling and Recovery of the State of California. CalRecycle is the state's regulatory agency on solid waste management.

City: The City of Los Angeles

City Council: Los Angeles City Council

Commingled Recyclables: Material that has been source-separated or kept separate from the Solid Waste stream at the point of generation, for the purpose of additional sorting or processing the material before recycling or reuse, which enables the return of the material to the economic mainstream in the form of raw material for new, reused, or reconstituted products that meet the quality standards necessary to be used in the marketplace. Commingled recyclables do not include Construction and Demolition Waste (defined below).

Commercial Establishments: All industrial, retail, wholesale, services, restaurant, hotel, motel, institutional, multifamily, and other premises, which are subject to the AB 939 compliance permit and Franchise systems regulating the collection and management of solid resources. Commercial Establishment shall not include customers that receive Solid Resources services from the City of Los Angeles.

Construction and Demolition (C&D) Waste: The material stream that results directly from construction, remodeling, repair, demolition, or deconstruction of buildings and other structures, does not contain hazardous waste (as defined in 22 CCR 66621.3 *et seq.*), and contains no more

than 1 percent putrescible wastes by volume, calculated on a monthly basis. Construction and demolition waste includes, but is not limited to, asphalt, concrete, Portland cement, brick, lumber, wallboard, roofing material, ceramic tile, pipe, glass, carpet, or associated packing.

County: Los Angeles County

Diversion: As defined in California statute, the combined efforts of waste prevention, reuse, and recycling practices.

Franchised Hauler: A hauler engaged by the City through a franchise contract to provide or responsible for the collection, removal, or transportation of solid waste, construction and demolition waste, source-separated materials, or commingled recyclables generated within the City.

General Plan: City of Los Angeles General Plan

Gross Receipts: Those receipts defined under Gross Receipts in Los Angeles Municipal Code Section 21.00(a) as generated by the collection of solid waste including, but not limited to, service, covered container rental, disposal, and processing charges.

Hazardous Waste: Any waste material which is toxic, corrosive, flammable, an irritant, a strong sensitizer or which generates pressure through decomposition, heat, or other means, if such a waste may cause substantial injury, serious illness or harm to humans, domestic livestock or wildlife.

Medical Waste: Biohazardous waste or sharps waste that has been generated during the diagnosis, treatment or immunization of human beings or animals, in research pertaining thereto, in the production or testing of biologicals, or which may contain infectious agents, those organisms classified as Biosafety Level II, III, or IV by the Federal Centers for Disease Control and Prevention and may pose a substantial threat to health.

Material Recovery Facility (MRF): A facility that processes source-separated Commingled Recyclables (Blue Bin materials stream).

Metro: Los Angeles County Metropolitan Transportation Authority

Organics (or Green Bin): The compostable materials source-separated from solid waste and placed in a container for collection. Organics may include, but are not limited to, grass, leaves, tree branches, clean wood free of paint, nails or any treatment, food scraps, food soiled boxes and paper.

Permitted Hauler: Any person engaged in the business of providing or responsible for the collection, removal, or transportation of Solid Resources (including Construction and Demolition Waste, source-separated materials, Solid Waste Commingled Recyclables, and Organics) generated within the City with, a City permit to do so.

Permittee: A person or entity issued an AB 939 Compliance Permit by the City pursuant to the provisions of subsection (a) of section 66.32.1 of the Los Angeles Municipal Code.

**Pharmaceutical Waste:** Prescription and over-the-counter drugs, but exempts all drugs that fall within the definition of hazardous waste by the Resource Conservation and Recovery Act (RCRA) or the California Radiation Control Law (RCL).

**Proposed Project:** An “Exclusive Franchise Hauling System for Municipal and Commercial Solid Waste”; a system for collecting and handling Solid Resources (as defined below). Under this system, the City grants a Franchised Hauling firm the exclusive privilege or right to collect Solid Resources (including Solid Waste, Commingled Recyclables and Organics) within a particular geographic zone. In the case of the Proposed Project, exclusive franchises would be granted to firms for the collection of Solid Resources from Commercial Establishments (as defined above) from 11 zones within the City of Los Angeles.

**Radioactive Waste:** Any waste containing radioactive material.

**Sanitation:** The City of Los Angeles, Department of Public Works, Bureau of Sanitation.

**Single Stream:** Single Stream recycling is a processing method that accepts Commingled Recyclable materials in one bin that has been source-separated at the point of generation.

**Solid Waste (or Black Bin):** shall mean waste that the Department of Resources Recycling and Recovery (CalRecycle) has deemed acceptable for disposal at a Class III Landfill, and shall not include Source-Separated Material or Commingled Recyclables. For purposes of the Proposed Project analysis in this document, Solid Waste does not include Construction and Demolition Waste.

**Solid Waste Disposal Facility:** A facility fully permitted under applicable local, state, and federal laws and regulations to accept and dispose of household and business refuse from the City and other licensed haulers.

**Solid Resources:** The materials generated which include Commingled Recyclables (Blue Bin), Organics (Green Bin), and Solid Waste (Black Bin) materials, as well as and Source-Separated Material, in the City of Los Angeles. For purposes of the Proposed Project analysis in this document, Solid Resources includes only materials generated at Commercial Establishments.

**Solid Waste Disposal Facility:** A facility fully permitted under applicable local, state, and federal laws and regulations to accept and dispose of household and business refuse from the City and other licensed haulers.

**Source-Separated Material:** Material that has been separated or kept separate from the Solid Waste stream at the point of generation and has not been commingled with other Solid Wastes or recyclable materials. To qualify as Source-Separated Material, each type of material must be transferred in a separate container to a recycling center. Source-Separated Material includes, but is not limited to, Construction and Demolition Waste such as clean wood, clean concrete or metals.

**Zero Waste:** 90 percent diversion of Solid Resources from landfills by 2025.

Zero Waste Goals: The ten goals listed in the Franchise Implementation Plan. They are:

1. Meet the City's goal of Zero Waste
2. Meet and Exceed State requirements for waste diversion and mandatory recycling
3. Improve Health and Safety for Solid Resources Workers
4. Improve Efficiency of the City's Solid Resources system
5. Improve the City's air quality
6. Provide the highest level of Customer Service
7. Create a consistent, clearly defined system, fair and equitable rates, and contingency plans to ensure reliable service including
8. Create a system that ensures long term competition
9. Ensure Sufficient Staffing to meet Program Goals
10. Ensure reliable system infrastructure to provide uninterrupted service to Customers

Zero Waste LA: The Proposed Project as analyzed in this document.

## **SECTION 1 INTRODUCTION**

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This Draft Program Environmental Impact Report (EIR) has been prepared to comply with the California Environmental Quality Act (CEQA). As a Draft Program EIR, it considers the overall effects of a series of phased actions for the project and recommends steps to avoid unnecessary adverse environmental effects (CEQA Section 15168). The Proposed Project consists of the adoption of a proposed ordinance by the City of Los Angeles (City), for the implementation of a Citywide Exclusive Franchise System for Solid Resources Collection and Handling. A Program EIR is an EIR that may discuss a series of actions that can be characterized as one large project, or a series of actions under consideration that are related geographically, or are logical parts in the chain of contemplated actions. A Program EIR may also discuss a series of actions that are in connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program. The series of actions also may be considered as individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects that can be mitigated in similar ways (CEQA Guidelines, Section 15168).

The Proposed Project would replace the current open market system for commercial Solid Resources with a franchised Solid Resources collection system comprised of 11 zones, with one exclusive Franchised Hauler per zone. The City's Bureau of Sanitation (Sanitation) currently collects and manages Solid Resources (which includes Solid Waste, Commingled Recyclables, and Organics) from single family homes and smaller multifamily complexes with its own publicly owned collection trucks. Sanitation will continue to provide these services, which are not part of the Proposed Project. The Proposed Project would increase diversion of materials away from landfill disposal by requiring Franchised Haulers to provide recycling services to Commercial Establishments and by establishing recycling and diversion goals. This Draft Program EIR has been prepared to assess the environmental consequences of the Proposed Project. The City is the Lead Agency for the Proposed Project pursuant to CEQA.

In accordance with CEQA Section 15168(c)(1), (2), (3), (4), and (5), during implementation of the Proposed Project, subsequent activities that may be implemented will be examined by the City to determine whether additional environmental documents must be prepared. As part of this process, in accordance with CEQA Section 15168(d)(1), (2), and (3), should the City determine that additional environmental analysis is required to implement subsequent activities, such additional environmental analysis could be tiered from this Program EIR (upon approval).

### **1.1 PURPOSE AND SCOPE OF THIS DRAFT PROGRAM EIR**

The City has prepared this Draft Program EIR to support the fulfillment of the following six major goals of CEQA (Section 15002 of the State CEQA Guidelines):

- To disclose to the decision makers and the public significant environmental effects of the proposed activities
- To identify ways to avoid or reduce environmental damage
- To mitigate environmental damage by requiring implementation of feasible alternatives or mitigation measures

- To disclose to the public the reasons for agency approvals of projects with significant environmental effects
- To foster interagency coordination in the review of projects
- To enhance public participation in the planning process

Although the Program EIR neither controls nor anticipates the ultimate decision on the proposed ordinance by the City Council, the City Council (and other agencies that rely on this Program EIR) must consider the information in the Program EIR and make appropriate findings, where necessary.

#### 1.1.1 Intent of CEQA

As provided in the State CEQA Guidelines (Title 14, California Code of Regulations [CCR] Section 15000 *et seq.*), public agencies are charged with the duty to avoid or minimize environmental damage where feasible. In discharging this duty, the City has an obligation to balance a variety of public objectives, including economic, environmental, and social issues (14 CCR 15021). The findings and conclusions of this Draft Program EIR regarding environmental impacts do not control the City's discretion to approve, deny, or modify the proposed ordinance, but instead are presented as information intended to aid the decision-making process. Sections 15122 through 15132 of the State CEQA Guidelines describe the required content of an EIR, as follows:

- Description of the project and the environmental setting (existing conditions)
- Environmental impact analysis
- Mitigation measures
- Alternatives
- Significant irreversible environmental changes
- Growth-inducing impacts
- Cumulative impacts

The City will review and consider the information in the Draft Program EIR, along with any other relevant information, in making final decisions regarding the proposed ordinance (14 CCR 15121).

#### 1.1.2 Environmental Review Process

A Notice of Preparation (NOP) of the Program EIR for the proposed ordinance was initially submitted on February 20, 2013. The NOP was received by the State Clearinghouse on February 22, 2013, and distributed to various federal, state, regional, and local government agencies. The NOP was revised and recirculated for a 30-day review period that began on February 26, 2013, and closed on March 27, 2013. Copies of the NOP, Revised NOP, and the comment letters submitted in response to the NOP are included in Appendix A of this Draft Program EIR. The NOP advertised seven Public Scoping meetings for interested parties to receive information on the proposed ordinance and the CEQA process, and to allow interested parties an opportunity to submit comments. The scoping meetings facilitated early consultation with interested parties in compliance with Section 15082 of the State CEQA Guidelines. Dates, times, and locations of the seven scoping meetings were as follows:

- March 4, 2013, 5:30 p.m. to 7:30 p.m. – Panorama Recreation Center, 8600 Hazeltine Avenue, Panorama City, CA 91402

- March 6, 2013, 5:30 p.m. to 7:30 p.m. – Wilmington Recreation Center (Multi-Purpose Room), 325 Neptune Avenue, Wilmington, CA 90744
- March 7, 2013, 5:30 p.m. to 7:30 p.m. – Lou Costello Recreation Center, 3141 E. Olympic Boulevard, Los Angeles, CA 90023
- March 11, 2013, 5:30 p.m. to 7:30 p.m. – South Los Angeles Sports Activity Center, 7020 S. Figueroa Street, Los Angeles, CA 90003
- March 12, 2013, 5:30 p.m. to 7:30 p.m. – Deaton Auditorium (in Police Administration Building), 100 W. 1st Street, Los Angeles, CA 90015
- March 13, 2013, 5:30 p.m. to 7:30 p.m. – Cheviot Recreation Center Auditorium, 2551 Motor Avenue, Los Angeles, CA 90064
- March 14, 2013, 5:30 p.m. to 7:30 p.m. – Granada Hills Charter High School Library, 10535 Zelzah Avenue, Granada Hills, CA 91344

Section 7, Organizations and Persons Consulted, of this Draft Program EIR lists the governmental agencies, community groups, and other organizations consulted during the preparation of this document.

The City requested information from the public related to the range of actions under consideration and alternatives, mitigation measures, and significant effects to be analyzed in depth in the Draft Program EIR. Verbal and written comments related to environmental issues that were provided during public review of the NOP and at scoping meetings were considered in the preparation of this Draft Program EIR. This Draft Program EIR also evaluates alternatives to the Proposed Project.

The City determined that the Proposed Project may have a significant effect on the environment and that preparation of a Program EIR would be required. The Draft Program EIR has been distributed to various federal, state, regional, and local government agencies and interested organizations and individuals for a 50-calendar-day public review period. The Draft Program EIR was provided to the State Clearinghouse on November 21, 2013, for distribution to additional agencies. A public Notice of Availability (NOA) of the Draft Program EIR was published in the *Los Angeles Times*, and the following local foreign-language newspapers: *La Opinion* (Spanish), *Asbarez* (Armenian), *World Journal LA* (Chinese), and the *Korea Times* (Korean). The Draft Program EIR will also be mailed directly to interested parties who request the document. The dates of the public review period are specified on the transmittal memorandum accompanying this Draft Program EIR. In addition, copies of this Draft Program EIR are available during the public review period at the following locations:

Bureau of Sanitation, 1149 S. Broadway, 5<sup>th</sup> Floor, Los Angeles, CA 90015  
 Central Library, 630 W. 5<sup>th</sup> Street, Los Angeles, CA 90071  
 Van Nuys Branch Library, 6250 Sylmar Avenue, Van Nuys, CA 91401  
 West L. A. Regional Branch Library, 11360 Santa Monica Boulevard, Los Angeles, CA 90025  
 San Pedro Regional Branch Library, 931 S. Gaffey Street, San Pedro, CA 90731  
 Northridge Library, 9051 Darby Avenue, Northridge, CA 91325  
 Encino-Tarzana Library, 18231 Ventura Blvd, Tarzana, CA 91356  
 Lincoln Heights Library, 2530 Workman Street, Los Angeles, CA 90031  
 Robert Louis Stevenson, 803 Spence Street, Los Angeles, CA 90023

And online at <http://www.lacitysan.org/>

Written comments on this Draft Program EIR should be submitted to the address below during the public review period and received by 12:00 p.m. on January 10, 2014.

Daniel K. Meyers, Assistant Division Manager  
Solid Resources Citywide Recycling Division  
City of Los Angeles Department of Public Works  
Bureau of Sanitation  
1149 S. Broadway, 5<sup>th</sup> Floor  
Los Angeles, CA 90015

Written comments provided by the public, organizations, and public agencies will be evaluated and written responses will be prepared for all comments received during the designated comment period. Upon completion of the evaluation, a Final Program EIR will be prepared and provided to the City Council for certification of compliance with CEQA, and for review and consideration as part of the decision-making process for the Proposed Project.

## **1.2 INTENDED USES OF THIS DRAFT PROGRAM EIR**

The City of Los Angeles, Department of Public Works, Bureau of Sanitation (Sanitation) is the lead agency for the Proposed Project. The City Council will consider certification of the Program EIR and has authorization to render a decision on the Proposed Project.

The City anticipates that the amount of recyclables and Organics, which ultimately would be diverted from landfill disposal, would exceed the capacity of existing facilities for material processing, and additional capacity in the form of material recovery facilities (MRFs), and Organics processing facilities will be required to meet the City's Zero Waste goals under the Proposed Project. In addition, new or expanded transfer stations and truck base yards could be required to support collection of Commingled Recyclables and Organics diverted from landfills. Because specific locations for new or expanded MRFs, Organics processing facilities, transfer stations, and truck base yards have not been identified (i.e., such facilities could be located both within the City and in jurisdictions outside the City), potential impacts associated with these facilities are evaluated at a conceptual level in this Draft Program EIR.

Site-specific environmental impacts that are associated with future new or expanded materials processing facilities, transfer stations, and truck base yards would be evaluated in compliance with CEQA when plans for such facilities are developed and their locations are identified. This analysis will be accomplished by the local jurisdiction in which expanded or new material handling facilities, transfer stations, or truck base yards are located. The jurisdiction responsible for CEQA compliance may choose to tier the environmental analysis off this Program EIR (upon approval); however, this decision will be made by each jurisdiction independently.



## **SECTION 2**

### **PROJECT DESCRIPTION**

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The Proposed Project would replace the City's current open market waste collection and handling system for Commercial Establishments in the City. The Proposed Project consists of an ordinance that will be considered by the City of Los Angeles (City) Council for adoption to establish and implement an exclusive waste franchise system on a Citywide basis for collection and handling of Solid Resources from Commercial Establishments (including larger multifamily dwellings) currently serviced by Permitted Haulers within the City. The City's Bureau of Sanitation (Sanitation) currently collects Solid Resources from single family homes and smaller multifamily complexes with its own publicly owned collection trucks. Sanitation will continue to provide these services, which are not part of the Proposed Project. This section provides an overview of the existing open market waste collection system, summarizes the development of the Proposed Project, identifies the Project Goals and Objectives, describes the Proposed Project, and identifies alternatives to the Proposed Project.

#### **2.1 OVERVIEW OF CITY'S EXISTING WASTE COLLECTION SYSTEM FOR COMMERCIAL ESTABLISHMENTS**

In 2002, Sanitation established a private sector permit system for the collection and management of waste and recovered materials from Commercial Establishments. Under the existing open market system, approximately 45 Permitted Haulers collect approximately 2 million tons annually of Solid Resources from Commercial Establishments (approximately 63,000 accounts). Currently, the Permitted Haulers operate under the following conditions:

- Permitted Haulers must obtain an annual waste hauler permit issued by the City.
- Permitted Haulers can operate throughout the entire City with no geographical restrictions.
- Permitted Haulers compete for individual service accounts.
- Permitted Haulers negotiate rates with each individual Commercial Establishment. The City does not set minimum or maximum rates that can be charged by Permitted Haulers.
- There is no limit on the number of accounts a Permitted Hauler can maintain, although no Permitted Hauler currently has more than 40 percent of accounts within the City.
- The City does not require Permitted Haulers to provide or offer recycling services, or meet specific diversion requirements.
- The City does not require Permitted Haulers to operate late model, low emission, or clean fuel vehicles.

#### **2.2 DEVELOPMENT OF THE PROPOSED PROJECT**

The City's right and responsibility to manage Solid Resource collection is derived from the California Public Resources Code (PRC) and the Los Angeles Municipal Code. Sanitation operates one of the largest municipal systems for collection of Solid Resources in the nation and has established a priority to increase the rate of diversion of Solid Resources that is currently disposed in landfills through increased diversion and recovery of recyclables and Organics. (Department of Public Works, 2012)

Under the California Integrated Waste Management Act of 1989 (PRC, § 40000 *et seq.*), local agencies are allowed to grant exclusive operating rights to Solid Resources disposal companies (PRC, § 40059, sub. (a)(1)). If other disposal companies have been authorized by the agency to operate within the municipality's boundaries for more than 3 years, the municipality must notify the disposal company that their operating rights will expire within 5 years (§ 49520.). In response to direction from the Mayor and City Council, on July 7, 2006, Sanitation issued a 7-year notice to the Permitted Haulers operating in the City stating the City's intent to consider the modification of the existing multifamily waste hauling system provided to multifamily residential properties. On December 16, 2011, Sanitation issued a 5-year notice to Permitted Haulers, regarding Solid Resources handling for Commercial Establishments. These notifications meet the needs of notification for the Proposed Project, which may be implemented as early as 5 years after this notification.

### 2.2.1 City Council Action

On November 14, 2012, City Council adopted the actions in the Energy and Environment and Ad Hoc on Waste Reduction and Recycling Committee Majority Report, under Council File No. 10-1797. City Council instructed Sanitation to develop an exclusive (one Franchised Hauler per franchise zone) franchise system to modify the existing Permitted Hauler system for the collection of Solid Resources from Commercial Establishments. City Council instructed Sanitation to prepare an Environmental Impact Report, and prepare an Implementation Plan. City Council further requested the City Attorney to prepare a City ordinance for the development and implementation of the Proposed Project.

In January 2013, Sanitation sent an information request to various existing Permitted Haulers soliciting input on the development of the form and structure of the Proposed Project. The responses to the information request were considered in the development of the Proposed Project and its alternatives, which are described in the Final Implementation Plan (FIP) (see Appendix B). Multiple meetings were held regarding the FIP, including discussions by City Council's joint Energy & Environment and Ad Hoc on Waste Reduction and Recycling Committees on February 20, 2013, and March 20, 2013. Sanitation conducted an open house on April 4, 2013, to accept comments on the proposed franchise zone boundaries.

On April 24, 2013, City Council approved the FIP, including the Program Goals used to develop the Proposed Project, and directed Sanitation to proceed with the CEQA process as part of the consideration by the City Council of the Proposed Project.

## 2.3 GOALS AND OBJECTIVES OF THE PROPOSED PROJECT

To meet the City's Zero Waste goals, the City needs to expand services and program offerings to Commercial Establishments. To provide these expanded services and programs, City Council approved the statement of the goals and actions of the Proposed Project to efficiently and effectively introduce the new program and services. This would be accomplished by creating a simple, uniform recycling system provided by franchise holders who will become partners with the City to divert more material from landfill disposal to beneficial reuse. These 10 Project Goals encompass the major elements of the program:

1. Meet the City's Zero Waste goals by establishing the maximum disposal for each zone and implementing waste diversion programs consistent with the Solid Waste Integrated Resources Plan (SWIRP) goals (see Section 2.5.2, Solid Waste Integrated Resources Plan).
2. Meet and exceed California requirements for waste diversion and mandatory commercial and multifamily recycling.
3. Improve health and safety for Solid Resource workers under City contract provisions.
4. Improve efficiency of the City's Solid Resources system by maximizing the efficiencies of the system's waste collection route.
5. Improve the City's air quality by requiring late-model, low-emission, clean-fuel vehicles for collection fleets and using exclusive zones to optimize routes to minimize vehicle miles traveled (VMT).
6. Provide the highest level of customer service through communication and delivery of services.
7. Create a consistent, clearly defined system with fair and equitable unit rates and contingency plans to ensure reliable service.
8. Create an environment that ensures long-term competition by utilizing a Request for Proposal (RFP) process that yields the best value service template for customers and allowing no more than 49 percent of the service to any individual Franchised Hauler.
9. Ensure sufficient staffing to meet Program Goals.
10. Ensure reliable system infrastructure to provide uninterrupted service to customers.

The existing open market system limits the ability of the City to address compliance with both State mandates and the City's diversion goals.

## **2.4 PROPOSED PROJECT**

Under the Proposed Project, the City would adopt an ordinance to establish and implement an exclusive franchise system or program on a citywide basis for collection and handling of Solid Resources from all Commercial Establishments serviced by Permitted Haulers. The Proposed Project would replace the existing open market waste collection and handling system for Solid Resources. Sanitation will continue the collection of Solid Resources from single family homes and small multifamily complexes, and continue to provide some special services such as bulky item collection for all households. Under the Proposed Project, the Franchised Haulers would be required to meet the City's recycling and diversion goals, including compliance with Assembly Bill (AB) 341 requirements and the City's goal of Zero Waste by 2025, defined as a 90 percent diversion with a small residual left for disposal.

Under the Proposed Project, Franchised Haulers would operate under the following conditions:

- Through contract negotiations, the City and the haulers would establish 11 geographical franchise collection zones. These zones would delineate the boundaries in which the Franchised Hauler would be allowed to operate.
- The City would award a Franchised Hauler the exclusive rights to operate in each of the 11 franchise collection zones.
- A single Franchised Hauler may be awarded more than one franchise collection zone.

- The City would establish a fair and equitable rate structure for each collection zone. The rate structure may be similar for multiple or all franchise collection zones. This rate structure would detail the rate schedule for Solid Resources collection services Commercial Establishments will pay.
- The City would establish a formula and caps on how rates for Solid Resources and recycling collection services that are charged to Commercial Establishments can be increased annually.
- Under the Proposed Project, three collection streams are anticipated: Commingled Recyclables (Blue Bin), Organics (Green Bin), and Solid Waste (Black Bin).
- Recycling services would include a Blue Bin system for the collection of Commingled Recyclables.
- Existing Organics recycling will be preserved. This includes restaurants participating in Sanitation's existing commercial food waste diversion program, existing green waste diversion from multifamily properties, and other recycling programs such as organics recycling from grocery stores. Haulers would be required, in a phased manner, to offer expanded Organics recycling as the necessary processing capacity is established.
- The City would mandate that every Commercial Establishment be provided a recycling service.
- The City would mandate maximum annual disposal levels and specific diversion requirements for each franchise zone to promote Solid Resource diversion from landfills.
- The City would mandate that all Solid Resources collection vehicles operated by the Franchised Hauler be late model, low emission, clean fuel vehicles.
- The City would require employees working under the franchise agreements to be paid, at a minimum, a living wage in accordance with the Living Wage Ordinance.
- The Franchised Hauler would assist the City in complying with existing and new regulations.
- The Franchised Hauler would assist the City in citywide public education.
- The Franchised Hauler will provide consistent reporting on all downstream recycling activities.
- Provide a partnership between the City and the franchised hauler to increase diversion and identify challenges.
- New or expanded recycling facilities would be needed as recycling increases under the Proposed Project.
- New or expanded facilities that support collection activities, such as transfer stations and truck base yards, could be required.
- The location and processing capacity of the new or expanded recycling facilities and the locations of transfer stations and truck base yards are not known at this time.
- The following material types will not be collected as part of the Proposed Project:
  - Construction and Demolition (C&D) Waste, debris generated from construction activities
  - Medical Waste
  - Hazardous Waste

- Radioactive Waste
- Pharmaceutical Waste
- Recyclables that have value to the generator, and are sold or donated
- Green waste removed and recycled from a site as incidental to a landscaping business
- Other specialty waste as designated by Sanitation (e.g., biosolids, fats, oils, and grease).

Under the Proposed Project, the City would issue a Request for Proposals (RFP) and accept proposals for each service zone, then select an exclusive Franchised Hauler per collection zone at the culmination of a competitive bid process. If the ordinance is approved by City Council, the earliest date for implementation of the Proposed Project would be January 1, 2017.

#### 2.4.1 Collection Zones

The Proposed Project would establish 11 geographic franchise collection zones (8 large zones and 3 small zones) within the City (see Figure 2-1). These zones are based on the City's existing watershed boundaries, which have been further subdivided using major geographical features such as main highways or mountains to delineate their boundaries. Table 2-1 presents the service level information for the franchise collection zones within the City. The information regarding the methodology used in establishing the collection zones is provided in the FIP (see Appendix B).

The collection zones would contain between approximately 1,000 and 9,000 service accounts and have been sized to provide a range of opportunities for small, medium, and large solid waste hauling firms. Table 2-1 provides preliminary service levels for the 11 collection zones. Service levels are based on the results of information provided by a survey of Permitted Haulers and are likely to be adjusted as more information is obtained.

**TABLE 2-1  
PRELIMINARY FRANCHISE ZONE SERVICE LEVELS**

<b>Zone</b>	<b>Total Service Customers<sup>a</sup></b>	<b>Percent of Total Based on Service Customers<sup>b</sup></b>	<b>Total Cubic Yards of Service per Week<sup>a</sup></b>	<b>Percent of Total Based on Cubic Yards</b>
DT	1,769	3%	21,915	4%
EDT	1,055	2%	10,863	2%
HB	3,029	5%	26,698	5%
NC	8,810	14%	78,035	14%
NE	5,877	9%	48,584	9%
NEV	7,050	11%	70,613	10%
SE	1,963	3%	14,180	3%
SEV	7,624	12%	52,751	13%
SLA	9,266	15%	62,429	11%
WLA	8,984	14%	75,051	14%
WV	8,032	13%	91,324	17%
<b>TOTAL:</b>	<b>63,459</b>		<b>552,444</b>	

### 2.4.2 Materials Processing Facilities and Truck Base Yards

The City has evaluated existing regional material processing capacity and projected the number of new processing facilities that would be needed to fully implement diversion programs under the Proposed Project (see Appendix C, Franchise Initiative Facility Analysis).

By 2030, the Proposed Project plans to divert approximately 1 million tons from landfills annually, including over 239,000 tons from multifamily generators and nearly 730,000 tons from commercial generators. Of the new diversion from Commercial Establishments, approximately 600,000 tons per year would be recyclables and 369,000 tons per year would be organic waste (see Appendix C, Franchise Initiative Facility Analysis).

At the projected level of diversion, the City estimates that 2 new MRFs and either 4 new small Organics processing facilities or 1 new large organics processing facility would be needed to reach the full diversion goals under the Proposed Project. Table 2-2 summarizes the processing facility needs associated with the Proposed Project. Although the facilities analysis assumed that a specific number of facilities at certain capacities would be needed, the actual number of facilities that are developed to accommodate diversion of materials from landfill disposal under the Proposed Project could differ depending on factors that include site availability, site sizes, and facility design capacities.

The ultimate need for new or expanded facilities will not affect the implementation of the Proposed Project. Existing material processing capacity is available for the initial implementation. Franchised Haulers will be required to identify and plan for the necessary processing facilities and demand in their proposals and these plans will become requirements in the franchise contracts. Recycling programs will expand as the facilities necessary to process that material are established.

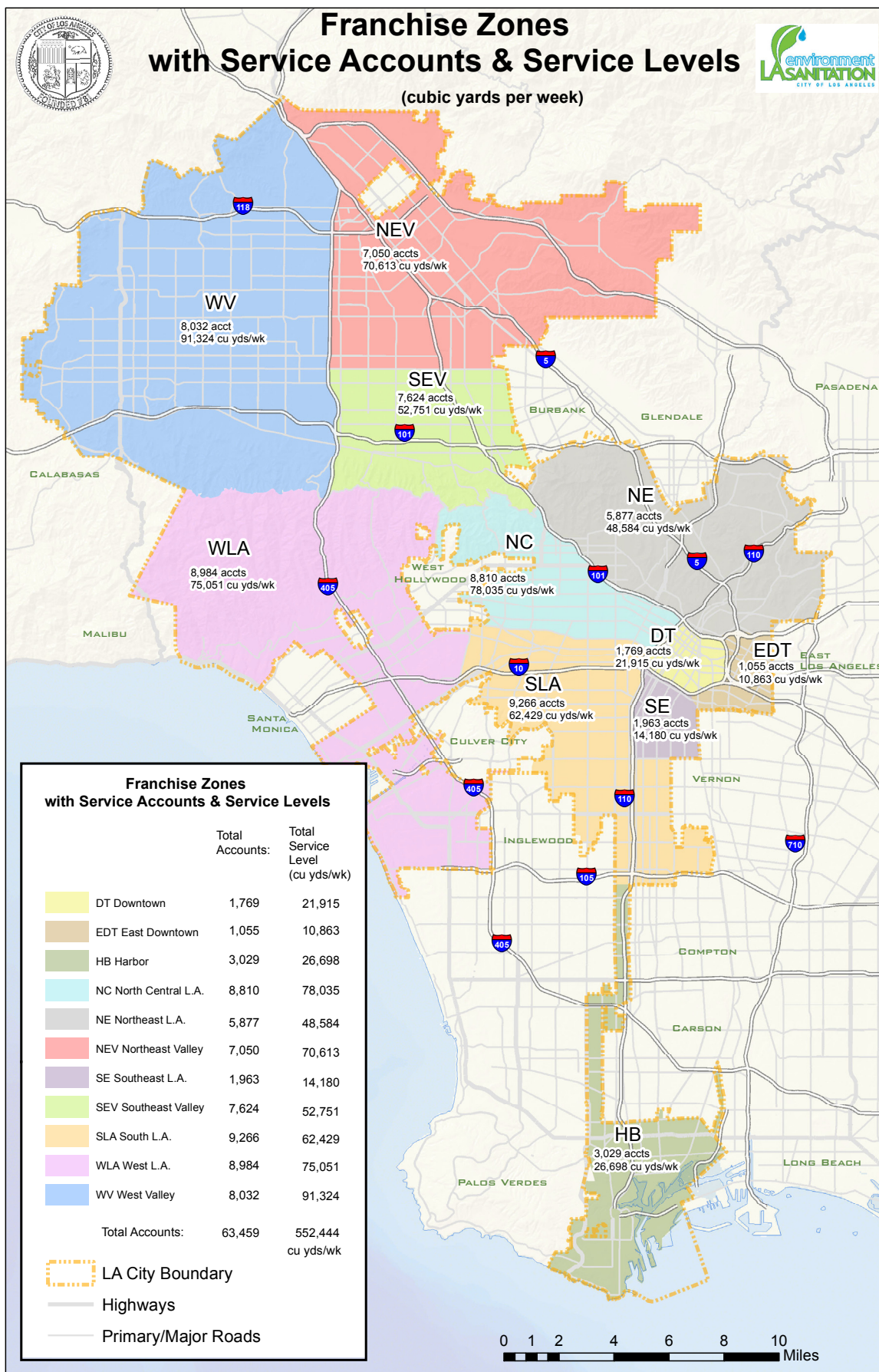
**TABLE 2-2  
FACILITY NEEDS FOR THE PROPOSED PROJECT**

	Recyclables Recovery Facilities		Organics Processing Facilities				
Facility Type/Size	MRF		Small Scale		OR	Large Scale	
	200,000 tons per year		60,000 tons per year			260,000 tons per year	
	Calculated	Rounded	Calculated	Rounded		Calculated	Rounded
Facilities needed for implementation of Proposed Project, not utilizing existing available capacity <sup>1</sup>	3	3	6.1	6		1.4	1
Existing regional capacity not currently utilized, allocated to the Proposed Project <sup>2</sup>	1.4	1	2	2		0.5	0
Net new facilities needed for implementation of Proposed Project, deducting for existing available capacity	1.6	2	4.1	4	0.9	1	

Source: Franchise Initiative Facility Analysis, 2013 (see Appendix C)

Note 1: The total number of facilities estimated to be needed to process material as a result of the Proposed Project, not accounting for existing unused regional capacity.

Note 2: The regional capacity available for the Proposed Project was calculated using a ratio based on the proportion of the regional capacity (that is available and not currently utilized) that will be needed for the Proposed Project compared to that that will be needed to fully implement all SWIRP programs.



In addition to new processing facilities, there is the potential that selected Franchised Haulers could site new truck base yards, expand existing truck base yards, site new transfer stations, or expand existing transfer stations to support collection activities under the Proposed Project. However, whether truck base yards and transfer stations would be expanded or new ones sited is not currently known because this is dependent on the selected Franchised Haulers and their existing equipment and infrastructure, as well as other factors.

Because the locations of expanded or new MRFs, Organics processing facilities, transfer stations, and truck base yards are not known, they cannot be evaluated at a site-specific level under this Draft Program EIR. This Draft Program EIR does include an evaluation of conceptual MRFs, Organics processing facilities, transfer stations, and truck base yards. Expanded or new facilities will be addressed in the project-specific environmental documentation prepared by the lead agency for the jurisdiction in which such new or expanded facilities are located. This Program EIR (upon approval) may be used, as appropriate, as a tiering document for future facilities.

#### 2.4.3 Project Elements and Key Environmental Benefits

Under the Proposed Project, the City would undertake a competitive bidding process through the RFP for each franchise zone, with requirements and criteria as specified in the RFP. Proposers would be evaluated, ranked, and recommended for selection based not only on their ability to achieve the Program Goals but also on their compliance with selection criteria.

The franchise agreement would serve as the implementing mechanism to achieve various Program Goals, including but not limited to the following:

- Diversion targets for recyclables and organics. Diversion targets, including Commingled Recyclables and Organics, to achieve the City's Zero Waste diversion goals and California diversion goals (including AB 341 compliance) would be included in franchise contracts with Franchised Haulers. Diversion targets for Commingled Recyclables and Organics would have the effect of extending landfill capacity and reducing greenhouse gas emissions from landfills (associated with a reduction in disposal of Organics).
- Landfill reduction targets and/or disposal limits. Landfill reduction targets or disposal limits by implementing the City's Zero Waste and California recycling/diversion goals (including AB 341 compliance) would be included in franchise contracts with Franchised Haulers. Landfill disposal limits would have the effect of extending landfill capacity and reducing greenhouse gas emissions from landfills.
- Preserve and expand existing Organics collection. Existing organics recycling will be preserved (over 1,200 restaurants currently participate in Sanitation's existing commercial food waste diversion program, as along with some green waste diversion from multifamily properties). Franchised Haulers would be required to offer organics recycling to all Commercial Establishments, in a phased manner, then implement Citywide diversion of Organics. This would have the effect of extending landfill capacity and reducing greenhouse gas emissions from landfills.
- Routing efficiency requirements. Routing efficiency and verification requirements to achieve the goal of improving the efficiency of the City's Solid Resources system by minimizing vehicle miles traveled (VMT) during collection of Solid Resources would be included in franchise contracts with Franchised Haulers. These routing efficiency requirements would also help achieve the goal to improve the City's air quality (including improvements to



public health and greenhouse gas emissions) and traffic conditions through optimizing VMT and minimizing the number of vehicles collecting in any area at one time.

- Greenhouse Gas Reduction. This program will also reduce greenhouse gases.
- Late model, low emission, clean fuel collection vehicles. Air Quality Management District (AQMD) Rule 1193 for public and private Solid Resources collection fleets requires fleet operators to acquire alternative-fuel, heavy-duty, refuse collection vehicles when procuring vehicles for use within the AQMD jurisdiction. To help achieve the goal to improve the City's air quality, requirements for collection fleets to use late model, low emission, clean fuel vehicles would be included in the franchise contracts with Franchised Haulers, and they would be encouraged to exceed Rule 1193 minimum standards. This would have the effect of reducing air emissions and improving public health.

## **2.5 ALTERNATIVES TO THE PROPOSED PROJECT**

During the initial conceptual phase of the Proposed Project, several alternatives were considered and analyzed. In addition to the Proposed Project and the No Project Alternative (required under CEQA), three project alternatives have been carried forward for detailed analysis in this Draft Program EIR. The three alternatives to the Proposed Project are as follows:

1. Non-exclusive system
2. Exclusive system with multiple Franchised Haulers per wasteshed
3. City collection of all materials

Section 4 of this Draft Program EIR, Alternatives to the Proposed Project, describes the No Project Alternative and the three alternatives to the Proposed Project, evaluates potential environmental impacts of each alternative, and analyzes the ability of each alternative to achieve the objectives of the Proposed Project in greater detail. An overview of each alternative is provided below.

### **2.5.1 Alternative 1: Non-Exclusive System**

The non-exclusive system alternative is comprised of these key components:

- City-wide franchise agreement (no franchise zones aside from the City boundaries)
- Unlimited number of Franchised Haulers provided they meet franchise agreement terms
- Franchised Haulers set rates through contract with customer (no uniform rates)
- Compliance with AB 341
- Collection of three streams: Commingled Recyclables, Organics, and Solid Waste
- The City would mandate that every Commercial Establishment is provided a recycling service
- The City would mandate that all Solid Resources collection vehicles operated by the Franchised Hauler be late model, low emission, clean fuel vehicles
- The City would require employees working under the franchise agreements to be paid, at a minimum, a living wage
- The Franchised Hauler would assist the City in complying with existing and new regulations

- New or expanded recycling facilities would be needed as recycling
- The location and processing capacity of the new or expanded facilities are not known at this time

#### 2.5.2 Alternative 2: Exclusive System with Multiple Franchised Haulers per Wasteshed

The Exclusive system with multiple Franchised Haulers per wasteshed alternative is comprised of these key components:

- Eleven franchise zones (same as Proposed Project)
- Up to 5 Franchised Haulers per zone (2 large and 3 small each)
- Franchised Haulers set rates (no uniform rates)
- Compliance with AB 341 and Zero Waste Goals
- Collection of up to three streams: Commingled Recyclables, Organics, and Solid Waste
- The City would mandate that every Commercial Establishment is provided a recycling service
- The City would mandate that all Solid Resources collection vehicles operated by the Franchised Haulers be late model low emission, clean fuel vehicles
- The City would require employees working under the franchise agreements to be paid, at a minimum, a living wage
- The Franchised Haulers would assist the City in complying with existing and new regulations
- New or expanded recycling facilities would be needed as recycling increases
- The location and processing capacity of the new or expanded recycling facilities are not known at this time

#### 2.5.3 Alternative 3: City Collection of All Materials

City collection of all materials is comprised of these key components:

- Sanitation collects from all Commercial Establishments
- Collection zones based on existing wastesheds
- No private haulers allowed
- Uniform rates
- Compliance with AB 341 and Zero Waste Goals
- Collection of three streams: Commingled Recyclables, Organics, and Solid Waste
- New or expanded recycling facilities would be needed as recycling increases The location and processing capacity of the new or expanded recycling facilities are not known at this time
- New materials handling facilities and new or expanded truck base yards

#### 2.5.4 Alternatives Considered and Withdrawn

During preparation of this Draft Program EIR, a number of considered alternatives were eliminated from further discussion and analysis. These alternatives are described below, along with an explanation of the rationale leading to their exclusion from further analysis. Alternatives considered but eliminated from further evaluation include the following:

1. 15 to 20 franchise zones
2. 25 franchise zones
3. 8 to 10 franchise zones
4. Material recovery facility (MRF) processing instead of source separation
5. Waste stream alternatives based on multi-streams, single-streams, and mixed-waste streams

##### *2.5.4.1 15 to 20 Franchise Zones*

During the development of the Implementation Plan and in response to the public scoping process, several comments were received recommending that between 15 and 20 franchise zones be established. The City considered these recommendations and determined that such an alternative would not result in substantive improved environmental benefits over the Proposed Project.

This alternative would result in more franchise collection zones than the Proposed Project, which would mean a greater number of fleets would be collecting and transporting materials to processing facilities and landfills in the region. This would have the likely effect of resulting in a greater number of VMTs associated with more trips crossing franchise zones as collection trucks travel between their base yards, collection zones, and processing and disposal facilities.

Because this alternative is not expected to result in fewer impacts or substantively different impacts than the Proposed Project, the alternative to establish between 15 and 20 franchise zones has been withdrawn from further consideration and evaluation.

##### *2.5.4.2 25 Franchise Zones*

During the development of the Implementation Plan, several comments were received recommending that 25 franchise zones be established. Establishing 25 franchise zones would result in even smaller franchise zones than would occur if 15 to 20 franchise zones were established, with a greater likelihood of collection trucks traversing the same areas. For the same reasons as described under Section 2.5.4.1, the alternative to establish 25 franchise zones has been withdrawn from further consideration and evaluation.

##### *2.5.4.3 8 to 10 Franchise Zones*

During the development of the Implementation Plan, several comments were received recommending that between 8 and 10 franchise zones be established. This alternative does not substantively differ from the Proposed Project, which provides 11 zones, consisting of 8 large zones and 3 small zones. Because this alternative would result in a similar number of franchise zones as the Proposed Project, it is not expected to result in substantively different environmental impacts than the Proposed Project. Therefore, the alternative for 8 to 10 franchise zones has been withdrawn from further consideration and evaluation.

#### *2.5.4.4 Mixed-Waste MRF Processing Instead of Source Separation*

A comment provided during the public scoping process proposed an alternative to the Proposed Project in which all Solid Resources collected under the Proposed Project would be commingled waste (i.e., Solid Waste, recyclables, and Organics) in one bin rather than separated into different bins by customers at the point of origin. Under this alternative, as outlined in the public scoping comment, a mixed waste processing facility, also known as a “dirty MRF,” would sort non-source separated mixed waste where recyclables and Organics would be recovered for recycling, and the residual material would be transported to a landfill for disposal.

This alternative has been considered and has been withdrawn from further consideration because: the level of diversion would be lower than the Proposed Project; it produces a higher level of contamination; and it does not produce a Citywide uniform recycling message with the City's current three bin source-separated program. On an annual basis, Sanitation currently certifies local mixed waste processing facilities. Under this program, mixed waste processors volunteer to allow Sanitation to perform a facility wide waste audit to determine the recycling or diversion rate of the mixed waste processing operation. Based on this certification program, Sanitation has determined that the diversion rate of these facilities range from 19percent to 32percent. The City certified diversion rates of mixed waste processing facilities are similar to the finding in a recent study by Kessler Consulting, Inc. (Kessler, 2009) which found that of the facilities analyzed, the diversion rate of mixed waste processing ranged from 18percent to 30percent. This level of diversion alone will not allow the City to achieve its Zero Waste goal of diverting 90percent of its Solid Waste from landfill disposal.

In addition, because both Solid Waste and recyclables would be commingled, a portion of the recyclable materials in the mixed waste stream, such as paper products, would be contaminated from commingling with wet waste, such as food, potentially reducing the value and marketability of the recovered recyclables. The majority of the recyclables recovered, both within the State and nationally, are currently exported with much of the material going to China. However, the Chinese government recently imposed new regulations, known as the Green Fence, strengthening the requirements on recyclables or waste they will accept as imports. As a result, recyclable material that is contaminated will not be accepted. The viability of the recycling program is jeopardized without a stable end market for material.

The Proposed Project includes the source-separation of recyclables from Solid Waste using a Blue Bin type system, similar to that currently provided to single and multifamily residences, as well as the Los Angeles Unified School District (LAUSD), along with ongoing public education regarding what recyclables are accepted in the system. Mixed waste processing is in direct conflict with the City's three bin (Black, Blue, and Green) system. A single bin system for residents under the Proposed Project, and three bin system for all other residents, will create confusion and could jeopardize the City goal of Zero Waste, 90 percent by 2025. Outreach and education will continue to be critical to the City's success.

Assuming this system would be implemented under an exclusive franchise collection model, the VMTs may be less than the Proposed Project. However, since this alternative could result in less diversion of materials away from landfill disposal than the Proposed Project, and is in conflict with the goals and objectives adopted by the City Council for the Proposed Project, it has been eliminated from further consideration.

#### **2.5.4.5 *Alternative: Evaluate a Multi-Stream Collection, Single Stream Collection, and Mixed Waste Stream Collection***

During the public scoping process, or Notice of Preparation (NOP), a comment was received stating that the City has the option of implementing a Multi-Stream Collection system, which for analysis purposes is similar to the Proposed Project, a Single Stream Collection system, and a Mixed Waste Stream Collection system. For analysis purposes, the Single Stream and Mixed Waste Stream Collection systems are assumed to be similar to Mixed Waste Processing.

This alternative has been considered and has been withdrawn from further consideration because it is similar to the Mixed Waste Processing alternative and contains similar elements. The level of diversion could be lower than the Proposed Project, commingling Solid Waste with recyclables and Organics produces a higher level of contamination, and would be in conflict with the adopted Proposed Project Goals and Objectives. Assuming this system would be implemented under an exclusive franchise collection model, the VMT's may be less than the Proposed Project. However, since this alternative could result in less diversion of materials away from landfill disposal than the Proposed Project, and is in conflict with the adopted goals of the program, it has been eliminated from further consideration.

## **2.6 RELATED PLANS AND PROJECTS**

In consideration of actions to include in the cumulative impacts evaluations in this Draft Program EIR, past, present, and reasonably foreseeable future actions that have the potential to combine with incremental effects of the Proposed Project to result in cumulative impacts have been identified. Cumulative impacts are those activities that are of a similar character as the Proposed Project, or are otherwise related, and could affect similar environmental resources as the Proposed Project. Because the California Integrated Waste Management Act, which mandates a minimum 50 percent waste diversion level from each city and county, and AB 341, which mandates that all multifamily complexes over 5 units and all commercial businesses that have over four cubic yards of waste collection per week have a recycling program, other jurisdictions in Southern California are undertaking landfill diversion activities that could affect the same environmental resources as the City's diversion efforts. On this basis, the following plans or programs below will be considered in the cumulative impact evaluations.

### **2.6.1 Other Landfill Diversion Programs**

Pursuant to the State's efforts to reduce landfill disposal by 75 percent by 2020, landfill and Solid Resources diversion efforts are being implemented by counties and cities in the same region as the City. In addition, related plans and activities include any efforts by jurisdictions (other than the City) to divert Solid Resources from landfill in excess of the 75 percent diversion level, such as following SWIRP, which is described below.

### **2.6.2 Solid Waste Integrated Resources Plan (SWIRP)**

SWIRP is a long-range master plan for Solid Resources management in the City of Los Angeles. The programs and policies identified in SWIRP apply to all residential, commercial, industrial, and institutional generators in the City, including single-family homes and City government generators.

SWIRP proposes an approach for the City to achieve a goal of 75 percent diversion by the end of 2013 and 90 percent diversion by 2025. These targeted diversion rates would be implemented

through an expansion of existing policies and programs, implementation of new policies and programs, and the development of future facilities to meet the City's Solid Resources infrastructure needs through 2030. SWIRP recommends a series of policies, programs, and facilities that would be required through 2030. They include the following:

1. Expansion of Existing Residential and Commercial Programs, such as source separation and collection of Commingled Recyclables, Organics, and Solid Wastes.
2. Implementation of New Downstream Policies and Programs that address collection, processing, diversion, and disposal of materials after they are generated.
3. Implementation of Mandatory Programs to facilitate source separation and collection at all waste generators within the City on a regular basis.
4. Adoption of Upstream Policies that would minimize the amount of waste prior to the point of generation.
5. Development of MRFs and Organics processing facilities to maximize diversion through residual waste separation and processing. Under SWIRP, the need for new facilities would include three MRFs, one large Organics processing facility (or six smaller ones), one resource recovery center, and five alternative technologies facilities (see Appendix C).
6. Disposal of remaining residual waste at local or remote landfills.

SWIRP addresses diversion of all waste streams in the City. The Proposed Project would divert Solid Resources away from landfill disposal that is generated by Commercial Establishments in the City; the Proposed Project would be a component of SWIRP.

### **SECTION 3**

## **EXISTING CONDITIONS, IMPACTS, MITIGATION, AND LEVEL OF SIGNIFICANCE AFTER MITIGATION**

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This section of the Draft Program EIR evaluates the potential of the Proposed Project to result in significant impacts to the environment and provides a full scope of environmental analyses in conformance with CEQA Guidelines.

The existing conditions portion of the analysis has been prepared in accordance with CEQA Guidelines. The existing conditions for each environmental resource are described based on literature review and archived resources, agency coordination, and field surveys. Applicable federal, state, regional, county, and local statutes and regulations governing the individual environmental resources must be considered by the City in the decision making process. Impacts of these statutes and regulations are discussed under the regulatory framework described for each environmental resource area. Significance thresholds were established in accordance with the Environmental Checklist Form in Appendix G of the CEQA Guidelines. The potential for cumulative impacts were evaluated through the NOP, and the public scoping and agency consultation process. Mitigation measures were derived in part from public and agency input during the NOP and public scoping and agency consultation process. The levels of significance after mitigation were evaluated in accordance with established thresholds, estimating the effectiveness of proposed mitigations to reduce potentially significant impacts from the Proposed Project to below the significance threshold. The impact analysis contained in this environmental document is based solely on the implementation of the Proposed Project as described in Section 2, Project Description, of this Draft Program EIR.

The impact evaluation focuses on the collection of Solid Resources (which includes Commingled Recyclables, Organics, and Solid Waste), and at a conceptual level on new or expanded transfer stations, material recovery facilities (MRFs), Organics processing facilities, and truck base yards. The new or expanded facilities, transfer stations, and truck base yards have not yet been proposed; therefore, the evaluation of these processing facilities and truck base yards in this section is at a conceptual level.

Sanitation's analysis resulted in two categories in which resource areas are grouped. Resource areas that have the potential for the Proposed Project to cause a significant environmental impact are categorized as Major Impact Resource Areas. These resource areas include:

- Air Quality
- Cultural Resources
- Greenhouse Gas
- Transportation

Resource areas that have the potential for the Proposed Project to cause less than significant impacts (with or without mitigation) are categorized as Minor Impact Resource Areas and include:

- Aesthetics/Visual Resources
- Agricultural Resources
- Biological Resources

- Geology and Soils
- Hazards-Hazardous Materials
- Hydrology-Water Resources
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Utilities-Service System



### **3.1 MAJOR IMPACT RESOURCE AREAS**

This Draft Program EIR analyzes the Proposed Project in accordance with the Appendix G of the CEQA Guidelines. The impact evaluation focuses on the collection of Solid Resources, from Commercial Establishments, and at a conceptual level on new or expanded transfer stations, MRFs, Organics processing facilities, and truck base yards.

Sanitation's analysis resulted in two categories into which resource areas are grouped. This section focuses on resource areas that have the potential for the Proposed Project to cause a significant environmental impact. For purposes of this Draft Program EIR, these resource areas are categorized as Major Impact Resource Areas, including:

#### **3.1.1 Air Quality**

#### **3.1.2 Cultural Resources**

#### **3.1.3 Greenhouse Gas Emissions**

#### **3.1.4 Transportation and Traffic**

### 3.1.1 Air Quality

#### 3.1.1.1 Introduction

This section evaluates the potential impacts to air quality and public health as related to air emissions from the Proposed Project. The air quality and public health impact evaluation focuses on the collection of Solid Resources, (which includes Commingled Recyclables Organics, and Solid Wastes). At a conceptual level, this evaluation focuses on new or expanded transfer stations, materials recovery facilities (MRFs) and Organics processing facilities that would be required to process diverted materials, and truck base yards. Collection activities would occur on and from existing Commercial Establishments. New or expanded transfer stations, (MRFs), Organics processing Facilities and truck base yards are expected to be sited on lands with industrial or commercial manufacturing zoning designation, but could include lands zoned for agricultural uses for organics processing facilities. The new or expanded facilities and truck base yards have not yet been proposed; therefore, the evaluation of air quality and associated public health impacts from these facilities is at a conceptual level.

A summary of the Proposed Project's anticipated impacts on air quality and public health, based on the evaluation below, is contained in Table 3.1.1-1.

**TABLE 3.1.1-1  
SUMMARY OF IMPACTS RELATED TO AIR QUALITY**

Environmental Impact Area	Potential Impact	Mitigation	Significant Impact After Mitigation
<b>AQ-1: Conflict With or Obstruct the Implementation of the Applicable Air Quality Plan</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>AQ-2: Violate Any Air Quality Standard or Contribute Substantially to an Existing or Projected Air Quality Violation</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	Yes
<b>AQ-3: Result in a Cumulatively Considerable Net Increase of Any Criteria Pollutant for Which the Project Region is in Nonattainment Under an Applicable Federal or State Ambient Air Quality Standard</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	Yes
<b>AQ-4: Expose Sensitive Receptors to Substantial Pollutant Concentrations</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	Yes
<b>AQ-5: Create Objectionable Odors Affecting a Substantial Number of People</b>			
Collection System	No	None Required	No
New or Expanded Facilities	No	None Required	No
<b>Cumulative Impacts</b>	Yes	Yes	Yes

The analysis of air quality consists of a summary of the regulatory framework to be considered during the decision-making process, a description of the existing conditions within the City, thresholds for determining if the Proposed Project would result in significant impacts, anticipated impacts (direct, indirect, and cumulative), identify mitigation measures, and level of significance after mitigation. The potential for impacts to air quality has been analyzed in accordance with *Appendix G of the State CEQA Guidelines*; the National Ambient Air Quality Standards (NAAQS), the California Ambient Air Quality Standards (CAAQS), and the federal Clean Air Act; and guidance documents provided by South Coast Air Quality Management District (SCAQMD) and California Air Resources Board (CARB).

#### **3.1.1.2 Regulatory Framework**

This regulatory framework identifies the federal, state, regional, and local laws that govern the regulation of air quality, which must be considered by the City when rendering decisions on projects that would have the potential to result in air emissions.

Responsibility for attaining and maintaining ambient air quality standards in California is divided between the CARB and regional air pollution control or air quality management districts. Areas of control for the regional districts are established by CARB, which divides the state into air basins. These air basins are based largely on topography that limits airflow or by county boundaries. The City of Los Angeles is within the South Coast Air Basin and under the jurisdiction of SCAQMD.

#### **Federal**

##### **Federal Clean Air Act**

Federal air quality policies are regulated through the federal Clean Air Act (CAA). The United States Environmental Protection Agency (EPA) adopted the CAA in 1970 and its amendments in 1977 and 1990. Pursuant to the CAA, EPA has established nationwide air quality standards to protect public health and welfare with an adequate margin of safety. These federal standards, known as NAAQS, represent the maximum allowable atmospheric concentrations that were developed for six criteria pollutants—ozone, nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO), particulate matter less than 10 microns and 2.5 microns in aerodynamic diameter (PM<sub>10</sub> and PM<sub>2.5</sub>, respectively), sulfur dioxide (SO<sub>2</sub>), and lead. The NAAQS represent safe levels of each pollutant to avoid specific adverse effects to human health and the environment. A summary of the NAAQS is presented in Table 3.1.1-2.

The 1977 CAA amendment required each state to develop and maintain a State Implementation Plan (SIP) for each criteria pollutant that violates the applicable NAAQS. The SIP serves as a tool to avoid and minimize emissions of pollutants that exceed ambient threshold criteria and to achieve compliance with the NAAQS. In 1990, the CAA was amended to strengthen regulation of both stationary and mobile emission sources for criteria pollutants.

**TABLE 3.1.1-2  
CALIFORNIA AND NATIONAL AMBIENT AIR QUALITY STANDARDS**

Pollutant	Averaging Time	CAAQS <sup>a</sup>	NAAQS <sup>b</sup>	
			Primary <sup>c</sup>	Secondary <sup>d</sup>
Ozone	8 hours 1 hour	0.070 ppm 0.09 ppm	0.075 ppm —	0.075 ppm —
PM <sub>10</sub> <sup>e</sup>	Annual Arithmetic Mean 24 hours	20 µg/m <sup>3</sup> 50 µg/m <sup>3</sup>	— 150 µg/m <sup>3</sup>	— 150 µg/m <sup>3</sup>
PM <sub>2.5</sub> <sup>e</sup>	Annual Arithmetic Mean 24 hours	12 µg/m <sup>3</sup> —	12 µg/m <sup>3</sup> 35 µg/m <sup>3</sup>	15 µg/m <sup>3</sup> 35 µg/m <sup>3</sup>
CO	8 hours 1 hour	9.0 ppm 20 ppm	9 ppm 35 ppm	— —
NO <sub>2</sub>	Annual Arithmetic Mean 1 hour	0.03 ppm 0.18 ppm	0.053 ppm 0.100 ppm <sup>f</sup>	0.053 ppm —
SO <sub>2</sub>	Annual 24 hours 3 hours 1 hour	— 0.04 ppm — 0.25 ppm	0.03 ppm (certain areas) <sup>g</sup> 0.14 ppm (certain areas) <sup>g</sup> — 0.075 ppm <sup>g</sup>	— — 0.5 ppm —
Lead <sup>h</sup>	Calendar Quarter Rolling 3-month Average 30-day Average	— — 1.5 µg/m <sup>3</sup>	1.5 µg/m <sup>3</sup> 0.15 µg/m <sup>3</sup> —	1.5 µg/m <sup>3</sup> 0.15 µg/m <sup>3</sup> —
Visibility-reducing Particles	8 hours	f	—	—
Sulfates	24 hours	25 µg/m <sup>3</sup>	—	—
Hydrogen Sulfide	1 hour	0.03 ppm	—	—
Vinyl Chloride <sup>i</sup>	24 hours	0.01 ppm	—	—

## Notes:

<sup>a</sup>California standards for ozone, CO (except Lake Tahoe), SO<sub>2</sub> (1-hour and 24-hour), NO<sub>2</sub>, and suspended particulate matter (PM<sub>10</sub>, PM<sub>2.5</sub>, and visibility-reducing particles) are values that are not to be exceeded. All others are not to be equaled or exceeded.

<sup>b</sup>National standards other than ozone, PM, and those based on annual averages or annual arithmetic means are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. For PM<sub>10</sub>, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m<sup>3</sup> is equal to or less than 1. For PM<sub>2.5</sub>, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, is equal to or less than the standard.

<sup>c</sup>National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

<sup>d</sup>National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

<sup>e</sup>On December 14, 2012, the national annual PM<sub>2.5</sub> primary standard was lowered from 15 µg/m<sup>3</sup> to 12.0 µg/m<sup>3</sup>. The existing national 24-hour PM<sub>2.5</sub> standards (primary and secondary) were retained at 35 µg/m<sup>3</sup>, as was the annual secondary standard of 15 µg/m<sup>3</sup>. The existing 24-hour PM<sub>10</sub> standards (primary and secondary) of 150 µg/m<sup>3</sup> also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

<sup>f</sup>To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (ppb).

<sup>g</sup>On June 2, 2010, a new 1-hour SO<sub>2</sub> standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO<sub>2</sub> national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

<sup>h</sup>CARB has identified lead and vinyl chloride as toxic air contaminants with no threshold level of exposure for adverse health effects determined. CARB made this determination following the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

<sup>i</sup>Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to particles when the relative humidity is less than 70 percent.

µg/m<sup>3</sup> = micrograms per cubic meter

ppm = parts per million (by volume)

Source: CARB, 2013a

The 1990 amendments to the CAA divide the nation into five categories of planning regions ranging from “marginal” to “extreme,” depending on the severity of pollution in the region, and set new timetables for attaining the NAAQS. Attainment deadlines are from 3 years to 20 years, depending on the category. Areas designated as severe-17 for nonattainment of the federal 8-hour ozone standard are required to reach attainment levels within 17 years of designation. Areas designated as serious for nonattainment of the federal PM<sub>10</sub> standard have a maximum of 10 years to reduce PM<sub>10</sub> emissions to attainment levels. All nonattainment areas for PM<sub>2.5</sub> have 3 years after designation to meet the PM<sub>2.5</sub> standards. Section 182(e)(5) of the federal CAA allows the EPA administrator to approve provisions of an attainment strategy in an extreme area that anticipates development of new control techniques or improvement of existing control technologies if a state has submitted enforceable commitments to develop and adopt contingency measures to be implemented if the anticipated technologies do not achieve planned reductions.

Nonattainment areas classified as serious or worse are required to revise their respective air quality management plans to include specific emission reduction strategies to meet interim milestones in implementing emission controls and improving air quality. EPA can withhold certain transportation funds from states that fail to comply with the planning requirements of the CAA. If a state fails to correct these planning deficiencies within 2 years of federal notification, EPA is required to develop a Federal Implementation Plan for the identified nonattainment area or areas.

### **State**

#### **California Air Quality Standards and California Clean Air Act**

CARB oversees California air quality policies. CAAQS were first established in 1969 pursuant to the Mulford-Carrell Act. These standards are generally more stringent than the NAAQS and include the NAAQS pollutants and four additional pollutants—sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particulates. Relevant CAAQS are listed in Table 3.1.1-2.

The California CAA, which was approved in 1988, requires each local air district in the state to prepare an Air Quality Management Plan (AQMP) that complies with the CAAQS as a part of the SIP. CARB has ultimate responsibility for the SIP for nonattainment pollutants but relies on each local air district to adopt mandatory statewide programs and provide tailored additional strategies for sources under their local jurisdiction. The SIPs required by federal law are a compilation of new and previously submitted plans, programs (such as monitoring, modeling, and permitting), district rules, state regulations, and federal controls. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB forwards SIP revisions to EPA for approval and publication in the Federal Register.

#### **Toxic Air Contaminants**

Toxic air contaminants (TACs) consist of a variety of compounds, including metals, minerals, soot, and hydrocarbon-based chemicals. There are hundreds of different types of air toxics, with varying degrees of toxicity. TACs are capable of causing acute, chronic, and carcinogenic adverse human health effects. Sources of TACs include industrial processes, such as petroleum refining and chrome-plating operations; commercial operations, such as gasoline stations and dry cleaners; and motor vehicle exhaust.

In August 1998, CARB identified particulate matter (PM) exhaust from diesel-fueled engines as a TAC. In September 2000, CARB adopted the *Diesel Risk Reduction Plan*, which recommends a number of control measures to reduce the risks associated with diesel PM to achieve a goal of 75 percent PM reduction by 2010 and 85 percent reduction by 2020 (CARB, 2000). The recommended measures in diesel risk reduction can be grouped as follows:

- Measures addressing on-road vehicles
- Measures addressing off-road equipment and vehicles
- Measures addressing stationary and portable engines

California's solid waste collection vehicle rule, Diesel Particulate Matter (DPM) Control Measure for On-road Heavy-duty Diesel-fueled Residential and Commercial Solid Waste Collection Vehicles, was passed in September 2003 to reduce the harmful health impacts of exhaust from diesel-fueled waste collection trucks (CARB, 2003). Implementation of the solid waste collection vehicle regulation anticipated to reduce cancer-causing DPM and smog-forming nitrogen oxide (NOx) emissions from these trucks by requiring owners to use CARB-verified control technology that best reduces emissions. The solid waste collection vehicle rule applies to owners of solid waste collection vehicles or those diesel-fueled trucks over 14,000 pounds gross vehicle weight with model-year engines from 1960 to 2006 used to collect residential and commercial solid waste. An owner can be a private company operating independently or can be under contract to a City or county, or an agency of City, county, state or federal government that directly operates services for refuse and recycling collection. All are required to clean up their solid waste collection vehicles by using what CARB defines as the Best Available Control Technology (BACT) for reducing diesel PM.

## **Regional**

### **South Coast Air Quality Management District**

The SCAQMD, which monitors air quality in all or portions of Los Angeles, Orange, Riverside, and San Bernardino counties, has jurisdiction over an area of approximately 10,743 square miles and a population of over 16 million. The 1977 Lewis Air Quality Management Act created SCAQMD to coordinate air quality planning efforts throughout Southern California. This act merged four county air pollution agencies into one regional district to improve air quality in Southern California. SCAQMD is responsible for monitoring air quality as well as planning, implementing, and enforcing programs designed to attain and maintain federal and state ambient air quality standards in the district. In addition, SCAQMD is responsible for establishing stationary-source permitting requirements and for ensuring that new, modified, or related stationary sources do not create net emission increases.

On a regional level, SCAQMD and the Southern California Association of Governments (SCAG) have responsibility under state law to prepare the AQMP, which contains measures to comply with state and federal requirements. When approved by CARB and EPA, the AQMP becomes part of the SIP. The most recent EPA-approved South Coast SIPs are the *1997 Air Quality Management Plan* (SCAQMD, 1997) and the *1999 Amendment to the 1997 Ozone AQMP Revision for the South Coast Air Basin and Settlement Agreement on the 1994 Ozone SIP Litigation* (SCAQMD, 1999). The 2007 Final AQMP/SIP was adopted by the SCAQMD Board on June 1, 2007. On September 27, 2007, the CARB Board adopted the State Strategy for the 2007 SIP and the 2007 SCAQMD Plan as part of the SIP. The final 2007 AQMP was submitted to EPA for approval on November 28, 2007.

In May 2008, EPA made the adequacy determination on the 8-hour ozone budgets in the 2007 AQMP (73 *Federal Register* [FR] 28110, May 15, 2008; as corrected on 73 FR 34837, June 18, 2008).

The most recent SCAQMD-adopted AQMP is the final 2012 AQMP that the SCAQMD Governing Board adopted on December 7, 2012. The 2012 AQMP is a regional and multi-agency effort (SCAQMD, CARB, SCAG, and EPA). The 2012 AQMP incorporates the latest scientific and technical information and planning assumptions, including the 2012 Regional Transportation Plan/ Sustainable Communities Strategy, updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts.

SCAQMD has an *Air Toxics Control Plan* that is designed to examine the overall direction of the SCAQMD's air toxics control program (SCAQMD, 2000). It includes strategies that aim to reduce toxic emissions and risk from both mobile and stationary sources. SCAQMD Rule 1193, Clean On-Road Residential and Commercial Refuse Collection Vehicles, is applicable to the solid waste collection fleets operating in the SCAQMD. Rule 1193 requires public and private solid waste collection fleet operators to acquire alternative-fuel refuse collection heavy-duty vehicles when procuring or leasing these vehicles for use by or for governmental agencies in the SCAQMD jurisdiction to reduce air toxic and criteria pollutant emissions.

### **Local**

#### **City of Los Angeles General Plan**

The jurisdiction of the Proposed Project is within the City; therefore, development in the area is governed by the policies, procedures, and standards set forth in the City's General Plan. The General Plan is prepared and maintained by the Department of City Planning. It is a comprehensive, long-range declaration of purposes, policies, and programs for the development of the City. The Air Quality Element of the County General Plan was adopted in 1992, developing goals and policies for improving air quality in Los Angeles County.

#### **3.1.1.3 Existing Conditions**

##### **South Coast Air Basin**

The City is located in the South Coast Air Basin (basin), which has high air pollution potential due to its climate and topography. The climate of the basin is characterized by warm summers, mild winters, infrequent rainfall, light winds, and moderate humidity. This mild climatological pattern is interrupted infrequently by extremely hot summers, winter storms, or Santa Ana winds. The South Coast Air Basin is in a coastal plain bounded by the Pacific Ocean to the west; the San Gabriel, San Bernardino, and San Jacinto mountains to the north and east; and the San Diego County line to the south. During the dry season, the Eastern Pacific High-Pressure Area (a semi-permanent feature of the general hemispheric circulation pattern) dominates the weather over much of Southern California, resulting in a mild climate tempered by cool sea breezes with light average wind speed. High mountains surround the rest of the basin perimeter, contributing to the variation of rainfall, temperature, and winds throughout the basin.

At times, the basin may experience temperature inversions, a condition characterized by an increase in temperature with an increase in altitude. Under normal atmospheric conditions, temperature decreases with altitude; under a temperature inversion condition, as pollution rises,

it reaches an area where the ambient temperature exceeds the temperature of the pollution, thereby limiting vertical dispersion of air pollutants and causing the pollution to sink to the surface, trapping it close to the ground. During summer, the interaction between the ocean surface and the low layer of the atmosphere often creates a marine layer. With an upper layer of warm air mass over the cool marine layer, air pollutants are prevented from dispersing upward. Additional air quality problems in the basin can be attributed to the bright sunshine, which causes a reaction between hydrocarbons and oxides of nitrogen to form ozone. During fall and winter, the greatest pollution problems are CO and NO<sub>x</sub> emissions, which become trapped and concentrated by the inversion layer.

## Existing Air Quality

### Area Designations

The City is located in the area of Los Angeles County that is designated as extreme nonattainment for ozone, as nonattainment for PM<sub>2.5</sub> and lead, and as maintenance for PM<sub>10</sub>, CO, and NO<sub>2</sub> for NAAQS. Under CAAQS, the area is designated as nonattainment for ozone, PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>2</sub>, and lead, and as attainment for CO. Designations of other pollutants are not classified under NAAQS or CAAQS. A summary of the attainment status of each pollutant under the federal and state standards is presented in Table 3.1.1-3.

**TABLE 3.1.1-3  
ATTAINMENT STATUS FOR FEDERAL AND STATE  
REGULATED POLLUTANTS IN THE PROJECT AREA**

Pollutant	State Designation	Federal Designation
Ozone (8-hour)	Nonattainment	Extreme Nonattainment
Ozone (1-hour)	Nonattainment	Revoked [70 FR 44470]
PM <sub>10</sub>	Nonattainment	Attainment/Maintenance
PM <sub>2.5</sub>	Nonattainment	Nonattainment
CO	Attainment	Attainment/Maintenance
NO <sub>2</sub>	Nonattainment	Attainment/Maintenance
Lead	Nonattainment	Nonattainment
All Others	Unclassified	Unclassified

Sources: CARB, 2013b; EPA, 2013a

### Air Monitoring Data

A network of ambient air quality monitoring stations is located throughout the South Coast Air Basin to provide ongoing monitoring of the air quality environment. Three monitoring stations are located in the City—one each at North Main Street, Westchester Parkway, and near the West Los Angeles Veterans Administration Hospital. The North Main Street station measures ozone, CO, NO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, and SO<sub>2</sub>. The other two stations do not measure PM concentrations. Table 3.1.1-4 shows the summary of the maximum concentrations of monitored criteria pollutants from the North Main Street station. Ambient concentrations of SO<sub>2</sub> are in attainment for both CAAQS and NAAQS; therefore, those values are not included in the summary. The monitoring data indicated that CO concentrations at North Main Street station are below the NAAQS and CAAQS for all 3 years. NO<sub>2</sub> exceeded the 1-hour NAAQS once in 2011. PM<sub>10</sub> exceeded the 24-hour CAAQS for 2 of the 3 years, and PM<sub>2.5</sub> exceeded the NAAQS in all 3 years.



**TABLE 3.1.1-4  
SUMMARY OF 2006–2008 AMBIENT AIR QUALITY DATA AT  
NORTH MAIN STREET STATION**

Pollutant (Monitoring Station)	Year	Maximum Concentration (ppm)		Number of Days Standard Exceeded	
		1-hour	8-hour	State 1-hour/8-hour	Federal 8-hour
CO	2010	2.7	2.32	0/0	0/0
	2011	2.8	2.42	0/0	0/0
	2012	2.2	1.91	0/0	0/0
Ozone	2010	0.098	0.08	1/1	0
	2011	0.087	0.065	0/0	0
	2012	0.133	0.077	1/2	1
Pollutant (Monitoring Station)	Year	Maximum Concentration (ppm)		Number of Days Standard Exceeded	
		1-hour	Annual Arithmetic Mean	State 1-hour/Annual	Federal 1-hour/Annual
NO <sub>2</sub>	2010	0.089	0.025	0/0	0/0
	2011	0.11	0.025	0/0	1/0
	2012	0.077	0.025	0/0	0/0
Pollutant	Year	Maximum Concentration (µg/m <sup>3</sup> )		Number of Days Standard Exceeded	
		24-hour	Annual Arithmetic Mean	State 24-hour	Federal 24-hour
PM <sub>10</sub>	2010	42	27.1	0	0
	2011	119.7	29	9	0
	2012	90.9	30.2	43	0
PM <sub>2.5</sub>	2010	48.6	12.6	NA	5
	2011	69.2	13.5	NA	7
	2012	58.7	13.1	NA	4

Source: CARB, 2013c <http://www.arb.ca.gov/adam/cgi-bin/db2www/adamtop4b.d2w/start>; EPA, 2013a, <http://www.epa.gov/air/data/reports.html>

Note: Table values are as of September 7, 2013. When California data and EPA data are not consistent, the higher value is selected for the table.

NA = not applicable.

ppm = parts per million

µg/m<sup>3</sup> = micrograms per cubic meter

<sup>a</sup>There were insufficient (or no) data available to determine this value.

## Sensitive Receptors

Some persons, such as those with respiratory illnesses or impaired lung function due to other illnesses, the elderly over 65 years of age, and children under 14 years of age, can be particularly sensitive to emissions of criteria pollutants. Facilities and structures where these sensitive people live or spend considerable amounts of time are known as sensitive receptors. Land uses identified to be sensitive receptors in the *CEQA Air Quality Analysis Guidance Handbook* include residences, schools, playgrounds, child care centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes (SCAQMD, 1993 updated 2013). Many sensitive receptors are located throughout the City.

#### 3.1.1.4 Significance Thresholds

The potential air quality impacts from the Proposed Project could occur on a local and regional scale. The potential for the Proposed Project to result in impacts related to air quality was analyzed in relation to the questions contained in *Appendix G of the State CEQA Guidelines*, namely, could the Proposed Project have one or more of five potential effects:

Impact AQ-1: Conflict with or obstruct the implementation of the applicable air quality plan.

Impact AQ-2: Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Impact AQ-3: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard (including release in emissions that exceed quantitative thresholds for ozone precursors).

Impact AQ-4: Expose sensitive receptors to substantial pollutant concentrations.

Impact AQ-5: Create objectionable odors affecting a substantial number of people.

The City relies on significance thresholds recommended by SCAQMD in the *CEQA Air Quality Analysis Guidance Handbook* to determine whether projects will have significant impacts to air quality (SCAQMD, 1993 updated 2013). SCAQMD is currently in the process of updating this air quality handbook; however, Chapters 2, 3, and 4 related to air quality background information and the roles of regulatory agencies are available online at the SCAQMD web site (<http://www.aqmd.gov/ceqa/hdbk.html>). Other chapters will be posted on the site as they become available. The chapters completed to date make no change in significance thresholds or analysis methodology.

The *CEQA Air Quality Analysis Guidance Handbook* lists the construction and operation significance thresholds (shown in Table 3.1.1-5). Air quality impacts resulting from construction and operation of a project will be deemed significant if daily emission estimates are above these significance thresholds (SCAQMD, 1993 updated 2013).

The Proposed Project does not involve any construction activities; therefore, the air quality impacts of the Proposed Project are not analyzed in comparison to construction emission thresholds of significance provided by SCAQMD. However, three significance criteria are relevant to the consideration of the Proposed Project:

- Daily SCAQMD operational emissions thresholds for CO, volatile organic compounds (VOCs), NO<sub>x</sub>, oxides of sulfur (SO<sub>x</sub>), PM<sub>2.5</sub>, and PM<sub>10</sub> as shown in Table 3.1.1-5
- NAAQS and CAAQS for CO
- Emissions of TACs
- Odor nuisance pursuant to SCAQMD Rule 402

**TABLE 3.1.1-5  
SCAQMD OPERATIONAL EMISSION THRESHOLDS OF SIGNIFICANCE**

Criteria Air Pollutant	SCAQMD Project Operation Threshold (lb/day)	SCAQMD Project Operation Threshold Converted to Ton/Year
CO	550	100
VOC	55	10
NOx	55	10
SOx	150	27
PM <sub>10</sub>	150	27
PM <sub>2.5</sub>	55	10
Lead	3	0.55

Source: SCAQMD, 1993 updated through 2013.

### 3.1.1.5 Impact Analysis

This section analyzes the potential impacts to air quality that could occur from implementation of the Proposed Project. Air quality impacts of a project generally fall into the following major categories:

1. *Construction Impacts:* Temporary impacts, including fugitive dust from soil disturbing construction activities, and gaseous emissions from construction equipment, delivery and material hauling trucks, employee vehicles, and paints and coatings. Construction emissions vary substantially from day to day, depending on the level of construction activity (which varies by construction phase) and weather conditions.
2. *Operational Impacts:* Long-term impacts from project operation. Operational impacts could occur at both regional and local levels. Traffic-related projects might affect the regional emission levels of air pollutants. The projects might also increase emissions of criteria pollutants in the immediate vicinity of a project, as well as TACs and odor emissions generated onsite.
3. *Cumulative Impacts:* Air quality changes resulting from the incremental impact of the project when added to other projects in the vicinity.

The adoption of the proposed City ordinance to implement the Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. New or expanded transfer stations, MRFs, Organics processing facilities and truck base yards are expected to be sited on lands with industrial or commercial manufacturing zoning designation, but could include lands zoned for agricultural uses for Organics processing facilities. The new or expanded facilities, transfer stations, and truck base yards have not yet been proposed; therefore, the evaluation of air quality and public health impacts of these facilities and truck base yards in this section is at a conceptual level. As such, impacts will be further addressed in the project specific environmental document prepared by the Lead Agency for the jurisdiction in which such new or expanded facilities are located.

## **Assessment Methods and Models**

### **Diesel Vehicle Emission Factors**

Emissions from traveling and idling solid waste collection vehicles (SWCVs) primarily consist of reactive organic gas (ROG), CO, NO<sub>x</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, and SO<sub>2</sub>. Emission factors of these pollutants were estimated using CARB's EMFAC2011 model. The following parameters and assumptions were used in the EMFAC2011 modeling for the SWCV emission factors:

1. 2012 existing condition and No Project alternative in 2017 and 2030 would use all diesel-fueled vehicles that comply with the applicable regulations for those years.
2. Emission factors for SWCVs during vehicle travel were modeled using the EMFAC2011 online database for the vehicle type T7 SWCV, heavy-duty solid waste collection vehicle. Emission factors were based on aggregated vehicle speed in the SCAQMD for the years 2012, 2017, and 2030.
3. Idling emission factors for SWCVs were modeled using the EMFAC2011-PL module for the vehicle type T7 SWCV, heavy heavy-duty solid waste collection vehicle for the years 2012, 2017, and 2030.
4. Additional emissions from the auxiliary power system (APS) of the diesel vehicles were included in the emission estimates for the SWCV operation to account for the extra power used and emissions due to the operation of the vehicles' garbage-container lifting system. APS idling emission factors of vehicles of model year 2007 and later were used for the 2012, 2017, and 2030 emission estimates.
5. SWCVs diesel PM<sub>10</sub> and PM<sub>2.5</sub> emission factors were adjusted to reflect the emission reduction requirements set forth in the CARB SWCV rule (CARB, 2003). The rule applies to all SWCVs of 14,000 pounds or more that operate on diesel fuel, have engines in model years from 1960 through 2006. By 2010, waste hauling and waste recycling companies were required to install BACT on their vehicles of model 2006 or older to reduce diesel emissions. The rule provided four options to comply with the PM emission control requirements, including 1) a new engine starting with model 2007 engines, 2) repowered model 1994 to 2006 engines, 3) an alternative-fuel engine, or 4) any diesel engine to which the highest level CARB-verified diesel emission control strategy is applied. For the purpose of estimating the emissions of the diesel SWCVs, all diesel SWCVs in the City were assumed to comply with the PM<sub>10</sub> and PM<sub>2.5</sub> emission levels for the model year 2007 standards.

Summaries of the vehicle emission factors and detailed assumptions are included in Appendix D.

### **Clean Fuel Vehicle Emission Factors**

The City has committed to use 100 percent late model low emission alternative-fuel vehicles starting on the first day of the Proposed Project implementation. Unlike diesel and gasoline vehicles that have detailed emission inventory information in EMFAC2011, the alternative-fuel vehicle emission factors were not available in EMFAC2011. In addition, no other agency-approved emission inventories or databases for alternative fuel are available. More specific emission information may be available, such as data from manufacturers of alternative-fuel vehicle engines, which typically contain information on one type of engine. However, such data are difficult to translate into a complex vehicle fleet emission rate that would be comparable to the diesel-vehicle

fleet emissions modeled from EMFAC2011. Therefore, emissions from alternative-fuel SWCVs used by the Propose Project were estimated using information collected from studies or surveys that compare the general emission levels of similar types of natural gas vehicles and diesel vehicles. Although alternative-fuel vehicles can be powered by other types of fuel, this analysis used the emission factors of vehicles using liquefied natural gas (LNG) and compressed natural gas (CNG) to represent the alternative-fuel vehicle emission levels. The rates of emission reduction or increase of the LNG/CNG vehicles from diesel vehicles are summarized from these studies and listed in Table 3.1.1-6.

Table 3.1.1-6 includes the percent emission change of SWCVs or other heavy heavy-duty natural gas vehicles compared to similar types of diesel vehicles. The data are from the studies performed in the early 2000s, such as the Argonne National Laboratory report in 2000 (Argonne National Laboratory, 2000) and the Inform Inc. Report in 2003 (Inform Inc. 2003), as well as the more recent information from SCAQMD in 2013 for model year 2010 refuse trucks (SCAQMD, 2013).

**TABLE 3.1.1-6  
SUMMARY OF LNG OR CNG HEAVY-DUTY TRUCK EMISSIONS  
COMPARED TO SIMILAR DIESEL TRUCKS AND DERIVED EMISSION FACTORS**

<b>Pollutant</b>	<b>Percent Change Compared to Similar Diesel Trucks - LNG Refuse Trucks<sup>a</sup></b>	<b>Percent Change Compared to Similar Diesel Trucks - Natural Gas Garbage Trucks<sup>b</sup></b>	<b>Percent Change used in EPA SmartWay Truck Tool<sup>c</sup></b>	<b>Percent Change Tested by SCAQMD<sup>d</sup></b>	<b>Selected and Used for the Analysis</b>
ROG	-64%	-69% to -83%	NA	NA	-64%
CO	80%	-11% to +200%	NA	NA	200%
NOx	-32%	-32% to -85%	-17%	-50% to -73%	-17%
PM	-86%	-85% to -94%	-86%	NA	0% <sup>e</sup>

Source:

<sup>a</sup> *Natural Gas Vehicles: Status, Barriers, and Opportunities, Table 5: Emission Reductions of NGVs Compared with Similar Models of Diesel Vehicles* (percent difference) (Argonne National Laboratory, 2000)

<sup>b</sup> *Greening Garbage Trucks: New Technologies for Cleaner Air*, Inform Inc, 2003

<sup>c</sup> *SmartWay 2.0.11 Truck Tool – Technical Documentation*, EPA, January 2012.

<sup>d</sup> *SCAQMD Preliminary Key Findings In-Use NOx Emissions Compared to 2010 Exhaust Emission Standard (SCAQMD, March 2013, [http://www.aqmd.gov/hb/attachments/2011-2015/2013Mar/SpecMtgAttach/3\\_Testing\\_OnRoad\\_HD\\_Vehicles.pdf](http://www.aqmd.gov/hb/attachments/2011-2015/2013Mar/SpecMtgAttach/3_Testing_OnRoad_HD_Vehicles.pdf))*. Accessed in October 2013. Data is derived from the figure for 2010 refuse trucks.

<sup>e</sup> PM emission rate from diesel vehicles that meets CARB's SWCV Rule requirements was assumed to be similar to the emission rate of alternative fuel vehicles. Therefore, the alternative fuel vehicles PM reduction rate summarized from the studies (86%) was not used in this analysis..

The data in Table 3.1.1-6 demonstrated a consistent trend in emission reductions in LNG or CNG SWCVs for reactive organic compounds (ROCs), NOx, and PM when compared to similar types of diesel vehicles. Information for SO<sub>2</sub> emission levels was not listed in these studies.

To estimate the emissions of alternative-fuel SWCVs for the project operation, the emission factors of diesel SWCVs were first modeled. Emission factors of alternative-fuel SWCVs were estimated by scaling the emission factors of the diesel SWCVs by the emission change rate summarized in Table 3.1.1-6. To be conservative, the rates for the least reduction were used for pollutants (ROG and NOx) that have lower emissions for LNG/CNG trucks than for diesel trucks. CO has shown various emission trends that ranged from a reduction of 11 percent to an increase of up to 200 percent compared to diesel vehicles. The highest emission increase found in these studies, a

200 percent increase from diesel truck emissions, was used in the emission calculations. SO<sub>2</sub> emissions from alternative fuel vehicles were estimated using the natural gas fuel sulfur content.

Although the studies have shown that alternative fuel vehicles would emit 86 to 94 percent less PM compared to diesel vehicles, these emission reduction rates were not used in the emission calculations. Because the SWCVs in California were required to meet the retrofitting requirements of the CARB SWCV rule (CARB, 2003) by 2010, PM emissions from the retrofitted diesel vehicles would be lower than the vehicles used for some of the referenced studies that might have used older and non-retrofitted vehicles. To avoid overestimating the PM emission reductions by alternative fuels, alternative fuel vehicle PM<sub>10</sub> and PM<sub>2.5</sub> emission factors were assumed to be the same as the adjusted PM emission factors for the retrofitted or newer model diesel vehicles.

### Emission Calculation and Comparisons

Vehicle emissions were calculated by multiplying the emission factors by the VMT and vehicle idling time. The VMTs and idling hours of the existing condition (2012), the No Project in 2030, and Proposed Project and the three project alternatives in 2030 were obtained from the technical memorandum to Sanitation presenting the Traffic Analysis (CH2M HILL, 2013). No Project, Proposed Project, and the three project alternatives' VMT and idling hours in 2017 were interpolated using the 2012 and 2030 data. Emission changes due to the No Project and Project alternatives in 2017 and 2030 from the CEQA 2012 baseline were calculated and compared to the SCAQMD CEQA significance thresholds to evaluate air quality impacts. If the Proposed Project emissions changes were below the SCAQMD CEQA significance thresholds, the impacts on air quality from the Proposed Project would be less than significant.

### **Construction Impacts**

Construction impacts of the potential new or expanded transfer stations, MRFs, Organics processing facilities, and new truck base yards were evaluated conceptually in this document. Emissions from construction of these facilities are assumed to exceed significance thresholds in this Draft Program EIR, and will be further addressed in the project-specific environmental document prepared by the Lead Agency for the jurisdiction in which such new or expanded facilities are located at the time when the new or expanded facilities can be better defined. Mitigation measures AQ-1 through AQ-13 would minimize construction emissions.

### **Operational Impacts**

#### Project Vehicle Activities in Study Area

Long-term air emissions in the City would be from the SWCVs traveling and idling in the franchise zones. The operation of the vehicles would not cause changes that would affect the regional or local vehicle travel patterns. Table 3.1.1-7 provides the VMT and idling hours of the SWCVs in the City for each alternative and each analysis year. VMT and idling hours of No Project, Proposed Project and the three project alternatives in 2017 and 2030 would be higher than the 2012 existing conditions. In 2030, the No Project, Proposed Project, and Alternative 3 would increase VMT and idling hours by 12 to 15 percent, and Alternatives 1 and 2 would increase the VMT and idling hours by up to 76 percent, from the 2012 condition.

**TABLE 3.1.1-7  
PROJECT VEHICLE MILES TRAVELED AND IDLING HOURS**

<b>Analysis Years</b>	<b>Vehicle Fuel Type</b>	<b>VMT (miles/year)</b>	<b>Idling (hours/year)</b>
2012	Diesel	9,143,221	349,551
2017 No Project	Diesel	9,516,780	356,653
2017 Proposed Project	Alternative Fuel	9,334,611	408,338
2017 Alternative 1	Alternative Fuel	14,615,742	483,477
2017 Alternative 2	Alternative Fuel	14,570,010	483,477
2017 Alternative 3	Alternative Fuel	9,334,611	408,338
2030 No Project	Diesel	10,488,034	375,117
2030 Proposed Project	Alternative Fuel	10,287,273	442,581
2030 Alternative 1	Alternative Fuel	16,107,380	525,046
2030 Alternative 2	Alternative Fuel	16,056,981	525,047
2030 Alternative 3	Alternative Fuel	10,287,273	442,581

Source: CH2M HILL, 2013

The City will require the use of 100 percent alternative-fuel vehicles for each alternative, starting 2017 when the Proposed Project is implemented. This requirement is one step ahead of what is required by the state or local agencies for SWCVs for reducing diesel emissions.

#### **Project Emission and Impacts**

Emissions from SWCVs in 2017 and 2030 were estimated using derived emission factors of alternative-fuel vehicles based on the percent of reduction or increase in emissions, as summarized in Table 3.1.1-6. Details of the emission factors and assumptions used in the calculations are in Appendix D. Summaries of vehicle emissions and changes in emission, compared to the 2012 baseline, for No Project, Proposed Project, and each of the three project alternatives in 2017 and 2030 are presented in Tables 3.1.1-8 and 3.1.1-9, respectively.

Tables 3.1.1-8 and 3.1.1-9 demonstrated that using the derived emission factors of alternative-fuel vehicles for the Proposed Project and the project alternatives, even with increased VMT and idling hours, the project's operational vehicle emissions of ROG, NO<sub>x</sub>, and SO<sub>2</sub> in 2017 and 2030 would be lower than the 2012 baseline. Emission calculations assumed a 200 percent increase of CO emissions when replacing the diesel trucks with alternative-fuel trucks, therefore, CO emissions would increase in 2017 and 2030 for the Proposed Project and the project alternatives, compared to the 2012 baseline. There would be a slight increase of PM<sub>10</sub> and PM<sub>2.5</sub> emissions from the Proposed Project and the three project alternatives in 2017 and 2030 compared to 2012 baseline due to the higher VMT and idling hours of the Proposed Project, and the conservative assumption that the alternative fuel PM emission factors would be equal to the diesel truck emission factors.

**TABLE 3.1.1-8  
CRITERIA POLLUTANT EMISSIONS – ESTIMATED BASED ON  
DERIVED EMISSION FACTORS FOR ALTERNATIVE-FUEL VEHICLES**

	Emissions (ton/year)					
	ROG	CO	NOx	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
2012	7.530	26.904	184.807	0.203	2.175	1.452
2017 No Project	6.994	27.042	148.354	0.209	2.212	1.464
2017 Proposed Project	2.807	89.704	125.705	0.090	2.277	1.534
2017 Alternative 1	3.496	113.464	183.695	0.134	3.279	2.139
2017 Alternative 2	3.494	113.371	183.248	0.133	3.271	2.135
2017 Alternative 3	2.807	89.704	125.705	0.090	2.277	1.534
2030 No Project	6.487	28.271	77.242	0.224	2.308	1.494
2030 Proposed Project	2.639	95.167	67.371	0.099	2.362	1.556
2030 Alternative 1	3.348	122.065	95.392	0.148	3.477	2.232
2030 Alternative 2	3.345	121.947	95.192	0.148	3.468	2.227
2030 Alternative 3	2.639	95.167	67.371	0.099	2.362	1.556

Note: Emissions summarized in the table included the emissions from vehicle travel, vehicle idling, and APS use. PM emissions included the vehicle exhaust emissions, brake wear, and tire wear.

**TABLE 3.1.1-9  
CRITERIA POLLUTANT EMISSION CHANGES FROM 2012 BASELINE –  
ESTIMATED BASED ON DERIVED EMISSION FACTORS FOR  
ALTERNATIVE-FUEL VEHICLES**

	Emission Changes (ton/year)					
	ROG	CO	NOx	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
2017 No Project	-0.54	0.14	-36.45	0.01	0.04	0.01
2017 Proposed Project	-4.72	62.80	-59.10	-0.11	0.10	0.08
2017 Alternative 1	-4.03	86.56	-1.11	-0.07	1.10	0.69
2017 Alternative 2	-4.04	86.47	-1.56	-0.07	1.10	0.68
2017 Alternative 3	-4.72	62.80	-59.10	-0.11	0.10	0.08
2030 No Project	-1.04	1.37	-107.56	0.02	0.13	0.04
2030 Proposed Project	-4.89	68.26	-117.44	-0.10	0.19	0.10
2030 Alternative 1	-4.18	95.16	-89.42	-0.06	1.30	0.78
2030 Alternative 2	-4.18	95.04	-89.62	-0.06	1.29	0.77
2030 Alternative 3	-4.89	68.26	-117.44	-0.10	0.19	0.10
SCAQMD CEQA Threshold (Converted from pounds/day)	10	100	10	27	27	10
Exceed Threshold?	No	No	No	No	No	No

Note: SCAQMD's CEQA threshold for operation emissions are in pounds per day. Thresholds in tons per year were calculated using 365 days a year.

As shown in Table 3.1.1-9, the Proposed Project and Alternative 3 have the highest emission reductions of ROG, NOx, and SO<sub>2</sub> compared and the lowest increase for PM and CO to the 2012 baseline. None of the pollutants of the Proposed Project or project alternatives would have emission increase exceeding the SCAQMD CEQA significance thresholds. Therefore, operation impacts from



collection activities under the Proposed Project are expected to be beneficial to air quality for ROG, NO<sub>x</sub>, and SO<sub>2</sub>, and to have less-than-significant impacts for other pollutants.

Lead emissions are not expected from alternative fuel vehicles because the clean fuels do not contain lead compounds. Diesel exhaust contains trace amount of lead. According to CARB's PM profile for MY 2007 heavy heavy-duty vehicle emissions, lead accounts for 0.0006 percent of diesel PM (CARB, 2013e). By utilizing alternative fuel vehicles, collection activities under the Proposed Project and project alternatives are expected to decrease lead emissions from the 2012 baseline level. Therefore, the Proposed Project would be beneficial to reducing lead concentrations in ambient air.

In conclusion, implementation of the collection activities under the Proposed Project would not be expected to cause emission increases that exceed the SCAQMD CEQA thresholds. Furthermore, the Proposed Project would eliminate diesel emissions by using 100 percent alternative-fuel SWCVs starting the first day of the Proposed Project's operation. Therefore, the Proposed Project would have less-than-significant impacts to air quality.

Evaluation of the operational impacts of the Proposed Project focused on the SWCVs emissions within the project area.

Operational emissions from the potential new or expanded transfer stations, materials processing facilities, and new truck base yards are assumed to exceed significance thresholds in this Draft Program EIR; therefore, the new or expanded transfer stations, processing facilities, or truck base yards could result in conflicts with air quality management plans, significance thresholds for criteria pollutants, expose sensitive receptors to air pollutants. Emissions from these facilities operation will be further addressed in the project specific environmental document prepared by the lead agency for the jurisdiction in which such new or expanded facilities are located when the specific new or expanded facilities operation are proposed and better defined. Mitigation measures AQ-14 through AQ-20 would minimize operational emissions from facilities.

#### Localized CO Impacts

CO is considered a localized problem under Section 9.4 of the SCAQMD *CEQA Air Quality Analysis Guidance Handbook*; thus, additional analysis is required when a project is likely to expose sensitive receptors to CO hotspots.

CO hot spots normally occur at locations where large amount of vehicles idle, such as at congested intersections. Although alternative-fuel vehicles could have higher CO emission rates compared to diesel vehicles, the operation of SWCVs in the franchise zones is not expected to cause the SWCVs to congregate at a single location, or to change the local traffic patterns that might cause additional congestion at intersections. An individual SWCV traveling or idling on local streets or stopping at an intersection is not expected to increase local CO concentrations to cause new hot spots.

#### Toxic Air Contaminants

There are many TACs emitted from mobile sources. In 2007, EPA identified seven TACs with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers. These seven compounds are acrolein, benzene, 1,3-butadiene, DPM,

formaldehyde, naphthalene, and polycyclic organic matter. Based on FHWA's mobile source emission analysis, DPM is the dominant mobile source air toxics of concern (FHWA, 2012).

Consistent with the EPA and FHWA findings, the main TAC of concern in South Coast Air Basin, where the project is located, is DPM. According to the most recent SCAQMD Multiple Air Toxics Exposure Study performed for the basin, DPM is the major contributor to cancer risks in the region, and accounted for about 84 percent of the total cancer risks in the basin (SCAQMD, 2008).

The major sources of DPM are the diesel-fueled off-road engines and on-road vehicles, including diesel trucks and buses. Efforts for reducing emissions have been taken at federal, state, and local levels. EPA's Control of Hazardous Air Pollutants from Mobile Sources (*Federal Register*, Vol. 72, No. 37, page 8430, February 26, 2007) requires controls that will dramatically decrease mobile source air toxic emissions through cleaner fuels and cleaner engines. Based on an analysis by the Federal Highway Administration (FHWA), even if VMT increases by 102 percent from 2010 to 2050, a combined reduction of 83 percent in the total annual emissions for the mobile source air toxics is projected for the same period by implementing the rule requirements (FHWA, 2012). At state and local levels, the CARB DPM Risk Reduction Plan and the various air toxic control measures (ATCMs) implemented in recent years expect to reduce DPM emissions and the associated health risk by 75 percent in 2010 and 85 percent or more by 2020 in California (CARB, 2000). In SCAQMD, Rule 1193 requires public SWCV fleets to acquire alternative-fuel, heavy-duty, refuse collection vehicles when procuring or leasing such vehicles, which will aid in the reduction of air toxic and criteria pollutant emissions. With implementation of these regulatory requirements to reduce emissions of air toxics, especially DPM, cancer risks due to DPM in the region are expected to decrease in future years regardless of the regional VMT growth and increase, with or without the Proposed Project.

The project alternatives would require the use of 100 percent alternative-fuel vehicles starting the first day of implementation. This is one step ahead of the CARB SWCV rule (retrofitting requirements to 2006 model and older) and the SCAQMD Rule 1193 (alternative-fuel vehicles are required for only new purchases or new lease). Therefore, the Proposed Project is expected to further decrease the mobile-source air toxic emissions, especially DPM, by eliminating DPM emissions from its SWCV fleet. Because DPM is the cancer risk driver in South Coast Air Basin, the Proposed Project would be beneficial to the regional emission reduction of DPM, thereby reducing the population exposure to mobile source air toxics and reduce the resulted cancer risks in the area.

The specific locations of future facilities have not been identified, so a quantitative assessment of health risk at sensitive receptors locations cannot be performed. Potential health risks associated with future facilities would be addressed in the project-specific environmental document prepared by the lead agency for the jurisdiction in which such new or expanded facilities are located at the time when the new or expanded facilities can be better defined.

### Odor

According to the SCAQMD *CEQA Air Quality Analysis Guidance Handbook*, odor nuisances are associated with land uses and industrial operations, including agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass-molding facilities (SCAQMD, 1993 updated 2013). The collection activities under the Proposed Project do not fall into any of these categories, and the operational odor impacts from the Proposed Project would be expected to be less, compared to existing conditions or the

No Project alternative, because alternative-fuel vehicles tend to have less odorous emissions than diesel vehicles. New processing facilities and transfer stations could fall into one or more of these categories and could, therefore, result in potentially significant odor impacts, depending on the location of the new facilities and whether sensitive receptors are located nearby. Mitigation measure AQ-21 would minimize odor impacts associated with operations of processing facilities and transfer stations.

### Cumulative Impacts

According to the SCAQMD white paper *Potential Control Strategies to Address Cumulative Impacts from Air Pollution, Appendix D Cumulative Impact Analysis Requirements Pursuant to CEQA*, an individual project that does not exceed the CEQA significance thresholds is generally not considered to be cumulatively significant (SCAQMD, 2003).

As shown in Tables 3.1.1-8 and 3.1.1-9, emissions of the nonattainment pollutants ( $PM_{10}$ ,  $PM_{2.5}$ , and ozone precursors  $NO_x$  and ROG) during the operation of the collection activities under the Proposed Project would not exceed the CEQA Thresholds of Significance established by SCAQMD. Therefore, the cumulative impacts from the Proposed Project's collection activities would be less than significant.

Construction and operation of new or expanded processing facilities, transfer stations, or truck base yards could result in emissions that exceed SCAQMD thresholds. Additionally, future stationary source emissions from the facilities would further contribute to exceedences to the SCAQMD thresholds, in conjunction with emissions from related projects. Implementation of mitigation measures AQ-1 through AQ-21 would reduce the construction and operational emissions associated with future facilities; however, residual impacts that contribute to a cumulative impact could remain. Therefore, a potentially significant and unmitigated cumulative impact is identified.

#### 3.1.1.6 Mitigation Measures

The analysis undertaken for this Draft Program EIR determined that the collection activities under the Proposed Project would not result in significant adverse impacts related to air quality on a project or cumulative basis; therefore, no mitigation measures would be required.

For the new or expanded facilities, transfer stations, or truck base yards, the following mitigation measures (or equivalent) would be implemented:

#### **Construction-Related Emissions**

- AQ-1:** Future facilities within the jurisdiction of the SCAQMD shall prepare and implement a fugitive dust control program pursuant to the provisions of SCAQMD Rules 402 and 403 prior to any ground disturbance. For future facilities outside the jurisdiction of the SCAQMD, adherence to any applicable fugitive dust control programs shall be required.
- AQ-2:** Minimize combustion emissions during construction activities.
- AQ-3:** Low VOC paintings and coatings shall be used on future facilities.
- AQ-4:** Excavation, grading, and other construction activity shall be limited to one activity or phase at a time.

- AQ-5:** Hours of operation of heavy-duty equipment shall be limited to a maximum of 8 hours per day, 5 days per week.
- AQ-6:** Fossil-fueled equipment shall be replaced with electrically driven equivalents (provided they are not run via a portable generator set) or clean fuel options, to the maximum extent practicable.
- AQ-7:** All diesel engines shall be shut off when not in use to reduce emissions from idling.
- AQ-8:** Curtail construction during periods of high ambient pollutant concentrations as determined by local air districts. Activities may include ceasing construction activity during the peak hour of vehicular traffic on adjacent roadways.
- AQ-9:** Implement activity management (e.g., rescheduling activities to reduce short-term impacts) to minimize concurrent operation of construction equipment and concurrent construction of project phases.
- AQ-10:** During the smog season (May through October), lengthen the construction period to minimize the vehicles and equipment operating at the same time.
- AQ-11:** Minimize the obstruction of traffic on adjacent roadways.
- AQ-12:** Power construction equipment with diesel engines fueled by alternative diesel fuel blends or ultra-low sulfur diesel (ULSD). Only fuels that have been certified by the CARB should be used. The CARB has verified specific alternative diesel fuel blends for NOx and PM emissions reduction. The applicant also should use CARB-certified alternative fueled (e.g., compressed natural gas [CNG], liquid natural gas [LNG], liquid propane gas, electric motors, or other CARB-certified off-road technologies) engines in construction equipment where practicable.
- AQ-13:** Use construction equipment that meets the current off-road engine emission standard (as certified by the CARB) or that is re-powered with an engine that meets this standard. Tier I, Tier II, and Tier III engines have significantly less NOx and PM emissions compared with uncontrolled engines.

### ***Facility Operational Emissions***

- AQ-14:** During the facility design phase, a review of local SCAQMD rules shall be conducted to determine site-specific permit requirements for waste processing or handling facilities that may emit or potentially emit VOCs, particulates, CO, NOx, or SOx. Emissions of nonconventional pollutants and hazardous air pollutants (Title V-Major Sources) shall comply with federal and state permitting rules.
- AQ-15:** Future facility applicant(s) shall properly maintain ROG emission control devices within the gasoline/fueling dispensing station.
- AQ-16:** Future facility applicant(s) shall ensure combustion operational emissions are minimized.

- AQ-17:** All diesel truck operators shall strictly abide by the applicable state law requirements for idling. Idling of the primary engine shall be limited to 5 minutes.
- AQ-18:** Energy-efficient design will be provided for buildings, including automated control systems for heating, air conditioning, and energy efficiency beyond California Code of Regulations (CCR) Title 24 (California Building Standards Code) requirements, lighting controls and energy-efficient lighting in buildings, increased insulation beyond Title 24 requirements, and light-colored roof materials to reflect heat.
- AQ-19:** Landscaping shall be used to maximize building protection from energy-consuming environmental conditions and to shade paved areas. Such landscaping could include planting of shade trees to shade 50 percent of paved areas within 15 years and planting deciduous trees on the south- and west-facing sides of buildings.
- AQ-20:** Implement measures to reduce the amount of vehicle traffic to and from future facilities. This could include provisions such as encouraging employees to rideshare or carpool to the project site, or incentives for employees to use alternative transportation.
- AQ-21:** An odor analysis shall be prepared as part of future project-specific air quality analysis. Should the odor analysis identify the potential for impacts, the facility shall incorporate odor-reducing design features. Such features could include, but are not limited to:
- Provision of exhaust fans to provide multiple air exchanges every hour;
  - Treatment of air leaving the building by an odor-neutralizing misting system; and
  - Maintaining negative pressure at the building entrances to minimize the amount of untreated air leaving the building.

### 3.1.2 Cultural Resources

#### 3.1.2.1 Introduction

This section evaluates the potential impacts to cultural resources from the Proposed Project. The analysis consists of an evaluation of the potential impact that the Proposed Project could have on historic resources, archaeological resources, paleontological resources, and human remains.

The impact evaluation focuses on the collection of Solid Resources to divert materials from landfills, and at a conceptual level, on new or expanded processing facilities that would be required to process diverted materials, and truck base yards. Collection activities would occur on and from existing Commercial Establishments. New or expanded processing facilities and truck base yards are expected to be sited on lands with industrial or commercial manufacturing zoning designation, but could include lands zoned for agricultural uses for Organics processing facilities. The new facilities and truck base yards have not yet been proposed; therefore, the evaluation of these facilities in this section is at a conceptual level.

A summary of the Proposed Project's anticipated impacts on cultural resources, based on the evaluation below, is contained in Table 3.1.2-1.

**TABLE 3.1.2-1  
SUMMARY OF IMPACTS RELATED TO CULTURAL RESOURCES**

Environmental Impact Area	Potential Impact	Mitigation	Significant Impact After Mitigation
<b>CUL-1: Historic Resources</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	Yes
<b>CUL-2: Archaeological Resources</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>CUL-3: Paleontological Resources</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>CUL-4: Human Remains</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>Cumulative Impacts</b>	Yes	Yes	Yes

#### 3.1.2.2 Environmental Setting

##### **Paleontological Resources Setting**

The presence of paleontological resources is associated directly with specific geologic formations, strata, or rock units known to contain the fossilized remains of fauna and flora. Fossil-bearing formations in which organic materials were buried and solidified over geologic time are uniformly sedimentary in origin but variable in age, composition, geographic location, and types of fossils they contain.

The principal types of vertebrate fossils typically yielded by formations in the Los Angeles area are marine and terrestrial vertebrate fossils, and marine invertebrate fossils.

Geologic mapping of the Los Angeles region has identified the geological units present in the City (City of Los Angeles, 2006). The geologic units and their paleontological sensitivity level (potential to bear fossils) are presented in Table 3.1.2-2 and described below.

**TABLE 3.1.2-2  
GEOLOGIC AND PALEONTOLOGICAL SUMMARY –  
CITY OF LOS ANGELES**

Years Before Present	Period	Epoch	Formations	Paleontological Sensitivity Level
Present to 11,000	Quaternary	Holocene	Younger alluvium and dune sand	Low
11,000 to 1.8 million		Pleistocene	Older alluvium and terrace deposits – marine or terrestrial	High
1.8 to 5 million	Tertiary	Pliocene	Fernando – marine	High
5 to 23 million		Miocene	Puente – marine	High
			Monterey – marine	High
			Topanga – marine	High
23 to 39 million		late Eocene – early Miocene	Sespe – terrestrial	High

Source: City of Los Angeles, 2006

### Quaternary Geologic Units

Quaternary Period deposits generally consist of two components—an upper younger layer from the Holocene (present to about 11,000 years before present [B.P.]) and an underlying older layer from the Pleistocene (about 11,000 years B.P. to 1.8 million years before present [Ma]).

Because of the much shorter period in which it accumulated, overlying Holocene alluvium is characteristically shallow (often less than 10 feet below the surface) and thinner than underlying Pleistocene sediments that were deposited more than 1.8 million years ago. Relatively recent in geological age, the thin upper layer of Holocene alluvium, therefore, lacks the potential to contain fossils. These units are assigned a low paleontological resource sensitivity rating.

Pleistocene alluvium represents age and depositional processes necessary for the fossilization of organic materials and, therefore, has a high potential to contain fossil resources (City of Los Angeles, 2006). Quaternary nonmarine terrace deposits are entirely late Pleistocene in age and, hence, also have the potential to contain fossil materials. In the Los Angeles region, Pleistocene sediments were deposited during marine conditions or as a result of terrestrial processes and thus could contain fossils from the general categories previously described. These units are assigned a high paleontological resource sensitivity rating with high potential for containing fossil material (City of Los Angeles, 2006).

## Tertiary Geologic Units

The Pliocene (1.8 to 5 Ma), Miocene (5 to 23 Ma), and Oligocene (23 to 33 Ma) also contain significant fossils (City of Los Angeles, 2006). In the Los Angeles region, Pliocene, Miocene, and older sediments were deposited during marine conditions or as a result of terrestrial processes and, therefore, might contain fossils from the general categories previously described.

In the Los Angeles Basin, for example, Pliocene marine strata often are represented by the Fernando Formation. Miocene marine strata in much of coastal Southern California are correlated with the Puente, Monterey, or Topanga Formations. Nonmarine strata from the Oligocene and Eocene can be correlated with the Sespe Formation. The paleontological resources associated with each of these formations and the sensitivity of the geologic units are briefly described below.

### Fernando Formation

The Fernando Formation (also known as the Pico Formation) was deposited during the Pliocene (about 1.8 to 5 Ma) in a marine environment. The Fernando Formation is composed of shale, sandstone, and conglomerate. These deposits are usually marked by turbidities, alternating beds of sand and mud left by underwater slides of material on the continental shelf that are preserved as horizontal layers of sandstone and shale. Fossils typically found in the Fernando Formation range from microorganisms to larger creatures such as sharks, rays, and bony fish. The Fernando Formation has been identified in subsurface contexts in the central Los Angeles downtown area, as well as in the Santa Monica-Pacific Palisades area. This unit is assigned a high paleontological resource sensitivity rating with high potential for containing fossil material (City of Los Angeles, 2006).

### Puente Formation

The marine Puente Formation is Late Miocene in age (7 to 12 Ma) and is composed of interbedded siltstone, sandstone, and conglomerate. Exposure of this formation has been recorded in many parts of the central and eastern Los Angeles region. The Puente Formation has produced an extensive collection of marine invertebrates and vertebrates, and it is assigned a high paleontological resource sensitivity level (City of Los Angeles, 2006).

### Monterey Formation

The Monterey Formation is a widespread unit deposited in a marine environment during the Middle to Late Miocene (5 to 17 Ma). The shale, sandstone, and mudstone deposits of the Monterey Formation are highly siliceous, a result of organic deposition (microorganisms such as diatoms) and inorganic deposition (volcanic ash). Virtually all types of marine fossils occur in the Monterey Formation, which is exposed throughout most of the City. Due to the extensive collection of marine vertebrates found in the Monterey Formation, this unit is assigned a high paleontological resource sensitivity level (City of Los Angeles, 2006).

### Topanga Formation

The Topanga Formation primarily is a marine unit from the Early to Middle Miocene (11 to 23 Ma). The general lithology of the Topanga Formation consists of up to 690 meters of white to tan arkosic fossiliferous sandstone, with interbeds of gray to brown siltstone and conglomerate. A wide range of marine fossils is typically found in the Topanga Formation, including invertebrates such as



foraminifera, bivalves, and vertebrates such as pinnipeds, whales, dolphins, sharks, bony fish, and turtles. Exposures of the Topanga Formation have been identified in the Santa Monica-Pacific Palisades area. This formation has produced many significant marine invertebrates, vertebrates, and plants, and it is assigned a high paleontological resource sensitivity level (City of Los Angeles, 2006).

### **Sespe Formation**

The Sespe Formation is nonmarine in origin, and is Late Eocene to Early Miocene in age (approximately 40 to 23 Ma). The Sespe Formation was deposited as a result of fluvial action that eroded ancient mountains, which have since vanished from the landscape. The Sespe Formation consists of distinctively reddish earthy sandstone, siltstone, and conglomerate and has been reported to contain terrestrial fossils (e.g., extinct carnivores, insectivores, rodents, and primates). Relative to the City, the Sespe Formation is generally exposed near the base of the Santa Monica Mountains in the western San Fernando Valley and in the Santa Monica-Pacific Palisades area. This unit is assigned a high paleontological resource sensitivity level throughout Southern California (City of Los Angeles, 2006).

### ***Archaeological Resources Setting***

#### **Prehistory**

The archaeological record indicates that sedentary populations occupied the coastal and inland regions of California more than 9,000 years ago. Early periods were characterized by processing of hard seeds with the mano and milling stone and the use of the atlatl (dart thrower) to bring down large game such as deer. Villages were typically situated around permanent water sources that allowed exploitation of a variety of different habitats for food. In the later periods, prior to the arrival of Europeans, bows and arrows were in use, beads were being used as money, trade and social networks had evolved, and the mortar and pestle were used to process acorns (City of Los Angeles, 2007).

#### **Ethnography**

The Proposed Project area lies within the territorial boundaries of the Gabrieliño Indians. The Gabrieliños were Shoshonean and Takic language speakers who resided in the general Los Angeles Basin and adjacent San Fernando Valley. Their name is derived from their association with the Mission San Gabriel Archangel; however, many now refer to themselves as Tongva. These people were hunters and gatherers with permanent villages, specialized processing sites, formal cemeteries, and trade networks with local and nonlocal groups. It is believed that they initially practiced a seasonal strategy, moving from location to location exploiting various food resources, but with technological advances, it has been determined that they were able to maintain permanent year-round villages with reliance on acorns and marine resources (City of Los Angeles, 2007).

At the time of European contact, the Gabrieliño occupied an area that included the watersheds of the Los Angeles, San Gabriel, and Santa Ana rivers, the Los Angeles Basin, the coast from Orange County's Aliso Creek north to Topanga Canyon, and the Channel Islands of Santa Catalina, San Clemente, and San Nicholas. Gabrieliño culture underwent dramatic changes following European contact. Diseases that were introduced weakened and killed large numbers of native

peoples, and most Gabrieliño villages were abandoned by 1810. Gabrieliño survivors helped build the Spanish Missions, and the Mexican and American ranches that followed (City of Los Angeles, 2007).

### Spanish and Mexican Periods

Although Spain claimed Alta California (the present day state of California) in the sixteenth century, settlement did not begin until 200 years later. To consolidate the Spanish claim to Alta California, an expedition led by Gaspar de Portolá was dispatched from Mexico City in the summer of 1769. Marching northward from San Diego, Portolá passed through the San Gabriel and San Fernando valleys in 1770. Mission San Gabriel was established in 1771, and by the early nineteenth century, most Gabrieliño were incorporated into the mission. The environs of present day Los Angeles and the current project area were included in the mission's domain (City of Los Angeles, 2007).

The Pueblo de la Reina de Los Angeles was founded in 1781 on the west bank of the Los Angeles River (Rio Porciúncula). Settled by a small group of pobladores of African, Native American, and Spanish descent, the outpost manifested Spanish colonial ambitions for Alta California, which envisioned a series of civilian pueblos that would function in support of the missions and presidios and expand the region's population (City of Los Angeles, 2007).

Los Angeles remained an isolated settlement for many years, gradually growing in population and gaining importance as a center of commerce and social exchange. By 1800, the pueblo boasted a population of 315. With the demise of the mission system and secularization of Mission San Gabriel in the 1830s, the town became the center of trading and economic activity in the region (City of Los Angeles, 2007).

As part of Spain's effort to colonize Alta California, a system of land grants was initiated to induce settlement and long-term occupation of the region. Large rancho tracts were bestowed upon a select few, primarily former soldiers and others who had provided services to the government (City of Los Angeles, 2007).

Mexico declared independence from Spain in 1821. The political change from Spanish to Mexican colony and the subsequent secularization of the missions in the 1830s had little effect on land use in pueblo-controlled areas. The area continued as grazing land for cattle, and settlement remained sparse (City of Los Angeles, 2007).

### American Period

The United States took over Alta California in 1848. With the ensuing Gold Rush and ultimate statehood in 1850, the pace of settlement in the region expanded rapidly, as did commerce. The discovery of gold in northern California created a boom in the local cattle industry, which fed the hordes of miners. Cattle ranching in the region declined during the 1860s after years of drought followed by disastrous floods, but it continued to be a major economic activity. The American population of the Los Angeles region continued to rise through the 1860s, as many of the old rancho families lost title to their land, leaving a vacuum that was promptly filled by settlers from the East and Midwest. Most of the vast ranchos were divided and sold in parcels as agriculture gained importance. In the City, development expanded from the early City center; the street grid was extended as new tracts were surveyed and subdivided (City of Los Angeles, 2007).

The extension of the Southern Pacific Railroad into Southern California in 1876, followed by the Atchison, Topeka and Santa Fe Railroad in 1887, set the stage for a massive real estate boom that resulted in the founding of hundreds of new towns and tremendous growth of the City. The City's population rose from 5,700 in 1870 to 50,000 by 1890 as residential development pushed ever outward. Industrial and commercial expansion, in addition to agricultural growth and advances as a shipping hub, established Los Angeles as a leading West Coast metropolis by the turn of the twentieth century (City of Los Angeles, 2007).

### ***Historic and Architectural Resources Setting***

Within the City, numerous sites, buildings, structures, and objects exist that are either listed on the National Register of Historic Places (described below, under Regulatory Frameworks), the California Register of Historical Resources (California Register), or otherwise comply with the criteria for eligibility for listing on the register(s). In general, these historic resources are at least 50 years old and represent significance in American (or California) history, architecture, engineering, or culture. Historic resources possess integrity of locations, design, setting, materials, and workmanship and maintain this integrity. The historic resources are associated with events or persons that have made significant contributions to broad patterns of history, represent works of masters, embody distinctive characteristics of a type, period, or construction method.

#### **Historic Cultural Monuments**

The City of Los Angeles Cultural Heritage Ordinance, enacted in 1962, has made possible the designation of buildings and sites as individual local landmarks, called "Historic-Cultural Monuments" in Los Angeles. The City currently has over 1,000 Historic-Cultural Monuments, providing official recognition and protection for the City's most significant and cherished historic resources. The list of Historic-Cultural Monuments includes sites that have been listed in or formally determined eligible for the California Register and the National Register of Historic Places.

Historic-Cultural Monument designation is reserved for those resources that have a special aesthetic, architectural, or engineering interest or value of a historic nature. The Cultural Heritage Ordinance establishes criteria for designation; these criteria are contained in the definition of a "Monument" in the Cultural Heritage Ordinance. A historical or cultural monument is any site (including significant trees or other plant life located thereon), building, or structure of particular historical or cultural significance to the City, such as historic structures or sites that have one or more of the following characteristics (City of Los Angeles, 2013):

- Reflect or exemplify the broad cultural, political, economic, or social history of the nation, state, or community
- Are identified with historic personages or with important events in the main currents of national, state, or local history
- Embody the distinguishing characteristics of an architectural-type specimen, inherently valuable for a study of a period, style, or method of construction
- Are a notable work of a master builder, designer, or architect whose individual genius influenced his or her age

## Historic Preservation Overlay Zones

The City, recognizing the need to identify and protect neighborhoods with distinct architectural and cultural resources, adopted the ordinance enabling the creation of Historic Preservation Overlay Zones (HPOZs) in 1979 and has since developed an expansive program for their designation. HPOZs, commonly known as historic districts, provide for review of proposed exterior alterations and additions to historic properties within designated districts (City of Los Angeles, 2013).

Angelino Heights became the City's first HPOZ in 1983. The City currently has 29 designated HPOZs, with many more under consideration (Proposed HPOZs). HPOZ areas range in size from neighborhoods of approximately 50 parcels to neighborhoods with more than 3,000 properties. Most HPOZs are primarily residential, many have a mix of single-family and multifamily housing, and some include commercial and industrial properties. HPOZs are established and administered by the City Angeles Planning Department (in concert with the City Council). Individual buildings in an HPOZ need not be of landmark quality on their own—it is the collection of a cohesive, unique, and intact collection of historic resources that qualifies a neighborhood for HPOZ status (City of Los Angeles, 2013).

### 3.1.2.3 Regulatory Framework

#### **Federal**

The federal significance of a historic structure or an archaeological site is determined by applying the National Register of Historic Places (NRHP) eligibility criteria (36 CFR 800 and 36 CFR § 60.4). These criteria state that a resource must be at least 50 years old and meet one or more of the following:

- The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:
- A. Is associated with events that have made a significant contribution to the broad patterns of history, or
  - B. Is associated with the lives of persons significant in the past, or
  - C. Embodies the distinctive characteristics of a type, period, or method of construction; represents the work of a master; possesses high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction, or
  - D. Has yielded, or may be likely to yield, information important in prehistory or history.

Federal undertakings (i.e., those projects with federal funding or that require a federal permit) that may affect a resource listed or eligible for listing on the NRHP must comply with Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA). Thus, for a federally funded project or projects requiring a federal permit, the possible impacts of a project on archaeological and historical resources must be reviewed. However, the Proposed Project is not expected to

require federal funding or a federal permit; therefore, the Proposed Project is not expected to be required to meet the requirements of NHPA.

### **State**

As defined by State law in Title 14 California Code of Regulations Section 4850, the term “historical resource” means “any object, building, structure, site, area, place, record, or manuscript, which is historically or archaeologically significant, or which is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural history of California.”

As defined by Section 15064.5(a) of the CEQA Guidelines, the term “historical resource” includes the following:

- A resource listed in, or determined eligible for, listing in the California Register (Public Resources Code [PRC] §§ 5024.1);
- A resource included in a local register of historical resources, or identified as significant in a historical resource survey meeting the requirements in Section 5024.1(g) of the PRC. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant;
- Any object, building, structure, site, area, place, record, or manuscript that is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the lead agency's determination is supported by substantial evidence in light of the historical record;
- Generally, a resource shall be considered by the lead agency to be “historically significant” if the resource meets at least one of the four criteria for listing on the California Register (PRC § 5024.1(a)), which are as follows:
  1. It is associated with events that have made a significant contribution to the broad patterns of California history and cultural heritage;
  2. It is associated with the lives of persons important in our past;
  3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
  4. Has yielded, or may be likely to yield, important information in prehistory or history.

CEQA also requires the evaluation of impacts to paleontological sites. All “historic properties” are automatically eligible for the California Register and, therefore, are “historical resources.” However, under State law, historical resources may include additional resources that have been identified in a historical resource survey or that have been designated under municipal or county ordinances.

For the purposes of this document, the term “historical resources” is used to represent both historic properties (under the federal definition) and historical resources (under the State definition). The California Office of Historic Preservation (OHP) implements State preservation law,

and is responsible for the California Register, which uses the National Register criteria for listing resources significant at the national, state, or local level.

### California Register of Historical Resources

As provided in PRC Section 5020.4, the California Legislature established the California Register in 1992. The California Register is used as a guide by state and local agencies, private groups, and citizens to identify the state historical resources and to include which properties are to be protected, to the extent prudent and feasible, from substantial adverse change. As noted above, the California Register automatically includes all California properties already listed in the National Register. It also includes those formally determined to be eligible for listing in the National Register (Categories 1 and 2 in the State Inventory of Historical Resources), as well as specific listings of the State Historical Landmarks and in the State Inventory of Historical Resources, and specific listings of State Historical Landmarks and State Points of Historical Interest. The California Register may also include various other types of historical resources that meet the criteria for eligibility, including the following:

- Individual historic resources
- Resources that contribute to a historic district
- Resources identified as significant in historic resource surveys
- Resources with a significance rating of Category 3 through Category 5 in the State

Categories 3 and 4 refer to potential eligibility for the NRHP; Category 5 indicates a property with local significance.

The California Register follows the lead of the National Register in using the 50-year threshold. A resource is usually considered potentially historically significant after it reaches the age of 50 years. This threshold is not absolute but was selected as a reasonable span of time after which a professional evaluation of historical value and importance can be made (City of Los Angeles, 2007).

### Historic Districts

Historic districts are unified geographic entities that contain a concentration of historic buildings, structures, objects, or sites united historically, culturally, or architecturally. Historic districts are defined by precise geographic boundaries. Therefore, districts with unusual boundaries require a description of what lies immediately outside the area not only to define the edge of the district but also to explain the exclusion of adjoining areas. The district must meet at least one of the criteria for significance discussed in PRC Section 4852 (b)(1)-(4).

Those individual resources contributing to the significance of the historic district would also be listed in the California Register. For this reason, all individual resources located within the boundaries of a historic district must be designated as either contributing or as noncontributing to the significance of the historic district (City of Los Angeles, 2007).

### Native American Human Remains

The disposition of Native American burials is governed by Section 7050.5 of the California Health and Safety Code and Sections 5097.94 and 5097.98 of the PRC and falls within the jurisdiction of the Native American Heritage Commission (NAHC).

In the event of an accidental discovery of human remains in a location other than a dedicated cemetery, no further excavation or disturbance of the site can occur until the County Coroner investigates the remains. If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American, or has reason to believe that the remains are those of a Native American, the coroner shall contact, by telephone within 24 hours, the NAHC. The NAHC in turn, notifies the likely descendants, who would inspect the remains and associated grave goods, and make recommendations for their handling.

### **Local**

City guidelines for the protection of archeological resources are set forth in Section 3 of the City of Los Angeles General Plan Conservation Element, which, in addition to compliance with CEQA, requires the identification and protection of archaeological sites and artifacts as a part of local development permit processing. Section 5 of the same Element requires the conservation and protection of cultural and historic resources (City of Los Angeles, 2001).

Specifically, Los Angeles Municipal Code Section 91.106.4.5 states that the Building Department:

“ . . . shall not issue a permit to demolish, alter or remove a building or structure of historical, archaeological or architectural consequence if such building or structure has been officially designated, or has been determined by state or federal action to be eligible for designation, on the National Register of Historic Places, or has been included on the City of Los Angeles list of historic cultural monuments, without the department having first determined whether the demolition, alteration or removal may result in the loss of or serious damage to a significant historical or cultural asset. If the department determines that such loss or damage may occur, the applicant shall file an application and pay all fees for the California Environmental Quality Act Initial Study and Check List, as specified in Section 19.05 of the Los Angeles Municipal Code. If the Initial Study and Check List identify the historical or cultural asset as significant, the permit shall not be issued without the department first finding that specific economic, social or other considerations make infeasible the preservation of the building or structure.”

#### **3.1.2.4 Significance Thresholds**

The Proposed Project would have a significant impact to cultural resources if it would:

Impact CUL-1: Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.

Impact CUL-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.

Impact CUL-3: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Impact CUL-4: Disturb any human remains, including those interred outside formal cemeteries.

### 3.1.2.5 Impact Analysis

***Impact CUL-1: The Proposed Project could potentially cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.***

Under Section 15064.5 of the CEQA Guidelines, a cultural resource (object, building, structure, site, area, place, record, or manuscript) is generally considered a historical resource if it is eligible for listing in the National Register of Historic Places, the California Register of Historical Resources, included in a local register of historical resources or identified as significant in a historical resource survey, or has been evaluated by a lead agency and determined to be historically significant.

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials in the Solid Resources collection activities could provide collection service to historic buildings, or travel over historic structures such as bridges, but collection activities would not result in physical changes or new development that could damage or otherwise adversely affect a historic resource.

Future new or expanded processing facilities and new or expanded truck base yards would likely be located in industrial areas or on land zoned for industrial uses (due to the industrial nature of the facilities). Organics processing facilities could be sited on lands zoned for agricultural uses, depending on the processing technology utilized. In general, industrial areas are utilitarian in design and character, which do not meet the requirements to be eligible for listing in the National Register of Historic Places, eligible for listing in the California Register of Historical Resources, designation as a Historic-Cultural Monument, or a contribution to an HPOZ. Without site-specific information, whether or not the future facilities would adversely affect historic resources cannot be determined at this time. However, future facilities could still result in significant cumulative impacts to historical resources because whereas local regulations provide for the mitigation of impacts, they do not explicitly prohibit the demolition or alteration of historical resources. Impacts to historic resources from the siting of facilities and truck base yards would be evaluated when a specific facility is proposed.

***Impact CUL-2: The Proposed Project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials in the Solid Resource collection activities would not result in physical changes or new development that could damage or otherwise adversely affect an archaeological resource.

Future new or expanded processing facilities and new or expanded truck base yards would likely be located and constructed in industrial areas or on land zoned for industrial uses (due to the industrial nature of the facilities). Organics processing facilities could be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Although industrial and agricultural areas generally have a low probability for containing archaeological resources due to the disturbed nature of these areas, without site specific information, whether or not the future facilities would adversely affect archaeological resources cannot be determined at this time.

Therefore, based on the anticipated collection activities associated with diversion of materials in the Solid Resource collection activities, the Proposed Project would not result in impacts to



archaeological resources. Impacts to archaeological resources from the siting of facilities and truck base yards would be evaluated when a specific facility is proposed.

***Impact CUL-3: The Proposed Project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials in the Solid Resource collection activities would not result in physical changes or new development that could damage or otherwise adversely affect a unique geologic resource or paleontological resource.

Future new or expanded processing facilities and new or expanded truck base yards would likely be located in industrial areas or on land zoned for industrial uses (due to the industrial nature of the facilities). Organics processing facilities could be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Although industrial and agricultural areas generally have a low probability for containing paleontological resources due to the disturbed nature of these areas, without site-specific information, whether or not the future facilities would adversely affect paleontological resources cannot be determined at this time.

Therefore, based on the anticipated collection activities associated with diversion of materials in the Solid Resource collection activities, the Proposed Project would not result in impacts to paleontological resources. Impacts to paleontological resources from the siting of facilities and truck base yards would be evaluated when a specific facility is proposed.

***Impact CUL-4: The Proposed Project would not disturb any human remains, including those interred outside formal cemeteries.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials in the Solid Resource collection activities would not result in physical changes or new development that could encounter interred human remains.

Future new or expanded processing facilities and new or expanded truck base yards would likely be located in industrial areas or on land zoned for industrial uses (due to the industrial nature of the facilities). Organics processing facilities could be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Industrial and agricultural areas are expected to have a low probability for containing human remains interred outside formal cemeteries due to the disturbed nature of these areas. Therefore, construction of new or expanded processing facilities and truck base yards is not expected to encounter interred human remains.

Therefore, the Proposed Project is not expected to result in significant impacts related to encountering interred human remains.

#### ***3.1.2.6 Cumulative Impacts***

The collection activities under the Proposed Project would have no effect on cultural or paleontological resources because they would not result in any construction or change in use of land. Therefore, collection activities under the Proposed Project would not make a considerable contribution to a significant cumulative impact to cultural resources or paleontological resources.

As with the Proposed Project, future diversion activities in Los Angeles County and the state associated with related projects could result in new or expanded facilities, transfer stations, and truck base yards, which could cause an adverse affect to cultural or paleontological resources. However, the Proposed Project and related project facilities would have to comply with general regulations related to the protection of cultural and paleontological resources, which are expected to keep potential cumulative impacts to cultural and paleontological resources at a potentially significant level.

It is the presumption that new or expanded transfer stations, processing facilities, and truck base yards, which could be located in the City or in other jurisdictions, would be subject to the same regulatory requirements and similar mitigation measures as those identified below for the Proposed Project. The implementation of these mitigation measures may avoid or minimize the impacts of the construction and operation of such new or expanded facilities to a level of less than significant. However, a project could still result in significant cumulative impacts to historical resources because whereas local regulations provide for the mitigation of impacts, they do not explicitly prohibit the demolition or alteration of historical resources. Cumulative impacts associated with new or expanded facilities, truck base yards, and Organics processing facilities will be further addressed in the project-specific environmental document prepared by the Lead Agency for the jurisdiction in which such new or expanded facilities are located.

#### **3.1.2.7 Mitigation Measures**

**CR-1:** Future SWIRP projects that would result in earth-disturbing activities involving native sediments with the potential for producing archaeological materials, or projects located near known cultural resources, shall implement the following:

1. Prior to commencement of any earth-disturbing activities, a Phase I study shall be undertaken to evaluate the current conditions of a project site. The study shall consist of: (1) an initial records search, including records, maps, and literature housed at the appropriate Archaeological Information Center depending on the specific county that the project is within; (2) a Sacred Lands check with the Native American Heritage Commission (NAHC) and initial scoping with interested Native American tribes and individuals identified by the NAHC; (3) a pedestrian field survey by a qualified Archaeologist to determine the presence or absence of surficial artifactual material or the potential for buried resources; and (4) a technical report describing the study and offering management recommendations for potential further investigation.
2. If archaeological sites or resources are discovered as a result of the Phase I study, a Phase II study of the significance of any prehistoric material that is present shall be undertaken. The evaluation shall include further archival research, ethnographic research, and subsurface testing and excavation to determine the horizontal and vertical extent of the site, the density and diversity of cultural material, and the overall integrity of the site. The evaluation shall include a technical report describing the findings and offering management recommendations for sites determined to be significant. Nonsignificant resources would require no further study.

3. If the Phase II study indicates that a significant site is present, the qualified Archaeologist shall determine appropriate actions, in cooperation with the City, for preservation and data recovery of the resource. Preservation in place is the preferred manner of mitigation, as provided in the California Code of Regulations (CCR) Title 14 Section 15126.5(b)(3). This could include (1) avoidance of resources; (2) incorporation of resources into open space; (3) capping the resource with chemically stable sediments; and (4) deeding the resource into a permanent conservation easement. To the extent that a resource cannot be preserved in place, a Phase III data recovery excavation shall be completed to recover the scientifically consequential information from the resource. A technical report shall be completed that adheres to the Office of Historic Preservation's (OHP) Archaeological Resources Management Report (ARMR) guidelines.
4. Monitoring of ground-disturbing activities shall be undertaken by a qualified Archaeologist as a final mitigation measure in areas that contain or are sensitive for the presence of cultural resources.

**CR-2:** Future SWIRP projects that would excavate into alluvial sediments (e.g., Older Quaternary Alluvium deposits) or bedrock formations shall implement the following:

1. Prior to commencement of any earth-disturbing activities, an archival records search shall be undertaken at the Natural History Museum of Los Angeles County, San Bernardino County Museum, or other appropriate institution to determine the depositional environment in the project area and to evaluate the likelihood of fossils being present.
2. A field survey shall be undertaken prior to ground-disturbing activities in areas of potential but unknown sensitivity to evaluate the site for the presence of significant fossil resources and to establish the need for paleontological salvage or monitoring.
3. If significant fossils are discovered as a result of a field survey or during monitoring operations, a qualified Paleontologist shall determine appropriate actions, in cooperation with the City, for the preservation and/or salvage of the resource.
4. Any monitoring activities shall be accomplished by a qualified Paleontologist so that fossils discovered during grading can be scientifically and efficiently recovered and preserved.
5. A qualified Paleontologist shall prepare collected specimens to the point of identification and place the prepared fossils in the appropriate institution for permanent curation.
6. Upon completion of recovery and curation, all studies and actions shall be described in a paleontological technical report prepared by a qualified Paleontologist.

- CR-3:** If human remains are encountered during SWIRP related projects, no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined the appropriate treatment and disposition of the human remains. Section 7050.5 of the California Health and Safety Code provides for the disposition of accidentally discovered human remains and states that if human remains are found, no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined the resources would require no further study.
- CR-4:** Implementation of SWIRP could include development near historical resources or resources considered to be potential historical resources. This development has the potential to result in significant impacts to individual historical resources in the project area, including resources listed in or eligible for listing in the National Register of Historic Places (NRHP), California Register of Historical Resources (California Register), and local registers. This could include the delisting or loss of eligibility of such resources. In addition, there is the potential for significant impacts to buildings or structures of historic age (45 years old or older), or buildings or structures that may eventually be of historic age, and that may qualify as historical resources pursuant to CEQA.

Prior to development of future facilities that would demolish or alter buildings or structures 45 years old or older or affect their historic setting, the project applicant shall employ a cultural resource professional who meets the Secretary of the Interior's Professional Qualifications Standards for Architectural History to determine if the project would cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the *CEQA Guidelines*. The cultural resource professional in conjunction with the City shall determine an appropriate scope of investigation including archival research, if necessary, an updated records search at any of the appropriate California Historical Resources Information System (CHRIS) information centers, and a pedestrian survey of the project area to determine if any significant historical resources would be adversely affected by the proposed development.

A technical report shall be completed per the Office of Historic Preservation (OHP) Archaeological Resources Management Report (ARMR) guidelines. The report shall evaluate any historical resources in the project area and include recommendations for eliminating or reducing impacts to historical resources. The technical report shall be submitted to the Lead Agency for approval. As determined necessary by the Lead Agency, environmental documentation (e.g., CEQA documentation) prepared for future development of the project site shall utilize the findings and recommendations of the technical report. The project applicant shall be responsible for implementing methods for eliminating or reducing impacts to historical resources. Such methods could include, but not be limited to: (1) preparing a preservation plan or element that provides guidelines to ensure that the project conforms to the standards for rehabilitation established by the Secretary of the Interior and the OHP; (2) requiring new construction to be compatible with historical resources on the site and in the vicinity (e.g., mass, height, materials, setback, retention of mature landscaping); (3) requiring the project sponsor to relocate the historical resource or offer it for relocation by another individual or organization (provided that eligibility will be maintained following the relocation); (4) requiring the project sponsor to adaptively reuse the historical

resource or incorporate it into the project; (5) undertaking documentation according to the requirements of the Historic American Building Survey such as large-format photography, measured drawings, and written narrative; (6) making copies of this documentation available to the Los Angeles Public Library and local preservation organizations and historical societies; or (7) requiring the project sponsor to allow local preservation organizations and historical societies to document the resource or remove significant historic elements for archives.

#### *3.1.2.8 Level of Significance after Mitigation*

The Proposed Project is not expected to result in impacts to paleontological resources, however, the Proposed Project would result in a potentially significant impact to cultural resources, even with mitigation. Implementation of mitigation measures CR-1 through CR-4 will require further investigation and identification of mitigation measures once a future project site is identified. However, since the specific locations of expanded or future facilities are not known, it cannot be conclusively stated at this time that all potential cultural impacts would be reduced to below a level of significance. Thus, impacts are considered potentially significant and unavoidable.

### 3.1.3 Greenhouse Gas Emissions

This section evaluates the potential impacts to the public from greenhouse gas (GHG) emissions from the Proposed Project. The GHGs impact evaluates the potential impacts related to the adoption of the Proposed Project, and at a conceptual level, on new or expanded transfer stations and processing facilities that would be required to process diverted materials; and truck base yards. Collection activities would occur on and from existing Commercial Establishments. New or expanded transfer stations, processing facilities, and truck base yards are expected to be sited on lands with industrial or commercial manufacturing zoning designation, but could include lands zoned for agricultural uses for Organics processing facilities. The new or expanded facilities and truck base yards have not yet been proposed; therefore, the evaluation of GHGs and associated public health impacts from these facilities and truck base yards is at a conceptual level.

A summary of the Proposed Project's anticipated impacts from GHG emissions, based on the evaluation below, is contained in Table 3.1.3-1.

**TABLE 3.1.3-1  
SUMMARY OF IMPACTS RELATED TO  
GREENHOUSE GAS AND PUBLIC HEALTH**

Environmental Impact Area	Potential Impact	Mitigation	Significant Impact After Mitigation
<b>GHG-1: Greenhouse Gas Emissions</b>			
Collection System	No	None Required	No
New or Expanded Facilities	No	None Required	No
<b>GHG-2: Conflict With Plan or Policy</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>Cumulative Impacts</b>	Yes	Yes	Yes

The analysis of GHG emissions consists of a summary of the regulatory framework to be considered in the decision-making process, a description of the existing conditions, thresholds for determining if the Proposed Project would result in significant impacts, and anticipated impacts (direct, indirect, and cumulative). The potential for impacts to GHG emissions has been analyzed in accordance with Appendix G of the State CEQA Guidelines.

#### 3.1.3.1 Greenhouse Gases and Effects

GHG includes both naturally occurring and anthropogenic gases that trap heat in the earth's atmosphere. GHGs include, but are not limited to: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydro-chlorofluorocarbons (HCFC), perfluorocarbons (PFC), and sulfur hexafluoride (SF<sub>6</sub>). These gases trap the energy from the sun and help maintain the temperature of the Earth's surface, creating a process known as the greenhouse effect. GHGs such as CO<sub>2</sub> and CH<sub>4</sub> are naturally present in the atmosphere. The presence of these gases prevents outgoing infrared radiation from escaping the Earth's surface and lower atmosphere, allowing incoming solar radiation to be absorbed by living organisms on Earth. Without these GHGs, Earth would be too cold to be habitable; however, an excess of GHGs in the atmosphere can cause global climate

change by raising the Earth's temperature, resulting in environmental consequences related to snowpack losses, flood hazards, sea level rises, and fire hazards.

Global climate change is a change in the average weather on earth that can be measured by wind patterns, storms, precipitation, and temperature. Although there is disagreement as to the speed of global warming and the extent of the impacts attributable to human activities, the majority of the scientific community now agrees that there is a direct link between increased emissions of GHGs and long-term global temperature. Potential global warming impacts in California may include, but are not limited to, loss in snowpack, sea level rise, more extreme heat days per year, more high-ozone days, more large forest fires, and more drought years. Secondary effects are likely to include a global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity. The accumulation of GHGs in the atmosphere regulates the earth's temperature; however, emissions from human activities such as electricity production and motor vehicles have elevated the concentration of GHGs in the atmosphere.

### **Carbon Dioxide**

CO<sub>2</sub> is a colorless, odorless, and nonflammable gas that is the most abundant GHG in the Earth's atmosphere after water vapor. CO<sub>2</sub> enters the atmosphere through natural process such as respiration and forest fires, and through human activities such as the burning of fossil fuels (oils, natural gas, and coal) and Solid Waste, deforestation, and industrial processes. CO<sub>2</sub> absorbs terrestrial infrared radiation that would otherwise escape to space, and therefore plays an important role in warming the atmosphere. CO<sub>2</sub> has an atmospheric lifetime of up to 200 years, and is therefore a more important GHG than water vapor, which has a residence time in the atmosphere of only a few days. CO<sub>2</sub> provides the reference point for the global warming potential (GWP) of other gases; thus, the GWP of CO<sub>2</sub> is equal to 1.

### **Methane**

CH<sub>4</sub> is a principal component of natural gas and consists of a single carbon atom bonded to four hydrogen atoms. It is formed and released to the atmosphere by biological processes from livestock and other agricultural practices and by the decay of organic waste in anaerobic environments such as Class III landfills. CH<sub>4</sub> is also emitted during the production and transport of coal, natural gas, and oil. CH<sub>4</sub> is about 21 times more powerful at warming the atmosphere than CO<sub>2</sub> (giving CH<sub>4</sub> a GWP of 21). Its chemical lifetime in the atmosphere is approximately 12 years. The relatively short atmospheric lifetime of CH<sub>4</sub>, coupled with its potency as a GHG, makes it a candidate for mitigating global warming over the near term. CH<sub>4</sub> can be removed from the atmosphere by a variety of processes such as the oxidation reaction with hydroxyl radicals (OH), microbial uptake in soils, and reaction with chlorine (Cl) atoms in the marine boundary layer.

### **Nitrous Oxide**

N<sub>2</sub>O is a clear and colorless gas with a slightly sweet odor. N<sub>2</sub>O has a long atmospheric lifetime (approximately 120 years) and heat trapping effects about 310 times more powerful than carbon dioxide on a per-molecule basis (giving N<sub>2</sub>O a GWP of 310). N<sub>2</sub>O is produced by both natural and human-related sources. The primary anthropogenic sources of N<sub>2</sub>O are agricultural soil management such as soil cultivation practices, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, and production of adipic and nitric acids. The natural process

of producing N<sub>2</sub>O ranges from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests.

### **Fluorinated Gases**

HFCs, PFCs, and SF<sub>6</sub> are synthetic, powerful GHGs that are emitted from a variety of industrial processes, including aluminum production, semiconductor manufacturing, electric power transmission, magnesium production and processing, and the production of HCFC-22. Fluorinated gases are being used as substitutes for ozone-depleting chlorofluorocarbons (CFCs). Fluorinated gases are typically emitted in small quantities; however, they have high GWPs of between 140 and 23,900.

#### **3.1.3.2 Regulatory Framework**

This regulatory framework identifies the federal, state, regional, and local laws that govern the regulation of GHG emissions, which must be considered by the City when rendering decisions on projects that would have the potential to result in GHG emissions.

### **Federal**

GHG emissions are regulated at the federal and state level. Laws and regulations, as well as plans and policies, have been adopted to address global climate change issues. Key federal regulations relevant to the Proposed Project are summarized below.

On October 5, 2009, Federal Executive Order (EO) 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, was signed by the White House Council on Environmental Quality (CEQ). EO 13514 requires federal agencies to set a 2020 GHG emissions reduction target within 90 days, increase energy efficiency, reduce fleet petroleum consumption, conserve water, reduce waste, support sustainable communities, and leverage federal purchasing power to promote environmentally responsible products and technologies.

On December 7, 2009, EPA signed the Final Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the CAA (74 FR 66496). The endangerment finding states that current and projected concentrations of the six key well-mixed GHGs in the atmosphere—CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, and SF<sub>6</sub>—threaten the public health and welfare of current and future generations. Furthermore, it states that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution that threatens public health and welfare.

Based on the endangerment finding, EPA and National Highway Traffic Safety Administration (NHTSA) updated the Corporate Average Fuel Economy (CAFE) fuel standards on May 7, 2010 (75 FR 25324), requiring substantial improvements in fuel economy for all vehicles sold in the United States. The new standards apply to new passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. The standards require these vehicles to meet an estimated combined average emissions level of 250 grams of CO<sub>2</sub> per mile in model year 2016, which would be the equivalent to 35.5 miles per gallon if the automotive industry were to meet this CO<sub>2</sub> level solely through fuel economy improvements.

On September 15, 2011, EPA and NHTSA issued a Final Rule of Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles



(76 FR 76 57107). This final rule is tailored to each of three regulatory categories of heavy-duty vehicles—combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. EPA and NHTSA estimated that the new standards in this rule would reduce CO<sub>2</sub> emissions by approximately 270 million metric tons (MMT) and save 530 million barrels of oil over the life of vehicles sold during the 2014 through 2018 model years.

### **State**

#### **Assembly Bill 1493**

In 2002, with the passage of Assembly Bill (AB) 1493, California launched an innovative and proactive approach to dealing with GHG emissions and climate change at the state level. AB 1493 requires CARB to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the model year 2009. Although litigation challenged these regulations and EPA initially denied California's related request for a waiver, the waiver request was granted.

#### **Executive Order S-3-05**

On June 1, 2005, Governor Arnold Schwarzenegger signed EO S-3-05. The goal of this executive order is to reduce California's GHG emissions to year 2000 levels by 2010, to 1990 levels by 2020, and to 80 percent below the 1990 levels by 2050. EO S-3-05 also calls for California Environmental Protection agency (CalEPA) to prepare biennial science reports on the potential impact of continued global warming on certain sectors of the California economy. As a result of the scientific analysis presented in these biennial reports, a comprehensive Climate Adaptation Strategy (CAS) was released in December 2009 following extensive interagency coordination and stakeholder input. The latest of these reports, *Climate Action Team Biennial Report*, was published in December 2010 (CalEPA, 2010).

#### **Assembly Bill 32**

In 2006, the goal of EO S-3-05 was further reinforced with the passage of AB 32, the Global Warming Solutions Act of 2006. AB 32 sets overall GHG emissions reduction goals and mandates that CARB create a plan, which includes market mechanisms, and implements rules to achieve "real, quantifiable, cost-effective reductions of GHGs." EO S-20-06 further directs state agencies to begin implementing AB 32, including the recommendations made by the state's Climate Action Team.

Among the specific requirements of AB 32 are the following:

- CARB will prepare and approve a scoping plan for achieving the maximum technologically feasible and cost-effective reductions in GHG emissions from sources or categories of sources of GHGs by 2020 (Health and Safety Code [HSC] Section 38561). The scoping plan, approved by CARB on December 12, 2008, provides the outline for future actions to reduce GHG emissions in California via regulations, market mechanisms, and other measures.
- Identify the statewide level of GHG emissions in 1990 to serve as the emissions limit to be achieved by 2020 (HSC Section 38550). In December 2007, CARB approved the 2020 emission limit of 427 MMT CO<sub>2</sub>e of GHG.

- Adopt a regulation requiring the mandatory reporting of GHG emissions (HSC Section 38530). In December 2007, CARB adopted a regulation requiring the largest industrial sources to report and verify their GHG emissions. The reporting regulation serves as a solid foundation to determine GHG emissions and track future changes in emission levels.

#### Executive Order S-20-06

On October 17, 2006, Governor Arnold Schwarzenegger signed EO S-20-06, which calls for continued efforts and coordination among state agencies on the implementation of GHG emission reduction policies, along with AB 32 and HSC Division 25.5, through the design and development of a market-based compliance program. In addition, EO S-20-06 requires the development of GHG reporting and reduction protocols and a multi-state registry through joint efforts among CARB, CalEPA, and the California Climate Action Registry (CCAR). EO S-20-06 directs the Secretary for Environmental Protection to coordinate with the Climate Action Team to develop a plan to create incentives for market-based mechanisms that have the potential of reducing GHG emissions.

#### Executive Order S-01-07

With EO S-01-07, Governor Schwarzenegger set forth the low-carbon fuel standard for California. Under this executive order, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020. Carbon intensity is a measure of the GHG emissions associated with the various production, distribution, and use steps in the life cycle of a transportation fuel. Because transportation is the leading source of GHG emissions in California, reducing carbon intensity of transportation fuels would reduce the GHG emissions from transportation, and is consistent with the GHG emission reduction goal of AB 32.

#### Senate Bill 97

Approved by Governor Arnold Schwarzenegger on August 24, 2007, Senate Bill (SB) 97 is designed to work in conjunction with the State CEQA Guidelines and AB 32. Pursuant to the State CEQA Guidelines, the Office of Planning and Research (OPR) is required to prepare for and develop proposed guidelines for implementation of CEQA by public agencies. Pursuant to AB 32, the CARB is required to monitor and regulate emission sources of GHGs that cause global warming in order to reduce GHG emissions. SB 97 states, "SB 97 requires OPR, by July 1, 2009, to prepare, develop, and transmit to the [CARB] guidelines for the feasible mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions, as required by CEQA, including, but not limited to, effects associated with transportation or energy consumption." As directed by SB 97, the Natural Resources Agency adopted amendments to the CEQA Guidelines for GHG emissions on December 30, 2009. On February 16, 2010, the Office of Administrative Law approved the amendments, and filed them with the Secretary of State for inclusion in the California Code of Regulations. The amendments became effective on March 18, 2010.

In addition, OPR and CARB are required to periodically update the guidelines to incorporate new information or criteria established by CARB, pursuant to AB 32. SB 97 applies to any environmental documents, including an EIR, a Negative Declaration, a Mitigated Negative Declaration, or other documents required by CEQA that have not been certified or adopted by the CEQA lead agency by the date of the adoption of the regulations.

### Senate Bill 375

SB 375, signed into law by the governor on September 30, 2008, became effective January 1, 2009. This law requires CARB to develop regional reduction targets for GHG emissions, and prompts the creation of regional land use and transportation plans to reduce emissions from passenger vehicle use throughout the State. The targets apply to the regions in the State covered by California's 18 metropolitan planning organizations (MPOs). The 18 MPOs have been tasked with creating the regional land use and transportation plans called "Sustainable Community Strategies" (SCS). The MPOs are required to develop the SCS through integrated land use and transportation planning and to demonstrate an ability to attain the proposed reduction targets by 2020 and 2035. This would be accomplished through either the financially constrained SCS, as part of its RTP, or an unconstrained alternative planning strategy. If regions develop integrated land use, housing, and transportation plans that meet the SB 375 targets, new projects in these regions can be relieved of certain review requirements of CEQA.

Pursuant to SB 375, CARB appointed a Regional Targets Advisory Committee (RTAC) on January 23, 2009, to provide recommendations on factors to be considered and methodologies to be used in CARB's target-setting process. The RTAC was required to provide its recommendations in a report to CARB by September 30, 2009. The report included relevant issues such as data needs, modeling techniques, growth forecasts, jobs-housing balance, interregional travel, various land use/transportation issues affecting GHG emissions, and overall issues relating to setting these targets. CARB adopted the final targets on September 23, 2010. CARB must update the regional targets every 8 years (or 4 years if it so chooses) consistent with each MPO update of its RTP.

### California Climate Action Registry

Established in 2001, the CCAR is a private nonprofit organization originally formed by the State of California. The CCAR serves as a voluntary GHG registry and has taken a leadership role on climate change by developing credible, accurate, and consistent GHG reporting standards and tools for businesses, government agencies, and nonprofit organizations to measure, monitor, and reduce GHG emissions. For instance, the CCAR General Reporting Protocol, version 3.1, dated January 2009 (CCAR, 2009), provides the principles, approach, methodology, and procedures required for voluntary GHG emissions reporting by businesses, government agencies, and nonprofit organizations.

### **Regional**

#### South Coast Air Quality Management District

SCAQMD has promoted a number of programs to combat climate change. SCAQMD's first formal action to fight GHG occurred in 1991, with the issuance of its Policy on Global Warming and Stratospheric Ozone Depletion, targeting a transition away from CFCs as an industrial refrigerant and propellant in aerosol cans. In the early 1990s, SCAQMD adopted several regulations regarding ozone-depleting compounds, which served as models for state and federal agencies.

On September 5, 2008, the SCAQMD Governing Board approved the SCAQMD Climate Change Policy, which directs SCAQMD to assist the State, cities, local governments, businesses, and residents in areas related to reducing emissions that contribute to global warming.

On September 11, 2011, SCAQMD adopted an air quality-related energy policy to help guide a unified approach to reducing air pollution while addressing other key environmental concerns, including environmental justice, climate change, and energy independence. The policy integrates air quality, energy, and climate change issues in a coordinated and consolidated manner, outlines 10 policies and 10 action steps to help meet federal health-based standards for air quality in the South Coast Air Basin while promoting the development of zero- and near-zero emission technologies (SCAQMD, 2011).

### **Local**

The City of Los Angeles released its climate action plan, *Green LA: An Action Plan to Lead the Nation in Fighting Global Warming*, in May 2007 (City of Los Angeles, 2007b). The Plan sets forth a goal of reducing the City's greenhouse gas emissions to 35 percent below 1990 levels by the year 2030, one of the most aggressive goals of any big City in the U.S. This climate action plan includes more than 50 actions to reduce our GHG emissions, as well as measures to adapt to the effects of climate change.

*Climate LA* (City of Los Angeles, 2008) is the implementation program that provides detailed information about each action item discussed in the Green LA framework. Action items range from harnessing wind power for electricity production and energy efficiency retrofits in City buildings, to converting the City's fleet vehicles to cleaner and more efficient models, and reducing water consumption.

#### **3.1.3.3 Existing Conditions**

As a part of AB 32, CARB established an emissions inventory for 1990 and a projected limit for 2020. Because climate change is a global and not a regional issue, specific inventories have not been prepared for the individual air basins. The Statewide 2020 limit was approved on December 6, 2007, and is not sector specific. The Statewide 2020 limit is based on the total 1990 GHG emissions inventory and is 427 MMT carbon dioxide equivalent (CO<sub>2</sub>e) (CARB, 2007).

In the United States, the main source of GHG emissions is electricity generation, followed by transportation. In California, however, transportation sources (including passenger cars, light-duty trucks, other trucks, buses, and motorcycles) make up the largest portion of GHG-emitting sources (CARB, 2013d). The dominant GHG emitted is CO<sub>2</sub>, primarily from fossil fuel combustion.

In 2011, the California Statewide GHG emissions were 448.11 MMT CO<sub>2</sub>e (CARB 2013d). The transportation sector accounts for about 38 percent of the Statewide GHG emissions inventory. The electric power sector accounts for about 19 percent of the total Statewide GHG emissions inventory. A summary of the 2010 Statewide GHG emissions inventory is included in Table 3.1.3-2.

**TABLE 3.1.3-2  
2010 CALIFORNIA STATEWIDE GREENHOUSE GAS  
EMISSIONS INVENTORY**

<b>Emission Category</b>	<b>2011 (MMT CO<sub>2</sub>e)</b>
Transportation	168.42
Electric power	86.57
Commercial and residential	45.47
Industrial	93.24
Recycling and waste	7.00
High GWP	15.17
Agriculture	32.24
Total California Emissions (Gross Emissions)	448.11

Source: CARB, 2013d

The GHG emission impacts of the Proposed Project might occur on a regional and global scale. The potential for the Proposed Project to result in impacts related to GHG emissions was analyzed in relation to the questions contained in Appendix G of the State CEQA Guidelines, namely, would the Proposed Project have the potential to result of the following effects:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

Although the regulatory framework is discussed in detail for the analysis, it is important to note that the OPR has been tasked with developing CEQA guidelines with regard to GHG emissions. OPR has indicated that many significant questions must be answered before a consistent, effective, and workable process for completing climate change analyses can be created for use in CEQA documents. No federal or state agency (e.g., EPA, CARB, SCAQMD) that is responsible for managing air quality emissions has promulgated a global warming significance threshold that could be used in reviewing the Proposed Project.

On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold for projects where the SCAQMD is lead agency. The interim threshold consists of five tiers of standards that could result in a finding of less than significant impact. The tiers include CEQA exemptions, consistency with regional GHG budgets, less-than-significant screening levels for industrial projects (10,000 metric tons/year CO<sub>2</sub>e) and commercial/residential projects (3,000 metric tons/year CO<sub>2</sub>e), performance standards (i.e., 30 percent less than business as usual), and carbon offsets. This SCAQMD GHG significance threshold does not necessarily apply to the Proposed Project because the SCAQMD is not the lead agency.

On a local level, the City has not adopted a significance threshold for climate change. Neither CEQA statutes nor CEQA guidelines establish thresholds of significance or particular methodologies for performing an impact analysis. The determination of significance is left to the judgment and discretion of the lead agency.

### **Significance Criteria**

There are two significance criteria relevant to the consideration of the Proposed Project's emissions of GHGs:

- Inconsistency with laws and regulations in managing GHG emissions
- Inconsistency with the goal to reduce GHG emissions to 1990 levels (approximately 427 MMT or 9.6 metric tons of CO<sub>2</sub>e per capita) by 2020 as required by AB 32

#### **3.1.3.4 Significance Thresholds**

The Proposed Project would have a significant impact to cultural resources if it would:

Impact GHG -1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

Impact GHG -2: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

#### **3.1.3.5 Impact Analysis**

This section analyzes the potential for significant impacts to GHG emissions that would occur from implementation of the Proposed Project. The six common GHGs include CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, SF<sub>6</sub>, HFCs, and PFCs. SF<sub>6</sub> is a gas that is used as insulation in electric power transmission and distribution equipment. Because the Proposed Project would not result in the construction of power transmission lines or the use of electrical power equipment, emissions of SF<sub>6</sub> would not be relevant. PFCs and HFCs are also not applicable because they are refrigerants that would not be used for project operation. Therefore, the analysis of GHG emissions associated with the Proposed Project focuses on CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O emissions, which could occur as a result of the vehicle emissions associated with the Proposed Project from solid waste collection vehicles (SWCVs). The emissions of CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O are reported as CO<sub>2</sub>e.

GHG emission impacts of projects are normally categorized into one of three major categories:

1. *Construction Impacts:* Temporary impacts, including GHG emissions from heavy equipment, delivery and material hauling trucks, employee vehicles, and paints and coatings. No construction activities are needed for the project.
2. *Regional Operational Impacts:* Direct GHG emissions from operation of combustion equipment and vehicles. For the Proposed Project, GHG emissions would be related to the vehicle emissions from waste collection activities.
3. *Cumulative Impacts:* GHG emissions resulting from the incremental impact of the Proposed Project when added to other projects in the vicinity.

### **Assessment Methods and Models**

#### **Diesel Vehicle GHG Emission Factors**

GHG emission factors from traveling and idling SWCVs as part of the Proposed Project were calculated using the CARB EMFAC2011 model. EMFAC2011 only has CO<sub>2</sub> emission factors.

Emissions of N<sub>2</sub>O and CH<sub>4</sub> are expected to be negligible compared to CO<sub>2</sub> emissions from diesel trucks and, thus, are not included in the GHG emission calculations for diesel trucks.

The following parameters and assumptions were used in the EMFAC2011 modeling for the Proposed Project's SWCVs GHG emissions factors:

1. 2012 existing condition and No Project alternative in 2030 would use diesel-fueled SWCVs that comply with current regulations.
2. Emission factors for SWCVs during vehicle travel were modeled using the EMFAC2011 vehicle type T7 SWCV, heavy heavy-duty solid waste collection vehicle. Emission factors were based on aggregated vehicle speed in the SCAQMD for the years 2012 and 2030.
3. Idling emission factors for SWCVs were modeled using the EMFAC2011 vehicle type T7 SWCV, heavy heavy-duty solid waste collection vehicle, for the years 2012 and 2030.
4. Additional emissions from the auxiliary power system (APS) of the diesel vehicles were included in the emission estimates for the SWCVs operation, to account for the extra power used and emissions due to the operation of the vehicles' garbage container lifting system. APS idling emission factors of vehicles of model year 2007 and later were used for the 2012 and 2030 emission estimate.

#### Clean Fuel Vehicle Emission factors

The City has committed to use 100 percent alternative-fuel vehicles starting on the first day of the implementation of the Proposed Project in 2017. The alternative-fuel SWCVs GHG emission factors in 2030 used the 2013 Climate Registry's Default Emission Factors (Climate Registry, 2013) for vehicles using LNG fuel. Emission factor for CO<sub>2</sub> in kg per cubic feet of LNG were converted to gram per vehicle mile using the fuel economy and volume correction factors for LNG vehicles from EPA's *SmartWay 2.0.11 Truck Tool – Technical Documentation* (EPA, 2012). Emission factors for CO<sub>2</sub>e of LNG truck travel were calculated using the global warming potentials of CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O.

GHG emission factors during LNG truck idling are not available in the Climate Registry's Default Emission Factors. To estimate the GHG emission factors of LNG trucks during idling and APS operation, the ratio of the LNG truck travel GHG emission factors to the diesel truck travel GHG emission factors were calculated. LNG truck emission factors during idling and APS operation were estimated assuming that emissions during idling and APS operation would change at the same ratio.

#### Project GHG Emissions

GHG emissions of the Proposed Project were calculated by multiplying the emission factors by the VMT and vehicle idling time. The VMT and idling time of the existing condition (2012), the No Project in 2030, and project alternatives in 2030 were obtained from the technical memorandum *City of Los Angeles Bureau of Sanitation Traffic Analysis* (CH2M HILL, 2013). The No Project's Project alternatives' VMT and idling hours in 2017 were interpolated using the 2012 and 2030 data. Emission changes of No Project alternative and the Proposed Project in 2017 and 2030 from the CEQA 2012 baseline were calculated and compared to the state emission inventory levels.

### ***Direct Operational Impacts***

GHGs are different from other air pollutants evaluated in CEQA reviews because their impacts are not localized or regional due to their rapid dispersion into the global atmosphere, which is characteristic of these gases. The effected environment for CO<sub>2</sub> and other GHG emissions is the entire planet. In addition, from a quantitative perspective, global climate change is the cumulative result of numerous and varied emissions sources (in terms of both absolute numbers and types), each of which makes a relatively small addition to global atmospheric GHG concentrations. It is difficult to isolate and quantify the GHG emissions impacts for a particular project. Furthermore, at this time, there is no scientific methodology for attributing specific climatological changes to a particular project's emissions.

No significance thresholds have been adopted by CARB or SCAQMD that would assist the City in conclusively determining whether the incremental effect of the Proposed Project could be cumulatively considerable. To date, there is little guidance regarding thresholds for GHG impacts from a specific Proposed Project, and there are no local, regional, state, or federal regulations to establish a criterion for significance to determine the cumulative impacts of GHG emissions on global climate change. As a result, analysis of the Proposed Project's GHG emissions and the impacts to climate change focused on the evaluation of the vehicle emissions in relation to the Statewide or global GHG emission levels, and whether or not the Proposed Project would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

Direct GHG emissions related to the Proposed Project's SWCV trips were estimated and compared to the State and global GHG emission levels. Based on the nature of GHG emissions and the exceedingly small potential GHG impacts of the Proposed Project, as discussed below and shown in Table 3.1.3-3, the GHG emissions from the Proposed Project will not result in reasonably foreseeable significant adverse impacts on the human environment.

The transportation sector in California is the largest source of total GHG emissions in the State, and the second largest in the United States. Transportation GHG emissions are primarily the result of fossil fuel combustion, and CO<sub>2</sub> makes up the largest component of these GHG emissions. VMT under the project alternatives would increase by 12 percent under the Proposed Project and Alternative 3, and by 76 percent under Alternatives 1 and 2, from the 2012 existing condition.

Table 3.1.3-3 compares the changes in GHG emissions due to the Proposed Project to the State and global GHG emissions in terms of CO<sub>2</sub>e. In 2017, the Proposed Project and Alternative 3 would result in a slight GHG decrease of 1430 metric tons from the 2012 baseline emission level. Alternatives 1 and 2 would increase GHG emission by 7,300 to 7,400 metric tons. In 2030, the Proposed Project could result in a potential increase of GHG compared to 2012 baseline for all alternatives analyzed. The GHG emission increases are approximately 11 metric tons per year for the Proposed Project and Alternative 3, and approximately 9,500 metric tons of Alternatives 1 and 2.

The GHG change due to the Proposed Project operation would be negligible compared to the Statewide GHG emissions of 448.11 MMT in 2011, and the emission goal of 427 MMT per year in 2020 established by AB 32. Therefore, the Proposed Project's GHG emissions would not contribute substantial amount to the State emissions inventory, and would not interfere with the AB 32 Scoping Plan and the long-term goal of AB 32 to reduce GHG emissions to 1990 levels by 2020. Implementation of the Proposed Project is not expected to conflict or delay the implementation of



the policies, plans, and regulations set forth by the state and local agencies to reduce GHG emissions. Operational GHG emissions resulting from implementation of the Proposed Project would be considered to be less than significant on climate change.

**TABLE 3.1.3-3  
COMPARISON OF GHG EMISSIONS TO STATE INVENTORY**

	<b>CO<sub>2</sub>e Emissions (metric ton/year)</b>	<b>CO<sub>2</sub>e Emission Change from 2012 (metric ton/year)</b>
2012	19,308	NA
2017 No Project	19,855	5.47E+02
2017 Proposed Project	17,876	-1.43E+03
2017 Alternative 1	26,721	7.41E+03
2017 Alternative 2	26,649	7.34E+03
2017 Alternative 3	17,876	-1.43E+03
2030 No Project	21,342	2.03E+03
2030 Proposed Project	19,319	1.08E+01
2030 Alternative 1	28,862	9.55E+03
2030 Alternative 2	28,786	9.48E+03
2030 Alternative 3	19,319	1.08E+01
California GHG Inventory 2011 (CARB, 2013d)		4.48E+08
State GHG Goal 2020 (Assembly Bill 32)		4.27E+08

### ***Life Cycle GHG Emissions***

For information purposes, a life cycle analysis (LCA) of the Proposed Project's GHG emission was performed. The LCA for the Proposed Project was accomplished in two phases, the Well-to-Pump phase and the pump through combustion phase. CA-GREET model (CARB, 2009) was used for the analysis of the Well-to-Pump stage, which includes the evaluation of GHG emissions and energy associated with the production of feedstock fuels, the transport of feedstock fuels, the production of the fuel, and the transport of the fuel to the pumping station. GHG emissions from the combustion phase of the LCA are the direct vehicle GHG emissions summarized in Table 3.1.3-3. CA-GREET was not used for the combustion phase GHG emission estimate because vehicle types included in the CA-GREET model was automobiles and light duty vehicles. The Proposed Project's SWCVs are heavy heavy-duty vehicles and are not included in the CA-GREET model.

The default CA-GREET assumptions were used to perform the Proposed Project's Well-to-Pump emission analysis, using California specific parameters to perform the analysis when such parameters were available. Transportation distances only were revised based on Proposed Project specific assumptions. The diesel and CNG transportation method and distances used the CA-GREET defaults. Distance of LNG/CNG transportation was set to 120 miles, assuming the LNG/CNG would be transported from Boron, CA to the City of Los Angeles.

Well-to-Pump GHG emission rates modeled from CA-GREET are summarized in Table 3.1.3-4. Well-to-Pump GHG emission rates of ultra low sulfur diesel and LNG would be similar with the LNG

being slightly higher than the diesel results. The CNG fuel has the lowest Well-to-Pump GHG emissions among the three fuels analyzed.

For the purpose of the Well-to-Pump GHG emission analysis, it was assumed that 50 percent of the project vehicles would be CNG powered, and the other 50 percent would be LNG powered. The Well-to-Pump GHG emission rate of the Proposed Project, after taking into account the 50/50 split of LNG and CNG fuels, is slightly lower than the diesel Well-to-Pump emission rate. Detailed emissions and assumptions are included in Appendix D.

**TABLE 3.1.3-4  
WELL TO PUMP EMISSION RATE FROM CA-GREET**

	<b>Diesel (g/MMBtu)</b>	<b>CNG (g/MMBtu)</b>	<b>LNG (g/MMBtu)</b>	<b>Project Fuel Mix (g/MMBtu)</b>
GHGs as CO <sub>2</sub> e	16,159	12,272	17,827	15,049

Note:

Project fuel mix assumed 50% CNG vehicles and 50% LNG vehicles

Total life cycle GHG emissions of the Proposed Project vehicle operation are summarized in Table 3.1.3-5. Approximately 79 to 83 percent of the life cycle GHG emissions would be attributed to the direct vehicle emissions. Life cycle GHG emissions for the Proposed Project and Alternative 3 would be lower than the 2012 baseline.

**TABLE 3.1.3-5  
LIFE CYCLE GHG EMISSIONS**

	<b>Well to Pump Emissions (metric tons/year)</b>	<b>Direct Vehicle Emissions (metric tons/year)</b>	<b>Life Cycle Well to Wheel Emissions (metric tons/year)</b>	<b>CO<sub>2</sub>e Emission Change from 2012 (metric tons/year)</b>
2012	4,093	19,308	23,401	NA
2017 No Project	4,246	19,855	24,101	700
2017 Proposed Project	4,661	17,876	22,537	-864
2017 Alternative 1	7,058	26,721	33,778	10,377
2017 Alternative 2	7,038	26,649	33,687	10,286
2017 Alternative 3	4,661	17,876	22,537	-864
2030 No Project	4,324	21,342	25,666	2,265
2030 Proposed Project	5,126	19,319	24,445	1,043
2030 Alternative 1	7,766	28,862	36,628	13,227
2030 Alternative 2	7,744	28,786	36,530	13,129
2030 Alternative 3	5,126	19,319	24,445	1,043

GHG emissions and impacts from the related SWIRP facilities operation, including the potential new or expanded transfer stations, processing facilities and new truck base yards were not quantified in this document. GHG emissions from operation of these facilities would be quantified in separate CEQA documentations by the responsible parties at the time when the new facilities can be better defined.

### ***New or Expanded Facility Impacts***

The Proposed Project could involve construction and operation of new or expanded transfer stations, processing facilities, and new truck base yards. New or expanded transfer stations, processing facilities, and truck base yards are expected to be sited on lands with industrial or commercial manufacturing zoning designation, but could include lands zoned for agricultural uses for Organics processing facilities. From a conceptual perspective, operations of new or expanded processing facilities, transfer stations, and truck base yards would be expected to result in substantially less GHG emissions than the collection activities because VMTs associated with such facilities would not be substantive. Furthermore, the new or expanded facilities are not likely to be classified as a major source of GHG emissions. Therefore, GHG emissions from new or expanded facilities are not expected to generate significant levels of GHG emissions or conflict with GHG plans or policies.

In addition, further evaluation of GHG emissions from facilities will be addressed in the project-specific environmental document prepared by the Lead Agency for the jurisdiction in which such new or expanded facilities are located and when the new facilities can be better defined.

#### ***3.1.3.6 Cumulative Impacts***

According to the SCAQMD white paper *Potential Control Strategies to Address Cumulative Impacts from Air Pollution, Appendix D Cumulative Impact Analysis Requirements Pursuant to CEQA*, projects that are determined to have less-than-significant impacts individually are generally not considered to be cumulatively significant (SCAQMD, 2003). Based on the Operational Impact discussion, the operational emissions of GHG from the collection activities under the Proposed Project are negligible compared to the State emission levels and would have less than significant impacts individually. In addition, the Proposed Project is a part of the Proposed Project that would divert Commingled Recyclables and Organics from landfill disposal, which would be beneficial to the GHG and global climate change by reducing GHG emissions from the disposal and resulting decomposition of recyclables and Organics in landfills that contribute to the generation of landfill gas, which includes methane a GHG. However, although the collection activities would result in fewer GHG emissions than baseline conditions, the incremental GHG emissions from the future facilities would make a cumulative contribution to global climate change, which is considered potentially significant. Implementation of mitigation measures AQ-1 through AQ-20 would reduce the construction and operational emissions associated with future facilities; however, residual operational-related impacts that contribute to a cumulative impact could remain.

#### ***3.1.3.7 Mitigation Measures***

The analysis undertaken for this Draft Program EIR determined that the collection activities under the Proposed Project would not result in significant adverse impacts related to GHG emissions and climate change. However, emissions associated with construction and operation of new or expanded processing facilities, transfer stations, and truck base yards would contribute to cumulative GHG impacts. Mitigation measures AQ-1 through AQ-20, described in Section 3.1.1, Air Quality, would reduce generation of GHG emissions; however, residual operational-related impacts that contribute to a cumulative impact could remain.

### 3.1.4 Transportation and Traffic

#### 3.1.4.1 Introduction

This section evaluates the potential traffic impacts related to the Proposed Project, and at a conceptual level, related to new or expanded transfer stations and processing facilities that would be required to process diverted materials and new truck base yards. This analysis of the Proposed Project focused on estimates of vehicle miles traveled (VMT) and vehicle hours traveled (VHT) by Solid Waste Collection Vehicles (SWCV) to transport Solid Resources from customer locations throughout the City to disposal and processing facilities. This assessment is based on Sanitation's Traffic Analysis Technical Memorandum prepared by CH2M HILL in August 2013. The technical memorandum is provided as Appendix E of this Draft Program EIR. The scope of the analysis is in accordance with direction provided by the City of Los Angeles Department of Transportation (LADOT). The new or expanded facilities have not yet been proposed; therefore, the evaluation of these facilities in this section is at a conceptual level.

Because of the large geographic area of the Proposed Project and uniqueness of the project trip generation and distribution, traffic impacts were assessed qualitatively and on a regional level. This section includes a description of the existing material collection system and a discussion of the approach and methodology used to estimate VMT and VHT for the existing and Proposed Project conditions (for 2012 and 2030). Also provided is a qualitative analysis of potential effects on roadway operations, air traffic, design hazards, emergency access, and alternative transportation in accordance with Appendix G of the State CEQA Guidelines and the City of Los Angeles CEQA Thresholds Guide (LADOT, 2006).

A summary of the Proposed Project's anticipated impacts on transportation and traffic resources, based on the evaluation below, is contained in Table 3.1.4-1.

**TABLE 3.1.4-1  
SUMMARY OF IMPACTS RELATED TO  
TRANSPORTATION AND TRAFFIC RESOURCES**

Environmental Impact Area	Potential Impact	Mitigation	Significant Impact After Mitigation
<b>TR-1: Plans, Policies or Ordinances</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	Yes
<b>TR-2: Congestion Management Program</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	Yes
<b>TR-3: Air Traffic Patterns</b>			
Collection System	No	None Required	No
New or Expanded Facilities	No	None Required	No
<b>TR-4: Design Hazards</b>			
Collection System	No	None Required	No
New or Expanded Facilities	No	None Required	No

**TABLE 3.1.4-1  
SUMMARY OF IMPACTS RELATED TO  
TRANSPORTATION AND TRAFFIC RESOURCES**

Environmental Impact Area	Potential Impact	Mitigation	Significant Impact After Mitigation
<b>TR-5: Emergency Access</b>			
Collection System	No	None Required	No
New or Expanded Facilities	No	None Required	No
<b>TR-6: Alternative Transportation</b>			
Collection System	No	None Required	No
New or Expanded Facilities	No	None Required	No
<b>Cumulative Impacts</b>	Yes	Yes	Yes

#### 3.1.4.2 Existing Material Collection System

Permitted Haulers currently collect materials from all Commercial Establishments not collected by the City, based on an open market system. At any given time, between 500 and 750 Permitted Haulers are providing some kind of Solid Resources hauling service. Most of these Permitted Haulers are construction-related contractors that have permits to haul construction and demolition debris. Of the Permitted Haulers operating in the City, approximately 140 are traditional haulers where waste transportation, or hauling, is their primary business. Currently, 45 haulers provide service to Commercial Establishments. These Permitted Haulers provide Solid Resources collection and disposal services to approximately 63,000 Commercial Establishments.

The largest 15 Permitted Haulers collect 97 percent of the Solid Resources, with the largest Permitted Haulers collecting 85 percent of the Solid Resources. Under the existing open market system, no single Permitted Hauler has more than 40 percent of the Solid Resources hauling market share in the City.

#### 3.1.4.3 Franchise Zones

The Proposed Project includes establishing 11 exclusive franchise zones within the City. The City is more than 460 square miles in area, with approximately 63,000 existing Commercial Establishment service accounts. Sanitation developed 11 franchise zones that range from approximately 1,000 accounts to approximately 9,000 accounts, using existing Sanitation wasteshed boundaries and major geographical features to delineate boundaries. For example, the Santa Monica range that establishes the San Fernando Valley (Valley) area is used as the southern boundary of two of the City's wastesheds. The San Pedro wasteshed was established considering the geographic nature of its location. Interstate (I-) 405 is the dividing line between the East and West Valley, dividing the Valley into two sections.

The franchise zones were developed to enable the City to meet its waste diversion goals, promote competition, help promote the City's goal of having fair and equitable rates for each service level throughout the City, allow for competition from smaller waste Permitted Haulers, and balance the cost of administering multiple contracts. A general description of the franchise zones is provided in Table 3.1.4-2. A map of the franchise zones is provided in Figure 2-1.

**TABLE 3.1.4-2  
GENERAL DESCRIPTION OF FRANCHISE ZONES**

Franchise Zone		Primary Communities	Major Roadways
1	West Valley (WV)	Porter Ranch, Chatsworth, Granada Hills, Northridge, North Hills, Canoga Park, Reseda, Woodland Hills, Tarzana, Encino	SR-118, SR-27 (Topanga Canyon Road), I-405, US 101
2	Northeast Valley (NEV)	Mission Hills, Sylmar, San Fernando, Pacoima, Panorama City, Sun Valley, Shadow Hills, Sunland, Tujunga	I-210, I-5, SR-170
3	Southeast Valley (SEV)	Van Nuys, North Hollywood, Studio City	SR-170, SR-134
4	West LA (WL)	Pacific Palisades, Brentwood, Westwood, Bel Air	I-405, I-10, SR-1, SR-2 (Santa Monica Blvd.), SR-90, SR-42
5	North Central LA (NC)	West Hollywood, Los Angeles	US 101, SR-2 (Santa Monica Blvd.)
6	Northeast LA (NE)	Los Angeles	I-5, I-110, US 101, SR-134
7	South LA (SLA)	Los Angeles	I-110, I-10, I-105
8	Harbor (HB)	Harbor City, San Pedro	I-110, I-405, SR-91, SR-47, SR-103, SR-213 (S. Western Ave.), SR-1
9	Downtown (DT)	Los Angeles	I-110, US 101, I-10, I-5
10	East Downtown (EDT)	Los Angeles	SR-60, I-5, US 101
11	Southeast LA (SE)	Los Angeles	SR-110, I-10

#### 3.1.4.4 Methodology

This section provides an overview of the approach used to prepare VMT and VHT estimates for the existing collection services and those anticipated under the Proposed Project.

A basic understanding of hauler route characteristics is important for estimating VMT and VHT. Permitted Haulers seek to provide efficient service by establishing routes that each collection vehicle follows on a particular day of the week. A typical route begins at a truck base yard (where the vehicle is parked overnight), includes a series of stops at Commercial Establishments, one or more trips to a disposal facility to unload, then concludes at the truck base yard. The location of the truck base yards and disposal facilities used by Permitted Haulers is an important consideration for preparing the VMT and VHT estimates. Another important consideration is the location of service provided throughout the City. One zip code within each franchise zone was selected to represent the “centroid” of collection for that zone.

#### Data Sources

The following information served as the basic data for estimating VMT and VHT:

- Tons of Solid Resources based on amounts from 2012 that Permitted Haulers collected from Commercial Establishments, including facilities utilized.
- 2012 Solid Resources collection service levels (in cubic yards [cy] per week) by address, as reported by Permitted Haulers to the City. Service levels were aggregated to each of the 11 franchise zones by summing service by zip code and using the area of each zip code

within each franchise zone provided by Sanitation staff to aggregate service levels by zip code into franchise zones.

- The results of a Permitted Hauler questionnaire received from eight Permitted Haulers that collect 76 percent of the Solid Resources collected in the City. The information used includes average tons per load, average trips to disposal facility per day, average number of days per week for collection, and the number of vehicles typically dispatched from each base yard used to provide service to customers in the City.
- The results of a truck survey conducted in June 2013, which consisted of a two-person crew following a collection vehicle from the start of its route to the end of its route. The survey results include on-route and off-route distances and times, number of stops per route, and distances and times between on-route stops. On-route means travel between collection stops and time spent at a location servicing a customer. Off-route means travel where one end or both ends of a trip is a base yard or disposal facility.
- Off-peak and peak distances and travel times among franchise zone centroids, hauler base yards and disposal facilities used by those Permitted Haulers were calculated using Google Earth and Google Maps.

### ***Route Trucks and Rolloffs***

Estimates of VMT and VHT were developed separately for two types of trucks used to collect Solid Resources—route trucks and rolloff trucks. Route trucks are typically front-loading vehicles that collect materials from many 1- to 8-cy containers along a defined route. Route trucks typically unload at a disposal facility one to three times per day. Rolloff trucks collect larger containers (8 to 50 cy) by providing a customer with a new empty container, then taking the full container to a disposal facility. These trucks typically unload at a disposal facility four to eight times per day.

### ***Geographic Boundaries***

Currently, no geographic boundaries determine where Permitted Haulers can or cannot provide service, and all Permitted Haulers that serve customers in the City have customers located outside the City limits. Permitted Haulers establish routes for cost-effective service. Thus, not only do SWCVs serve customers both inside and outside the City limits, a single collection route (route truck or rolloff) may have customers both inside and outside the City limits.

### ***On-Route VMT and VHT***

On-route VMT and VHT were estimated using the results of the truck survey conducted in June 2013. For 10 days, a truck was followed from each of three Permitted Haulers (one larger Permitted Haulers for 6 days and two smaller Permitted Haulers for 2 days each, for a total of 10 trucks and 10 routes).

### ***Off-Route VMT and VHT***

Off-route VMT was estimated in five main steps:

1. The total number of trucks required to collect material from a hauler's customers within a City franchise zone each week was calculated by using that hauler's total annual amount of Solid Resources disposed of, and information from the hauler questionnaire about the

number of its route trucks and rollofs, the number of tons per trip, number of trips per day to a disposal facility, and days per week of collection. This resulted in an estimated number of route trucks and rollofs required to collect Solid Resources in the City daily.

2. The breakdown between route trucks and rollofs was calculated using information about the number of each type of truck at a hauler's base yard(s) and other statistics from the hauler questionnaire.
3. The geographic locations of the route segments were determined on the basis of hauler-reported service levels within each franchise zone.
4. The specific segments traveled to serve a hauler's franchise zones were determined using a linear optimization algorithm so that the specific segments to and from base yards, franchise zones, and disposal facilities are allocated in a manner that minimizes total VHT (i.e., using travel time rather than distance). In other words, this approach ensures that off-route trips are sent between franchise zone centroids and disposal facilities in a manner that minimizes travel time, which is a key efficiency objective for Franchised Haulers. The resulting off-route VMT is effectively a VHT-optimized weighted average of the service provided by Franchised Haulers in each franchise zone. This approach was used for the eight Permitted Haulers that responded to the questionnaire. Those results were used to estimate VMT and VHT for other Permitted Haulers by using VMT per ton for Permitted Haulers of similar size.
5. Two adjustments were made to the modeled results to improve accuracy:
  - a) The modeled VMT estimates to specific franchise zones are substantially greater than the off-route VMT results from the truck survey. Accordingly, model results were adjusted downward to account for various factors that might result in modeled estimates being greater than what Franchised Haulers actually experience.
  - b) The model results indicate that larger Permitted Haulers typically require more than one route truck per day in each franchise zone they service, whereas many smaller Permitted Haulers require less than one route truck per day in many zones. As noted in Item 3, the model counts "partial VMT/VHT" for partial loads. In many cases, this is a reasonable approximation because Permitted Haulers generally organize routes throughout the week to accommodate differing collection frequencies (e.g., M, T, W or M, F) and will collect from multiple zones when needed to minimize trips to a disposal facility. However, many small Permitted Haulers collect less than a full load of material in the City over the course of a collection week. This will result in routes combined with customers outside the City and partial loads to disposal facilities. Thus, a "small hauler adjustment" was made to the modeled results.

Off-route VHT was estimated by multiplying VMT times the reciprocal of the average off-route travel speed calculated from the truck survey.

To ensure the peak (congested) travel times are truly represented, travel times were collected between 8:00 and 9:00 AM to represent the AM peak, and between 4:00 and 5:00 PM to represent the PM peak.



#### **3.1.4.5 Environmental Setting**

The intercity transportation system in the City serves as a regional, national, and international hub for passenger and freight traffic. The system includes the largest port complex in the United States; an extensive freight and passenger rail infrastructure, including light rail lines and subway lines; numerous airports and bus lines; and an extensive freeway and road system. The description of the existing transportation network was primarily obtained from the *City of Los Angeles Transportation Profile* (LADOT, 2009).

#### **Regional and Local Roadway System**

Within the City limits, there are approximately 6,500 miles of dedicated public streets, approximately 180 miles of freeway, and roughly 4,400 signalized intersections. The major freeway routes through the Los Angeles area providing interstate and regional connections are I-5 (north to Sacramento and south to San Diego), I-405 (south to Orange County), US 101 (north to Santa Barbara), I-710 (south to Long Beach), I-110/State Route (SR-) 110 (south to the Los Angeles Harbor and north to Pasadena), I-210 (through the northeast section of the Valley), SR-118 (from I-5 in the north Valley west to Simi Valley), and I-10 (west to Santa Monica and east to San Bernardino and beyond).

In addition to the freeways above, the following freeways traverse the region:

- SR-2 (Glendale Freeway)
- SR-14 (Antelope Valley Freeway)
- SR-47 (Seaside Freeway)
- SR-60 (Pomona Freeway)
- SR-90 (Marina Freeway)
- SR-91 (Gardena Freeway)
- SR-170 (Hollywood Freeway)
- SR-134 (Ventura Freeway)
- SR-103 (Terminal Island Freeway)
- I-105 (Century Freeway)

Other state highways of Los Angeles include:

- SR-1 (Pacific Coast Highway/Lincoln Boulevard)
- SR-2 (Santa Monica Boulevard)
- SR-23 (Decker Canyon Road)
- SR-27 (Topanga Canyon Boulevard)
- SR-47 (Alameda Street)
- SR-90 (Slauson Avenue)
- SR-170 (Highland Avenue)
- SR-187 (Venice Boulevard)

The City has an extensive street grid. Arterial streets connect freeways with smaller neighborhood streets and are often used to bypass congested freeway routes.

### **Overview of Regional Roadway Operations**

The Los Angeles County Metropolitan Transportation Authority (Metro) *Draft 2010 Congestion Management Program* (CMP) summarizes the results of over 15 years of monitoring highway, transit, and local growth for the Southern California region. The CMP monitoring results indicate that congestion levels in the region have remained relatively constant between 1992 and 2009. Areas where Los Angeles County has experienced fluctuations in congestion have generally involved only incremental changes in Level of Service (LOS). This indicates that the Los Angeles County freeway system is a mature system that is not prone to radical fluctuations in congestion levels. Further, on a systemwide basis, Los Angeles County freeways are operating at approximately their designed capacity. However, at specific locations along the system, freeway segments may range from free flow, such as the northern stretch of the SR-14 as it approaches the Kern County border, to extremely congested conditions, such as along I-10 west of I-110, where demand significantly exceeds capacity during both morning and evening peak hours.

The Los Angeles County freeway system continues to be generally defined by highly congested conditions. Between 1992 and 2009, about half of the system has consistently operated at the two most congested levels, LOS E and F, during both the morning and afternoon peak periods. Since monitoring began in 1992, 2001 marked the first year that LOS E and F accounted for more than 50 percent of the morning peak-period LOS. LOS E and F accounted for 50 percent or more of the afternoon peak-period LOS in 7 of the 10 monitoring years, including each of the last 5 CMP years. However, the overall pattern for Los Angeles County since 1992 has been a gradual stabilization of congestion levels, with the 2009 proportion of LOS E and F segments approximating baseline 1992 levels for both the morning and evening peak hours (Metro, 2010).

While traditional commute patterns in many urban areas typically have the heaviest congestion flowing toward a central core in the morning with the reverse flow in the afternoon, Los Angeles County has many activity centers besides downtown Los Angeles, resulting in highly complex travel patterns. Some freeways experience heavy congestion in both directions during peak periods. These include:

- I-10 between the East Los Angeles interchange and I-405
- I-5 between SR-2 and SR-170
- I-5 between SR-19 and the Orange County line

CMP monitoring results indicate that, as a whole, arterial intersections are also congested, although not as severely as the freeway system. The afternoon peak hours are generally somewhat more congested than the morning peak hours. About one-quarter of all monitored intersections operate at LOS E or F during both morning and afternoon rush hours.

### **LADOT Transit Service and Facilities**

LADOT operates three public transit systems—Commuter Express, DASH, and Cityride—as well as the Bunker Hill/Union Station/Metrolink Shuttle and a charter bus program. LADOT's transit fleet consists of approximately 350 vehicles and serves 24.3 million passenger boardings per year. Daily ridership is approximately 82,400 boardings.

The Commuter Express provides peak-period express bus services to major work sites in Los Angeles County (Downtown, Century City, Westwood, Marina Del Rey, El Segundo, Pasadena,

Glendale, and Burbank). There are 14 fixed Commuter Express routes. DASH buses travel fixed routes and provide access to various activity centers, such as parks, recreation centers, cultural sites, medical facilities, and retail areas. The DASH concept has been expanded to 32 routes that serve 27 communities throughout the City, including 5 routes in the Downtown area. Cityride is a special dial-a-ride and taxicab service for seniors 65 years and older, and persons with disabilities, enabling clients to gain access to senior centers, medical facilities, supermarkets, and other sites.

Other bus services provided by LADOT include the Bunker Hill/Union Station/Metrolink Shuttle, a high-frequency shuttle connecting Los Angeles Union Station with Bunker Hill employment sites and charter bus program that provides free bus service to qualified seniors, youth, and disabled groups.

LADOT currently utilizes the Encino Park-and-Ride Lot in the San Fernando Valley, which supports LADOT's Commuter Express service, providing parking spaces, bicycle lockers, and electric vehicle recharging stations. The Commuter Express routes service numerous other Park-and-Ride lots (not owned by LADOT) throughout the county. Metrolink stations are located in Chatsworth, California State University Northridge, Van Nuys, Sylmar/San Fernando, and Sun Valley. Transit Centers are located in El Sereno, Highland Park, and Warner Center.

#### Metropolitan Transportation Authority Services

The regional public transit service in Los Angeles County is the Metropolitan Transportation Authority, more commonly known as Metro. Metro operates Metro Local (buses), Metro Rail (light rail), and Metro Rapid (express bus).

On an average weekday, Metro operates 2,000 peak-hour buses throughout Los Angeles County. Metro also funds 16 municipal bus operators. Metro Rail includes approximately 70 miles of rail line, made up of the Metro Red Line and Purple Line subway systems, the Metro Blue Line, the Metro Green Line, the Metro Gold Line, and the Metro Expo Line. Metro Rail serves more than 60 rail stations from Long Beach to Downtown Los Angeles to Hollywood, Universal City and North Hollywood in the San Fernando Valley, from Downtown Los Angeles to Pasadena, and from Norwalk to El Segundo. Metro Rapid is a limited-stop express bus that is tied to the City's Automated Traffic Surveillance and Control (ATSAC) system; those buses are equipped with transponders that communicate with traffic signals, giving the buses priority for green signals.

#### Metrolink

Metrolink is a commuter rail service, governed by the Southern California Regional Rail Authority (SCRRA), which connects the Southern California region, including Los Angeles, Orange, Ventura, San Bernardino, and Riverside counties. Metrolink has 7 lines and 55 stations, and it serves 44,000 passengers annually, covering a network of 512 route-miles.

#### Other Municipal Transit Services

Other municipal transportation agencies in Los Angeles County include Long Beach Transit, Montebello Bus Lines, Norwalk Transit, Redondo Beach, Santa Monica's Big Blue Bus, Santa Clarita Transit, Torrance Transit, and Foothill Transit.

## Airports

The City owns and operates Los Angeles World Airports, a system of four airports—Los Angeles International (LAX), Ontario (ONT), Van Nuys (VNY), and Palmdale Regional (PMD). Other major nearby commercial airports include Bob Hope Airport (BUR), serving the San Fernando and San Gabriel Valleys; Long Beach Airport (LGB), serving the Long Beach/Harbor area; and John Wayne Airport (SNA), serving the Orange County area.

## Ports

The San Pedro Bay Port Complex includes the Port of Long Angeles and the Port of Long Beach. The Port of Los Angeles is located 20 miles south of downtown Los Angeles and is a department of the City of Los Angeles, often referred to as the Los Angeles Harbor Department. The Port of Los Angeles consists of 7,500 acres and 43 miles of waterfront, and the port features 27 cargo terminals, including dry and liquid bulk, container, break-bulk, automobile, and omni facilities. These terminals handle approximately 190 million metric tons of cargo annually.

The Port of Long Beach is located at the south end of I-710 in Long Beach, on the opposite side of the harbor from the Port of Los Angeles. The Port of Long Beach is a public agency managed and operated by the City of Long Beach Harbor Department. The Port of Long Beach consists of 3,200 acres, 10 piers, 80 berths, and 66 post-Panamax gantry cranes. The Port of Long Beach is the second busiest port in the United States, behind the Port of Los Angeles, and handles approximately 74.6 million metric tons of cargo annually.

## Commercial Rail

Los Angeles County operates as a major commercial rail hub. The region is linked to the national rail network by main lines operated by Union Pacific Railroad (UPRR) and Burlington Northern Santa Fe (BNSF). UPRR has terminals located near each port and one located in the City of Los Angeles. BNSF operates three terminals, one of which is located in the City of Los Angeles. In 2002, the Alameda Corridor opened, providing a 20-mile, grade-separated freight rail link between rail yards near downtown Los Angeles and inland, and the San Pedro Bay ports.

## Bicycle Facilities

The City's local street network has a bicycle circulation system that includes signed bike routes (Class III bicycle facilities), striped and signed bike lanes (Class II bicycle facilities), and on-street bike paths that are physically separated from automobile traffic (Class I bicycle facilities).

Bicycle lanes are installed throughout the City along feasible street locations to serve commuters, students, and bicycle enthusiasts. To date, there are more than 130 miles of bicycle lanes in the network, some of which are located along Venice Boulevard, Hoover Street, Westwood Boulevard, De Soto Avenue, and Rinaldi Street. Bicycle paths can be found along Venice Beach, Sepulveda Basin, Culver Boulevard, and the Los Angeles River. Work on Santa Monica Boulevard was recently completed, and plans are underway to extend the Los Angeles River Bike Path, as well as construct a new path in conjunction with the North Hollywood-to-Warner Center Busway Project.

#### **3.1.4.6 Regulatory Framework**

This section briefly describes the relevant federal, state, regional, and local plans, policies, and regulations that pertain to transportation and traffic.

##### **Federal**

There are no applicable federal requirements related to transportation that would apply to the Proposed Project.

##### **State**

The California Department of Transportation (Caltrans) has jurisdiction over the construction and maintenance of highways and freeways within the Proposed Project study area. Caltrans also coordinates several Statewide transportation programs that directly impact the circulation system in the region. These include the State Transportation Improvement Program (STIP), the Congestion and Mitigation and Air Quality Program (CMAQ), and the Traffic Congestion Relief Program (TCRP).

##### **Regional**

###### **2012-2035 Regional Transportation Plan/Sustainable Communities Strategy**

The Regional Transportation Plan (RTP) is a long-range transportation plan that is developed and updated by Southern California Association of Governments (SCAG) every 4 years. The last RTP was adopted by SCAG's Council in April 2012. For the 2012–2035 RTP/Sustainable Communities Strategy (SCS), SCAG has placed a greater emphasis on sustainability and integrated planning with a vision that encompasses three principles—mobility, economy, and sustainability.

Specific issues and goals in the RTP address corridor preservation; mobility and accessibility; sustainability, including promoting transit-oriented development growth patterns; environmental protection, which addresses air quality and energy efficiency; transportation financing, security, and safety; environmental justice and mitigation; revenues and expenditures; transportation conformity, implementation, and monitoring; and future connections and growth.

The RTP provides a basic policy and program framework for long-term investment in the regional transportation system in a coordinated, cooperative, and continuous manner. By law, transportation investments in the SCAG region that receive State or federal transportation funds must be consistent with the RTP and must be included in the RTIP.

##### **Metro CMP**

In addition to being a regional transit operator, Metro is responsible for planning and managing vehicular congestion and coordinating regional transportation policies within Los Angeles County. Metro prepared the 2010 CMP for Los Angeles County, in accordance with Section 65089 of the California Government Code. As required by statute, Los Angeles County's CMP has the following elements:

- System of highways and roadways, with minimum LOS performance measurements designated for highway segments and key roadway intersections on this system
- Performance element, including criteria to evaluate multimodal system performance

- Travel demand element, promoting alternative transportation strategies
- Program to analyze the impacts from local land use decisions to the regional transportation system, including an estimate of the costs of mitigating those impacts
- Seven-year capital improvement program of projects that benefit the CMP system
- Deficiency plan

The 2010 CMP is the eighth CMP adopted for Los Angeles County since the requirement became effective with the passage of Proposition 111 in 1990. The CMP is intended to address vehicular congestion relief by linking land use, transportation, and air quality decisions and to address the impact of local growth on the regional transportation system. Proposition 111 provides State gasoline tax revenue for transportation improvements and requires cities, counties, and other eligible agencies to implement the requirements of the CMP. Compliance with the CMP ensures a local jurisdiction's eligibility to compete for these State gas tax funds for local transportation projects.

### **Local**

#### **City of Los Angeles General Plan Framework Element**

The City of Los Angeles General Plan Framework Element is the first component of the Citywide comprehensive General Plan. The Framework Element was originally adopted in 1996 and most recently was re-adopted in August 2001. The Framework Element defines Citywide policies related to growth that influence most of the City's General Plan elements. It includes policies for land use, housing, urban form/neighborhood design, open space/conservation, economic development, transportation, and infrastructure/public services. Implementation of the Framework Element will be achieved through plans, ordinances, standards and guidelines, studies, capital improvements, economic development procedures, administrative procedures, and coordination with other governmental agencies, coordination and partnerships with private landowners and developers, and development review procedures. Many policies of the Framework Element will be implemented by the revision of the community plans and the Municipal Code.

#### **City of Los Angeles General Plan Transportation Element**

The Transportation Element presents a guide to the further development of a Citywide transportation system, which provides for the efficient movement of people and goods, based in part, on recommendations of the Framework Element. The Transportation Element recognizes that the primary emphasis must be placed on maximizing the efficiency of existing and proposed transportation infrastructure through advanced transportation technology, through reduction of vehicle trips, and through focusing growth in proximity to public transit. The City's current Transportation Element addresses motorized and nonmotorized transportation through 2010.

The City is currently in the process of updating the Transportation Element (proposed to be renamed the Mobility Element). As part of this update, the Los Angeles Departments of City Planning and Transportation are conducting the LA/2B project to envision a new way of moving around the City, using its streets for mobility and beyond. This project will assist the City in developing a revised Mobility Element that will identify goals, objectives, policies, and programs that reflect the communities' future mobility ideas and suggested strategies. The updated Mobility Element is scheduled to be completed in spring 2014.

**State CEQA Guidelines**

Based on the *CEQA Guidelines*, a significant traffic impact would occur, if the Proposed Project would:

Impact TR-1: Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and nonmotorized travel, and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.

Impact TR-2: Conflict with an applicable congestion management program, including, but not limited to, LOS standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.

Impact TR-3: Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

Impact TR-4: Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Impact TR-5: Result in inadequate emergency access.

Impact TR-6: Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

**City of Los Angeles CEQA Thresholds**

The City Department of Transportation has developed its own *L.A. CEQA Thresholds Guide* (LADOT, 2006) for Citywide administrative guidance in the preparation and review of environmental documentation subject to CEQA. The *L.A. CEQA Thresholds Guide* is a document representing the technical input of City departments and bureaus. Similar to the State CEQA thresholds, the City thresholds relevant to evaluating the potential traffic impacts of the Proposed Project include evaluating impacts to freeway, intersection, and roadway capacity, and evaluating potential impacts from neighborhood intrusion on local residential streets.

**3.1.4.7 Impact Analysis**

Based on the VMT and VHT analysis presented in the Traffic Analysis prepared for Sanitation (CH2M HILL, 2013), forecasted VMT and VHT for the existing (2012) and the 2030 conditions by alternative are shown in Table 3.1.4-3.

VMT and VHT were forecasted for the No Project Alternative, Proposed Project, and other alternatives (discussed in further detail in Section 4, Alternatives to the Proposed Project) for the 2030 conditions, which is the end of the planning period covered in this Draft Program EIR. It is assumed that the Proposed Project would be fully implemented by this time. The approach used to estimate VMT and VHT for the alternatives focused on estimating the number of trucks that would be needed to reasonably forecast the 2030 quantities of Solid Waste, Commingled Recyclables, and Organics. Appendix E presents the detailed methodology used to calculate the 2030 VMT and VHT estimates.

The City's current open market waste collection system results in approximately 9,143,000 VMT and 854,000 VHT per year by Permitted Haulers. Assuming no changes are made to the City's collection system (No Project Alternative), by 2030, it is estimated that the VMT would increase by 15 percent to 10,488,000 and the VHT would increase by 16 percent to 993,000. Under 2030 conditions, implementation of the Proposed Project would result in a 2 percent decrease in 2030 VMT (10,287,000 VMT) and a 10 percent increase in 2030 VHT (1,074,000 VHT), compared to the No Project Alternative.

**TABLE 3.1.4-3  
FORECAST 2030 VMT AND VHT**

Alternatives	VMT			VHT			No. of Trucks Required for Operations <sup>1</sup>
	2030 VMT	% Change	% Change (No Project vs. Alternatives)	2030 VHT	% Change	% Change (No Project vs. Alternatives)	
2012 Existing Conditions	9,143,221			853,608			283
2030 Alternatives							
No Project	10,488,034	15%	-	992,597	16%	-	329
Proposed Project	10,287,273	13%	-2%	1,073,843	26%	8%	356
Alt 1. Non-Exclusive	16,107,380	76%	54%	1,587,034	86%	60%	526
Alt 2. Exclusive, Multiple Franchised Haulers	16,056,981	76%	53%	1,582,618	85%	60%	524
Alt 3. City Collection	10,287,273	13%	-2%	1,073,843	26%	8%	356

Notes:

1. The Proposed Project requires more trucks but results in less VMT than the No project alternative. This is based on the assumption that the competitive procurement process will result in Franchised Haulers driving shorter distances to and from base yards and disposal, MRFs, and transfer facilities.

The following factors result in changes in VMT and VHT between the alternatives compared to existing conditions:

- Historically, congestion has increased gradually through time, and this trend is projected to continue in the future. On the basis of historical trends published in the Texas A&M Transportation Institute *2012 Annual Urban Mobility Report*, it is estimated that peak-period VHT/mile will increase by a projected 1.27 percent per year.
- The added diversion resulting from the Proposed Project requires more stops at customer premises for collection, and all things equal, more miles would be required to collect material compared to the existing conditions. A key goal of the Proposed Project is to increase diversion of material currently sent to landfills. Consequently, as more customers set out bins for three different types of material compared to only one or two, more trucks will be required to service the additional bins. When the diversion programs are implemented, the relative number of trucks required to collect Solid Waste, Commingled



Recyclables, and Organics will change as the quantities of Commingled Recyclables and Organics increase and the quantity of Solid Waste declines. An additional evaluation examined the effects of implementing the Proposed Project with the current diversion rates (i.e., assuming the same material distribution as the No Project Alternative). The result from this analysis indicates that implementation of the Proposed Project without additional diversion would result in a 16 percent decrease in VMT along with a 9 percent decrease in VHT. The results of this comparison are shown in Table 3.1.4-4.

**TABLE 3.1.4-4  
COMPARISON OF 2030 VMT AND VHT FOR OPEN MARKET AND  
FRANCHISE SYSTEM WITH AND WITHOUT NEW DIVERSION REQUIREMENTS**

	<b>2030 No Project</b>	<b>2030 Exclusive Franchise with No New Recycling Programs</b>	<b>2030 Exclusive Franchise with New Recycling Programs (Proposed Project)</b>
<b>Annual VMT</b>	10,488,034	8,774,309	10,287,273
% Change from Open Market System to Franchise System	0.0%	-16.3%	-2.0%
<b>Annual VHT</b>	992,597	902,021	1,073,843
% Change from Open Market System to Franchise System	0.0%	-9.1%	8.2%

- Under the Proposed Project, there would be a substantial reduction in the distance and time traveled between customer stops compared to existing conditions because only one Franchised Hauler would operate in each franchise zone. To a lesser extent, this would also occur for the other alternatives (as discussed in Section 4, Alternatives to the Proposed Project). Trucks will travel less time and distance between Commercial Establishments on collection routes. Furthermore, the competitive nature of the RFP process and the guaranteed additional business from having all customers in one or more zones could result in companies locating base yards closer to franchise zones. Franchised Haulers might also commit to building transfer stations or reload facilities closer to franchise zones in an attempt to lower costs.
- VHT increases more than VMT because VHT includes time spent collecting material at customer premises and unloading that material at disposal and processing facilities. Although the driving distance and time would decrease with the Proposed Project even with fewer Franchised Haulers collecting, the time spent at each premises collecting is unchanged. Thus, reducing the number of Franchised Haulers would reduce miles traveled more than it would reduce time spent on collection routes.

***Impact TR-1: The Proposed Project could conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and nonmotorized travel, and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.***

Due to the Citywide scale of the project, the traffic assessment for the Proposed Project is based on volume changes and a determination of the overall effect on LOS. Individual effects were not identified.

The changes in VMT and VHT would occur throughout the City's 460 square miles. Most of the vehicles would be widely distributed, with no concentrations of vehicles occurring, except when collection vehicles exit a truck base yard or disposal facility at the beginning of the workday, which occurs under existing conditions. The Proposed Project would also potentially change the on-route and off-routes used by Franchised Haulers to maximize routing efficiency, although it assumed that, in general, the routes would be similar to existing conditions because the location of customers and disposal facilities will not change substantially.

The Proposed Project would result in small changes in traffic volumes throughout the system (both better and worse), but due to the regional scale of the project, individual effects cannot be identified with certainty. The estimated changes in hauler VMT (a 2 percent decrease) and VHT (a 10 percent increase) by 2030 are relatively small changes for a small subset of the vehicles on the road dispersed over a large area. Existing VHT citywide (for vehicles and trucks) is estimated to be 989 million vehicle hours per year. By 2035, the VHT is expected to increase to 1.14 billion vehicle hours per year. The overall increase in project-related VHT (approximately 81,200 hours) represents a change in overall VHT in the City of less than 0.01 percent. The conclusion is that the changes would not translate into a substantial increase in traffic or any change in operations. Impacts to the overall transportation system are expected to be less than significant.

Furthermore, as part of the Proposed Project, Sanitation recommends that franchise agreements require Franchise Haulers to establish vehicle-tracking methods and processes to ensure maximum routing efficiencies. Each franchisee would be required to provide detailed information on the number and types of vehicles that it will use for collection. Each franchisee also would be required to report total VMTs (recommended to occur annually, at a minimum), compare actuals versus what was proposed, explain deviations, and explain how any needed improvements can and will be made. Collection vehicles could be required, for example, to have global positioning system (GPS) tracking to ensure accurate VMT tracking, as well as establishing VMT reduction goals.

No changes to or increase in demand for alternative transportation would occur as a result of the Proposed Project. Vehicles collecting Solid Resources would be traveling on public streets and along routes already used routinely by such vehicles; therefore, no significant impact to transit routes or transit stops would occur as a result of the Proposed Project. The Proposed Project would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness regarding alternative transportation. There would be no impact.

Per City guidelines, a neighborhood intrusion impact would occur if the project-related average daily traffic (ADT) on the local residential streets were to increase by more than 8 percent and 16 percent, depending on the projected future ADT on the street. The added diversion resulting

from the Proposed Project requires more stops at customer premises for collection compared to the existing conditions. As more customers set out bins for three different types of material compared to only one or two currently used, more trucks would be required to service the additional bins. However, the collection accounts would include larger multifamily dwellings, office buildings, commercial buildings, stores and shops, shopping malls, hotels, institutions (such as hospitals and schools), sports and entertainment venues, and television/movie studios. These accounts are unlikely to be located on a local residential street. In addition, when the diversion programs are implemented, the relative number of trucks required to collect Solid Waste, Commingled Recyclables, and Organics would change as the quantities of Commingled Recyclables and Organics increase and the quantity of Solid Waste declines. The variations in numbers and types of bins and collection frequency that are possible with the Proposed Project are too speculative to predict on a neighborhood-by-neighborhood basis. During the Proposed Project startup, the City would conduct community outreach to inform the public of the proposed changes in collection services (schedule, frequency) to minimize potential impacts to the extent possible. For these reasons, impacts to neighborhood intrusion are considered less than significant.

Lastly, specific locations and trip generation estimates for the future new or expanded transfer stations, processing facilities, and new or expanded truck base yards have not been identified at this time. Therefore, depending on the trip generation and distribution associated with the future facilities, there is a potential for the project-added traffic to result in localized impacts to the road network, which consequently, may conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. Impacts associated with the future facilities are considered potentially significant. Mitigation measure TR-1 is proposed to minimize potential traffic impacts to the extent possible.

***Impact TR-2: The Proposed Project would potentially conflict with an applicable congestion management program, including, but not limited to LOS standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.***

See Impact TR-1.

***Impact TR-3: The Proposed Project would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.***

Implementation of the Proposed Project would not result in a change in air traffic patterns. It would not result in an increase in air travel, nor would it change the location of travel so as to result in a substantial safety risk. The Proposed Project would have no effect on air traffic patterns. No impacts are expected.

***Impact TR-4: The Proposed Project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. Although the Proposed Project would result in the diversion of materials (Commingled Recyclables and Organics) from landfills, these collection activities would occur on and from Commercial Establishments, using existing urban infrastructure (streets and freeways) in the City, and similar collection methods.

Vehicles collecting Solid Resources would be traveling on public streets and along routes already used routinely by such vehicles; therefore, the Proposed Project would not result in a significant design hazard or significant impact to emergency access.

The locations of potential future facilities are not known at this time. The siting and design of the facilities would require review and approval from the appropriate reviewing agency and must incorporate proper design principles that avoid hazards due to sharp curves or dangerous intersections, including but not limited to site ingress and egress. Furthermore, it is unlikely that the facilities would be located in an area that causes hazards due to incompatible uses. Impacts from future facilities are considered less than significant.

***Impact TR-5: The Proposed Project would not result in inadequate emergency access.***

See Impact TR-4.

***Impact TR-6: The Proposed Project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.***

No changes to or increase in demand for alternative transportation would occur as a result of the Proposed Project. The Proposed Project would not conflict with adopted policies, plans, or programs regarding alternative transportation.

Depending on the location of future facilities, they may be located adjacent to transit stops, bike routes, and pedestrian paths. The jurisdiction processing the permits to construct the facility would review the site plan and improvements to ensure that there is adequate access to any existing alternative transportation facilities. Additionally, a traffic control plan would be required should construction of the facilities result in temporary road closures that could impact bus, pedestrian, or bicycle routes. Therefore, impacts related to alternative transportation during both the construction and operation phase for future facilities are considered less than significant.

#### ***3.1.4.8 Cumulative Impacts***

Cumulative traffic analysis is a function of the impact of the Proposed Project, as well as the impact of other projects that are proposed in the vicinity. The Proposed Project would result in small changes in traffic volumes throughout the system (both better and worse), but due to the regional scale of the project, individual effects cannot be identified with certainty. Cumulative impacts to the operation of the overall transportation system are expected to be less than significant because the changes in Franchised Hauler VMT and VHT are negligible compared to the overall travel by all of the vehicles in a large area. Adding those changes in Franchised Hauler VMT and VHT would not be noticeable compared to the cumulative traffic volumes from other projects. The project would not result in a change in air traffic patterns, substantially increase hazards due to a design feature, result in inadequate emergency access, or conflict with adopted policies, plans, or programs regarding alternative transportation. There would be no cumulative impact.

It is the presumption that new or expanded transfer stations, processing MRFs and truck base yards that could be located in the City or in other jurisdictions would be subject to the same regulatory requirements and/or similar mitigation measures as those identified below for the Proposed Project to avoid and/or minimize the impacts of the construction and operation of such new or expanded facilities to a level that is less than significant. Cumulative impacts associated

with new or expanded facilities, truck base yards and Organic processing facilities will be further addressed in the project-specific environmental document prepared by the lead agency for the jurisdiction in which such new or expanded facilities are located. Due to the uncertainty of where future facilities will be located, it cannot be determined, conclusively, if the project-generated traffic associated with the future facilities will result in a significant cumulative impact. Upon determination of the facility location, a project-level CEQA analysis will be required to determine if construction and operation of the facilities will have a cumulative impact. However, until that project-level analysis is conducted, cumulative impacts are determined to be potentially significant.

#### ***3.1.4.9 Mitigation Measures***

The Proposed Project could result in significant impacts to traffic resources due to the siting of new or expanded transfer stations, processing facilities, and truck base yards. Therefore, the following mitigation measure is recommended:

**TR-1:** Prior to the approval of any future facility, a project-level traffic impact report shall be prepared by a qualified traffic consultant. The report shall be prepared to the standard of the local jurisdiction that would be providing approvals for the project. The report shall include existing traffic information, thresholds of significance, construction and operation-related trip generation and a project and cumulative-level analysis. The traffic report shall identify mitigation measures to reduce project- and cumulative-level impacts to the maximum extent practicable. Such mitigation measures could include roadway and intersection improvements, payment of traffic impact fees, timing of collection truck schedules to avoid peak hours, encouraging carpool, vanpool, or alternative transportation for employees through the use of incentives.

#### ***3.1.4.10 Level of Significance after Mitigation***

The Proposed Project would result in a potentially significant impact to traffic even with mitigation. Implementation of mitigation measure TR-1 will require preparation of a traffic impact report and identification of mitigation once a future project site is identified. However, since the specific locations of expanded or future facilities are not known and the conditions of the roadway network adjacent to the future sites cannot be determined, it cannot be conclusively stated at this time that all potential traffic impacts would be reduced to below a level of significance. Thus, impacts are considered potentially significant and unavoidable.

## **3.2 MINOR IMPACT RESOURCE AREAS**

This Draft Program EIR analyzes the Proposed Project in accordance with Appendix G of the CEQA Guidelines. The impact evaluation focuses on the collection of Solid Resources from Commercial Establishments, and at a conceptual level on new or expanded transfer stations, MRFs, Organics processing facilities, and truck base yards.

Sanitation's analysis resulted in two categories into which resource areas are grouped. This section focuses on resource areas that have the potential for the Proposed Project to cause less than significant impacts (with or without mitigation). For the purposes of this Draft Program EIR, the following resources are categorized as Minor Impact Resource Areas:

- 3.2.1 Aesthetics/Visual Resources
- 3.2.2 Agricultural Resources
- 3.2.3 Biological Resources
- 3.2.4 Geology and Soils
- 3.2.5 Hazards-Hazardous Materials
- 3.2.6 Hydrology-Water Resources
- 3.2.7 Land Use and Planning
- 3.2.8 Mineral Resources
- 3.2.9 Noise
- 3.2.10 Population and Housing
- 3.2.11 Public Services
- 3.2.12 Recreation
- 3.2.13 Utilities-Service System

### 3.2.1 Aesthetics

#### 3.2.1.1 Introduction

This section evaluates the potential impacts to aesthetic resources from the Proposed Project. The analysis consists of an evaluation of the potential impact that the Proposed Project would have on a scenic vista, scenic resources (including the elements of the viewshed of a scenic highway), the visual character of the project site and its surroundings, glare, and potential impact on nighttime views.

The impact evaluation focuses on the collection of Solid Resources to divert materials from landfills, and at a conceptual level, on new or expanded processing facilities which would be required to process diverted materials, and new or expanded truck base yards. Collection activities would occur on and from existing Commercial Establishments. New or expanded processing facilities and truck base yards are expected to be sited on lands with industrial or commercial manufacturing zoning designation, but could include lands zoned for agricultural uses for Organics processing facilities. The new or expanded facilities and truck base yards have not yet been proposed; therefore, the evaluation of these facilities in this section is at a conceptual level.

Table 3.2.1-1 provides a summary of the Proposed Project's anticipated impacts on aesthetic resources, based on the evaluation that follows.

**TABLE 3.2.1-1  
SUMMARY OF IMPACTS RELATED TO AESTHETIC RESOURCES**

Environmental Impact Area	Potential Impact	Mitigation	Significant Impact After Mitigation
<b>AES-1: Scenic Vistas</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>AES-2: Scenic Resources</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>AES-3: Visual Character</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>AES-4: Light or Glare</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>Cumulative Impacts</b>	Yes	Yes	No

#### 3.2.1.2 Environmental Setting

The general aesthetic characteristic of the City and vicinity is densely urbanized, with pockets of open space at local and regional parks, as well as on the undeveloped hillsides and mountains of Los Angeles City and County. The Pacific Ocean is on the west and south of the City and is a valuable scenic resource. The hills and mountains within and surrounding the City also provide a valuable scenic resource throughout the City.

The Los Angeles River and many of its tributaries traverse through the San Fernando Valley and central portions of the City before flowing into the Pacific Ocean. Large portions of the Los Angeles River and many of its tributaries have been modified as concrete-lined channels. During most of the year, the channels have minimal water flow, with varying amounts and species of vegetation (including weeds and non-native species). The portions of the river and its tributaries that are not in concrete channels remain in a relatively natural state.

One state-designated scenic and/or historic roadway is located within Los Angeles County—State Route 2. This official state-designated scenic highway is part of the Angeles Crest Scenic Byway. In addition, the following two officially designated county scenic highways are located in Los Angeles County (Caltrans, 2012):

- Mulholland Highway from State Route 1 to Kanan Dume Road and from west of Cornell Road to east of Las Virgenes Road
- Malibu Canyon-Las Virgenes Highway from State Route 1 to Lost Hills Road

Neither the state nor county scenic highways are located within the City.

The City has established numerous Scenic Highways within its jurisdictions (see Figure 3.2.1-1). The Scenic Highways have been designated as such because they traverse areas of natural scenic quality in undeveloped or sparsely developed areas of the City, or because they traverse urban areas of cultural, historical, or aesthetic value that merit protection and enhancement (City of Los Angeles, 1999).

Light associated with the urban developments and infrastructure illuminates the sky throughout the entire metropolitan area. Most areas throughout the City are fully developed with street lighting and/or commercial/ industrial lighting.

#### *3.2.1.3 Significance Thresholds*

The Proposed Project would have a significant impact to aesthetic resources if it would:

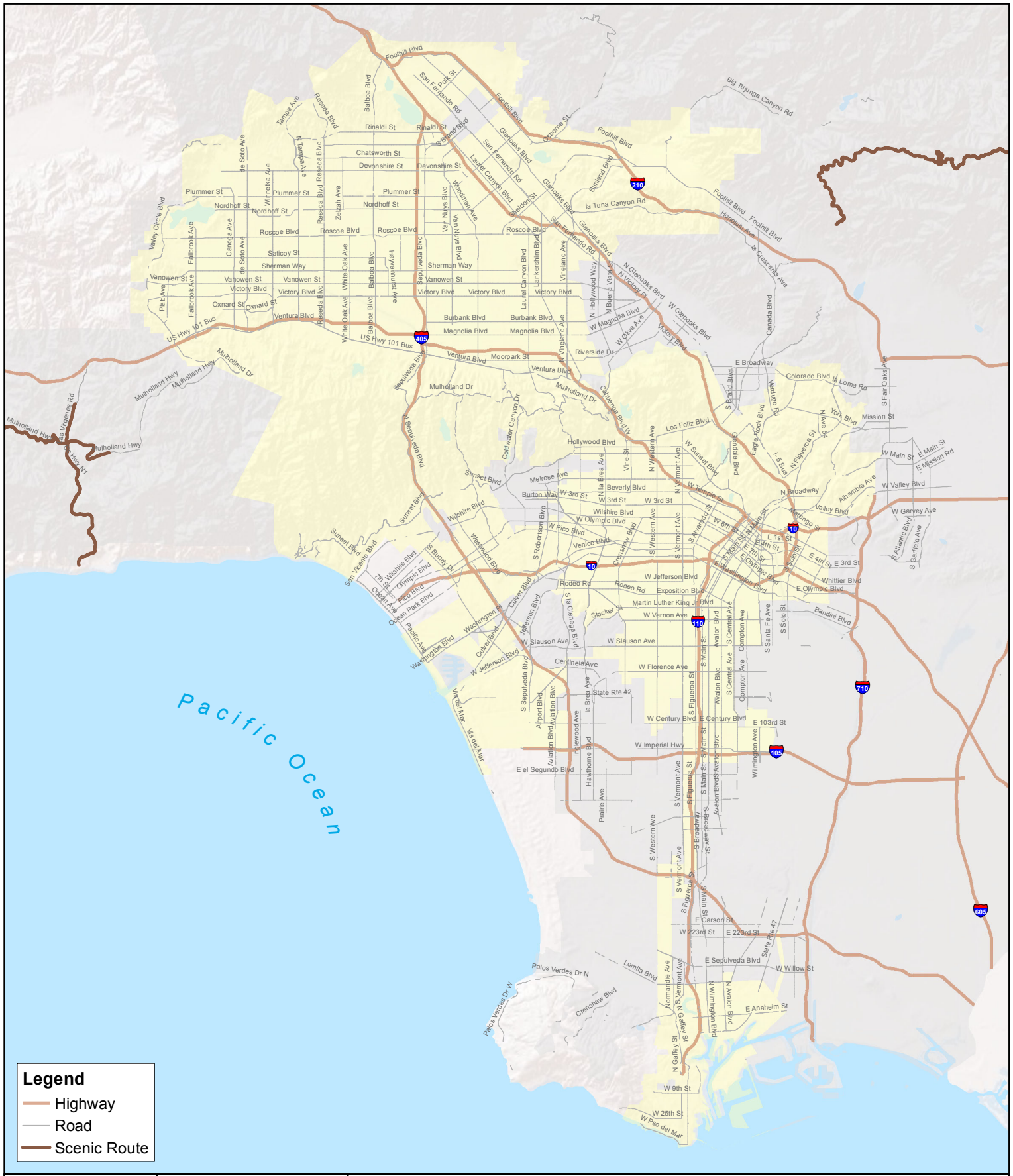
Impact AES-1: Have a substantial adverse effect on a scenic vista.

Impact AES-2: Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within the viewshed of a state scenic highway.

Impact AES-3: Substantially degrade the existing visual character or quality of the site and its surroundings.

Impact AES-4: Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.





1 in = 6 miles



Source: LA County Street Center TIGER 2011

Imagery Source: ESRI World Shaded Relief

**FIGURE 3.2.1-1: SCENIC HIGHWAYS**

**DRAFT EIR**  
CITY-WIDE EXCLUSIVE FRANCHISE SYSTEM FOR  
MUNICIPAL SOLID WASTE COLLECTION AND HANDLING  
CITY OF LOS ANGELES, BUREAU OF SANITATION

NOVEMBER 2013

#### 3.2.1.4 Impact Analysis

***Impact AES-1: The Proposed Project could potentially have a substantial adverse effect on a scenic vista.***

The adoption of the Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials within the Solid Resource collection activities would occur within developed areas of the City using existing infrastructure, and would not result in development that could adversely affect a scenic resource, including scenic vistas, which form the basis for designation as a scenic highway.

Future new or expanded transfer stations, processing facilities, and truck base yards would likely be located in industrial areas or on land zoned for industrial uses (due to the industrial nature of the facilities). Organics processing facilities could be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Within the City, there is limited agricultural land in the Sepulveda Basin and at Pierce College. Industrial areas and agricultural areas in the City are established in the General Plan, which includes provisions and regulations addressing potential impacts to designated visual resources. Outside of the City, there is the possibility that lands zoned for industrial or agricultural uses could contain or be located in proximity to a scenic vista. The location of future new or expanded facilities is unknown at this time; as a consequence, the expanded or new transfer stations, processing facilities and truck base yards could be located on lands zoned for industrial uses or agriculture, and potentially result in adverse impacts to a designated scenic vista from construction-related disturbances and site development. If substantial adverse effects on a scenic vista were to occur, implementation of mitigation measures VR-1 through VR-7 would mitigate the adverse impacts to below a level of significance.

Under mitigation measure VR-1, future new or expanded facilities would be sited in accordance with all applicable zoning and planning restrictions, and, to the greatest extent possible, in areas not identified as visually significant or historic.

Under mitigation measure VR-2, future new or expanded facilities would include design features that allow the facility to blend in with nearby buildings, including landscape screening or fencing, use of varying facades, use of building materials that minimize glare, shielded light, and design that is consistent with the character of existing surrounding uses.

Under mitigation measure VR-3, existing natural aesthetic features proposed for removal would be replaced.

Under mitigation measure VR-4, the grading of natural and semi-natural open space would be minimized to the maximum extent.

Under mitigation measure VR-5, design features would be incorporated into the project which would effectively integrate natural aesthetics.

Under mitigation measure VR-6, new utilities would be placed underground, where appropriate.

Under mitigation measure VR-7, rooftop mechanical equipment, garbage dumpsters, and other outdoor equipment would be screened from public view.

***Impact AES-2: The Proposed Project could potentially substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within the viewshed of a state scenic highway.***

The adoption of the Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources. The collection activities associated with diversion of materials within the Solid Resource collection activities would not result in development that could damage a scenic resource, including trees, rock outcroppings, or historic buildings.

Future new or expanded transfer stations, processing facilities, and truck base yards would likely be located in industrial areas or on land zoned for industrial uses (due to the industrial nature of the facilities). Organics processing facilities could be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Industrial areas and agricultural areas are established in the applicable General Plan, and are not generally considered scenic resources, nor do they usually contain valued trees, rock outcroppings, or historic buildings within the viewshed of a state or locally-designated scenic highway. However, the location of future new or expanded facilities is unknown at this time; therefore, there is the possibility that lands zoned for industrial or agricultural uses could be located in within the viewshed of a designated scenic highway. As a consequence, the siting of new or expanded transfer stations, processing facilities and truck base yards could potentially result in adverse impacts to scenic resources within the viewshed of a state scenic highway. If substantial adverse effects on a scenic resource were to occur, implementation of mitigation measures VR-1 through VR-7 would mitigate the adverse impacts to below a level of significance.

***Impact AES-3: The Proposed Project could potentially substantially degrade the existing visual character or quality of the site and its surroundings.***

The adoption the Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials within the Solid Resource collection activities would not result in development that could degrade the existing visual character or quality of the areas and surroundings along collection routes throughout the City.

Future new or expanded transfer stations, processing facilities, and truck base yards would likely be located in industrial areas or on land zoned for industrial uses (due to the industrial nature of the facilities), which are not likely to be considered aesthetically important areas. Future processing facilities and truck base yards are expected to be consistent with the uses typically found in industrial areas. Organics processing facilities could be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Industrial areas and agricultural areas are established in the applicable General Plan, which generally includes provisions and regulations addressing potential degradation to visual resources. However, the location of future new or expanded facilities is unknown at this time; as a consequence, the expanded or new transfer stations, processing facilities and truck base yards could have the potential to substantially degrade the existing visual character or quality of the site or its surroundings due to construction-related disturbances and site development. If substantial adverse effects on the existing visual character or quality of a specific site were to occur, implementation of mitigation measures VR-1 through VR-7 would mitigate the adverse impacts to below a level of significance.

***Impact AES-4: The Proposed Project could potentially create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.***

The adoption of the Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials within the Solid Resource collection activities would not result in development that creates a new source of light or glare.

Future new or expanded transfer stations, processing facilities, and truck base yards would likely be located in industrial areas or on land zoned for industrial uses (due to the industrial nature of the facilities). Although the new or expanded facilities and truck base yards would require site lighting, such lighting would be expected to be consistent with that found in industrial areas. Organics processing facilities could be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Within the City, there is limited agricultural land in the Sepulveda Basin and at Pierce College. Although Organics processing facility would require site lighting, such lighting is expected to be directed on areas within the facilities and away from adjacent areas. Industrial areas and agricultural areas are generally established in the applicable General Plan, and future new or expanded facilities would be subject to applicable ordinances and regulations that govern building design and development standards, including lighting.

However, the location of future new or expanded facilities is unknown at this time; as a consequence, the construction and operation of expanded or new transfer stations, processing facilities and truck base yards could have the potential to create a new source of substantial light or glare that could adversely affect day or nighttime views in the area. If substantial adverse effects from new site-specific sources of light or glare were to occur, implementation of mitigation measures VR-2, VR-6 and VR-7 would mitigate the adverse impacts to below a level of significance.

***3.2.1.5 Cumulative Impacts***

As discussed above, collection activities under the Proposed Project would have no effect on aesthetics and visual resources because its implementation will not result in any construction or change in visual character. Therefore, collection activities under the Proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact to aesthetic resources.

As with the Proposed Project, future diversion activities within Los Angeles County and the State associated with related projects could cause the need for new or expanded transfer stations, processing facilities, truck base yards, and Organics processing facilities, and if those related project facilities occur in the vicinity of a scenic vista, scenic highway, or other aesthetic resource, or create a new source of light or glare, they could result in visual resource impacts. Mitigation measures VR-1 through VR-7 would be implemented to reduce potential impacts of new transfer stations, processing facilities, and truck base yards, and organic processing facilities under the Proposed Project to a less than significant level. Therefore, after mitigation, the Proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact to visual resources/aesthetics.

It is the presumption that new or expanded transfer stations, processing facilities and truck base yards that could be located with the City or in other jurisdiction would be subject to the same regulatory requirements and/or similar mitigation measures as those identified below for the Proposed Project to avoid and/or minimize the impacts of the construction and operation of such new or expanded facilities to a level of less than significant. Cumulative impacts associated with new or expanded facilities, truck base yards and Organic processing facilities will be further addressed in the project-specific environmental document prepared by the Lead Agency for the jurisdiction in which such new or expanded facilities are located.

#### **3.2.1.6 Mitigation Measures**

The Proposed Project could potentially result in significant impacts related to aesthetics and visual resources due to the siting of new or expanded transfer stations, processing facilities, and truck base yards. The following mitigation measures are recommended:

- VR-1:** Future facilities shall be sited in accordance with all applicable zoning and planning restrictions. To the greatest extent possible, future facilities shall be sited in areas not identified as visually significant or historic.
- VR-2:** Future facilities shall include design features that allow the facility to blend in with nearby buildings. These design features may include but are not limited to:
- Landscape screening (i.e., use of tall trees or shrubs around the perimeter);
  - Neutral wall or fencing that obstructs the view of the facility from the nearby roads;
  - Use of varying facades to break up bulk and scale;
  - Building materials that minimize glare potential;
  - Shielded lighting so as to minimize spillage to adjacent parcels and minimize night sky pollution;
  - Modifying structure design to eliminate or screen contrasting/detracting features; and
  - Utilizing architectural styles, materials, scale, massing, setbacks, signage, circulation patterns, pedestrian orientation, streetscape amenities, and landscaping common to and/or consistent with the character of existing surrounding uses.
- VR-3:** Existing natural aesthetic features proposed for removal shall be replaced.
- VR-4:** Grading of natural and semi-natural open space shall be minimized to the maximum extent.
- VR-5:** Design features shall be incorporated into the project which effectively integrates natural aesthetics (i.e., cluster development, greenbelts, landscaping, etc.).

**VR-6:** New utilities shall be placed underground, where appropriate.

**VR-7:** Rooftop mechanical equipment, garbage dumpsters, and other outdoor equipment shall be screened from public view.

*3.2.1.7 Level of Significance after Mitigation*

With implementation of mitigation measures VR-1 through VR-7, potential impacts to aesthetics and visual resources resulting from the Proposed Project would be less than significant.

## 3.2.2 Agricultural Resources

### 3.2.2.1 Introduction

This section evaluates the potential impacts to agricultural resources from the Proposed Project. The analysis consists of an evaluation of the potential impact that the Proposed Project could have related to conversion of important farmland to non-farmland uses, conflicts with agricultural uses, conflict with forest land uses, conversion of forest lands to non-forest uses, and otherwise converting agricultural uses to non-agricultural uses.

The impact evaluation focuses on Solid Resource collection, and at a conceptual level, on new or expanded processing facilities which would be required to process diverted materials, and truck base yards. Collection activities would occur on and from existing Commercial Establishments. New or expanded processing facilities and truck base yards are expected to be sited on lands with industrial or commercial manufacturing zoning designation, but could include lands zoned for agricultural uses for Organics processing facilities. The new or expanded facilities and truck base yards have not yet been proposed; therefore, the evaluation of these facilities in this section is at a conceptual level.

A summary of the Proposed Project's anticipated impacts on agricultural resources, based on the evaluation below, is contained in Table 3.2.2-1.

**TABLE 3.2.2-1  
SUMMARY OF IMPACTS RELATED TO AGRICULTURAL RESOURCES**

Environmental Impact Area	Potential Impact	Mitigation	Significant Impact After Mitigation
<b>AG-1: Important Farmland</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>AG-2: Conflict with Agricultural Uses</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>AG-3: Conflict with Forest Land Uses</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>AG-4: Conversion of Forest Lands</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>AG-5: Other Changes to Agricultural or Forest Lands</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>Cumulative Impacts</b>	Yes	Yes	No

### 3.2.2.2 *Environmental Setting*

The California Department of Conservation, Division of Land Resource Protection, provides oversight of agricultural lands in California. The Department of Conservation categorizes Important Farmland as Prime Farmland, Unique Farmland, and Farmland of Statewide and Local Importance. The Farmland Mapping and Monitoring Program (FMMP) of the Department of Conservation uses soil surveys from the United States Department of Agriculture (USDA) in conjunction with land use data to determine farmland classification. Farmland classifications do not include publicly owned lands for which an adopted policy preventing agricultural use is enforced.

The following classifications of agricultural lands are defined in the FMMP.

**Prime Farmland.** Prime Farmland is land that has the best combination of physical and chemical characteristics for the production of crops. It has the soil quality, growing season, and moisture supply needed to produce sustained, high yields of crops when treated and managed according to current farming methods. Prime Farmland must meet specific criteria for soil pH, temperature, sodium content, permeability, and other defined characteristics.

**Unique Farmland.** Unique Farmland is land that does not meet the criteria for Prime Farmland or Farmland of Statewide Importance but that has been used for the production of specific high economic-value crops.

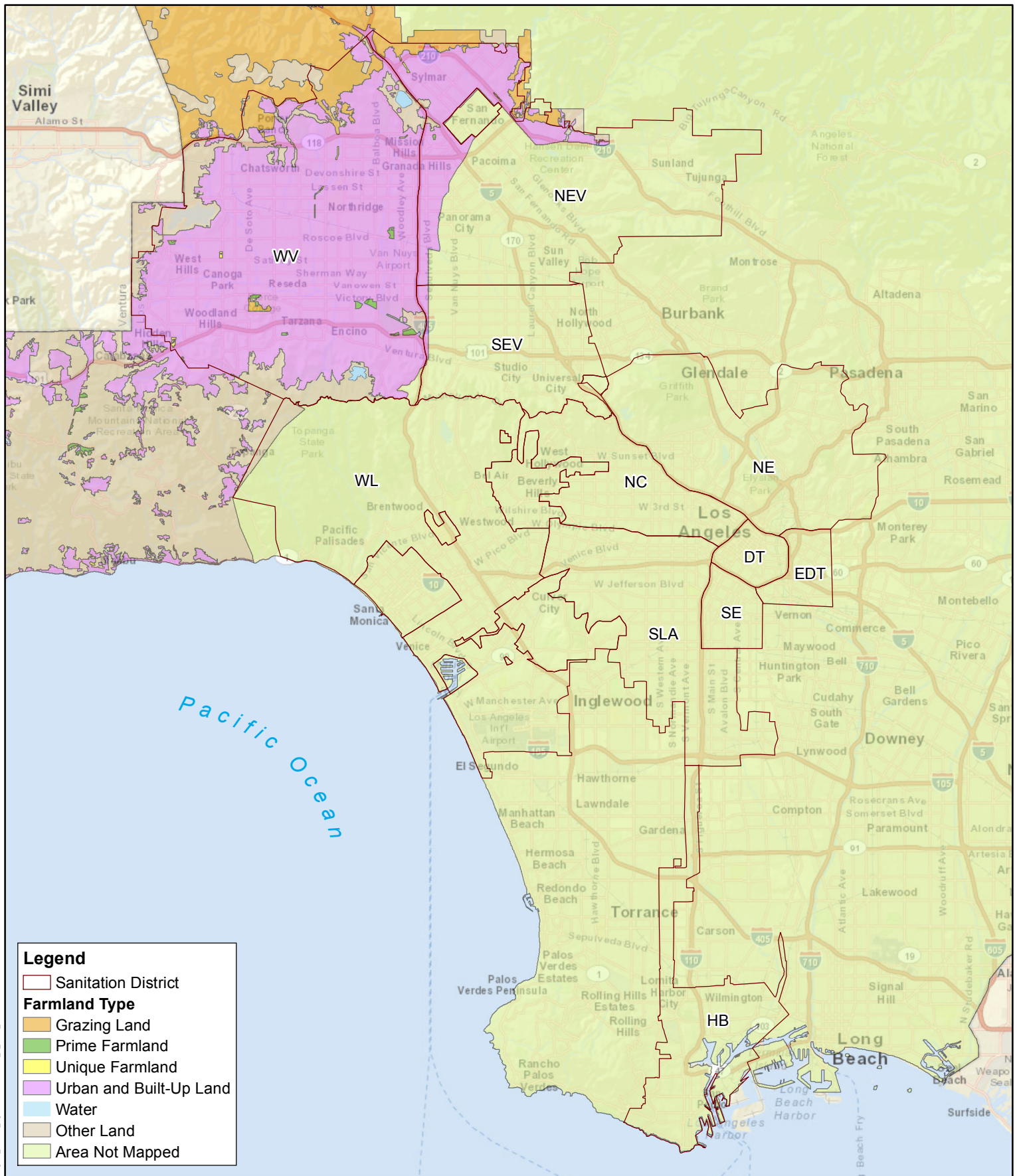
**Farmland of Statewide Importance.** Farmland of Statewide Importance is land other than Prime Farmland that has a good combination of physical and chemical characteristics for the production of crops. Similar to Prime Farmland, Farmland of Statewide Importance must meet specific criteria for soil pH, temperature, sodium content, permeability, and other defined characteristics.

**Farmland of Local Importance.** Farmland of Local Importance is that land of importance to the local agricultural economy as determined by the board of supervisors and a local advisory committee of each county.

According to the Los Angeles County Important Farmland map, isolated pockets of Prime and Unique Farmland exist in the largely urbanized western half and inland portion of the San Fernando Valley, including land used for agriculture near Pierce College, and in the Sepulveda Dam Basin (State of California, 2010). Figure 3.2.2-1 shows the larger isolated farmland in the San Fernando Valley.

The City contains no other Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or Farmland of Local Importance. In addition, the City does not contain forest land or lands used for timber production.





**FIGURE 3.2.2-1: AGRICULTURAL RESOURCES**

**DRAFT EIR**

CITY-WIDE EXCLUSIVE FRANCHISE SYSTEM FOR  
MUNICIPAL SOLID WASTE COLLECTION AND HANDLING  
CITY OF LOS ANGELES, BUREAU OF SANITATION

NOVEMBER 2013



1 in = 6 miles



Source: California Department of  
Conservation, Division of Land Resource  
Protection, Farmland Mapping and  
Monitoring Program 2010

Imagery Source: ESRI World Shaded Relief

### 3.2.2.3 Regulatory Framework

The California Land Conservation Act (also known as the Williamson Act), enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments that are much lower than normal because they are based upon farming and open space uses as opposed to full market value (State of California, 2013a).

Within Los Angeles County, there are 40,180 acres of land under the Williamson Act program, all of which is located on Santa Catalina Island. Since 1974, these lands have been under a 50-year open space agreement with Los Angeles County (State of California, 2013b).

### 3.2.2.4 Significance Thresholds

The Proposed Project would have a significant impact on agricultural resources if it would:

Impact AG-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.

Impact AG-2: Conflict with existing zoning for agricultural use, or a Williamson Act contract.

Impact AG-3: Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code § 12220(g)), timberland (as defined by Public Resources Code § 4526), or timberland zoned Timberland Production (as defined by Government Code § 51104(g)).

Impact AG-4: Result in the loss of forest land or conversion of forest land to non-forest use.

Impact AG-5: Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.

### 3.2.2.5 Impact Analysis

**Impact AG-1: The Proposed Project could potentially convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.**

The adoption of the Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials within the Solid Resource collection activities would not result in physical changes or new development that would convert the isolated locations of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within the City to non-agricultural uses. There would be no impact.

The specific location of future new and/or expanded processing facilities and new truck base yards have not been identified at this time, therefore, the potential for these future facilities to convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the FMMP, to non-agricultural use is unknown. Within the City,

there is limited agricultural land in the Sepulveda Basin and at Pierce College, and the dedicated uses (under the control of an educational institution) or regulatory framework (flood control purposes within the Sepulveda Dam Basin) of these agricultural uses likely preclude siting of an Organics facility. If future sites include locations that support FMMP-classified land, then there is a potential for a significant impact.

As future facilities are proposed, they would be subject to additional environmental review pursuant to CEQA. The future review could include an additional analysis which may include use of the Agricultural LESA system to help decision-makers determine the quality of land for agricultural uses and assess sites or land areas for their agricultural economic potential and if any such conversion would result in a significant impact. Implementation of the mitigation measures AG-1 through AG-4 would reduce potential impacts to a less than significant level.

Therefore, based on the anticipated collection activities associated with diversion of materials within from the Solid Resource collection activities and potential siting of facilities in industrial areas, the Proposed Project would not result in significant impacts to Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Impacts to agricultural resources from the siting of Organics processing facilities on agricultural lands would be evaluated during the environmental analysis process when a specific facility is proposed.

***Impact AG-2: The Proposed Project could potentially conflict with existing zoning for agricultural use, or a Williamson Act contract.***

The adoption of the Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials within the Solid Resource collection activities would not result in physical changes or new development that would convert farmland to non-agricultural uses. There would be no impact.

The specific location of future new and/or expanded processing facilities and new truck base yards have not been identified at this time, therefore, the potential for these future facilities to conflict with existing zoning for agriculture use or a Williamson Act contract is unknown. If future sites are proposed on lands that are zoned for agricultural use or contain a Williamson Act contract, then there is potential for an impact. Within the City, there is limited agricultural land in the Sepulveda Basin and at Pierce College, and the dedicated uses (under the control of an educational institution) or regulatory framework (flood control purposes within the Sepulveda Dam Basin) of these agricultural uses likely preclude siting of an Organics processing facility. As future facilities are proposed, they would be subject to additional review pursuant to CEQA, at which time additional environmental review to identify conflicts with existing zoning or Williamson Act contracts would occur. Implementation of the mitigation measures AG-1 through AG-4 would reduce potential impacts to a less than significant level.

***Impact AG-3: The Proposed Project could potentially conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code § 12220(g)), timberland (as defined by Public Resources Code § 4526), or timberland zoned Timberland Production (as defined by Government Code § 51104(g)).***

The referenced sections of the Public Resources Code define timberland as follows:

- *"Forest land" is land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits. (Public Resources Code § 12220(g)),*
- *"Timberland" means land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the board on a district basis after consultation with the district committees and others. (Public Resources Code § 4526),*
- *"Timberland production zone" or "TPZ" means an area which has been zoned pursuant to Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision (h). (Government Code § 51104(g))*

As previously stated, no forest land or lands used for timber production are located within the City. However, if future facilities are sited outside of the City, it is possible that the facilities could conflict with existing zoning of forest land, timberland, or timberland zoned Timberland Production or result in the loss of forest land or convert forest land to non-forest use. If future sites include locations that support these types of land uses, then there is a potential for a significant impact to occur. As future facilities are proposed, they would be subject to additional review pursuant to CEQA, at which time additional environmental review to identify conflicts to existing forest land or timberland, loss of forest land, or conversion of forest land to non-forest use would occur. Implementation of the mitigation measures AG-1 through AG-4 would reduce potential impacts to a less than significant level.

***Impact AG-4: The Proposed Project could potentially result in the loss of forest land or conversion of forest land to non-forest use.***

See Impact AG-3.

***Impact AG-5: The Proposed Project could potentially involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.***

The adoption of the Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials within the Solid Resource collection activities would not result in physical changes or new development that could convert farmland to non-agricultural uses or forest land to non-forest uses.

The specific location of future new and/or expanded processing facilities and new truck base yards have not been identified at this time, therefore, the potential for these future facilities to involve other changes to the environment, or convert Farmland to non-agricultural use, or convert forest-land to non-forest use is unknown. If future sites include locations that support these lands, then there is a potential for a significant impact to occur. As future facilities are proposed, they would be subject to additional environmental review pursuant to CEQA, at which time additional environmental review to identify changes to or conversion of existing farm and forest land would occur. Implementation of the mitigation measures AG-1 through AG-4 would reduce potential impacts to a less than significant level.

#### **3.2.2.6 Cumulative Impacts**

The collection activities under the Proposed Project would have no effect on agricultural resources because they would not result in any construction or change in use of actively farmed or designated agricultural land. Therefore, collection activities under the Proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact to agricultural resources.

As with the Proposed Project, future diversion activities within Los Angeles County and the State associated with related projects could result in new or expanded facilities, transfer stations, and truck base yards that could affect agricultural resources. Mitigation measures AG-1 through AG-4 would be implemented to reduce potential impacts of new transfer stations, processing facilities, and truck base yards, and Organics processing facilities under the Proposed Project to a less than significant level. Therefore, after mitigation, the Proposed Project would not make a considerable contribution to a significant cumulative impact to agricultural resources.

It is the presumption that new or expanded transfer stations, processing facilities and truck base yards that could be located with the City or in other jurisdiction would be subject to the same regulatory requirements and/or similar mitigation measures as those identified below for the Proposed Project to avoid and/or minimize the impacts of the construction and operation of such new or expanded facilities to a level of less than significant. Cumulative impacts associated with new or expanded facilities, truck base yards and Organics processing facilities will be further addressed in the project specific environmental document prepared by the Lead Agency for the jurisdiction in which such new or expanded facilities are located.

#### **3.2.2.7 Mitigation Measures**

The Proposed Project could potentially result in significant impacts to agricultural resources due to the siting of new or expanded transfer stations, processing facilities and truck base yards. Therefore, the following mitigation measures are recommended:

- AG-1:** Future facilities shall be sited away from Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. If facilities are sited on such farmland, impacts to the farmland shall be mitigated at a 1:1 ratio or through payment of fees into an agricultural conservation trust. Proof of agricultural land acquisition or fee payment shall be provided to the local jurisdiction that is issuing the grading permit. The Planning Director of that local jurisdiction shall confirm that the land has been acquired or fees paid.

- AG-2:** Future facilities shall be sited away from lands under a Williamson Act Contract or within a Farmland Security Zone to the maximum extent.
- AG-3:** Future facilities (except for composting facilities) shall be sited away from areas that are zoned for agricultural use to the maximum extent possible.
- AG-4:** Future facilities shall be sited away from areas zoned for Timberland Production to the maximum extent. If facilities are sited on such farmland, impacts to the farmland shall be mitigated at a 1:1 ratio or through payment of fees into a forest conservation trust.

**3.2.2.8** *Level of Significance after Mitigation*

With implementation of mitigation measures AG-1, AG-2, AG-3, and AG-4, potential impacts to agricultural resources resulting from the Proposed Project would be less than significant.

### 3.2.3 Biological Resources

#### 3.2.3.1 Introduction

This section evaluates the potential impacts to biological resources from the Proposed Project. The analysis consists of an evaluation of the potential impacts that the Proposed Project could have on special status species, riparian habitat, wetlands, wildlife movement, protected biological resources, and habitat conservation plans.

The impact evaluation focuses on the collection of Solid Resources from Commercial Establishments to divert materials from landfills, and at a conceptual level, on new or expanded processing facilities which would be required to process diverted materials, and new or expanded truck base yards. Collection activities would occur on and from existing Commercial Establishments. New or expanded transfer stations, processing facilities, and truck base yards are expected to be sited on lands with industrial or commercial manufacturing zoning designation, but could include lands zoned for agricultural uses for Organics processing facilities. The new or expanded facilities and truck base yards have not yet been proposed; therefore, the evaluation of these facilities in this section is at a conceptual level.

A summary of the Proposed Project's anticipated impacts on biological resources, based on the evaluation below, is contained in Table 3.2.3-1.

**TABLE 3.2.3-1  
SUMMARY OF IMPACTS RELATED TO BIOLOGICAL RESOURCES**

Environmental Impact Area	Potential Impact	Mitigation	Significant Impact After Mitigation
<b>BIO-1: Special Status Species</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>BIO-2: Riparian Habitat</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>BIO-3: Wetlands</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>BIO-4: Wildlife Movement</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>BIO-5: Protected Biological Resources</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>BIO-6: Habitat Conservation Plans</b>			
Collection System	No	None Required	No
New or Expanded Facilities	No	None Required	No
<b>Cumulative Impacts</b>	Yes	Yes	No



### 3.2.3.2 Environmental Setting

The City is a highly urbanized, densely populated area of approximately 465 square miles. The area includes coastline, harbors, valleys, hills, and portions of the Verdugo Mountains and Santa Monica Mountains. Prominent geographic features that support natural habitat are the Santa Monica Mountains, the San Gabriel Mountains, and the Pacific Ocean. Los Angeles has a Mediterranean climate that is characterized by relatively mild temperatures year round with precipitation that occurs primarily during the winter.

Urbanized areas of the City support low to moderate amounts of vegetation that typically consists of non-native landscape species selected for their ornamental value. Native vegetation grows primarily in open space areas (e.g., in open parcels or on undeveloped hillsides). Fragmented natural habitat within the City is subject to disturbance and typically supports high amounts of ruderal (weedy) plant species. Native vegetation communities present within the City include coastal sage scrub, chaparral, and southern willow scrub.

Wildlife within the City is limited generally to species that have adapted to urban habitats. As noted in the Los Angeles Citywide General Plan Framework EIR, the abundance and diversity of natural biological resources within the City has been greatly reduced as a result of urbanization (City of Los Angeles, 2001). The western fence lizard (*Sceloporus occidentalis*) commonly is found in open lots. During migration seasons, a variety of birds can be observed within the City; however, the number of nesting birds in urban habitats is limited. Bird species that commonly breed in urban habitats of the City include the rock dove (*Columba livia*), mourning dove (*Zenaidura macroura*), American crow (*Corvus brachyrhynchos*), common pigeon (family *Columbidae*), European starling (*Sturnus vulgaris*), and house finch (*Carpodacus mexicanus*). Although primarily nocturnal and not often seen, several mammal species adapted to urban habitats commonly are observed in the City. These include, but are not limited to, Virginia opossum (*Didelphis virginiana*), black rat (*Rattus rattus*), raccoon (*Procyon lotor*), coyote (*Canis latrans*), skunk (*Mephitis mephitis*), fox squirrel (*Sciurus niger*), and Western Grey Squirrels (*Sciurus griseus*). Toward the more rural outer areas of the City, the abundance and diversity of species increases.

Special-status species within the City include plants or wildlife listed under the federal Endangered Species Act (ESA) as threatened or endangered (or candidates for such designation), plants or wildlife similarly listed under the California Endangered Species Act (CESA), and wildlife listed as Species of Special Concern by the California Department of Fish and Wildlife (CDFW). Additionally, special-status species within the City include plant species designated by the California Native Plant Society (CNPS) as presumed extinct in California (List 1A); plants designated by the CNPS as rare, threatened, or endangered in California and elsewhere (List 1B); and plants designated by the CNPS as being rare, threatened, or endangered in California but more common elsewhere (List 2). The special-status plant species with the potential to occur in the City, along with specific information on status, are presented in Appendix F. The special-status wildlife species with the potential to occur in the City are presented in Appendix F.

The six areas of biological interest located in the City include the Los Angeles River, El Segundo Dunes, Ballona Creek and Wetlands, Ballona and Del Rey Lagoons, Baldwin Hills, and Santa Monica Bay (City of Los Angeles, 2006).



## Los Angeles River

The Los Angeles River drains a watershed of 800 square miles that extends from the eastern portions of the Santa Monica Mountains, Simi Hills, and Santa Susana Mountains to the western portion of the San Gabriel Mountains. The upper portion of the watershed (approximately 324 square miles) is dominated by forest or open space, and the remaining watershed (approximately 476 square miles) is characterized by commercial, industrial, and residential uses.

A number of major tributaries flow into the Los Angeles River, including Burbank Western Channel, Pacoima Wash, Tujunga Wash, and Verdugo Wash in the San Fernando Valley, as well as the Arroyo Seco, Compton Creek, and Rio Hondo downstream of Glendale Narrows. Twenty-two lakes are located within the boundaries of the Los Angeles River watershed; all are impoundments created for water conservation, recreation, or other uses. A number of spreading grounds have been established in the watershed. Although some spreading grounds are currently active, others are unused. Flood control facilities include Sepulveda Dam and Basin, Hansen Dam, Lopez Dam, and Pacoima Dam. The Los Angeles River is connected hydraulically to the San Gabriel River through the Whittier Narrows Reservoir, although this connection occurs primarily during large storm events.

The Los Angeles River, which once flowed freely over the coastal plain, was channelized between 1914 and 1970 to control runoff and reduce the impacts of major flood events in the region. Today, the Los Angeles River is lined with concrete on 47.9 miles of its 51-mile length; however, the following three reaches of the Los Angeles River channel are have reinforced banks, but are soft bottomed, not lined on the bottom with concrete reinforcement:

- Sepulveda Flood Control Basin
- Glendale Narrows
- Area south of Willow Street in Long Beach

In addition, 53.2 miles of Los Angeles River tributary streams are channelized and lined with concrete.

Within portions of the unlined or soft-bottom reaches of the Los Angeles River, scattered wetlands and riparian vegetation are present. Vegetation communities present in the unlined reaches include southern willow scrub vegetation, which is dominated by black willow (*Salix gooddingii*), Fremont cottonwood (*Populus fremontii*), arroyo willow (*Salix laevigata*), and emergent marsh, which is dominated by cattail (*Typha latifolia*) and bulrush (*Scirpus* spp.). Within Sepulveda Basin, exotic species are present, including arundo (*Arundo donax*) and non-native species of ash (*Fraxinus* spp.). In the reach along Glendale Narrows, considerable wetland and riparian vegetation are present, supported in part by the high groundwater discharge in this area and by man-made pools from the sills of bridges in this reach. Scouring during high flood events clears some of the understory vegetation in this reach, but well rooted willows have persisted in recent years. Below Willow Street in Long Beach, the unlined channel is tidally influenced, and the channel supports a mix of scattered wetland and riparian, intertidal, and submerged aquatic habitat.

Although the concrete-lined reaches of the Los Angeles River are primarily unvegetated, some organisms are associated with the warm, nutrient-rich, slow-moving waters such as algae and aquatic invertebrates that are abundant under appropriate conditions. In particular, the concrete-

lined reach of the Los Angeles River that extends from Willow Street upstream to Rosecrans Avenue supports a shallow sheet flow of water from the low-flow channel to the banks and creates a dense algal mat (Garrett, 2004). This algal mat supports a large number of aquatic invertebrates, providing abundant forage habitat for shorebirds and other waterfowl. Both shorebird foraging and nesting occur along this reach (City of Los Angeles, 2006).

### El Segundo Dunes

The El Segundo Dunes consist of geologically recent and older sand dunes along the coast from Ballona Creek to the Palos Verdes Hills. Formerly, these sand dunes extended 3 to 6 miles inland, with crests ranging 85 to 185 feet above mean sea level (msl). Most of the El Segundo Dunes area is now fully developed. The few remaining patches of this habitat are found near Los Angeles International Airport and Hyperion Treatment Plant. The type of dune scrub vegetation that characterizes this area supports special-status plant and wildlife species, including the federally endangered El Segundo blue butterfly (*Euphilote battoides allyni*). The food plant for this butterfly is coastal buckwheat (*Eriogonum parvifolium*), found in dune scrub vegetation. The Los Angeles World Airports and Chevron Company support ongoing efforts to maintain these habitats on their properties by planting coastal buckwheat and removing grasses, weeds, and other invasive species (City of Los Angeles, 2006).

### Ballona Creek and Wetlands

Similar to the Los Angeles River, Ballona Creek is channelized for flood control purposes. Near its mouth at the Pacific Ocean, the creek bisects an area known as the Ballona Wetlands, which is one of only two remaining coastal wetlands bordering Santa Monica Bay.

Vegetation communities in coastal wetlands include salt and freshwater marshes, and southern willow scrub. A 10-acre freshwater marsh has been restored in Ballona Wetlands, which supports emergent marsh dominated by cattail and bulrush, and perimeter riparian vegetation dominated by willows and mulefat (*Baccharis salicifolia*). Additional willow woodlands are present along undeveloped areas in lower Ballona Creek, and fragmented and degraded areas of salt and brackish marshes are present in the remaining coastal marsh. Dominant plant species in salt marsh areas include pickleweed (*Salicornia* spp.) and alkali heath (*Frankenia* sp.). These vegetation types provide high-quality habitat for a variety of wildlife species and have the potential to support many special-status plant and wildlife species. Endangered and threatened species known to occur at the Ballona Wetlands include the California least tern (*Sterna antillarum browni*) and Belding's savannah sparrow (*Passerculus sandwichensis beldingi*) (City of Los Angeles, 2006).

### Ballona and Del Rey Lagoons

The Ballona and Del Rey Lagoons are located near the mouth of Ballona Creek. The Ballona Lagoon is north of the creek and Marina del Rey, and it runs perpendicular to the creek (from the mouth of the creek, north to the Venice canals). The Ballona Lagoon receives waters from the Marina del Rey ocean entrance and experiences tidal action. It maintains a relatively high-quality mud-flat habitat that supports invertebrates that, in turn, support foraging shorebirds. The endangered least tern is known to forage at Ballona Lagoon and has the potential to forage in del Rey Lagoon.

Del Rey Lagoon is located south of Ballona Creek and is connected to the creek by a gated pipeline to control its flows. This lagoon supports minimal native vegetation and is small and park-like because it is surrounded by homes and streets. Del Rey Lagoon supports both domesticated ducks and wild or native duck species. This lagoon also is known for occasional occurrences of rare bird species, such as little blue heron (*Egretta caerulea*); this species is common in the southeast U.S., but is a rare visitor to the west coast (City of Los Angeles, 2006).

### Baldwin Hills

The Baldwin Hills area, located east of the Ballona Wetlands and south of Ballona Creek, supports one of the largest remaining areas of natural open space in the City. Kenneth Hahn State Recreation Area is located in the northern and eastern portion of Baldwin Hills. The eastern and southern slopes of the hills contain residential areas, with much of the remaining land area owned by oil development interests.

Vegetation communities in these hills include non-native annual grassland, coastal sage scrub, and southern willow scrub. These vegetation communities provide high-quality habitat for wildlife species and have potential to support several special-status plant and wildlife species. The coastal sage scrub habitats in Baldwin Hills are dominated by California sagebrush (*Artemisia californica*) and California buckwheat (*Eriogonum fasciculatum*), and they provide potentially suitable habitat for the federally threatened coastal California gnatcatcher (*Polioptila californica californica*), although this species has not been observed in this area. In addition, the southern willow scrub habitats provide potentially suitable habitat for the endangered least Bell's vireo (*Vireo Bellii pusillus*) (City of Los Angeles, 2006).

### Santa Monica Bay

The Santa Monica Bay extends from approximately the Palos Verdes Point on the Palos Verdes Peninsula northward to approximately Point Dume (on the coast south of Westlake Village, California). The bay extends 15 to 20 miles offshore and includes underwater landforms such as Dume Canyon, Santa Monica Canyon, and Redondo Canyon. Representative bay habitats include sandy beach, rocky intertidal, soft-bottom, kelp forests, and pelagic or open water. Each of these habitat types is discussed briefly below.

Sandy beaches are important foraging and nesting grounds for many shorebird species. The protection of this habitat is central to the population recovery of two endangered species—the western snowy plover (*Charadrius alexandrinus nivosus*) and California least tern. Although the western snowy plover no longer nests on Santa Monica Bay beaches, it is still a resident during the winter season. The California least tern is restricted to one nesting colony on Santa Monica Bay at Venice Beach that is protected by a 6-foot-high, 300 by 500-foot fence.

Rocky intertidal areas are hard-bottom habitats that typically comprise a mix of rocky and sandy shoreline. These areas include the shallow kelp-covered areas adjacent to rocky headlands, submarine canyon walls, and deep-water plateaus. Hard-bottom habitats also include man-made features such as artificial reefs and breakwaters. Although hard-bottom habitat is scarce in Santa Monica Bay, it supports a unique and productive ecosystem. Ecologically sensitive bird species that require this habitat include the black oystercatcher (*Haematopus bachmani*), surfbird (*Aphriza virgata*), wandering tattler (*Heteroscelus incanus*), and black turnstone (*Arenaria melanocephala*).

Soft-bottom habitat comprises unconsolidated, soft sediments (sand, silt, and clay) that make up most of the Santa Monica Bay seafloor. This habitat supports a variety of organisms, including more than 100 common species of bottom-dwelling fish such as the white croaker (*Genyonemus lineatus*), queenfish (*Seriphus politus*), California halibut (*Paralichthys californicus*), and barred sand bass (*Paralabrax nebulifer*).

Kelp forests consist of vertically structured underwater vegetation. These forests (or beds) provide valuable foraging and protective habitat for more than 800 species of fish and invertebrates. Kelp forests or beds occur over hard-bottom substrate. The Santa Monica Bay supports two large kelp forests, one on the Palos Verdes Shelf (west of the Palos Verde Peninsula) and the other in the area from Malibu west to Point Dume.

Pelagic, or open water, habitat is the most extensive of any of the coastal and marine habitats in the Santa Monica Bay. The vast majority of life in the bay depends directly or indirectly on phytoplankton that live in the upper ocean water layers. Phytoplankton forms the base of food web that supports grazing zooplankton, fish, and marine bacteria. In Southern California, 40 percent of fish live within the pelagic habitat. This habitat provides valuable foraging habitat for endangered seabirds such as the California brown pelican (*Pelecanus occidentalis californicus*) (City of Los Angeles, 2006).

#### **3.2.3.3 Regulatory Framework**

##### **Federal**

##### **Federal Endangered Species Act**

The federal ESA of 1973 protects plants and animals listed by the federal government as "endangered" or "threatened." The ESA is implemented by enforcement of Sections 7 and 9 of the ESA, as administered by the United States Fish and Wildlife Service (USFWS).

Section 7 applies to federal agency actions (like permits or funding) for public or private activities, such as Section 404 permits issued by the United States Army Corps of Engineers (USACE) for construction work in waters or wetlands. Specifically, Section 7 imposes an affirmative duty on federal agencies to ensure that their actions (including permitting) are not likely to jeopardize the continued existence of a listed species (plant or animal) or result in the destruction or modification of critical habitat (Title 50 Code of Federal Regulations [CFR] § 402.01(a))(50 CFR § 402.01(a)). Sections 7 and 10(a) of the federal ESA allow or authorize "incidental takes" in accordance with the provisions, but only with a permit that could be obtained through consultation with the USFWS. Section 9 makes it unlawful for anyone to "take" a listed animal, and includes significantly modifying its habitat. This law applies to private parties and private land. Landowners are not allowed to "take" an endangered animal or its habitat on their property without first obtaining the appropriate authorization to do so in accordance with the provisions of Section 7 or 10(a).

##### **Clean Water Act**

Activities that have the potential to discharge fill materials into "Waters of the U.S.," including wetlands are regulated under Section 404 of the Clean Water Act (CWA), as administered by USACE. Fill activities could be permitted by a Nationwide or Individual Permit. The Nationwide Permit Program involves certain activities that have been preauthorized by USACE. Activities that do not fall under the Nationwide Permit Program would require Individual Permits.

Projects requiring a Section 404 permit also require a CWA Section 401 Water Quality Certification or Waiver, issued by the appropriate Regional Water Quality Control Board (Regional Board) (33 U.S.C. § 1344 *et seq.*).

### Migratory Bird Treaty Act

The original Migratory Bird Treaty Act (MBTA) of 1918 implemented the 1916 Convention between the United States and Great Britain (for Canada) for the protection of migratory birds. Specific provisions of the statute include the establishment of a federal prohibition, unless permitted, to:

*...pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of the Convention ... for the protection of migratory birds ... or any part, nest, or egg of any such bird.*

Bird species protected under the provisions of the MBTA are identified by the List of Migratory Birds (50 CFR, § 10.13, as updated by the 1983 American Ornithologists Union Checklist and published supplements through 1995, USFWS).

### State

#### California Endangered Species Act

The CESA is established by Section 2080 of the California Fish and Game Code. It specifically prohibits "take" of any species that the CDFW designates to be endangered or threatened. Take is defined in the Fish and Game Code as to "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill."

CESA allows for take that is incidental to otherwise lawful development projects. CESA emphasizes early consultation to avoid potential impacts on rare, endangered, and threatened species and to develop appropriate mitigation planning to offset project-induced losses of listed species populations and their essential habitats.

Through permits or memoranda of understanding, the CDFW may authorize individuals, public agencies, or educational institutions, to import, export, take, or possess any endangered species, threatened species, or candidate species of plants and animals. Take is authorized only after it has been demonstrated by the applicant that the impacts of a project shall be minimized and fully mitigated. The measures required to meet this obligation are roughly proportional in extent to the impact of the authorized take on the species and must be capable of successful implementation.

#### California Department of Fish and Game Code Section 3503

Fish and Game Code Section 3503, much like the federal MBTA, prohibits the needless destruction of the nest or eggs of any bird. The Fish and Game Code states, "It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto."

## **Local**

### **Significant Ecological Areas**

Significant Ecological Areas (SEAs) were established in 1976 by Los Angeles County to designate areas with sensitive environmental conditions and/or resources to preserve biological diversity. Los Angeles County defines an SEA as “ecologically important or fragile land and water areas, valuable as plant and animal communities.” These areas are classified as such based on the presence of one or more of the following:

- Habitats for rare and endangered species of plants and animals
- Restricted natural communities – ecological areas that are scarce on a regional basis
- Habitats restricted in distribution in the county
- Breeding or nesting grounds
- Unusual biotic communities
- Sites with critical wildlife and fish value
- Relatively undisturbed habitats

SEA boundaries are general in nature, and broadly outline the biological resources of concern. The Los Angeles County General Plan allows development in SEAs as long as development is “highly compatible” with the identified resources.

### **Protected Trees**

The City has enacted an ordinance to slow the decline of native tree habitat within the City. The ordinance provisions are contained in Los Angeles Municipal Code (LAMC) Sections 46.00 through 46.06, and Sections 12.21 A 12, 17.02, 17.05, 17.06, 17.51, and 17.52. The protections extend to all native oak tree species (*Quercus* spp.), California sycamore (*Platanus racemosa*), California bay (*Umbellularia californica*), and California black walnut (*Juglans californica*) that are 4 inches or larger in diameter at 4.5 feet above ground.

Removal of protected trees requires a removal permit by the City's Board of Public Works.

#### **3.2.3.4 Significance Thresholds**

The Proposed Project would have a significant impact to biological resources if it would:

Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

Impact BIO-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

Impact BIO-3: Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, and coastal wetlands) through direct removal, filling, hydrological interruption, or other means.

Impact BIO-4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

Impact BIO-5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Impact BIO-6: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

### 3.2.3.5 *Impact Analysis*

***Impact BIO-1: The Proposed Project could potentially have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.***

The adoption of the Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials within the Solid Resource collection activities would not result in development or physical changes that could damage or otherwise modify habitat that supports candidate, sensitive, or special-status species.

Future new or expanded transfer stations, processing facilities and new truck base yards would likely be located in industrial areas or on land zoned for industrial uses (due to the industrial nature of the facilities). Organics processing facilities could also be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Industrial areas and agricultural areas are designated in the City's General Plan, are not located in SEAs, and are likely devoid of habitat required to support candidate, sensitive, or special-status species. However, outside of the City, it is possible that lands zoned for industrial or agricultural uses could be undisturbed, and as such, could contain special-status species or their habitat. As a consequence, if the expanded or new transfer stations, processing facilities and truck base yards would be located on undisturbed lands zoned for industrial uses or for agriculture, they could potentially result in adverse impacts directly to candidate, sensitive, or special-status species or to habitat that supports such species, if present, from construction-related disturbances and site development.

Therefore, new transfer stations, processing facilities, and truck base yards under from the Proposed Project could result in significant impacts to candidate, sensitive, or special-status species.

Implementation of mitigation measure BIO-1 and BIO-2, described below, would mitigate potential impacts to special-status species and their habitat to less than significant levels.

Under mitigation measure BIO-1, a qualified biologist shall conduct a habitat assessment to evaluate the site's potential to support special status plant species and wildlife species prior to the approval of any new or expanded transfer stations, processing facility, or truck base yards that could result in earth-disturbing activities (e.g., grubbing, grading). To the extent feasible, the location(s) of all new or expanded transfer stations, and processing facilities shall be on previously disturbed or developed sites and shall avoid undisturbed, high-quality, natural habitat that supports special status biological resources. If the habitat assessment determines that there is

the potential for significant impacts to any biological resources, additional surveys and/or documentation would be required pursuant to CEQA.

Under mitigation measure BIO-2, if it has been determined that a new or expanded transfer station, processing facility, or truck base yard has the potential for significant impacts to any biological resources, then prior to commencement of any earth-moving activities, an appropriate focused survey(s) shall be conducted to determine the presence or absence of special status species (i.e., plant and/or wildlife surveys) that could be significantly impacted by the facility. If special status species are identified on or adjacent to the facility site, then appropriate avoidance and/or mitigation measures shall be implemented, as approved by the resource agencies with jurisdiction over that species and subject to the necessary permits under FESA, CESA, the California Fish and Game Code, and other applicable regional or local regulations or plans, and ensure that impacts would be less than significant after mitigation.

***Impact BIO-2: The Proposed Project could potentially have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.***

The adoption of the Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. Although areas with riparian habitat and natural communities exist within the City, these areas (such as the unlined portions of the Los Angeles River, and undeveloped mountain areas) are distinctly separate from the developed routes where collection activities would occur. Therefore, the collection activities associated with diversion of materials within the Solid Resource collection activities would not result in impacts to riparian habitat.

Future new or expanded processing facilities and new truck base yards would likely be located in industrial areas or on land zoned for industrial uses (due to the industrial nature of the facilities). Organics processing facilities could also be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Industrial areas and agricultural areas in the City are established in the General Plan, are not located in SEAs, and do not support riparian habitat or natural communities. However, outside of the City, there is the possibility that lands zoned for industrial or agricultural uses could be undisturbed, and as such, could contain some riparian habitat. As a consequence, if the expanded or new processing facilities and truck base yards are on undisturbed lands zoned for industrial uses or agriculture, they could potentially result in adverse impacts to riparian habitat or other natural community from construction-related disturbances and site development.

Therefore, new transfer stations, processing facilities and truck base yards under from the Proposed Project could potentially result in significant impacts to riparian habitat or sensitive natural communities.

Implementation of mitigation measure BIO-1 and BIO-2, described below, would mitigate potential impacts to riparian habitat to less than significant levels.

Under mitigation measure BIO-1, a qualified biologist shall conduct a habitat assessment to evaluate the site for the presence of riparian habitat that could be affected from earth-disturbing activities (e.g., grubbing, grading). To the extent feasible, the location(s) of all new or expanded



transfer stations, processing facilities, and truck base yards shall be on previously disturbed or developed sites and shall avoid undisturbed sites with riparian habitat.

Under mitigation measure BIO-2, if potential impacts to riparian habitat could occur due to project implementation, appropriate avoidance and/or mitigation measures shall be implemented as approved by the resource agencies, and subject to the necessary permits under the Section 404 of the Clean Water Act issued by USACE, Section 401 of the Clean Water Act (Water Quality Certification) issued by the RWQCB, and Section 1600 of the California Fish and Game Code, and ensure that impacts would be less than significant after mitigation.

***Impact BIO-3: The Proposed Project could potentially have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, and coastal wetlands) through direct removal, filling, hydrological interruption, or other means.***

The adoption of the Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. Although wetlands exist within the City, they are generally confined to watercourses or undeveloped areas where collection activities would not occur. Therefore, the collection activities associated with diversion of materials within the Solid Resource collection activities would not result in impacts to wetlands.

Future new or expanded transfer stations, processing facilities and new truck base yards would likely be located in industrial areas or on land zoned for industrial uses (due to the industrial nature of the facilities). Organics processing facilities could also be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Industrial areas and agricultural areas in the City are established in the General Plan and do not support wetlands. However, outside of the City, there is the possibility that lands zoned for industrial or agricultural uses could be undisturbed, and as such, could contain wetlands. As a consequence, if the expanded or new transfer stations, processing facilities and truck base yards would be located on undisturbed lands zoned for industrial uses or agriculture, they could potentially result in adverse impacts to wetlands from construction-related disturbances and site development.

Therefore, new or expanded transfer stations, processing facilities, and truck base yards under the Proposed Project could potentially result in significant impacts to wetlands.

Implementation of mitigation measure BIO-1 and BIO-2, described below, would mitigate potential impacts to wetlands to less than significant levels.

Under mitigation measure BIO-1, a qualified biologist shall conduct a habitat assessment to evaluate the site for the presence of wetlands that could be affected from earth-disturbing activities (e.g., grubbing, grading). To the extent feasible, the location(s) of all new or expanded transfer stations and, processing facilities shall be on previously disturbed or developed sites and shall avoid undisturbed sites with wetlands.

Under mitigation measure BIO-2, if potential impacts to wetlands could occur due to project implementation, appropriate avoidance and/or mitigation measures shall be implemented as approved by the resource agencies, and subject to the necessary permits under the Section 404 of the Clean Water Act issued by USACE, Section 401 of the Clean Water Act (Water Quality

Certification) issued by the RWQCB, and Section 1600 of the California Fish and Game Code, and ensure that impacts would be less than significant after mitigation.

***Impact BIO-4: The Proposed Project could potentially interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.***

The adoption of the Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials within the Solid Resource collection activities would occur within developed areas of the City using existing infrastructure, and therefore would not physically impede the movement of wildlife species or the migration of wildlife through wildlife corridors.

Future new or expanded transfer stations, processing facilities and new truck base yards would likely be located in industrial areas or on land zoned for industrial uses (due to the industrial nature of the facilities). Organics processing facilities could also be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Industrial areas and agricultural areas are generally established in the applicable General Plan, are not located in SEAs, and are devoid of wildlife habitat. However, outside of the City, there is the possibility that lands zoned for industrial or agricultural uses could be undisturbed, and as such, could serve as a migratory wildlife corridor. As a consequence, if new transfer stations, processing facilities and truck base yards are on undisturbed lands zoned for industrial uses or for agriculture, they could potentially interfere with the movement of any wildlife species or with a wildlife corridor.

Therefore, new transfer stations, processing facilities, and truck base yards under Proposed Project could potentially result in significant impacts to biological resources related to interference with wildlife movement.

Implementation of mitigation measure BIO-1, BIO-2, and BIO-3 described below, would mitigate potential impacts to wildlife movement to less than significant levels.

Under mitigation measure BIO-1, a qualified biologist shall conduct a habitat assessment to evaluate the site's potential to support biological resources prior to the approval of any new or expanded transfer stations, processing facility, or truck base yards that could result in earth-disturbing activities (e.g., grubbing, grading). An evaluation of potential project impacts to wildlife movement and migration corridors is included in the habitat assessment. To the extent feasible, the location(s) of new or expanded transfer stations and processing facilities shall be on previously disturbed or developed sites and shall avoid undisturbed, high-quality, natural habitat that supports special status biological resources. If the habitat assessment determines that there is the potential for significant impacts to wildlife movement, additional surveys and/or documentation would be required pursuant to CEQA.

Under mitigation measure BIO-2, if it has been determined that a new or expanded transfer station, processing facility or truck base yard has the potential for significant impacts to any biological resources, then prior to commencement of any earth-moving activities, an appropriate focused survey(s) shall be conducted to determine the presence or absence of special status species (i.e., plant and/or wildlife surveys) that could be significantly impacted by the facility. If special status species are identified on or adjacent to the facility site, then appropriate avoidance

and/or mitigation measures shall be implemented, as approved by the resource agencies with jurisdiction over that species and subject to the necessary permits under FESA, CESA, the California Fish and Game Code, and other applicable regional or local regulations or plans, and ensure that impacts would be less than significant after mitigation.

Additionally, mitigation measure BIO-3 requires compliance with all appropriate laws and regulations including the MBTA and/or CDFG regulations that are intended to protect migratory birds.

***Impact BIO-5: The Proposed Project could potentially conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.***

The adoption of the Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials within the Solid Resource collection activities would occur within developed areas of the City using existing infrastructure, and therefore would not result affect protected trees.

Future new or expanded transfer stations, processing facilities and new truck base yards would likely be located in industrial areas or on land zoned for industrial uses (due to the industrial nature of the facilities). Organics processing facilities could also be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Industrial areas and agricultural areas in the City are established in the General Plan and are generally devoid of protected trees. However, there could be instances where protected trees are located on such sites, and on potential facility sites located outside of the City. As a consequence, if the expanded or new transfer stations, processing facilities and truck base yards on lands zoned for industrial uses or agriculture, they could potentially result in adverse impacts to protected trees from construction-related disturbances and site development.

Therefore, new or expanded transfer stations, processing facilities and truck base yards under the Proposed Project could result in significant impacts to protected trees.

Implementation of mitigation measure BIO-3, described below, would mitigate potential impacts to protected trees to less than significant levels.

Mitigation measure BIO-3 requires compliance with local biological resource protection regulations, including native tree protection ordinances, which will reduce potential impacts to a less than significant level.

***Impact BIO-6: The Proposed Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.***

The adoption of the Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials within the Solid Resource collection activities would not result in development, and would not occur in areas under a habitat or natural community conservation plan.

Future new or expanded transfer stations, processing facilities and new truck base yards would likely be located in industrial areas or on land zoned for industrial uses (due to the industrial nature of the facilities). Organics processing facilities could also be sited on lands zoned for

agricultural uses, depending on the processing technology utilized. Industrial areas and agricultural areas are generally established in the applicable General Plan and are not subject to habitat conservation plans or natural community conservation plans that seek to preserve habitat of value in its natural state. As such, the expanded or new transfer stations, processing facilities and base yards, and the location of Organics processing facilities (depending on the processing technology) on areas zoned as agriculture are not expected to conflict with a habitat conservation plan, a natural community conservation plan, or other approved conservation plan.

Therefore, the Proposed Project would not result in impacts related to conflicts with habitat or natural community conservation plans.

#### **3.2.3.6 Cumulative Impacts**

As discussed above, collection activities under the Proposed Project would have no effect on biological resources because they would not result in any construction or occur in areas that support biological resources. Therefore, collection activities under the Proposed Project would not make a considerable contribution to a significant cumulative impact to biological resources.

As with the Proposed Project, future diversion activities within Los Angeles County and the State associated with related projects could cause the need for new or expanded transfer stations, processing facilities, truck base yards and Organics processing facilities (depending on the processing technology) on areas with sensitive resources, and if those related project facilities occur on undisturbed lands, they could result in impacts to biological resources. Mitigation measures BIO-1, BIO-2, and BIO-3 would be implemented to reduce potential impacts of new transfer stations, processing facilities, and truck base yards, and Organics processing facilities under the Proposed Project to a less than significant level. Therefore, after mitigation, the Proposed Project would not make a considerable contribution to a significant cumulative impact to biological resources.

It is the presumption that new or expanded transfer stations, processing facilities and truck base yards that could be located with the City or in other jurisdiction would be subject to the same regulatory requirements and/or similar mitigation measures as those identified below for the Proposed Project to avoid and/or minimize the impacts of the construction and operation of such new or expanded facilities to a level of less than significant. Cumulative impacts associated with new or expanded facilities, truck base yards and Organics processing facilities will be further addressed in the project specific environmental document prepared by the Lead Agency for the jurisdiction in which such new or expanded facilities are located.

#### **3.2.3.7 Mitigation Measures**

The Proposed Project could potentially result in significant impacts to biological resources due to the siting of new or expanded transfer stations, processing facilities, and truck base yards. The following mitigation measures are recommended:

- BIO-1:** Prior to the approval of any new or expanded transfer stations, processing facility, or truck base yard that could result in earth-disturbing activities (e.g., grubbing, grading), a qualified Biologist shall conduct a habitat assessment to evaluate the site's potential to support special status plant and wildlife species and jurisdictional wetlands/waters. To the extent feasible, the location(s) of all new project facilities shall be on previously

disturbed or developed sites and shall avoid undisturbed, high-quality, natural habitat that supports special status biological resources, areas that are used for regional or local wildlife movement, and jurisdictional wetlands and associated waters. If the habitat assessment determines that there is the potential for significant impacts to any biological resources, additional surveys and/or documentation would be required pursuant to CEQA and mitigation measure BIO-2.

- BIO-2:** If it has been determined that a new or expanded transfer station, processing facility, or truck base yard has the potential for significant impacts to any biological resources, then prior to commencement of any earthmoving activities, Lead Agency shall conduct the appropriate focused survey(s) to determine the presence or absence of special status species (i.e., plant and/or wildlife surveys) that could be significantly impacted by the Proposed Project. If special status species are identified on or adjacent to the facility site, then appropriate avoidance and/or mitigation measures shall be implemented, as approved by the resource agencies with jurisdiction over that species and subject to the necessary permits under FESA, CESA, the California Fish and Game Code, and other applicable regional or local regulations or plans, and ensure that impacts would be less than significant after mitigation. If any jurisdictional wetlands or associated waters are identified, appropriate avoidance and/or mitigation measures shall be implemented as approved by the resource agencies, and subject to the necessary permits under the Section 404 of the Clean Water Act issued by U.S. Army Corps of Engineers, Section 401 of the Clean Water Act (Water Quality Certification) issued by the Regional Water Quality Control Board, and Section 1600 of the California Fish and Game Code, and ensure that impacts would be less than significant after mitigation.
- BIO-3:** All project-related ground-disturbing activities shall comply with applicable federal, state, regional, and local biological resource protection regulations to avoid and/or minimize potential impacts to biological resources including, but not limited to, use of BMPs during construction and in the design of project facilities; protection of native trees as required by local tree ordinances; and pre-construction nesting bird surveys and nesting raptor surveys (if appropriate based on season and habitat present) in compliance with the Migratory Bird Treaty Act and/or California Department of Fish and Game regulations.

#### *3.2.3.8 Level of Significance after Mitigation*

With implementation of mitigation measures BIO-1, BIO-2, and BIO-3, potential impacts to biological resources resulting from the Proposed Project would be less than significant.

## 3.2.4 Geology-Soils

### 3.2.4.1 Introduction

This section evaluates the potential impacts to geology and soils from the Proposed Project. The analysis consists of an evaluation of the potential impact that the Proposed Project would have related to earthquakes, seismic ground shaking, ground failure, landslides, soil erosion, unstable geologic units, expansive soils, and soils incapable of supporting alternative wastewater disposal systems.

The impact evaluation focuses on the collection of Solid Resources to divert materials from landfills, and at a conceptual level, on new or expanded processing facilities which would be required to process diverted materials, and new or expanded truck base yards. Collection activities would occur on and from existing Commercial Establishments. New or expanded transfer stations, processing facilities, and truck base yards are expected to be sited on lands with industrial or commercial manufacturing zoning designation, but could include lands zoned for agricultural uses for Organics processing facilities. The new facilities and truck base yards have not yet been proposed; therefore, the evaluation of these facilities in this section is at a conceptual level.

A summary of the Proposed Project's anticipated impacts on geology and soils, based on the evaluation below, is contained in Table 3.2.4-1.

**TABLE 3.2.4-1  
SUMMARY OF IMPACTS RELATED TO GEOLOGY AND SOILS**

Environmental Impact Area	Potential Impact	Mitigation	Significant Impact After Mitigation
<b>GEO-1: Earthquake Faults</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>GEO-2: Seismic Ground Shaking</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>GEO-3: Seismic Related Ground Failure</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>GEO-4: Landslides</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>GEO-5: Soil Erosion</b>			
Collection System	No	None Required	No
New or Expanded Facilities	No	None Required	No
<b>GEO-6: Unstable Geologic Units or Soil</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No

**TABLE 3.2.4-1  
SUMMARY OF IMPACTS RELATED TO GEOLOGY AND SOILS**

Environmental Impact Area	Potential Impact	Mitigation	Significant Impact After Mitigation
<b>GEO-7: Expansive Soil</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>GEO-8: Soils and Alternative Wastewater Disposal Systems</b>			
Collection System	No	None Required	No
New or Expanded Facilities	No	None Required	No
<b>Cumulative Impacts</b>	Yes	Yes	No

### 3.2.4.2 Environmental Setting

Collection activities under the Proposed Project would be implemented within the jurisdictional boundaries of the City. The northern and central portions of the City lie within the Transverse Ranges Geomorphic Province, so named because the mountains in the area and the geologic structures that define them have an east-west orientation. This east-west orientation is transverse to the generally dominant northwestern orientation of most of the mountains and valleys in Southern California. The northern portion of the City includes the San Fernando Valley and portions of the surrounding Santa Susana Mountains, San Gabriel Mountains, and Verdugo Mountains. The San Fernando Valley contains thick deposits of alluvium from the surrounding mountains. The southern boundary of the Transverse Ranges Geomorphic Province trends along the south side of the Santa Monica Mountains (City of Los Angeles, 2006).

The Los Angeles Basin and downtown Los Angeles are south of the Santa Monica Mountains and in the Peninsular Range Geomorphic Province. This province trends northward along the southern portion of California and is characterized by northwest-trending faults and other geologic structures. The province contains late Paleozoic to Recent formations and Mesozoic intrusive rocks.

Soil and bedrock deposits generally are grouped according to age, composition, and other geologic characteristics. These groups of deposits are referred to as geologic units, or more formally as geologic formations. The Los Angeles area has diverse geology, which includes many informal geologic units and geologic formations. There has been a lack of uniform convention, which has led to varying depictions of the units on geologic maps. For the purpose of this Draft Program EIR, some of the more prevalent geologic units and formations that occur in the City and vicinity are described below.

**Artificial Fill.** The greater Los Angeles area has undergone extensive development and urbanization. As a result, many areas exist where the soil has been cut and filled. Areas that have received significant (generally greater than 5 vertical feet) amounts of fill soil might be shown on geologic maps as fill deposits. Fill was generally placed in low-lying areas to level the land during construction of streets, bridges, railroad crossings and buildings (City of Los Angeles, 2006).

**Recent Alluvium.** Holocene (or Recent) alluvial deposits of the modern stream channels, such as along the Los Angeles and San Gabriel rivers, and on the alluvial fans and floodplains, are among the youngest surficial deposits in the Los Angeles area. Recent alluvial deposits as used here

describe those stream and river deposits that are less than about 10,000 years old. The Recent alluvium encountered in the San Fernando Valley and Los Angeles Basin areas can be generally characterized as moderately dense mixtures of silt, sand, and gravel with lesser amounts of clay. Alluvial deposits along the north side of the Santa Monica Mountains, the Los Angeles Narrows, Ballona Gap, and across the Los Angeles Basin toward Los Angeles Harbor were deposited by the Los Angeles River fluvial system. Second order stream deposits occur throughout the area in the upper reaches of coalescing alluvial fans and along the flanks of the hills and mountains. Subsurface exploration data generally reveal that the alluvial deposits consist predominantly of silty sands, poorly graded to well graded sands, and gravelly sands. These granular sediments were mostly deposited in the channels and along the banks of streams and rivers that feed into the alluvial basins. Lesser deposits of silt and clayey silt can be found in floodplain areas, in low areas subject to ponding, and as the upper part of fining upward granular deposits (City of Los Angeles, 2006).

**Older Alluvium.** The older (generally late Quaternary) alluvial soils are similar to the overlying younger alluvial soils described above. Older alluvial deposits, including nonmarine terrace deposits, are exposed in uplifted areas around the margins of the San Fernando Valley and Los Angeles Basin. Boulders of hard intrusive rock are present in the young and older alluvial soils. Boulders are present especially near drainage headland areas that are near exposures of intrusive rocks, such as along the toe of the Verdugo and San Gabriel mountains, and in some of the major stream and river channels such as in the Los Angeles Narrows. Generally, such boulders would occur within the gravel beds; however, in rare cases, isolated boulders have been observed (City of Los Angeles, 2006).

**Lakewood Formation and San Pedro Formation.** The Lakewood Formation of Upper Pleistocene age and the San Pedro Formation of Lower Pleistocene age are widely exposed around the margins of the Los Angeles Basin. The San Pedro Formation is generally better defined in the subsurface on the basis of its importance as a source of fresh water. The San Pedro Formation in the Los Angeles Basin reaches thicknesses of several thousand feet (Yerkes et al., 1965) and includes many of the major groundwater aquifers in the basin (such as the Lynwood, Silverado, Sunnyside, Exposition, and Gage aquifers) (Thomas et al., 1961).

Much of the late Quaternary deposits present in the Los Angeles Basin have been grouped together and mapped as the Lakewood Formation. The formation includes "terrace deposits," Palos Verdes Sand, Sunny Hills Formation, and other unnamed Upper Pleistocene deposits (both marine and continental). The grouping of deposits within the Lakewood Formation served to help define the hydrogeology of the Los Angeles Basin (City of Los Angeles, 2006).

**Fernando Formation.** The Fernando Formation underlies the fluvial deposits of the Los Angeles River and alluvial fan deposits along the southern foothills of the Elysian Park Hills and Repetto Hills. This formation is inclusive in Upper Pliocene marine strata exposed in many areas around the margins of the Los Angeles Basin (City of Los Angeles, 2006).

**Puente Formation.** The Miocene-age Puente Formation underlies the Elysian Park Hills and the western Repetto Hills. The middle member is 750 to 1,500 meters (m) thick and is thicker in the north. It is a medium- to coarse-grained, feldspathic sandstone interbedded with sandy siltstone and diatomaceous siltstone with lenses of pebble conglomerate (Dibblee, 1989).



**Topanga Formation.** Bedrock of the Topanga Formation has been mapped at many locations in the Santa Monica Mountains and in the northern portion of the Verdugo Mountains. The formation consists mostly of interbedded gray to tan sandstone and gray micaceous claystone. Locally, it contains lenses of pebbly sandstone and pebble-cobble conglomerate (City of Los Angeles, 2006).

**Intrusive Rocks.** Mesozoic-age igneous intrusive rocks are exposed in the hillside areas on both the east and west sides of the Los Angeles Narrows corridor. Igneous rocks form from the solidification of molten material that originates in or below the crust of the earth. The composition depends on the kind of molten material (magma) from which it crystallizes, and its texture depends on the rate at which the material cools. Slow rates of cooling promote larger crystal-sized rock (granodiorite, quartzdiorite); whereas, fast-cooling rates produce fine crystallized rock (basalt) (City of Los Angeles, 2006).

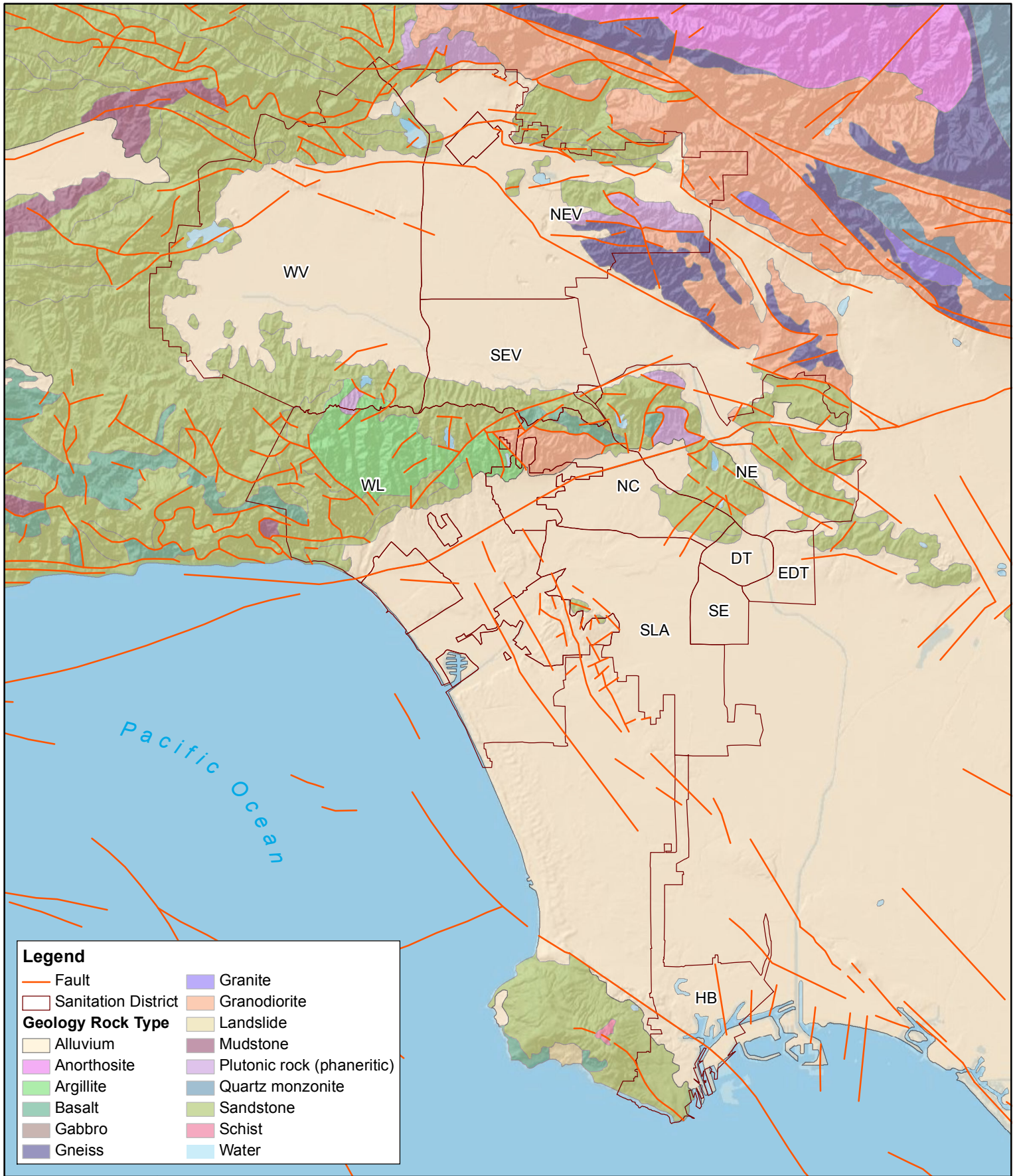
**Santa Monica Slate.** The Jurassic-age Santa Monica Slate, which underlies a great portion of the eastern Santa Monica Mountains, is a low-grade metamorphosed slate. The deep marine deposit formed within a subduction zone. Having a much longer and more complex structural history than the overlying Tertiary deposits, Santa Monica Slate is highly fractured and sheared. The slate is distinctly foliated with foliation parting surfaces at an orientation commonly subparallel to relict bedding. This structural character leads to unpredictable slope stability. Landslides can occur along shears, joints, foliation, or a combination of these (City of Los Angeles, 2006).

**Chico Formation/Chatsworth Formation.** The Chico Formation (Chatsworth Formation of the Simi Hills) is an Upper Cretaceous, mostly marine clastic sedimentary sequence that occurs in the Santa Monica Mountains and Simi Hills. The deposits consist largely of well sorted sandstone and interbedded shale with less abundant sandy conglomerate and poorly sorted pebble and cobble conglomerate (City of Los Angeles, 2006).

### ***Seismic Faults and Other Geological Hazards***

The City lies relatively close to the San Andreas Fault, a transform fault boundary that marks the juncture between the North America Tectonic Plate and the Pacific Tectonic Plate. Movement on the San Andreas Fault has created a complex geologic terrain over the 20 to 30 million years since it has been active. Figure 3.2.4-1 illustrates active and potentially active faults in the Los Angeles area.

The San Andreas Fault is also the boundary between the oceanic plate on the west and the continental plate on the east. The section of the San Andreas Fault nearest the City trends at an angle to that of the fault to the north and south, and has been termed "the Big Bend" that causes a component of north-south convergence in the Southern California area. Numerous geologic units have been faulted against each other, forming mountains and valleys. Many faults in the Southern California area trend north, similar to the San Andreas Fault; others that are within the Transverse Ranges Geomorphic Province trend east-west. It is generally accepted that the Transverse Range Fault system was formed as a result of transpressional forces (both lateral and compressional) along the "Big Bend."



1 in = 6 miles



Source: USGS Open-File Report 2005-1305; Jennings, C.W., Strand, R.G., and Rogers, T.H., 1977, Geologic map of California: California Division of Mines and Geology, scale 1:750,000.

Imagery Source: ESRI World Shaded Relief

**FIGURE 3.2.4-1: GEOLOGY AND FAULTS**

**DRAFT EIR**  
CITY-WIDE EXCLUSIVE FRANCHISE SYSTEM FOR  
MUNICIPAL SOLID WASTE COLLECTION AND HANDLING  
CITY OF LOS ANGELES, BUREAU OF SANITATION

NOVEMBER 2013

The seismicity of Southern California is dominated by movements on the intersecting northwest-southeast-trending San Andreas Fault system and the east-west-trending faults of the Transverse Ranges Fault system. The Los Angeles Basin is located south of the intersection of these two systems. Both fault systems respond to strain by fault movement and deformation of the rocks. This fault movement is driven by the relative motions of the Pacific and North American Tectonic Plates. The strain is relieved by faulting on the San Andreas and related faults and by displacement on faults in the Transverse Ranges. Geologically younger faults are present in the Transverse Ranges and the Los Angeles Basin and are classified as historically active, active, potentially active, or inactive, based on the following criteria:

- **Historically Active:** Faults that have generated earthquakes accompanied by evidence of movement during historical time (approximately the last 200 years), and faults that exhibit creep.
- **Active:** Faults that show geologic evidence of movement within Holocene time (approximately the last 11,000 years).
- **Potentially Active:** Faults that show geologic evidence of movement during the Quaternary period (approximately the last 2,000,000 years). Such faults might have remained active during Holocene time, but direct evidence for continued activity is not available.
- **Inactive:** Faults that do not show evidence of movement during all of Quaternary time or longer.

Active faults within the Los Angeles area include the Elysian Park Thrust Fault, Raymond Hills Fault, the Hollywood Fault, the Northridge Hills Fault, the Newport-Inglewood Fault, and the San Fernando Fault (City of Los Angeles, 2006).

An earthquake is classified by the amount of energy released, which traditionally has been quantified using the Richter Scale. This is a logarithmic scale wherein each whole number increase in Richter magnitude represents a tenfold increase in the wave magnitude generated by an earthquake. Earthquakes of Richter magnitude 6.0 to 6.9 are classified as moderate, those between 7.0 and 7.9 as major, and those of 8.0 or higher as great.

A list of earthquake faults in the greater Los Angeles area is shown in Table 3.2.4-2.

**TABLE 3.2.4-2  
MAXIMUM MOMENT MAGNITUDES OF EARTHQUAKES  
ON LOCAL FAULTS IN SOUTHERN CALIFORNIA**

<b>Fault Name</b>	<b>Maximum Earthquake Magnitude (Mw)</b>
Hollywood	6.4
Verdugo	6.7
Raymond	6.5
Sierra Madre	7
Santa Monica	6.6
Sierra Madre (San Fernando)	6.7
Northridge (E. Oak Ridge)	6.9
Newport-Inglewood (Los Angeles Basin)	6.9

**TABLE 3.2.4-2  
MAXIMUM MOMENT MAGNITUDES OF EARTHQUAKES  
ON LOCAL FAULTS IN SOUTHERN CALIFORNIA**

<b>Fault Name</b>	<b>Maximum Earthquake Magnitude (Mw)</b>
Elysian Park Thrust	6.7
Compton Thrust	6.8
San Gabriel	7
Malibu Coast	6.7
Santa Susana	6.6
Clamshell-Sawpit	6.5
Palos Verdes	7.1
Whittier	6.8
Holser	6.5
Anacapa-Dume	7.3
San Jose	6.5
Oak Ridge (onshore)	6.9
Simi-Santa Rosa	6.7
San Andreas – Mojave	7.1
San Andreas – 1857 Rupture	7.8
Cucamonga	7
Chino-Central Avenue (Elsinore)	6.7
San Cayetano	6.8
San Andreas – Carrizo	7.2
Santa Ynez (East)	7
Elsinore-Glen Ivy	6.8
Newport-Inglewood (offshore)	6.9
San Andreas – San Bernardino	7.3
San Andreas – Southern	7.4
San Jacinto-San Bernardino	6.7
Ventura – Pitas Point	6.8
Cleghorn	6.5

Source: City of Los Angeles, 2006.

### Liquefaction

Liquefaction is a phenomenon in which sediments below groundwater temporarily lose their shear strength during periods of strong, earthquake-induced, ground shaking. Saturated loose sands and silty sands within 50 feet of the ground surface are most susceptible to liquefaction. Liquefaction-related phenomena include subsidence, lateral spreading, and sand boils (City of Los Angeles, 2006).

The California Department of Conservation, Division of Mines and Geology (CDMG), now referred to as the California Geological Survey (CGS), Seismic Hazard Maps of the Los Angeles area indicate

that many areas are potentially subject to liquefaction. These areas are located predominantly in the valleys where relatively high groundwater has been reported.

The potential for liquefaction is dependent on the groundwater levels. Groundwater levels in alluvial valley areas of Los Angeles are an important source of drinking water and are both raised by natural and controlled recharge from rainwater runoff and lowered by pumping from groundwater drinking wells. Liquefaction sometimes occurs during a large earthquake, usually when the water table is within about 30 feet of the ground surface. Strong ground shaking causes the saturated soil to temporarily behave like a thick liquid, which removes support for foundations and can damage overlying structures.

### Lateral Spreading

Seismically induced lateral spreading involves primarily lateral movement of earth materials from ground shaking. Lateral spreading occurs in conjunction with liquefaction and loss of soil strength in near-level topography. It differs from slope failure because complete ground failure involving large movement does not occur, based on the relatively smaller gradient of the initial ground surface. Lateral spreading is demonstrated by near-vertical cracks with predominantly horizontal movement of the soil mass involved.

Such phenomena can occur widely across the Los Angeles area, with location of the lateral spreading depending on the source of the earthquake and the nature of the generated seismic ground motions. Lateral spreading in conjunction with liquefaction was observed in the Northridge area during the Northridge earthquake in 1994 and in the Sylmar area during the San Fernando earthquake in 1971.

### Ground Lurching

Ground lurching is essentially a dynamic phenomenon in which the sudden shift of the ground during an earthquake causes sudden, high-velocity ground movement and concomitant accelerations. The ground can lurch a meter or more unidirectionally within 1 to 3 seconds. It can also occur on slopes and ridge tops where seismic shaking can cause lateral movement of the ground and result in rock or soil fracturing. Ridge-top lurching was observed in the hills and mountain slopes in Los Angeles in the 1971 San Fernando earthquake and the 1994 Northridge earthquake.

### Subsidence

In Southern California, subsidence (lowering of ground surface elevation) has been generally attributable to four major causes—tectonic activity, groundwater extraction, hydroconsolidation, and withdrawal of oil and gas. Subsidence attributable to tectonic activity is a geologic phenomenon occurring in areas of active seismicity, such as where down warping is caused by progressive bending of earth strata. Groundwater extraction in Los Angeles was at its peak in the 1930s and 1940s when much of the San Fernando Valley and Los Angeles Basin were used for agriculture. Reports of subsidence from agriculture water-well pumping were documented in scattered areas. In contrast, hydroconsolidation caused by infiltration of surface water to the ground can occur in areas of ponding or water spilling. Alluvial deposits in the headward, proximal areas, of alluvial fans might be more susceptible to hydroconsolidation.

## Settlement

Settlement under load is the total vertical movement of the soil column caused by the application of a compressive load. Settlement of an engineered structure attributable to compression of soil below the foundation can occur in certain circumstances on the basis of building loads. Settlement occurs as a natural process in certain soils that were deposited in a loose state, such as landslide deposits and some alluvial deposits laid down rapidly during a storm event. Such natural settlement occurs over time as the loose soils naturally consolidate either due to load application or time-dependent pore drainage. Natural consolidation can be accelerated by the addition of overburden soils deposited above or by infiltration of water causing hydroconsolidation.

## Landslides

Landslides occur in the City. In fact, slope failures were instrumental in Los Angeles being one of the first municipalities in the nation to adopt ordinances for hillside grading. Rapid uplift of the mountainous areas of Los Angeles from past and ongoing tectonic movements gives rise to a geologic setting conducive to mass wasting. The variable nature of sediments and rocks exposed throughout the City, and the slope conditions created by uncontrolled grading, have led to frequent landslides of a variety of types.

Rotational and translational landslides are common, as are debris flows of surficial deposits, such as topsoil and colluvium. Beginning at the turn of the Nineteenth to Twentieth centuries, uncontrolled grading in the hillside areas of Los Angeles created innumerable situations in which uncompacted fill soils were placed over surficial soil deposits, or adversely oriented bedrock, in a way that loads a natural slope that previously had a near equilibrium slope stability.

Landslides on the hills and bluffs of the coastal areas of Los Angeles are common and have posed a hazard for many years. Other hillside areas of the City, especially the central and eastern Santa Monica Mountains, have geologic and topographic conditions that are conducive to the development of surficial and gross landslides.

### *3.2.4.3 Regulatory Framework*

The Alquist-Priolo Earthquake Fault Zoning Act was signed into law December 22, 1972, and went into effect March 7, 1973. The purpose of this act is to prohibit the location of most structures for human occupancy across the traces of active faults and to thereby mitigate the hazard of fault rupture. Under the Act, the State Geologist (Chief of the CGS) is required to delineate "Earthquake Fault Zones" (EFZs) along known active faults in California. Cities and counties affected by the zones must regulate certain development within the zones. They must withhold development permits for sites within the zones until geologic investigations demonstrate that the sites are not threatened by surface displacement from future faulting.

The City of Los Angeles Department of Building and Safety regulates construction and development within City limits. As part of the City of Los Angeles Building Code and review process, the City implements the requirements of the Alquist Priolo Earthquake Fault Zoning Act. In addition, the City has established a Hillside Ordinance to regulate hillside development, which specifies that a geologic report is required for proposed construction on hillside areas, and development must incorporate recommendations in the geologic reports that address potential concerns.

#### 3.2.4.4 *Significance Thresholds*

The Proposed Project would have a significant impact related to geology and soils if it would:

Impact GEO-1: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault.

Impact GEO-2: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.

Impact GEO-3: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction.

Impact GEO-4: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.

Impact GEO-5: Result in substantial soil erosion or the loss of topsoil.

Impact GEO-6: Be located on a geologic unit or on soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse.

Impact GEO-7: Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.

Impact GEO-8: Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

#### 3.2.4.5 *Impact Analysis*

***Impact GEO-1: The Proposed Project could expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials in the Solid Resources collection activities would not result in physical changes or new development that could expose people to injury or risks associated with earthquake faults.

Future new or expanded transfer stations, processing facilities, new truck base yards, and Organics processing facilities would have to comply with local land use plans and zoning requirements of the jurisdiction in which they are located and with the applicable building code, seismic code, and local building permit requirements. Those requirements generally include preparation of geotechnical studies and compliance with associated geotechnical recommendations to minimize potential impacts associated with seismic activities and known or unknown faults, and from other geological hazards. It is unlikely that future new or expanded facilities would be sited in a manner that

exposes people or structures to potential substantial adverse effects related to the rupture of a known earthquake fault. However, the locations of future facilities are unknown at this time. If future new or expanded transfer stations, processing facilities, truck base yards, and Organics processing facilities are constructed in proximity to active mapped faults, a potentially significant impact could occur. Implementation of mitigation measure GS-1 would mitigate the potential adverse impacts to below a level of significance.

Under mitigation measure GS-1 future new or expanded facilities would not be located in an area mapped as an Alquist-Priolo Earthquake Fault Zone, and the placement of structures for human occupancy shall be restricted from these areas.

***Impact GEO-2: The Proposed Project could expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.***

The Proposed Project would not result in physical changes related to the basic methods used to collect S Resources in the City. The collection activities associated with diversion of materials in the Solid Resource collection activities would not result in physical changes or new development that could expose people to injury or risks associated with strong seismic ground shaking.

Future new or expanded transfer stations, processing facilities, new truck base yards, and Organics processing facilities would have to comply with local land use plans and zoning requirements of the jurisdiction in which they are located and with the applicable building code, seismic code, and local building permit requirements. Those requirements generally include preparation of geotechnical studies and compliance with associated geotechnical recommendations to minimize potential impacts associated with seismic ground shaking. However, the locations of future facilities are unknown at this time. Future new or expanded transfer stations, processing facilities, truck base yards, and Organics processing facilities could be constructed in locations that expose people or structures to potential substantial adverse effects resulting from strong seismic ground shaking. Implementation of mitigation measure GS-2 would mitigate the potential adverse impacts to below a level of significance. Under mitigation measure GS-2, a site-specific geotechnical report would be prepared in areas subject to earthquake-induced landslides or liquefaction, as mandated by the State Seismic Hazard Mapping Act at the time a site is selected for a new or expanded facility. Further mitigation measures and design recommendations identified in those site-specific reports would be implemented to minimize the potential for injury and loss related to earthquake-induced landslides, liquefaction, or seismic hazards.

***Impact GEO-3: The Proposed Project could expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials in the Solid Resource collection activities would not result in physical changes or new development that could expose people to injury or risks associated with seismic-related ground failure, including liquefaction.

Future new and/or expanded transfer stations, processing facilities, new base yards, and Organics processing facilities would have to comply with local land use plans and zoning requirements of the



jurisdiction in which they are located and with the applicable building code, seismic code, and local building permit requirements. Those requirements generally include preparation of geotechnical studies and compliance with associated geotechnical recommendations to minimize potential impacts associated with seismic activity and seismic-related ground failure, including liquefaction. However, the locations of future facilities are unknown at this time; future new or expanded transfer stations, processing facilities, truck base yards, and Organics processing facilities could be constructed in locations that expose people or structures to potential substantial adverse effects resulting from seismic-related ground failure, including liquefaction. Implementation of mitigation measures GS-2 and GS-3 would mitigate the potential adverse impacts to below a level of significance.

Under mitigation measure GS-3, future new or expanded facilities would not be located within an area known for or designated with a high liquefaction potential, and placement of structures for human occupancy would be restricted from areas known for ground failure or liquefaction.

***Impact GEO-4: The Proposed Project could expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials diverted within the Solid Resource collection activities would not result in physical changes or new development that could expose people to injury or risks associated with landslides or slope failures.

Future new or expanded transfer stations, processing facilities, new truck base yards, and Organics processing facilities would have to comply with local land use plans and zoning requirements of the jurisdiction in which they are located and with the applicable building code, seismic code, and local building permit requirements. Those requirements generally include preparation of geotechnical studies and compliance with associated geotechnical recommendations to minimize potential impacts associated with geologic hazards such as landslides. However, the locations of future facilities are unknown at this time. Future new or expanded transfer stations, processing facilities, truck base yards, and Organics processing facilities could be constructed in locations that expose people or structures to potential substantial adverse effects resulting from landslides. Implementation of mitigation measures GS-2 and GS-4 would mitigate the potential adverse impacts to below a level of significance.

Under mitigation measure GS-4, future new or expanded facilities would not be located in areas mapped as a landslide or mudslide hazard area in local planning documents (e.g., General Plans).

***Impact GEO-5: The Proposed Project would not result in substantial soil erosion or the loss of topsoil.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials in solid Resource collection activities would not result in physical changes or new development that could cause substantial soil erosion or the loss of topsoil.

Future new or expanded transfer stations, processing facilities, new truck base yards, and Organics processing facilities would have to comply with applicable building and water quality regulations that require minimization of soil erosion and loss of top soil. Future new or expanded facilities

would be required to prepare a Stormwater Pollution Prevention Plan (SWPPP), which would include an identification of best management practices (BMPs) to be implemented during project construction. Implementation of BMPs, which would be required as part of the SWPPP, would keep potential erosion impacts to below a level of significance. As a consequence, the Proposed Project is not expected to result in significant topsoil or erosion impacts.

***Impact GEO-6: The Proposed Project could be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials in the Solid Resource collection activities would not result in physical changes or new development on unstable geologic units or unstable soil that could result in additional geologic impacts such as landslides, lateral spreading, subsidence, or collapse.

Future new or expanded transfer stations, processing facilities, new truck base yards, and Organics processing facilities would have to comply with local land use plans and zoning requirements of the jurisdiction in which they are located and with the applicable building code, seismic code, and local building permit requirements. Those requirements generally include preparation of geotechnical studies and compliance with associated geotechnical recommendations to minimize potential impacts associated with unstable geologic conditions, including landslides, lateral spreading, subsidence, and liquefaction or collapse. However, the locations of future facilities are unknown at this time. Future new or expanded transfer stations, processing facilities, truck base yards, and Organics processing facilities could be constructed on a geologic unit or soil that is unstable, or that would become unstable as a result of the project. Implementation of mitigation measure GS-2 would mitigate the potential adverse impacts to below a level of significance.

***Impact GEO-7: The Proposed Project could be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials in the Solid Resource collection activities would not result in physical changes or new development that could be affected by expansive soil conditions.

Future new and/or expanded transfer stations, processing facilities, new truck base yards, and Organics processing facilities would have to comply with local land use plans and zoning requirements of the jurisdiction in which they are located and with the applicable building code, seismic code, and local building permit requirements. Those requirements generally include preparation of geotechnical studies and compliance with associated geotechnical recommendations to minimize potential impacts associated with adverse ground conditions, including expansive soils. However, the locations of future facilities are unknown at this time; future new or expanded transfer stations, processing facilities, truck base yards, and Organics processing facilities could be constructed on an area with expansive soil. Implementation of mitigation measure GS-2 would mitigate the potential adverse impacts to below a level of significance.

***Impact GEO-8: The Proposed Project would not have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials in the solid Resource collection activities would not result in physical changes or new development, including septic systems or alternative wastewater disposal systems.

Future new or expanded transfer stations, processing facilities and new truck base yards, would require the provision of various utilities and are, therefore, likely to be located in industrial areas or areas currently serviced by a traditional wastewater collection system (e.g., a sewer service that conveys wastewater to a wastewater treatment plant for processing). Because of this, the expansion of existing facilities or construction of new facilities and truck base yards in industrial areas would not use alternative wastewater disposal systems, including septic systems, which could adversely affect surrounding soil. Organics processing facilities could be sited on lands zoned for agricultural uses, depending on the processing technology utilized. The City has limited agricultural land in the Sepulveda Basin and at Pierce College in the San Fernando Valley. Additionally, there are large agricultural areas near the City. Facilities sited on lands zoned for agricultural uses could require use of alternative wastewater disposal systems such as septic systems due the lack of nearby sewer lines; however, the majority of agricultural areas are on alluvial soils with adequate drainage characteristics, which are not expected to be incapable of supporting alternative wastewater disposal systems. In the event a septic system is proposed, soil testing would be required to determine if the permeability of the soil is adequate to support the use of a septic system.

Therefore, the Proposed Project is not expected to result in significant soil impacts related to the use, or development, of septic systems or alternative wastewater disposal systems.

#### ***3.2.4.6 Cumulative Impacts***

The collection activities under the Proposed Project would not result in any construction or change in use of land and would not result in geology and soils impacts. Therefore, collection activities under the Proposed Project would not make a considerable contribution to a significant cumulative impact to geology and soils.

As with the Proposed Project, future diversion activities within Los Angeles County and the state associated with related projects could cause the need for new or expanded transfer stations, processing facilities, truck base yards, and Organics processing facilities, and those project facilities could be located in areas that experience significant impacts related to geology or soils. However, the Proposed Project and its related project facilities would have to comply with general requirements that would dictate siting and design requirements for new or expanded facilities, which are expected to keep potential cumulative impacts geology and soils at a less-than-significant level. Mitigation measures GS-1 through GS-4 would be implemented to reduce potential impacts of new transfer stations, processing facilities, truck base yards, and Organics processing facilities under the Proposed Project to a less-than-significant level. Further, because geology and soils impacts tend to be site specific and generally mitigated on a project-by-project basis, they do not typically contribute to a cumulative impact.

It is the presumption that new or expanded transfer stations, processing facilities, and truck base would be subject to the same regulatory requirements or similar mitigation measures as those identified below for the Proposed Project to avoid or minimize the impacts of the construction and operation of such new or expanded facilities to a level that is less than significant. Cumulative impacts associated with new or expanded facilities, truck base yards, and Organics processing facilities will be further addressed in the project-specific environmental document prepared by the Lead Agency for the jurisdiction in which such new or expanded facilities are located.

#### ***3.2.4.7 Mitigation Measures***

The Proposed Project could result in significant impacts related to geology or soils, geologic hazards, or seismic activities and hazards due to the siting of new or expanded transfer stations, processing facilities and truck base yards. The following mitigation measures are recommended:

- GS-1:** Future new or expanded facilities shall not be located within a mapped Alquist-Priolo Earthquake Fault Zone. Placement of structures for human occupancy shall be restricted from areas designated as an Alquist-Priolo Earthquake Fault Zone.
- GS-2:** At the time a site is selected for a new or expanded facility, a site-specific geotechnical report shall be prepared, particularly in areas subject to earthquake-induced landslides or liquefaction, as mandated by the State Seismic Hazard Mapping Act. Mitigation measures and design recommendations identified in those site-specific reports shall be implemented to minimize the potential for injury and loss related to earthquake- or project-induced landslides, liquefaction, lateral spreading, subsidence, unstable or expansive soils, or seismic hazards.
- GS-3:** Future new or expanded facilities shall not be located in an area known for or designated with a high potential for liquefaction. Placement of structures for human occupancy shall be restricted from areas known for ground failure or liquefaction.
- GS-4:** Future new or expanded facilities shall not be located in areas mapped as a landslide or mudslide hazard area in local planning documents (e.g., General Plans).

#### ***3.2.4.8 Level of Significance after Mitigation***

With implementation of mitigation measures GS-1 through GS-4, potential impacts related to geology or soils, geologic hazards, or seismic activities and hazards resulting from the Proposed Project would be less than significant.

### 3.2.5 Hazards-Hazardous Materials

#### 3.2.5.1 Introduction

This section evaluates the potential impacts related to hazards and hazardous materials that could result from the Proposed Project. The analysis consists of an evaluation of the potential impact that the Proposed Project could have related to hazards such as wildfire, and hazardous materials to people and the environment.

The impact evaluation focuses on the collection of Solid Resources from Commercial Establishments Organic, and at a conceptual level, on new or expanded which would be required to process diverted materials, and truck base yards. Collection activities would occur from existing Commercial Establishments. New or expanded processing facilities and truck base yards are expected to be sited on lands with industrial or commercial manufacturing zoning designation, but could include lands zoned for agricultural uses for Organics processing facilities. The new facilities and truck base yards have not yet been proposed; therefore, the evaluation of these facilities in this section is at a conceptual level.

A summary of the Proposed Project's anticipated impacts related to hazards and hazardous materials, based on the evaluation below, is contained in Table 3.2.5-1.

**TABLE 3.2.5-1  
SUMMARY OF IMPACTS RELATED TO HAZARDS AND HAZARDOUS MATERIALS**

Environmental Impact Area	Potential Impact	Mitigation	Significant Impact After Mitigation
<b>HAZ-1: Public Hazard from Transport, Use or Disposal of Hazardous Materials</b>			
Collection System	No	None Required	No
New or Expanded Facilities	No	No	No
<b>HAZ-2: Accidental Release of Hazardous Materials</b>			
Collection System	No	None Required	No
New or Expanded Facilities	No	No	No
<b>HAZ-3: Emit Hazards Within One-Quarter Mile of a School</b>			
Collection System	No	None Required	No
New or Expanded Facilities	No	No	No
<b>HAZ-4: Locate Project on Hazardous Material Site</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>HAZ-5: Proximity to Public Airport</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No

**TABLE 3.2.5-1  
SUMMARY OF IMPACTS RELATED TO HAZARDS AND HAZARDOUS MATERIALS**

Environmental Impact Area	Potential Impact	Mitigation	Significant Impact After Mitigation
<b>HAZ-6: Proximity to Private Airport</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>HAZ-7: Interference with Emergency Response Plan</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>HAZ-8: Exposure to Wildland Fires</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>Cumulative Impacts</b>	Yes	Yes	No

### 3.2.5.2 Environmental Setting

In the Los Angeles area, naturally occurring contamination could exist at oil and gas fields, and man-made contamination is a function of the types of land uses and activities in any given area. In addition, CEQA Appendix G addresses hazards or risks associated with airports; therefore, background information on airports is also provided.

#### **Naturally Occurring Contamination**

Thirty-five oil fields exist in the Los Angeles area from the south near the Los Angeles Harbor to the northern San Fernando Valley. The oil fields near downtown Los Angeles include the Las Cienegas, Los Angeles Downtown, Union Station, and Boyle Heights oil fields. Other naturally occurring oil fields are in the San Fernando Valley, including the northwest portion of the valley in the Horse Meadows and Cascade oil field areas, southwest toward Pacoima, and other smaller areas. Production from the oil fields has been scaled back, and some have been abandoned. Today, oil fields still actively producing petroleum include those near Culver City, in the City of Beverly Hills, and at Wilmington Oil Field.

Naturally occurring methane and lesser amounts of hydrogen sulfide could be present in oil field areas. The Defined Methane and Methane Buffer Zones in the City are areas where the City requires that soil gas be evaluated and mitigated, if needed, to reduce the risk of fire or explosion.

#### **Man-Made Contamination**

Because the Los Angeles area is heavily urbanized, man-made contamination is likely to exist throughout the City. In general, industrial land uses and, to a lesser extent, commercial land uses are associated with such contamination. For instance, contaminated soil and groundwater could be found at gas stations, dry cleaners, or manufacturing facilities. Contamination is typically from gasoline or solvents but could also include metals, such as lead and chromium. Generally, soil and groundwater contamination is not associated with residential land uses; however, lead-based paints, asbestos, and pesticides can be found in residential areas.

Known large-scale contamination also exists in the City and vicinity. The San Fernando Basin underlying the San Fernando Valley is an important source of drinking water for the Los Angeles metropolitan area, and it contains several Superfund sites. The U.S. Environmental Protection Agency (EPA) has designated four separate Superfund areas in the San Fernando Superfund area—Burbank and North Hollywood, Glendale/ Crystal Springs, Verdugo, and Pollock/Los Angeles. The State of California and EPA are directing cleanup of the Superfund areas, and the EPA Superfund program has been instrumental in requiring the assessment and cleanup of contamination.

The primary contaminants of concern in the Superfund areas are trichloroethylene (TCE) and perchloroethylene (PCE), which are widely used in a variety of industries, including metal plating, machinery degreasing, and dry cleaning. TCE and PCE have been detected in many production wells at levels that are above the federal maximum contaminant level (MCL) of 5 parts per billion (ppb).

Numerous production water wells have been taken offline due to contamination. Cleanup is overseen by EPA and state agencies, including the Los Angeles Regional Water Quality Control Board. Despite cleanup of soil and groundwater at sites, limited residual contamination could exist; however, additional cleanup is not always required by the federal or state government. Generally, the lateral and vertical limits of larger-scale soil and groundwater contamination in the City and vicinity are known. The types of contaminants present in soil and groundwater include metals (lead and chromium, for example), hydrocarbons, solvents, and others, including emerging chemicals of concern. (City of Los Angeles, 2006).

### **Airports**

There are 14 public airports in the County of Los Angeles, as follows:

- Agua Dulce Airport
- Bob Hope Airport
- Brackett Field Airport
- Catalina Airport
- Compton/Woodley Airport
- El Monte Airport
- General William J. Fox Airfield
- Hawthorne Airport
- Los Angeles International Airport
- Long Beach Airport
- Palmdale Airport
- Santa Monica Airport
- Torrance Airport
- Van Nuys Airport
- Whiteman Airport

Source: County of Los Angeles Department of Public Works, 2013.

In addition to the above-listed general aviation airports, there are approximately 160 airports (predominately heliports) in Los Angeles County that are operated by private parties or public agencies such as police or fire departments.

### **Wildfire Hazard Areas**

Although the City is largely urbanized, many mountain and hillside areas along its periphery and along the Santa Monica Mountains and Verdugo Mountains are generally undeveloped with natural vegetation that is subject to wildfire hazards.

### **3.2.5.3 Regulatory Framework**

Regulations applicable to the Proposed Project are designed to regulate hazardous materials and hazardous wastes. These regulations also are designed to limit the risk of upset during the use, transport, handling, storage, and disposal of hazardous materials. In addition, other aspects of the regulatory framework are intended to minimize hazards and risk. The Proposed Project would be subject to numerous federal, state, and local laws and regulations, including, but not limited to, those described below.

#### **Federal**

##### **Hazardous Waste Regulations**

In 1976, Congress enacted the Resource Conservation and Recovery Act (RCRA, 42 United States Code [U.S.C.] §§ 6901–6992K) to regulate the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA provides the basic framework for the federal regulation of hazardous waste (City of Los Angeles, 2006).

##### **Emergency Planning and Community Right-To-Know**

The Emergency Planning and Community Right-To-Know Act of 1986 (42 U.S.C. §§ 11001–11050), also known as the Superfund Amendments and Reauthorization Act (SARA) Title III, requires businesses and local emergency planning and response agencies to report information about the amounts of materials that businesses use, release, and/or spill. The act also provides the public with information about potential hazards in their communities (City of Los Angeles, 2006).

##### **Occupational Safety**

Federal occupational safety and health regulations contain provisions with respect to hazardous materials management. The applicable federal law is the Occupational Safety and Health Act (OSHA) of 1970 as amended (29 U.S.C., §§ 651–678; 29 CFR 1910). Federal OSHA requirements are designed to promote worker safety, worker training, and worker right-to-know. OSHA establishes regulatory requirements primarily by promulgating occupational safety and health standards. These standards establish permissible exposure limits (PELs) for a number of air contaminants (29 CFR§ 1910.1000). These PELs define the amount of hazardous airborne chemicals to which an employee safely can be exposed over specific time periods. When administrative or engineering controls cannot achieve compliance with PELs, protective equipment or other protective measures must be used.

Employers are required to train a team of employees to applicable federal OSHA-defined (29 CFR 1910.120, Hazardous Waste Operations and Emergency Response [HAZWOPER] Standards) levels to respond to accidental releases of hazardous materials and, as appropriate, to retain on-call contractors to respond to accidental releases of hazardous materials (City of Los Angeles, 2006).



## State

### Hazardous Waste Regulations

RCRA allows individual states to develop their own programs for the regulation of hazardous waste, provided that the state program is at least as stringent as RCRA. The State of California has developed the California Hazardous Waste Control Law (Health and Safety Code § 25100 *et seq.*; 22 California Code of Regulations [CCR] § 66260.1 *et seq.*), which is modeled closely after RCRA. EPA granted final authorization to California for RCRA enforcement on August 1, 1992. These regulations identify standards for the classification, management, transportation, and disposal of Hazardous Waste (City of Los Angeles, 2006).

### Emergency Planning and Community Right-To-Know

In California, many of the requirements of SARA Title III overlap with state regulations. The Waters Bill (Assembly Bill 2185; Health and Safety Code § 25500 *et seq.*), adopted by the California Legislature in 1985, requires that any facility that meets minimum reporting requirements for the use and storage of hazardous materials must initiate emergency response planning, including the development of a Business Emergency Plan (BEP). Basic requirements of hazardous materials planning under the Waters Bill include the development of detailed hazardous materials inventories for all materials used and stored onsite, a program of employee training for hazardous materials release response, and the identification of emergency contacts and response procedures.

In 1996, the federal Accidental Release Prevention (ARP) Program (40 CFR 68) was promulgated. California added certain provisions specific to the state, which created the California Accidental Release Prevention (CalARP) Program. Any owner or operator of a stationary source that has more than a threshold quantity of regulated substances must submit a Risk Management Plan (RMP), as required by CalARP.

CalARP defines three program levels with different requirements depending upon the complexity, accident history, and potential impact of releases of regulated substances. In general, facilities must identify potential receptors and assess the risks to the public from potential releases. The RMP must include an emergency response plan.

Under OSHA, the U.S. Department of Labor, Occupational Safety and Health Administration can delegate its authority to administer the act to states that have developed a state plan with provisions at least as stringent as those provided by OSHA. California is a delegated state for federal OSHA purposes. The California Occupational Safety and Health Administration (CalOSHA) program (codified in CCR Title 8, and in the Labor Code §§ 6300–6711) is administered and enforced by the Division of Occupational Safety and Health, a unit of the California Department of Industrial Relations (City of Los Angeles, 2006).

### Government Code Section 65962.5

Government Code Section 65962.5 requires the California Department of Toxic Substances Control (DTSC) to compile a list of all land designated as hazardous waste property or border zone property in California, including hazardous substance release sites selected for or subject to response action(s). The list includes:

1. Hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code.
2. Land designated as hazardous waste property or border zone property pursuant to Article 11 (commencing with § 25220) of Chapter 6.5 of Division 20 of the Health and Safety Code.
3. Information received by DTSC pursuant to Section 25242 of the Health and Safety Code on hazardous waste disposals on public land.
4. Sites listed pursuant to Section 25356 of the Health and Safety Code.
5. Sites included in the Abandoned Site Assessment Program.

DTSC maintains a centralized database of hazardous materials sites, which includes sites required by California Government Code Section 65962.5 termed "EnviroStor" (CalEPA, 2011).

### ***Local***

#### **City of Los Angeles Fire Code**

Additional requirements pertaining to hazardous materials management are set forth in the City of Los Angeles Fire Code (LAFC). The LAFC regulates the types, configuration, and quantities of hazardous materials that can be managed at a facility. Also, LAFC specifies design standards for the storage and management of hazardous materials.

#### **Los Angeles City Emergency Preparedness**

Citywide emergency response planning and emergency evacuation plans are coordinated by the Emergency Preparedness Department and the Emergency Operations Board of the City of Los Angeles. These plans are documented in the Emergency Operations Master Plan and Master Plan Procedures and Annexes of the City of Los Angeles. Operational units of the City (e.g., departments) maintain emergency plans for their operations and facilities within the framework of the citywide plan. These plans are updated annually or when appropriate due to changed conditions.

#### **City of Los Angeles Municipal Code**

In 2004, the City approved Ordinance No. 175,790 amending Section 91.106.4.1 and Division 71 of Article 1, Chapter IX of the Los Angeles Municipal Code to establish citywide methane mitigation requirements and to include more current construction standards to control methane intrusion into buildings.

#### ***3.2.5.4 Significance Thresholds***

The Proposed Project would have a significant impact related to hazards or hazardous materials if it would:

Impact HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Impact HAZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

Impact HAZ-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

Impact HAZ-4: Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, it would create a significant hazard to the public or the environment.

Impact HAZ-5: Result in a safety hazard for people if the Proposed Project were located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport.

Impact HAZ-6: Result in a safety hazard for people if the Proposed Project were located within the vicinity of a private airstrip.

Impact HAZ-7: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Impact HAZ-8: Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

#### 3.2.5.5 *Impact Analysis*

***Impact HAZ-1: The Proposed Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City.

The collection activities associated with diversion of materials within the Solid Resources collection activities would not involve the collection or transport of hazardous materials because the collection and processing of Solid Resources in the City specifically excludes the collection of hazardous materials and hazardous waste. Although fleet operators are expected to routinely maintain their collection vehicles, which may involve the use of products that are considered hazardous such as lubricants, solvents, and cleaners, these materials would be used at fleet yards in compliance with applicable laws and regulations governing their use, storage, transport and disposal. In addition, use of such products is expected to be confined to the fleet yards or other maintenance facilities and would not expose the public or the environment to hazards from their use.

Future new or expanded processing facilities and new or expanded truck base yards would likely be located in industrial areas or on land zoned for industrial uses (due to the industrial nature of the facilities). Organics processing facilities could also be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Facility operators are expected to routinely maintain their equipment, which may involve the use of products that are considered hazardous such as lubricants, solvents, welding supplies, and cleaners, and these products would be used in compliance with applicable laws and regulations governing their use, storage, transport, and

disposal. Such products are expected to be confined to the facility grounds and would not expose the public or the environment to hazards from their use.

Therefore, based on the anticipated collection activities associated with diversion of materials within from the Solid Resource collection activities, the Proposed Project would not result in impacts related to hazards and hazardous materials. Impacts related to hazards and hazardous materials from the siting of facilities and truck base yards would be evaluated when a specific facility is proposed. However, it is expected that mandatory compliance with all applicable regulations involving the use, transport, and disposal of hazardous substances would minimize impacts during the construction and operation of the future facilities.

***Impact HAZ-2: The Proposed Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials within the Solid Resource collection activities would not result in physical changes or new development that could damage or otherwise involve the collection or transport of hazardous materials because the collection and processing of Solid Resources in the City specifically excludes the collection of hazardous materials and hazardous waste. Because hazardous wastes or materials would not be collected or transported, collection activities would not create a hazard to the public through reasonably foreseeable accidents.

Future new or expanded processing facilities and new or expanded truck base yards would likely be located and constructed in industrial areas or on land zoned for industrial uses (due to the industrial nature of the facilities). Organics processing facilities could also be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Although unlikely in agricultural areas, industrial areas may use various heavy equipment to move and process recyclable and Organics. Facility operators are expected to routinely maintain their equipment, which may involve the use of products that are considered hazardous such as lubricants, solvents, welding supplies, and cleaners, but these materials would be stored in relatively small quantities in accordance with applicable laws and regulations, which are expected to keep potentially significant hazards to the public or the environment related to accidents below a level of significance. Therefore, compliance with applicable laws and regulations regarding storage of hazardous materials would minimize the potential for accidental releases at new or expanded processing facilities and truck base yards.

Therefore, based on the anticipated collection activities associated with diversion of materials within from the Solid Resource collection activities, the Proposed Project is not expected to create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Impacts related to hazards and hazardous materials from the siting of facilities and truck base yards would be further evaluated when a specific facility is proposed.

***Impact HAZ-3: The Proposed Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials within the Solid Resource collection activities would not involve the use or processing of materials that could emit hazardous materials or emissions during collection activities. Therefore, collection activities would not emit hazardous emissions within one-quarter mile of a public school.

Future new or expanded processing facilities and new or expanded truck base yards would have various heavy equipment used to move and process recyclable and Organics. New or expanded truck base yards would store heavy vehicles. Facility operations would consist of further separating recyclables and Organics into more defined diversion streams, which would not involve industrial processes that typically are associated with hazardous emissions. Use and storage of small amounts of hazardous materials such as lubricants, solvents, welding supplies, and cleaners to maintain processing equipment would be confined to the processing facilities (and incidental hazardous materials for vehicle maintenance at truck base yards) and are not expected to result in hazardous or acutely hazardous emissions.

The Air Quality Management Districts (AQMD) regulate emissions according to the geographic area and potential sensitive receptors. Emissions from the construction and operation of future facilities would be assessed on a case-by-case basis to determine if siting of waste, processing or handling facilities is protective of existing and future school students and staff within one-quarter mile. Furthermore, facilities would likely be sited on industrial zoned land; industrial areas are not generally located near schools.

Therefore, based on the anticipated collection activities associated with diversion of materials within from the Solid Resource collection activities, the Proposed Project would not result in impacts related to hazardous emissions, including hazardous emissions within one-quarter mile of a public school. Impacts resulting from the siting of facilities and truck base yards would be further evaluated when a specific facility is proposed.

***Impact HAZ-4: The Proposed Project could potentially be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 or create a significant hazard to the public or the environment.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection of materials diverted from the Solid Resource collection activities would not involve physical disturbances, including excavation, at any collection locations. Although it is possible that Solid Resource and diversion collection activities could occur from hazardous materials sites identified as such pursuant to Government Code Section 65962.5, the collection activities are not expected to create a significant hazard to the public or the environment because collection would not disturb those sites, the locations of which are generally known. Therefore, collection activities would not create a significant hazard to the public or the environment by disturbing hazardous materials sites identified pursuant to Government Code Section 65962.5.

Future new or expanded processing facilities and new or expanded truck base yards would likely be located and constructed in industrial areas or on land zoned for industrial uses (due to the industrial nature of the facilities). Organics processing facilities could also be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Although industrial activities frequently use hazardous materials in various industrial processes, whether an industrial parcel or site is contaminated is a function of the historical use of that site and the business practices of the previous operators. Until such time as the locations for new processing facilities, including Organics, and truck base yards are identified, whether those future processing facility sites and truck base yards are listed as hazardous materials sites pursuant to Government Code Section 65962.5, or otherwise contaminated, cannot yet be determined. Similarly, the nature of any contamination at a future processing facility cannot be determined at this time. Due to this uncertainty of where future facilities would be located, there is a potential that the facility could be located on or adjacent to a site that is listed by DTSC as needing corrective action. This represents a potentially significant impact. Mitigation measure HAZ-1 has been identified, which will reduce this impact to below a level of significance.

***Impact HAZ-5: The Proposed Project could potentially be located within an airport land use plan, within 2 miles of a public airport or public use airport, and could be developed or situated in a manner that results in a safety hazard for people residing or working in the project area.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. Although it is possible that collection activities could occur from establishments within 2 miles of a public airport, collection would occur at ground level and would not pose a threat to flight safety or result in hazards to people working or residing in the vicinity of an airport.

Future new or expanded processing facilities and new or expanded truck base yards would likely be located in industrial areas or on land zoned for industrial uses (due to the industrial nature of the facilities). Organics processing facilities could also be sited on lands zoned for agricultural uses, depending on the processing technology utilized. However, the potential for these future facilities to conflict with an airport land use plan, or operations at a public airport is dependent upon where future facilities are sited. Due to the uncertainty at this time, a potentially significant impact related to potential safety hazards due to proximity to public airports is identified. Mitigation measures HAZ-2 has been identified to reduce potentially significant impacts to airports to a less than significant level. Future facilities would be subject to additional review pursuant to CEQA, and any potential conflicts with existing airports would be identified.

***Impact HAZ-6: The Proposed Project could be located within the vicinity of a private airstrip or airport and could potentially result in a safety hazard for people residing or working in the vicinity of a private airstrip or airport.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. Numerous private airports are in Los Angeles and the vicinity, which serve the aviation, hospital, news, public safety (such as police and fire stations), and other commercial and industrial uses. The majority of these private airports are heliports atop structures, but they also include airports such as the Goodyear Blimp Base Airport in Carson.

The collection activities associated with diversion of materials within the Solid Resource collection activities would not result in physical changes or new development that could damage or threaten a private airport. Although it is possible that collection activities could occur from establishments within the vicinity of a private airport, collection would occur at ground level and would not pose a threat to flight safety or result in hazards to people working or residing in the vicinity.

Future new or expanded processing facilities and new or expanded truck base yards would likely be located in industrial areas or on land zoned for industrial uses (due to the industrial nature of the facilities). Organics processing facilities could also be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Processing facilities and truck base yards would be located in industrial areas, which could occur within the vicinity of a private airport. The potential for these future facilities to result in potential safety hazards due to proximity to a private airport is dependent upon where future facilities are sited. Due to the uncertainty at this time, a potentially significant impact to airports is identified. Mitigation measures HAZ-2 has been identified to reduce potentially significant impacts to airports to a less than significant level. Future facilities would be subject to additional review pursuant to CEQA, and any potential conflicts with existing airports would be identified.

***Impact HAZ-7: The Proposed Project could potentially impair implementation or physically interfere with an adopted emergency response plan or emergency evacuation plan.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials within the Solid Resource collection activities would not result in physical changes or new development that could damage or otherwise adversely affect an adopted emergency response plan or evacuation plan. Although collection vehicles would use existing transportation infrastructure, their use is consistent with transportation uses and current collection methods and would not block streets, highways, or freeways. Therefore, collection activities are not expected to impair implementation or physically interfere with emergency response or evacuation plans or activities.

Future new or expanded processing facilities and new or expanded truck base yards would likely be located in industrial areas or on land zoned for industrial uses (due to the industrial nature of the facilities). Organics processing facilities could also be sited on lands zoned for agricultural uses, depending on the processing technology utilized.

The Hazardous Materials Release Response Plans & Inventory Act requires facilities using hazardous materials or generating hazardous wastes to prepare BEPs. These plans specify storage, secondary containment and proper hazardous material and waste management procedures and practices, including personnel training and emergency response actions to contain, cleanup and report unauthorized releases or spills. In addition, SARA was enacted to help communities protect public health, safety, and the environment from chemical hazards. To implement SARA, California has been divided into emergency planning districts. Each district has identified a local emergency planning committee. SARA provides the requirements for emergency release notification, chemical inventory reporting, and toxic release inventories for facilities that handle chemicals. Depending on where the future facilities are located and the types of materials they handle, community emergency plans may need to be reviewed and updated. This represents a potentially significant impact. Mitigation measure HAZ-3 through HAZ-7 have been identified, which will reduce this impact to below a level of significance. These mitigation measures require that, upon approval of

future facilities, an applicable community emergency plan shall be developed, reviewed and updated, as needed, to account for new waste facilities and updated routes for the transportation of hazardous wastes.

***Impact HAZ-8: The Proposed Project could potentially expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials within the Solid Resource collection activities would not result in physical changes or new development that could expose people or structures to the threat of wildland fires. The collection of materials diverted from the Solid Resource activities would occur in the largely urbanized areas of the City, and these urbanized areas have replaced wildland areas and reduced the potential for wildland fires. Hence, the Proposed Project is not expected to expose people or structures to a significant risk of loss, injury, or death involving wildland fires.

Future new or expanded processing facilities and new or expanded truck base yards would likely be located in industrial areas or on land zoned for industrial uses (due to the industrial nature of the facilities). Organics processing facilities could also be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Industrial and agricultural areas in the City are generally devoid of and not located near wildlands. However, due to the uncertainty of where future facilities would be located, there is a potential that the facility could expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. This represents a potentially significant impact. Mitigation measure HAZ-8 has been identified, which will reduce this impact to below a level of significance.

#### ***3.2.5.6 Cumulative Impacts***

The collection activities under the Proposed Project would not have affects related to the routine use of hazardous materials because they would not result in any construction or change in use of land. Therefore, collection activities under the Proposed Project would not make a considerable contribution to a significant cumulative impact to hazards and hazardous materials.

As with the Proposed Project, future diversion activities within Los Angeles County and the State associated with related projects could cause the need for new or expanded transfer stations, processing facilities, truck base yards, and Organics processing facilities, and if those related project facilities could emit hazardous materials, affect air strips or conflict with airport land use plans or interfere with emergency response plans, they could result in impact from hazards/hazardous materials. Mitigation measures HAZ-1 through HAZ-8 would be implemented to reduce potential impacts of new transfer stations, processing facilities and truck base yards, and Organic processing facilities under the Proposed Project to a less than significant level. Therefore, after mitigation, the Proposed Project would not make a considerable contribution from a significant cumulative impact caused by hazards or hazardous materials.

It is the presumption that new or expanded transfer stations, processing facilities and truck base yards that could be located with the City or in other jurisdiction would be subject to the same regulatory requirements and/or similar mitigation measures as those identified below for the



Proposed Project to avoid and/or minimize the impacts of the construction and operation of such new or expanded facilities to a level of less than significant. Cumulative impacts associated with new or expanded facilities, truck base yards and Organic processing facilities will be further addressed in the project specific environmental document prepared by the Lead Agency for the jurisdiction in which such new or expanded facilities are located.

#### **3.2.5.7 Mitigation Measures**

The Proposed Project could potentially result in significant impacts related to hazards and hazardous materials due to the siting of new or expanded transfer stations, processing facilities, and truck base yards. Therefore, the following mitigation measures are recommended:

- HAZ-1:** Prior to siting waste facilities, a Phase I Environmental Site Assessment (ESA) shall be conducted in conformance with industry-accepted practices, American Society of Testing Materials (ASTM) Designation E1527-05, and the EPA All Appropriate Inquiry Rule
- HAZ-2:** If future facilities are sited within an area governed by an airport land use plan or within two miles of a public or private airport, analysis shall be undertaken to assess if the proposed facility would result in any impacts to airport operations or if it would subject people to a significant risk due to airport operations. If potential impacts are identified, a different site shall be selected or mitigation measures shall be implemented during the project level environmental analysis to reduce the potential impact to airport operations to below a level of significance. Such mitigation measures could include maintaining certain percentages of low-occupancy areas (e.g., undeveloped areas, parking areas), building heights and building lights.
- HAZ-3:** Upon approval of future facilities, an applicable community emergency plan shall be developed, reviewed and updated, as needed, to account for new waste facilities and updated routes for the transportation of hazardous wastes.
- HAZ-4:** Future facilities shall provide barriers, as needed, to contain hazardous materials. Such barriers could include providing appropriate buffers between facility operations and adjacent, off-site uses.
- HAZ-5:** At future facilities, hazardous substances shall be stored away from site boundaries.
- HAZ-6:** A Health and Safety Plan shall be developed in accordance with local, state, and federal occupational health regulations.
- HAZ-7:** Spill containment measures shall be developed and implemented on site for any new facility.
- HAZ-8:** A Fire Safety Plan shall be developed for use during construction and operation of any new facility.

#### **3.2.5.8 Level of Significance after Mitigation**

With implementation of mitigation measures HAZ-1 through HAZ-8, potential impacts to hazards resulting from the Proposed Project would be less than significant.

### 3.2.6 Hydrology and Water Quality

#### 3.2.6.1 Introduction

This section provides an overview of the hydrology and water quality in the City and evaluates potential impacts to hydrology and water quality associated with the Proposed Project. Hydrology and water quality include surface water hydrology (flood hazards), surface water quality, and groundwater quality.

The impact evaluation focuses on the collection of Solid Resources from Commercial Establishments, and at a conceptual level, on new or expanded transfer stations, processing facilities, and truck base yards. Collection activities would occur on and from existing Commercial Establishments. New or expanded transfer stations, processing facilities and truck base yards are expected to be sited on lands with industrial or commercial manufacturing zoning designation, but could include lands zoned for agricultural uses for Organics processing facilities. The new or expanded facilities, transfer stations, and truck base yards have not yet been proposed; therefore, the evaluation of these facilities in this section is at a conceptual level.

A summary of the anticipated impacts to hydrology and water quality from the Proposed Project, based on the evaluation below, is contained in Table 3.2.6-1.

**TABLE 3.2.6-1  
SUMMARY OF IMPACTS RELATED TO HYDROLOGY AND WATER QUALITY**

Environmental Impact Area	Potential Impact	Mitigation	Significant Impact After Mitigation
<b>WQ-1: Water Quality Standards</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>WQ-2: Groundwater</b>			
Collection System	No	None Required	No
New or Expanded Facilities	No	None Required	No
<b>WQ-3: Erosion</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>WQ-4: Flooding</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>WQ-5: Storm Drain Capacity</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>WQ-6: Otherwise Degrade Water Quality</b>			
Collection System	No	None Required	No
New or Expanded Facilities	No	None Required	No

**TABLE 3.2.6-1  
SUMMARY OF IMPACTS RELATED TO HYDROLOGY AND WATER QUALITY**

<b>Environmental Impact Area</b>	<b>Potential Impact</b>	<b>Mitigation</b>	<b>Significant Impact After Mitigation</b>
<b>WQ-7: Housing in Flood Hazard Areas</b>			
Collection System	No	None Required	No
New or Expanded Facilities	No	None Required	No
<b>WQ-8: Flood Flow Obstructions</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>WQ-9: Risks From Flooding Due to Failure of a Dam or Levee</b>			
Collection System	No	None Required	No
New or Expanded Facilities	No	None Required	No
<b>WQ-10: Inundation</b>			
Collection System	No	None Required	No
New or Expanded Facilities	No	None Required	No
<b>Cumulative Impacts</b>	Yes	Yes	No

### 3.2.6.2 Environmental Setting

#### **Surface Waters Hydrology and Quality**

The City is located across the following four major watersheds (defined as a region or area that drains ultimately to a particular watercourse or body of water regardless of government jurisdictions)—the Los Angeles River, Ballona Creek, Dominguez Channel, and the Santa Monica Bay watersheds. Hydrologic conditions in each area cause runoff within the watershed to drain to a receiving body of water (City of Los Angeles, 2006).

For purposes of the municipal National Pollutant Discharge Elimination System (NPDES) Stormwater Permit (described in Section 3.2.6.3, Regulatory Framework), the Regional Water Quality Control Board (RWQCB), Los Angeles Region combined these watersheds into three Watershed Management Areas (WMAs) —Los Angeles River WMA, Santa Monica Bay WMA, and Dominguez Channel WMA, summarized as follows (RWQCB, 1994).

The Los Angeles River WMA is one of the largest in the region. In its entirety, the river is 51 miles long, draining a watershed of 834 square miles. Approximately one-third of the watershed area is in the City of Los Angeles. The Los Angeles RWQCB has placed the majority of the Los Angeles River and its tributaries on the Section 303(d) list (described in Section 3.2.6.3, Regulatory Framework) because of the high number of point and nonpoint pollution sources in that area. As part of the work to comply with 303 (d) requirements, the Los Angeles RWQCB has established Total Maximum Daily Loads (TMDLs). A TMDL is a calculation of the maximum amount of a pollutant that a body of water can receive while still meeting its beneficial use requirements. The Los Angeles River WMA has a TMDL that establishes a zero target for trash in receiving waters. Additional TMDLs for the Los Angeles River WMA in the City include the Los Angeles River Nitrogen Compounds and Related Effects TMDL; Los Angeles River and Tributaries Metals TMDL; Los Angeles River Watershed Bacteria TMDL; Los Angeles Area Lake TMDLs for Lake Calabasas, Echo Park Lake, Legg Lake, and

Peck Road Park Lake; as well as Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL.

The entire Santa Monica Bay WMA encompasses approximately 414 square miles, including the Ballona Creek watershed that covers approximately 130 square miles. However, only about one-third of the Santa Monica Bay watershed is in the City. The Santa Monica Bay WMA extends from the top of the Santa Monica Mountains on the north, to the Los Angeles-Ventura County line on the west, and to downtown Los Angeles on the southeast. From downtown, it extends south and west across the Los Angeles plain to include the area east of Ballona Creek and north of Baldwin Hills. South of Ballona Creek the natural drainage is a narrow strip of wetlands between Playa del Rey and Palos Verdes (City of Los Angeles, 2006). The 303(d) list includes impairments due to trash, metals, pathogens, and Organic pesticides. TMDLs have been established for trash, toxic pollutants, bacteria, metals, and sediment and invasive exotic vegetation in the Ballona Creek watershed. Additional TMDLs for the Santa Monica Bay WMA in the City include the Santa Monica Bay Beaches Bacteria TMDL (Wet and Dry Weather), Santa Monica Bay Nearshore and Offshore Debris TMDL, Santa Monica Bay TMDL for dichlorodiphenyltrichloroethane (DDT) and polychlorinated biphenyls (PCBs), Marina del Rey Harbor Mother's Beach and Back Basins Bacteria TMDL, and Marina del Rey Harbor Toxic Pollutants TMDL.

The Dominguez Channel WMA drains 133 square miles, of which about 20 percent is in the City. This WMA drains a highly developed area. Approximately 81 percent of the watershed or 93 percent of the land is developed. Residential development covers nearly 40 percent of the watershed. Another 41 percent is made up by industrial, commercial, and transportation uses. This WMA also includes the Los Angeles and Long Beach Harbors, and the Palos Verdes Hills (City of Los Angeles, 2006). TMDLs for the Dominguez Channel WMA in the City include the Los Angeles Harbor Bacteria TMDL, Machado Lake Trash TMDL, Machado Lake Nutrient TMDL, Machado Lake Pesticides and PCBs TMDL, as well as Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL.

### **Groundwater**

Two main groundwater basins partially lie beneath the City—the San Fernando Basin and Coastal Plain of Los Angeles Basin. Groundwater is a source of water used by the City, other public agencies, private industry, and private agricultural and domestic users (City of Los Angeles, 1998). Additionally, numerous spreading basins are located in the City and vicinity to replenish groundwater supplies. The following sections describe the groundwater hydrology by basin.

San Fernando Valley Groundwater. The San Fernando Valley, also known as the Upper Los Angeles River Area (ULARA), contains four separate adjudicated groundwater basins—the San Fernando, Sylmar, Verdugo, and Eagle Rock basins. The San Fernando Basin has an estimated total groundwater storage capacity of approximately 3 million acre-feet and a surface area of 112,000 acres. The San Fernando Basin is bounded on the north and northwest by the Santa Susana Mountains, on the north and northeast by the San Gabriel Mountains, on the east by the San Rafael Hills, on the south by the Santa Monica Mountains and Chalk Hills, and on the west by the Simi Hills. Drainage occurs via the Los Angeles River through the Glendale Narrows.

Groundwater generally flows to the southeast, where it exits the San Fernando Basin as underflow or as rising water into the Los Angeles River in the Central Basin of the Los Angeles Coastal Plain.

Groundwater flow velocities vary from 5 feet per year in the western portion of the San Fernando Basin to 1,300 feet per year in the Glendale Narrows.

Groundwater levels in the San Fernando Basin have been recorded since the early 1900s. The water table fluctuates depending on rainfall, pumping, and recharge. Numerous monitoring wells that are used to track fluctuations in the groundwater table are located throughout the San Fernando Basin. Extraction wellfields and six spreading facilities are located in the eastern part of San Fernando Basin to recharge the groundwater supply, including Hansen, Pacoima, Tujunga, Branford, Lopez, and Headworks spreading facilities. The Headworks facility, however, has not been used for spreading since approximately 1982. The remaining five facilities are operated by the Los Angeles County Department of Public Works. These facilities primarily use runoff derived from precipitation within the watershed, but can also use imported surplus water during wet years. Basin recharge also occurs from direct precipitation and outdoor water use. Average spreading is approximately 25,000 acre-feet per year. Groundwater is generally deep in the eastern San Fernando Basin and fluctuates substantially. No extraction wells are in the western part of the San Fernando Basin, so groundwater levels in this area typically are closer to the ground surface and more stable (City of Los Angeles, 2006).

Water quality in the San Fernando Basin is affected by naturally occurring conditions and human-induced environmental contamination. A significant portion of the groundwater in the eastern portion of the San Fernando Basin is contaminated by industrial solvents such as trichloroethylene (TCE) and perchloroethylene (PCE). In addition, substantial contamination by chromium and nitrates exists. A large portion of the San Fernando Basin has been designated as a Superfund site by USEPA (City of Los Angeles, 2006).

Coastal Plain of Los Angeles Groundwater Basin. The Coastal Plain of Los Angeles Groundwater Basin is subdivided into the Santa Monica, Central, Hollywood, and West Coast Sub-Basins. The physical characteristics of these sub-basins are described below.

**Santa Monica Sub-basin.** The Santa Monica Sub-basin has a surface area of approximately 32,100 acres (50.2 square miles) with an estimated storage capacity of 1,100,000 acre-feet. This sub-basin underlies the northwestern part of the Coastal Plain Basin and is bounded by the Santa Monica Mountains on the north, the Inglewood fault zone on the east, the Ballona Escarpment on the south, and the Pacific Ocean on the west. Ballona Creek is the primary hydrologic feature in the sub-basin, draining surface water to the Pacific Ocean (City of Los Angeles, 2006).

Groundwater in the Santa Monica Sub-basin generally moves southward toward the Ballona gap, and then flows toward the Pacific Ocean. Recharge to the sub-basin is primarily due to the percolation of precipitation and surface runoff from the Santa Monica Mountains. (City of Los Angeles, 2006).

**Central Sub-basin:** The Central Sub-basin has a surface area of approximately 177,000 acres (277 square miles) with an estimated storage capacity of 13,800,000 acre-feet. The sub-basin occupies a large portion of the southeastern area of the Coastal Plain Basin and is bounded on the north by a surface divide known as the La Brea High; on the northeast and east by the Tertiary rocks of the Elysian, Repetto, Merced, and Puente Hills; on the southeast by Coyote Creek; and on the southwest by the Newport-Inglewood fault system. The sub-basin contains portions of the Los Angeles and San Gabriel rivers (City of Los Angeles, 2006).

Groundwater recharge in the Central Sub-basin is provided through surface and subsurface flow and by direct percolation of precipitation, stream flow, and applied water. Recharge occurs primarily in the forebay areas where permeable sediments are exposed at the ground surface. Artificial recharge also occurs in the sub-basin. Imported water purchased from the Metropolitan Water District and recycled water from the Whittier and San Jose Treatment Plants is applied in the Montebello forebay and at the Rio Hondo and San Gabriel River spreading grounds. Historically, groundwater flow in the Central Sub-basin has been from the recharge areas in the northeast toward the Pacific Ocean in the southwest. However, pumping in the aquifers has reduced the subsurface outflow to the West Coast Sub-basin (Department of Water Resources, 2004).

**Hollywood Sub-basin.** The Hollywood Sub-basin has a surface area of approximately 10,500 acres (16.4 square miles) with an estimated storage capacity of 200,000 acre-feet. The sub-basin is generally bounded on the north by the Santa Monica Mountains, on the east by the Elysian Hills, on the west by the Inglewood fault zone, and on the south by the La Brea High, an impermeable rock zone near the surface (City of Los Angeles, 2006).

**West Coast Sub-basin.** The West Coast Sub-basin is an adjudicated sub-basin that has a surface area of approximately 91,300 acres (142 square miles) with an estimated storage capacity of 6,500,000 acre-feet in the Silverado aquifer, the primary water-producing aquifer in the sub-basin. The sub-basin is bounded on the north by the Ballona Escarpment, on the east by the Newport-Inglewood fault zone, and on the south and west by the Pacific Ocean and Palos Verdes Hills. The Los Angeles River and the San Gabriel River cross the sub-basin on the surface before entering San Pedro Bay (City of Los Angeles, 2006).

### ***Flood Hazards***

The City, in coordination with Los Angeles County, state, and federal agencies, has an extensive system for providing protection against flood hazards caused by excessive dry and wet weather flows. The system includes dams, open channels, flood control basins, storm drains, catch basins, culverts, low-flow diversions to direct runoff to sanitary sewer systems, pumping plants, debris basins, detention basins, and spreading grounds (City of Los Angeles, 2006). The system drains wet and dry weather runoff from surface areas such as streets and routes flows into underground pipes and drains discharging to various inland streams and channels. Ultimately, runoff is discharged to the Pacific Ocean. However, even with flood control devices, portions of Los Angeles lie within 100- and 500-year flood zones as defined by the Federal Emergency Management Agency (FEMA) (City of Los Angeles, 2006).

The Safety Element of the City of Los Angeles' General Plan also includes a map of potential inundation areas in the City in the event of a failure of a dam, levee, or overflowing of the key drainage infrastructure (Exhibit G of the Safety Element). The potential inundation areas include large portions of the City that are currently urbanized. The Safety Element also includes goals and policies to address Hazard Mitigation, Emergency Response, and Disaster Recovery (City of Los Angeles, 1996).

### 3.2.6.3 Regulatory Framework

#### **Federal**

##### Clean Water Act of 1972 (PL 92-500, as amended)

The federal Clean Water Act (CWA) provides for the restoration and maintenance of the physical, chemical, and biological integrity of the nation's waters. Discharges of wastes to waters of the U.S. (e.g., surface waters) must be authorized through NPDES permits (under Section 402 of the CWA). In California, the State Water Resources Control Board (SWRCB) and the nine RWQCBs have authority delegated by the U.S. Environmental Protection Agency (EPA) to issue NPDES permits. California permits are also issued as Waste Discharge Requirements (WDRs) as required under California law by the Porter-Cologne Water Quality Control Act (see below). Section 301(a) of the CWA prohibits discharges without a permit, and is the basis of the NPDES permit program.

Section 303 of the CWA requires states to develop water quality standards for all waters and submit to EPA for approval all new or revised standards established for inland surface waters, estuaries, and ocean waters. Under Section 303(d), the state is required to list impaired water segments that do not meet water quality standards and to develop TMDLs for these waters. The SWRCB and the RWQCBs implement sections of the CWA through the Ocean Plan, the Enclosed Bays and Estuaries Plan, the nine Water Quality Control Plans (one for each region), and permits for waste discharges.

#### **State**

##### Porter-Cologne Water Quality Control Act of 1972

The Porter-Cologne Water Quality Control Act (or Porter-Cologne Act - California Water Code Section 13000 et seq.), which is the principal law governing receiving water quality regulation in California, establishes a comprehensive program to protect water quality and the beneficial uses of state waters. Unlike the federal CWA, Porter-Cologne covers both surface water and groundwater. In 1973, the SWRCB and the nine RWQCBs were established by the Act and have been delegated the responsibility for implementing its provisions and administering permitted waste discharge into the waters of California.

The Porter-Cologne Act also implements many provisions of the federal CWA, such as the NPDES permitting program. Under the Act "any person discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the state" must file a report of the discharge with the appropriate RWQCB. Pursuant to the Act, the RWQCB may then prescribe WDRs that add conditions related to control of the discharge.

##### State Water Resources Control Board Stormwater Permits

The SWRCB has issued and periodically renews a statewide General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities and a statewide General Industrial Activity Stormwater Permit for projects that do not require an individual permit for these activities. The General Permit for Construction Activities was significantly updated and revised in 2009, and the new permit became effective July 10, 2010. Anyone with a construction activity that disturbs one acre or more must prepare and implement a construction Stormwater Pollution Prevention Plan (SWPPP) that specifies best management practices (BMPs) to prevent or reduce

pollutant loading from stormwater or nonstormwater discharges to receiving waters. The intent of the SWPPP and BMPs is to keep all products of erosion from moving offsite into receiving waters, eliminate or reduce nonstormwater discharges to storm sewer systems and other waters of the U.S., and perform sampling and analytical monitoring to determine the effectiveness of BMPs in reducing or preventing pollutants (even if not visually detectable) in stormwater discharges from causing or contributing to violations of water quality objectives.

The General Industrial Activities Stormwater Permit requires dischargers to develop and implement an SWPPP to reduce or prevent industrial pollutants in stormwater discharges, eliminate unauthorized nonstorm discharges, and conduct visual and analytical stormwater discharge monitoring to verify the effectiveness of the SWPPP and submit an annual report. The General Industrial Permit was last issued in 1997. Update and renewal of this permit is expected within the next year.

### **Regional**

#### **Water Quality Control Plan, Los Angeles Region (Basin Plan)**

RWQCB, Los Angeles Region is responsible for the protection of ground and surface water quality in the Los Angeles Region, including the coastal watersheds of Los Angeles and Ventura counties, along with very small portions of Kern and Santa Barbara counties (RWQCB, 1994).

The RWQCBs develop and implement Water Quality Control Plans, also known as Basin Plans, which consider regional beneficial uses, water quality characteristics, and water quality problems. The RWQCB Basin Plan for the Los Angeles Region is designed to preserve and enhance water quality and protect the beneficial uses of all regional waters. Specifically, the Basin Plan:

- (i) Designates beneficial uses for surface and ground waters,
- (ii) Sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's anti-degradation policy, and,
- (iii) Describes implementation programs to protect all waters in the region. In addition, the Basin Plan incorporates (by reference) all applicable state and RWQCB plans and policies, and other pertinent water quality policies and regulations (RWQCB, 1994).

#### **Los Angeles Municipal Separate Storm Sewer System NPDES Permit**

The agencies that discharge stormwater and urban runoff to a municipal separate storm sewer system (MS4) in Los Angeles County are required to obtain and comply with an NPDES Permit/ WDRs to meet the NPDES requirements. In Los Angeles County, all of the MS4 agencies are permitted under a single permit issued to Los Angeles County and 84 incorporated cities (this includes all cities in the Los Angeles RWQCB jurisdiction, which excludes the high desert and does not include the City of Long Beach, which has its own MS4 Permit), referred to here as the Permittees. The City of Los Angeles is a co-permittee under the NPDES MS4 Permit No. CAS004001 (Order No. R4-2012-0175), adopted on November 8, 2012, and effective on December 28, 2012.

The NPDES MS4 permit is intended to regulate the discharge of urban runoff from the MS4 within Los Angeles County. Under the NPDES MS4 permit, the City is responsible for the management of storm drain systems within its jurisdiction. Cities are required to implement management



programs, monitoring programs, implementation plans, and watershed control measures. Each permittee is responsible to reduce pollutants in stormwater discharges from the MS4 to the Maximum Extent Practicable (MEP).

The section of the MS4 permit that sets forth requirements for new development and redevelopment projects is the Planning and Land Development Program. New development or redevelopment projects subject to permit requirements will need to control pollutants, pollutant loads, and runoff volume emanating from the project site by minimizing the impervious surface area and controlling runoff from impervious surfaces through infiltration, bioretention and/or rainfall harvest and use.

The 2012 MS4 Permit mandates a Low Impact Development (LID) approach to stormwater treatment and management of runoff discharges. LID strategies are designed to retain stormwater runoff onsite by minimizing soil compaction and impervious surfaces, and by disconnecting stormwater runoff from conveyances to the storm drain system. The permit establishes criteria for the volume of stormwater to be retained onsite as required to achieve water quality goals and to preserve predevelopment hydrology in natural drainage systems. LID BMPs should be used to infiltrate, evapotranspire, harvest and use, or treat runoff from impervious surfaces, in accordance with the *City's Development Best Management Practices Handbook Low Impact Development Manual* (City of Los Angeles Sanitation, 2011). The approach is consistent with the City's LID Ordinance, which amends and expands on the existing Standard Urban Stormwater Mitigation Plan requirements by incorporating LID practice and principles and expanding the applicable development categories.

#### *3.2.6.4 Significance Thresholds*

The Proposed Project would have a significant impact on hydrology or water quality if it would:

Impact WQ-1: Violate any water quality standards or waste discharge requirement.

Impact WQ-2: Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted).

Impact WQ-3: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or offsite.

Impact WQ-4: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or offsite.

Impact WQ-5: Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

Impact WQ-6: Otherwise substantially degrade water quality.

Impact WQ-7: Place housing in a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.

Impact WQ-8: Place structures in a 100-year flood hazard area, which would impede or redirect flood flows.

Impact WQ-9: Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.

Impact WQ-10: Inundate by seiche, tsunami, or mudflow.

#### *3.2.6.5 Impact Analysis*

##### ***Impact WQ-1: The Proposed Project could violate applicable water quality standards or waste discharge requirements.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities under the Proposed Project would not result in discharges in the watersheds that could violate water quality standards or waste discharge requirements.

Future new and/or expanded processing facilities, transfer stations, and truck base yards would likely have impervious surfaces that would generate runoff. Because these facilities could have residual Solid Wastes in recyclables and Organics, there is the possibility that site runoff could be tainted and enter waterways and receiving waters, depending on the locations of the new or expanded facilities. In addition, runoff generated during construction of these facilities could contain contaminants that could enter waterways and receiving waters. Therefore, new and expanded processing facilities, transfer stations, and truck base yards have the potential to result in a violation of water quality standards, which is considered a potentially significant water quality impact.

Implementation of mitigation measures WQ-1, WQ-2, and WQ-3 described below, would mitigate potential impacts to water quality to less-than-significant levels.

Mitigation measure WQ-1 requires the identification of applicable water quality standards for receiving waters, and sets a performance standard of not violating those standard though the incorporation of measures into facility engineering documents. Mitigation measure WQ-2 requires compliance with the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, and the General Industrial Activity Stormwater Permit to keep potential discharges during construction and operation of new or expanded processing facilities, transfer stations, and truck base yards from violating water quality standards or waste discharge requirements. Mitigation measure WQ-3 further requires incorporation of BMPs during facility design to implement source control measures, including treatment BMPs.

***Impact WQ-2: The Proposed Project would not deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted).***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials in the Solid Resource collection activities would not result in the extraction of groundwater or the placement of impervious surfaces upon established groundwater recharge areas.

Future new and/or expanded processing facilities, transfer stations, and truck base yards would likely be located in industrial areas, on land zoned for industrial uses due to the industrial nature of the facilities. Organics processing facilities could be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Lands zoned for industrial, manufacturing, and agricultural uses are not generally used for groundwater recharge. In addition, local permitting processes would prevent new facilities, transfer stations, and truck base yards from encroaching on designated groundwater recharge areas. Furthermore, water needed for operation of the facilities, transfer stations, and truck base yards would likely be provided by existing water distribution systems and would not extract groundwater. Therefore, future new or expanded handling facilities, transfer stations, and truck base yards would not deplete groundwater supplies or interfere with groundwater recharge.

***Impact WQ-3: The Proposed Project could substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or offsite.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials in the Solid Resource collection activities would not result in alternations to existing drainage patterns, would not affect streams or rivers, and would not cause erosion or siltation.

Future new and/or expanded processing facilities, transfer stations, and truck base yards would likely be located in industrial areas or on land zoned for industrial uses due to the industrial nature of the facilities. Organics processing facilities could be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Although development of facilities would not likely result in onsite erosion or siltation, runoff from the new or expanded facilities could increase downstream drainage volumes, which could in turn result in erosion or siltation if downstream drainage facilities are unlined channels or otherwise have natural features. Therefore, the Proposed Project could result in significant siltation or erosion impacts if drainage facilities downstream of new or expanded processing facilities, transfer stations, or truck base yards are unlined or are natural streams.

Implementation of mitigation measures WQ-4 and WQ-5, described below, would mitigate potential drainage-related impacts to less-than-significant levels. Mitigation measure WQ-4 requires measures to reduce peak runoff flows from facility sites, and WQ-5 requires reducing impervious surfaces and adding natural areas to further reduce peak runoff.

***Impact WQ-4: The Proposed Project could substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or offsite.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials in the Solid Resource collection activities would not result in alternations to existing drainage patterns, or affect streams or rivers that in turn could result in flooding.

Future new and/or expanded processing facilities, transfer stations, and truck base yards would likely be located in industrial areas or on land zoned for industrial uses due to the industrial nature of the facilities. Organics processing facilities could be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Development of facilities would result in runoff from the sites that could increase downstream drainage volumes, which could in turn result in flooding if the capacities of the drainage facilities are exceeded. Therefore, the Proposed Project could result in significant flooding impacts.

Implementation of mitigation measures WQ-4 and WQ-5, described below, would mitigate potential flooding impacts to less than significant levels.

***Impact WQ-5: The Proposed Project could create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials in the Solid Resource collection activities would not create or contribute to runoff in the City, and would therefore not adversely affect stormwater conveyance capacity or runoff quality.

Future new and/or expanded processing facilities, transfer stations, and truck base yards would likely be located in industrial areas or on land zoned for industrial uses due to the industrial nature of the facilities. Organics processing facilities could be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Development of facilities would result in runoff from the sites that could contribute to runoff flows that exceed the capacity of existing storm drains, if the storm drain capacities are constrained. Therefore, the Proposed Project could result in significant impacts to the storm drain system.

Implementation of mitigation measures WQ-4, WQ-5, and WQ-6 described below, would mitigate potential impacts to storm drain capacity to less-than-significant levels.

Mitigation measure WQ-6 requires a study that evaluates the capacity of the storm drain system. If the system does not have adequate capacity, the evaluation would identify alternatives to safely convey site runoff without overburdening the storm drain system.

***Impact WQ-6: The Proposed Project would not otherwise substantially degrade water quality.***

Aside from the anticipated impacts to water quality described under Impact WQ-1 above, no additional impacts to water quality are foreseen from the Proposed Project.

***Impact WQ-7: The Proposed Project would not place housing in a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials in the Solid Resources collection activities would not result in the development of any new housing, and thus would not place housing in a 100-year floodplain.

Future new and/or expanded processing facilities, transfer stations, and truck base yards would be used only to process diverted materials from landfills or facilitate collection of recyclables, and would not include the development of any housing.

Therefore, the Proposed Project would not result in the placement of any housing in a 100-year flood hazard area.

***Impact WQ-8: The Proposed Project could place structures in a 100-year flood hazard area, which could impede or redirect flood flows.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials in the Solid Resource collection activities would not result in the development of any new structures, and thus would not place any structure in a 100-year floodplain.

Future new and/or expanded processing facilities, transfer stations, and truck base yards would likely be located in industrial areas due to the industrial nature of the facilities that could be located in 100-year flood hazard areas, depending on how the applicable General Plan has allocated land use. Runoff is generally conveyed away from developed sites through the storm drain system to designated stormwater conveyance channels, which are usually concrete-lined unless they are located in areas of high groundwater or they are located in the upstream areas of the watershed. If processing facilities, transfer stations, and truck base yards are proposed within a 100-year floodplain, there would be a remote potential for that facility to add to a flooding hazard that could redirect flood flows, which although remote, is still considered a potentially significant flood impact.

Implementation of mitigation measures WQ-7, WQ-8, and WQ-9 described below, would mitigate potential flood-related impacts from Project facilitates to less-than-significant levels.

Mitigation measure WQ-7 requires the preparation of a floodplain study during facility design to identify feasible measures to comply with FEMA water surface elevation requirements. Mitigation measures WQ-8 and WQ-9 require facility design features to avoid flood hazard areas or otherwise eliminate the flood hazard.

***Impact WQ-9: The Proposed Project would not expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials in the Solid Resource collection activities would not result in the development of any new structures or housing that could involve risk of loss, injury or death from flooding.

Future new and/or expanded processing facilities, transfer stations, and truck base yards would likely be developed in industrial areas due to the industrial nature of the facilities, or on agricultural lands in the case of Organics facilities, which could be subject to inundation in the event of flood from natural or dam or levee failure. However, much of the potential inundation areas in the City are heavily urbanized and developed with residential, commercial, and industrial uses. Although new or expanded processing facilities, transfer stations, or truck base yards could be placed in a potential inundation area, these facilities would be designed to comply with applicable flood management and building code requirements to avoid exposing people or structures to significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam. Potential inundation risks of future facilities are consistent with existing inundation risks throughout large portions of the City.

Further, Government Code Section 65302(g) requires general plans to include a safety element for the protection of the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence and other known geologic hazards. The safety elements are the primary mechanism for relating local safety planning to City and county land use decisions, and cities and counties establish land use planning policies, standards, and designations based on the criteria set forth in the safety element of their general plan. Because general plans have safety elements that address potential safety risks, including potential failure of a dam or levee, future facilities, transfer stations, and truck base yards under the Proposed Project are not expected to expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.

***Impact WQ-10: The Proposed Project would not likely be inundated by seiche, tsunami, or mudflow.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. Although the Proposed Project would result in the diversion of Organic Solid Resources from landfills, these collection activities would occur on and from existing Commercial Establishments using existing urban infrastructure (streets and freeways), and would not result in development that could be inundated by seiches, tsunamis, or mudflows.

Future new and/or expanded processing facilities, transfer stations, and truck base yards would likely be located in industrial areas due to the industrial nature of the facilities, or on agricultural lands in the case of Organics facilities. Such areas are not likely to be affected by seiche, tsunami, or mudflow due to lack of proximity to the ocean, large bodies of water, or hillsides subject to mudflows. For facilities near the coast, tsunami warning systems are in place to notify people in low-lying areas. Communities that could be impacted by tsunamis have evacuation routes identified. Given the planning measures that are in place with regard to a tsunami, in the event a

future facility were located in a tsunami inundation area, it is anticipated that emergency systems would be activated in the event of a tsunami, and impacts would be less than significant.

Therefore, the Proposed Project would not result in significant impacts related to inundation from seiches, tsunamis, or mudflows.

#### **3.2.6.6 Cumulative Impacts**

The collection activities under the Proposed Project are not anticipated to result in significant impacts to surface or groundwater quality, or flood hazards. Therefore, collection activities under the Proposed Project would not make a considerable contribution to a significant cumulative impact to hydrology or water quality.

As with the Proposed Project, future diversion activities in Los Angeles County and the state associated with related projects could result in new or expanded facilities, transfer stations, and truck base yards that affect surface water or groundwater quality, or drainage patterns. However, the Proposed Project and its related project facilities would have to comply with general NPDES permits, SWPPPs, MS4 NPDES Permit, and runoff BMPs, which are expected to keep potential cumulative impacts to water quality and drainage patterns at a less-than-significant level. Although no facilities could be implemented without complying with these permits and regulations, project-level mitigation requiring compliance has been identified in this Draft Program EIR. Mitigation measures WQ-1 through WQ-9 would be implemented to reduce potential impacts of new transfer stations, processing facilities, truck base yards, and Organic processing facilities under the Proposed Project to a less-than-significant level. Therefore, after mitigation, the Proposed Project would not make a considerable contribution to a significant cumulative impact to water quality or hydrology.

It is the presumption that new or expanded transfer stations, processing facilities, and truck base yards that could be located in the City or in other jurisdiction would be subject to the same regulatory requirements and/or similar mitigation measures as those identified below for the Proposed Project to avoid and/or minimize the impacts of the construction and operation of such new or expanded facilities to a level of less than significant. Cumulative impacts associated with new or expanded facilities, truck base yards, and Organic processing facilities will be further addressed in the project-specific environmental document prepared by the lead agency for the jurisdiction in which such new or expanded facilities are located.

#### **3.2.6.7 Mitigation Measures**

The Proposed Project could result in significant hydrology and water quality impacts from the siting of new or expanded processing facilities, transfer stations, and truck base yards. The following mitigation measures are recommended:

**WQ-1:** Prior to entitlement of any future facility and to assist in preparation of final engineering documents, a project-specific water quality study would be required to address impacts on water quality and identify potential mitigation measures. The project-specific water quality study shall identify downstream bodies of water, their beneficial uses, any impairment, and applicable water quality standards. The water quality report shall identify permanent BMPs to mitigate water quality impacts and ensure that water quality standards are not violated.

**WQ-2:** Construction stormwater quality will need to be addressed in a construction Stormwater Pollution Prevention Plan (SWPPP), in accordance with the State General Construction Permit. The construction SWPPP shall provide a plan for addressing water quality associated with construction activities. SWPPPs would be prepared during final engineering or prior to construction. For operations, facilities would comply with the General Industrial Activities Stormwater Permit, which also requires development and implementation of operational SWPPPs to control discharges from industrial sites. The operational SWPPPs emphasize BMPs and provide the flexibility necessary to establish appropriate BMPs for different types of industrial activities and pollutant sources. The operational SWPPPs also require monitoring to ensure effectiveness.

**WQ-3:** Specific and detailed BMPs shall be required. BMPs will address the site design, source control, and treatment. Individual facility development shall implement applicable local jurisdictional BMP standards. Facilities will be required to implement all site design, source control, and treatment BMPs to the maximum extent practicable. A number of counties and cities are emphasizing LID design features as a way to address water quality concerns through the use of multiple sustainable BMP alternatives at the local level. To facilitate this sustainable approach, development should aim to maximize the number of LID mitigation alternatives implemented in site design.

In addition to the use of construction BMPs, an operation and maintenance plan must be established to demonstrate long-term performance of the features. Typically, part of the operation and maintenance discussion for BMPs will include a funding source and identify the entity responsible for implementing the operation and maintenance plan.

**WQ-4:** Future facilities shall include the use of new or improved stormwater management BMPs to reduce or retard the amount of peak runoff from the facility sites. Such measures may include the construction of detention basins or other structures that will slow down or delay the peak flow of stormwater runoff from the site.

**WQ -5:** Future facilities shall reduce impervious surfaces and materials, maximize landscaped and natural areas, and meet LID requirements, thus reducing runoff.

**WQ-6:** Prior to entitlement of any future facility and to assist in preparation of final engineering documents, a project-specific drainage study will be required for development of any facility demonstrating the impacts on local and regional hydrology. The drainage study shall include a review of the existing drainage facility capacity and demonstrate that site runoff will not overwhelm existing drainage capacities. Any increase in runoff above the existing drainage facility capacity would require hydraulic analysis to determine alternatives to safely convey site runoff under design storm conditions without overburdening the drainage system. Alternatives could include connecting with the storm drain system below the point of inadequate capacity, or other alternatives that avoid contributing to the constraints. Future facilities would implement improvements to the drainage system, if the analysis concludes that existing capacity is not adequate.

**WQ-7:** If a future facility is proposed to be sited in a floodplain, a floodplain study shall be prepared to address FEMA or jurisdictional floodplain management requirements. The floodplain study shall be completed during entitlement and final engineering. The floodplain study shall investigate the hydrology of the river system and develop a



hydraulic model to quantify existing and proposed water surface elevations and velocities. The study shall identify feasible mitigation measures to meet FEMA water surface elevation requirements<sup>1</sup>. These mitigation measures shall be implemented as part of the project design and/or construction.

**WQ -8:** Future facilities shall be designed so that structures and other important facilities that would be adversely affected by flooding are no longer located within flood hazard areas.

**WQ -9:** Future facilities shall raise the building pad or ground floor of proposed structures to an elevation above flood-prone areas.

#### *3.2.6.8 Level of Significance after Mitigation*

With implementation of mitigation measures WQ-1 through WQ-9, potential hydrology and water quality impacts from the Proposed Project would be less than significant.

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<sup>1</sup> These requirements are based on Title 44 Code of Federal Regulations: Emergency Management and Assistance, Chapter 1: Federal Emergency Management Agency, Department of Homeland Security.

### 3.2.7 Land Use-Planning

#### 3.2.7.1 Introduction

This section evaluates the potential impacts to land use from the Proposed Project. The analysis consists of an evaluation of the potential impact that the Proposed Project could have related to dividing an established community, land use plan or zoning conflicts, and conflicts with habitat conservation plans.

The impact evaluation focuses on the collection of Solid Resources from Commercial Establishments to divert materials from landfills, and at a conceptual level, on new or expanded processing facilities and truck base yards which would be required to process diverted materials. Collection activities would occur on and from existing Commercial Establishments. New or expanded transfer stations, processing facilities and truck base yards are expected to be sited on lands with industrial or commercial manufacturing zoning designation, but could include lands zoned for agricultural uses for Organics processing facilities. The new facilities and truck base yards have not yet been proposed; therefore, the evaluation of these facilities in this section is at a conceptual level.

A summary of the Proposed Project's anticipated impacts on land use, based on the evaluation below, is contained in Table 3.2.7-1.

**TABLE 3.2.7-1  
SUMMARY OF IMPACTS RELATED TO LAND USE**

Environmental Impact Area	Potential Impact	Mitigation	Significant Impact After Mitigation
<b>LU-1: Established Community</b>			
Collection System	No	None Required	No
New or Expanded Facilities	No	None Required	No
<b>LU-2: Land Use Plans and Zoning</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>LU-3: Habitat Conservation Plan</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>Cumulative Impacts</b>	Yes	Yes	No

#### 3.2.7.2 Environmental Setting

Land use planning in municipalities throughout California is implemented using two major tools—the general plan and the zoning ordinance. The City of Los Angeles General Plan (General Plan), prepared and maintained by the Department of City Planning, is a long-range declaration of purposes, policies, and programs for the development of the City. It is approved by the mayor and the City Planning Commission and adopted by the City Council. Land uses throughout the City are classified into five primary land use types—residential; commercial; industrial; open space, public, institutional, or other; and infrastructure. There are no areas of natural habitat with an adopted Habitat Conservation Plan in the City (City of Los Angeles, 2006).

### **3.2.7.3 Regulatory Framework**

#### **State**

California State law (Government Code § 65300) requires each City to prepare and adopt a comprehensive, long-term general plan for its future development. General plans must contain seven elements, including land use, circulation, housing, conservation, open space, noise, and safety. In addition to these, State law permits cities to include optional elements in their general plans, thereby providing local governments with the flexibility to address the specific needs and unique character of their jurisdictions.

California State law requires that the day-to-day decisions of a City follow logically from the general plan and be consistent with it. More specifically, Government Code §§ 65860, 66473.5, and 656474 require that approvals of zoning ordinances and subdivision and parcel maps be consistent with the general plan.

#### **City of Los Angeles General Plan**

The General Plan is a comprehensive, long-term plan for the physical development of the City. The City's General Plan consists of the following citywide elements—Framework, Transportation, Infrastructure Systems, Housing, Noise, Air Quality, Conservation, Open Space, Historic Preservation and Cultural Resources, Safety, Public Facilities and Services, and Land Use.

The Framework Element is a strategy for long-term growth that establishes a citywide context to guide the update of the community plan and citywide elements. The Framework Element responds to state and federal mandates to plan for the future. In planning for the future, the City uses population forecasts provided by the Southern California Association of Governments (SCAG). The General Plan Framework Element defines citywide policies that will be implemented through subsequent amendments of the City's community plans, zoning ordinances, and other pertinent programs.

#### **Land Use Element**

The Land Use Element includes 35 local area plans, known as Community Plans. The primary objectives of the policies in the Land Use chapter of the Framework Element are to support the viability of the City's residential neighborhoods and commercial districts. In addition, when growth occurs, the Land Use chapter encourages sustainable growth in a number of higher-intensity commercial and mixed-use districts, as well as in centers, boulevards, and industrial districts, particularly in those near transportation corridors and transit stations.

The 35 community plans guide the physical development of neighborhoods by establishing the goals and policies for land use. Whereas the General Plan presents a long-range vision and guide to future development, the community plans provide the specific neighborhood-level detail, relevant policies, and implementation strategies necessary to achieve the General Plan objectives.

The City Planning Department is currently updating several of the community plans as part of an ongoing program to ensure that those plans effectively guide potential growth and development in the City's neighborhoods.

**Infrastructure and Public Services**

The goals, objectives, and policies found within the Infrastructure and Public Services Element of the City's General Plan address the following systems and services:

1. Wastewater
2. Stormwater
3. Water
4. Solid Resources
5. Police
6. Fire
7. Libraries
8. Parks
9. Power
10. Schools
11. Telecommunications
12. Street Lighting
13. Urban Forest

For each of the public services and infrastructure systems, four basic policies are defined by the Framework Element (City of Los Angeles, 2001):

1. Monitor levels of demand and the abilities of the service/infrastructure system to support demands. Use these demands to forecast future needs and improvements.
2. Maintain an adequate system/service to support the needs of population and employment. This encompasses the upgrade and replacement of existing facilities as they deteriorate as well as the expansion of facilities/services to accommodate growth.
3. Implement techniques that reduce demands on utility infrastructure or services, where appropriate. Generally, these encompass a variety of conservation programs (e.g., reduced wastes and energy use, increased site permeability, watershed management, telecommunications, and others).
4. Establish procedures for the maintenance or restoration of service after an emergency, including earthquakes.

The Infrastructure and Public Services Element lists the following specific goals and objectives regarding Solid Resources (City of Los Angeles, 2001):

GOAL 9D - An integrated Solid Resources management system that maximizes source reduction and materials recovery and minimizes the amount of waste requiring disposal.

GOAL 9E - Adequate Recycling Facility Development - expanded siting of facilities that enhance the City's reduction, recycling, and composting efforts using methods and strategies that are economically, socially, and politically acceptable.

GOAL 9F - Adequate collection, transfer, and disposal of mixed Solid Waste - the City shall seek to ensure that all mixed Solid Waste that cannot be reduced, recycled, or composted is collected, transferred and disposed of in a manner that minimizes adverse environmental impacts.

GOAL 9G - An environmentally sound Solid Resources management system that protects public health, safety, and natural resources and minimizes adverse environmental impacts.

GOAL 9H - A cost-effective Solid Resources management system that emphasizes source reduction, recycling, reuse, and market development and is adequately financed to meet operational and maintenance needs.

OBJECTIVE 9.12 - Support integrated Solid Resources management efforts.

POLICIES:

- 9.12.1 Prepare a 30-year policy plan that provides direction for the Solid Resources management decision-making process.
- 9.12.2 Establish citywide diversion objectives.
- 9.12.3 Define specific programmatic tasks, roles, and responsibilities for source reduction, composting, special waste, and public education goals, as well as an implementation schedule.

### ***Zoning***

As discussed above, each of the 35 community plans included in the Land Use Element of the City's General Plan has adopted generalized land use maps that guide development within its associated community. Land use categories include residential, neighborhood commercial, industrial, and open space. The general land uses in the community plans are implemented through specific zoning designations at the parcel level and serve as a guide for rezoning purposes.

Within the City, zoning designations include agriculture zones (designated by A1, A2, or RA), single-family dwelling zones (generally designated as R1, although other designations exist), and multifamily dwelling zones (generally designated by R2, R3, R4, and so forth, although other designations exist). The City zoning designations also include commercial use zones (generally designated by CR, C1, C2, and so forth, although other designations exist), industrial or manufacturing use zones (generally designated by M1, M2, M3, and so forth, although other designations exist), parking zones (designated by PO or PB), and Open Space/Public Facility zones (designated as OS or PF) (City of Los Angeles, 2003).

In general, transfer stations and facilities that handle or process recyclable materials are considered industrial uses that would be located in industrial areas. In addition, Organics processing facilities could be sited on lands zoned for agricultural uses, depending on the technologies or processes used.

#### ***3.2.7.4 Significance Thresholds***

The Proposed Project would have a significant impact to land use if it would:

Impact LU-1: Physically divide an established community.

Impact LU-2: Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Proposed Project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

Impact LU-3: Conflict with any applicable habitat conservation plan or natural community conservation plan.

### *3.2.7.5 Impact Analysis*

#### ***Impact LU-1: The Proposed Project would not physically divide an established community.***

The adoption of the Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials within the Solid Resource collection activities would be similar to the diversion of Comingled Recyclables and Organics that has occurred for a number of years for the materials collected by the City. The collection activities under the Proposed Project would not result in development that would physically divide an established community.

Future new or expanded transfer stations, processing facilities, and new truck base yards would likely be located in industrial areas or on land zoned for industrial uses (due to the industrial nature of the facilities), which are generally established in the applicable General Plan and which are subsets of established community plans (see Figures 3.2.7-1 and 3.2.7-2 for industrial and agricultural land use and zoning information within City limits). As such, the expanded or new processing facilities and truck base yards on industrial lands are not expected to physically divide an established community. Organics processing facilities could be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Within the City, there is limited agricultural land in the Sepulveda Basin and at Pierce College, and the dedicated uses (under the control of an educational institution) or regulatory framework (flood control purposes within the Sepulveda Dam Basin) of these agricultural uses likely preclude siting of an Organics facility. Siting Organics processing facilities on agricultural lands is not expected to divide an established community because such lands are typically established in the applicable General Plan.

Therefore, the Proposed Project would not result in land use impacts that result from dividing an established community.

#### ***Impact LU-2: The Proposed Project could potentially conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Proposed Project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.***

The adoption of the proposed Proposed Project would be consistent with the City's goals, objectives, and policies, previously described, regarding waste management and reduction of the amount of Solid Resources requiring disposal.

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials within the Solid Resource collection activities would not result in development that would conflict with the General Plan. In addition, collection of Comingled Recyclables and Organics for diversion from landfills is consistent with the goals and objectives in the Infrastructure and Public Services Element.

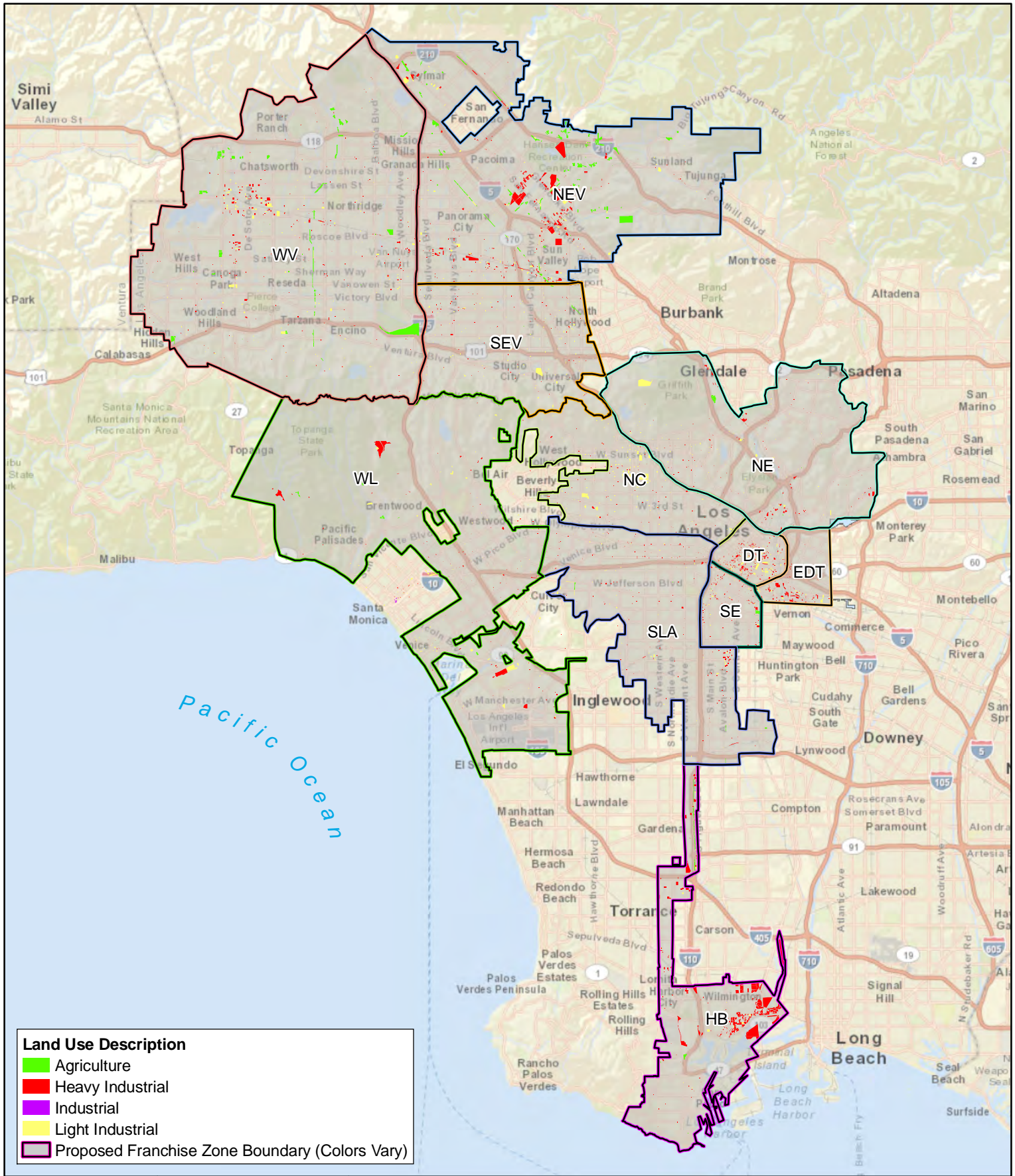
Future new or expanded transfer stations, processing facilities, and truck base yards, would likely be located in industrial areas or on land zoned for industrial uses (due to the industrial nature of the facilities), which are generally established in the applicable General Plan and which are reflected in the underlying zoning designation of industrial parcels. Siting of the expanded or new processing facilities and truck base yards on industrial lands is not expected to result in conflicts with the applicable General Plan or the zoning designation of the future sites. Organics processing facilities could be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Within the City, there is limited agricultural land in the Sepulveda Basin and at Pierce College, and the dedicated uses (under the control of an educational institution) or regulatory framework (flood control purposes within the Sepulveda Dam Basin) of these agricultural uses likely preclude siting of an Organics facility. However, the locations of future new or expanded facilities are unknown at this time. Depending on the type of facility, potential impacts to land use would occur if a new or expanded transfer station, processing facility, truck base yard or Organics processing facility was proposed in or near a residential land use, or where nearby land uses, residents, and/or businesses would be adversely affected by the day to day activities occurring at the facility (e.g., noise, intensity, traffic, and odor). If a proposed facility is not found to be compatible with the surrounding land uses at the time of proposal, a significant impact to land use and planning could occur. At the time a location is identified to site a new or expanded facility, the proposed facility would be subject to the applicable land use plans, policies, or regulation of the agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, redevelopment plan, interim control ordinance, habitat/community conservation plan, or zoning ordinance) for the respective jurisdiction.

The project-level mitigation identified for the project, LU-1 through LU-3, is designed to minimize the potential for land use impacts at the project-level and would also reduce the potential for the project to contribute a cumulative impact. It is the presumption that new or expanded transfer stations, processing facilities and truck base yards that could be located with the City or in other jurisdiction would be subject to the same regulatory requirements and similar mitigation measures as those identified for the Proposed Project to avoid and/or minimize the impacts of the construction and operation of such new or expanded facilities to a level of less than significant.

***Impact LU-3: The Proposed Project could potentially conflict with any applicable habitat conservation plan or natural community conservation plan.***

The adoption of the Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials within the Solid Resource collection activities would not result in development, and would not occur in areas under a habitat management plan or natural community conservation plan.





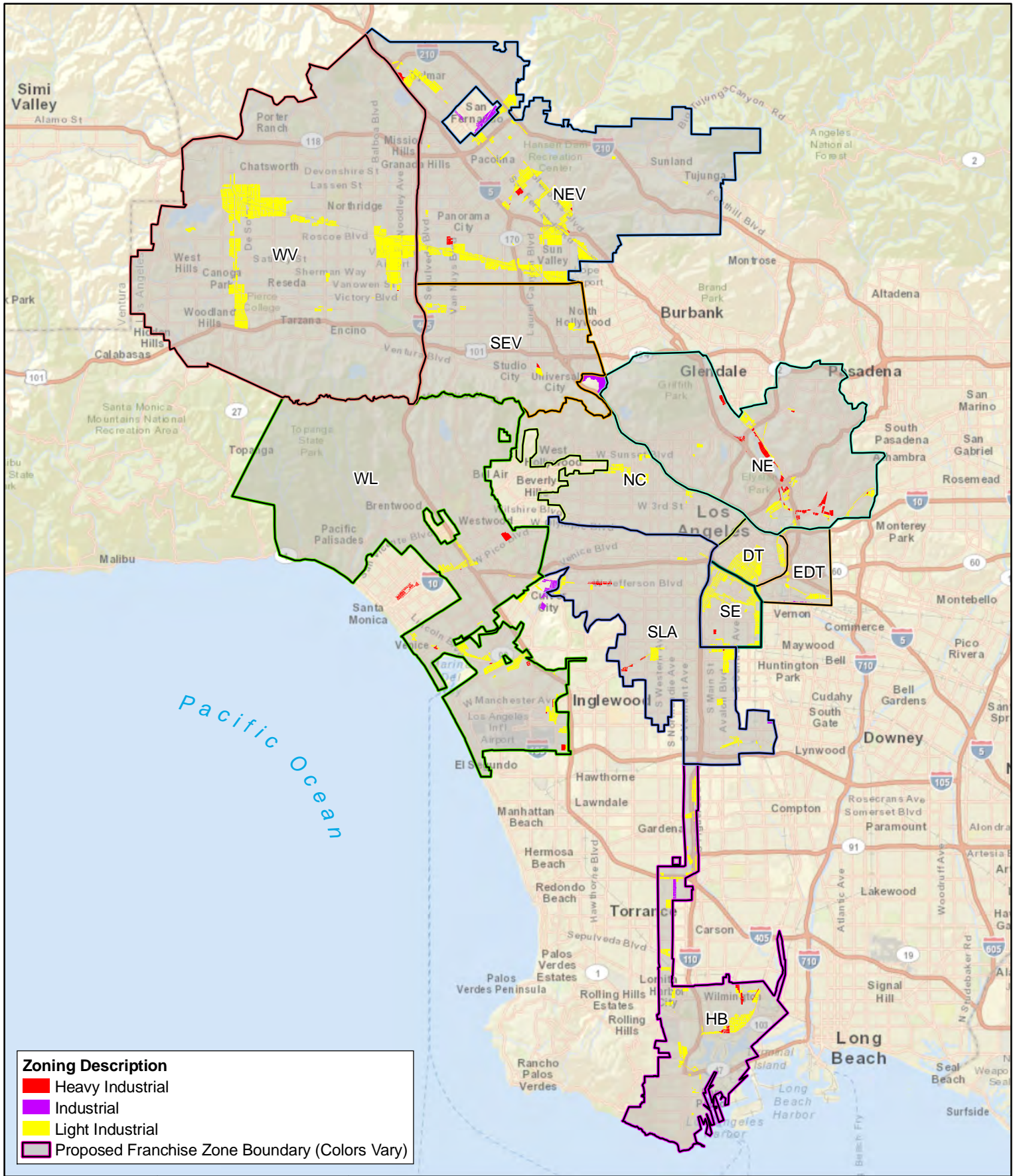
**FIGURE 3.2.7-1: LAND USE**

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**FIGURE 3.2.7-2: CITY ZONING**

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Future new or expanded transfer stations, processing facilities, and truck base yards would likely be located in industrial areas or on land zoned for industrial uses (due to the industrial nature of the facilities), which are generally established in the applicable General Plan, and are not subject to habitat management plans or natural community conservation plans that seek to preserve habitat of value in its natural state. Organics processing facilities could be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Within the City, there is limited agricultural land in the Sepulveda Basin and at Pierce College, and the dedicated uses (under the control of an educational institution) or regulatory framework (flood control purposes within the Sepulveda Dam Basin) of these agricultural uses likely preclude siting of an Organics facility. However, the locations of future new or expanded facilities are unknown at this time. Depending on the type of facility, potential impacts to land use would occur if a new or expanded transfer station, processing facility, truck base yard or Organics processing facility was proposed in a location where a nearby conservation area would be adversely affected by the day to day activities occurring at the facility (e.g., noise, intensity, traffic, and odor). If a proposed facility is not found to be compatible with the surrounding land uses at the time of proposal, a significant impact to land use and planning could occur. At the time a location is identified to site a new or expanded facility, the proposed facility would be subject to the applicable land use plans, policies, or regulation of the agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, redevelopment plan, interim control ordinance, habitat/community conservation plan, or zoning ordinance) for the respective jurisdiction.

The project-level mitigation identified for the Proposed Project, LU-1 through LU-3, is designed to minimize the potential for land use impacts at the project-level and would also reduce the potential for the Proposed Project to contribute a cumulative impact. It is the presumption that new or expanded transfer stations, processing facilities and truck base yards that could be located with the City or in other jurisdiction would be subject to the same regulatory requirements and similar mitigation measures as those identified for the Proposed Project to avoid and/or minimize the impacts of the construction and operation of such new or expanded facilities to a level of less than significant.

#### *3.2.7.6 Cumulative Impacts*

As discussed above, the collection activities under the Proposed Project would have no effect on land use and planning because they would not result in any construction or change in use of land. Therefore, collection activities under the Proposed Project would not make a considerable contribution to a significant cumulative impact to land use and planning.

As with the Proposed Project, future diversion activities within Los Angeles County and the State associated with related projects could cause the need for new or expanded transfer stations, processing facilities, truck base yards, and Organics processing facilities, which could result in impacts to land use and planning. These facilities would be governed by the general plans, zoning ordinances and other regulatory mechanisms in place in that particular jurisdiction. Mitigation measures LU-1 through LU-3 would be implemented to reduce potential impacts of new transfer stations, processing facilities and truck base yards, and Organic processing facilities under the Proposed Project to a less than significant level. Therefore, after mitigation, the Proposed Project would not make a considerable contribution to a significant cumulative impact to land use and planning.

It is the presumption that new or expanded transfer stations, processing facilities and truck base yards that could be located with the City or in other jurisdiction would be subject to the same regulatory requirements and/or similar mitigation measures as those identified below for the Proposed Project to avoid and/or minimize the impacts of the construction and operation of such new or expanded facilities to a level of less than significant. Cumulative impacts associated with new or expanded facilities, truck base yards and Organic processing facilities will be further addressed in the project specific environmental documentation prepared by the lead agency for the jurisdiction in which such new or expanded facilities are located.

#### ***3.2.7.7 Mitigation Measures***

The Proposed Project could potentially result in significant impacts on land use due to the siting of new or expanded transfer stations, processing facilities and truck base yards, necessitating the construction of replacement housing elsewhere. The following mitigation measures are recommended:

- LU-1:** Future facilities shall be sited in locations that support the appropriate general plan and zoning designations for the use being proposed. The project's proposed land use shall be modified to be consistent with designated land uses, zoning classification, and/or general plan element(s).
- LU-2:** Future facilities shall be fully enclosed to the maximum extent practicable to minimize nuisance issues such as noise, odor and visual impact and achieve maximum compatibility with surrounding land uses. If a nuisance is found to occur as result of facility operations, certain restrictions on the operational characteristics of the facility shall be implemented to reduce or eliminate impacts, such as limiting hours of operation or placing restrictions on specific types of uses or activities proposed for the facility.
- LU-3:** Project design, configuration, visual screening, setbacks, building heights, etc., shall be compatible with surrounding uses.

#### ***3.2.7.8 Level of Significance after Mitigation***

With implementation of mitigation measures LU-1 through LU-3, potential impacts to land use resulting from the Proposed Project would be less than significant.

### 3.2.8 Mineral Resources

#### 3.2.8.1 Introduction

This section evaluates the potential impacts to mineral resources from the Proposed Project. The analysis consists of an evaluation of the potential impact that the Proposed Project could have on local, regional and state mineral resources.

This section evaluates the potential impacts related to the adoption of the Proposed Project, and at a conceptual level, on new or expanded transfer stations, processing facilities, and truck base yards which would be required to divert materials from landfills. Collection activities would occur on and from existing Commercial Establishments. New or expanded processing facilities and truck base yards are expected to be sited on lands with industrial or commercial manufacturing zoning designation, but could include lands zoned for agricultural uses for Organics processing facilities. The new facilities and truck base yards have not yet been proposed; therefore, the evaluation of these facilities in this section is at a conceptual level.

A summary of the Proposed Project's anticipated impacts on mineral resources, based on the evaluation below, is contained in Table 3.2.8-1.

**TABLE 3.2.8-1  
SUMMARY OF IMPACTS RELATED TO MINERAL RESOURCES**

Environmental Impact Area	Potential Impact	Mitigation	Significant Impact After Mitigation
<b>MR-1: Loss of Mineral Resources to Region and State</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>MR-2: Loss of Locally Important Mineral Resources Recovery Site</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>Cumulative Impacts</b>	Yes	Yes	No

#### 3.2.8.2 Environmental Setting

The primary mineral resources within the City are rock, gravel, and sand deposits. Sand and gravel deposits follow the Los Angeles River floodplain, coastal plain, and other bodies of water and watercourses. Significant potential deposit sites have been identified by the state geologist. These sites lie along the floodplain from the San Fernando Valley through the downtown area of the City. Much of the area identified has been developed with structures and is inaccessible for mining extraction.

Mining of sand and gravel began in Los Angeles around 1900 when concrete became popular as a building material. Extraction began in the Arroyo Seco and the Big Tujunga Wash. From 1920 to the present, the demand for sand and gravel has been spurred by construction associated with growth in California and the southwestern United States. The only currently available deposit site

in the City is the Tujunga alluvial fan, which is rich in accumulations of high-quality sand and gravel washed from the adjacent mountains.

No onshore or offshore mining of beach or ocean sand is permitted by the State of California within the coastal zone or adjoining ocean of the Southern California area to protect the beaches and coastline within the region (City of Los Angeles, 2001).

### **3.2.8.3 Regulatory Framework**

#### **State**

##### **California Surface Mining and Reclamation Act of 1975**

The California Surface Mining and Reclamation Act of 1975 (SMARA) (Public Resources Code § 2710 *et seq.*; subsequently amended) is the primary regulator of onshore surface mining in the state. It delegates specific regulatory authority to local jurisdictions. The act requires the state geologist (Division of Mines and Geology) to identify all mineral deposits within the state and to classify them as containing little or no mineral deposits, significant deposits, or deposits identified but further evaluation needed.

Local jurisdictions are required to enact specific plan procedures to guide mineral conservation and extraction at particular sites and to incorporate mineral resource management policies into their general plans. A particular concern of the state legislators in enacting SMARA was premature loss of minerals and protection of sites threatened by development practices that might preclude future mineral extraction.

In 1979, the State Mining & Geology Board adopted guidelines for the management of mineral resources and preparation of local plans. The guidelines require local general plans to reference the state-identified mineral deposits and sites that are identified by the state geologist for conservation or future mineral extraction. Subsequently, the Board identified urbanized areas where irreversible land uses precluded mineral extraction. Much of the City was deemed urbanized and, therefore, exempt from SMARA.

The state geologist classified Mineral Resources Zone-2 (MRZ-2) sites within the City. MRZ-2 sites contain potentially significant sand and gravel deposits that are to be conserved. Any proposed development plan must consider access to the deposits for purposes of extraction. Much of the areas within the MRZ-2 sites in the City was developed with structures prior to the MRZ-2 classification and, therefore, are currently unavailable for extraction (City of Los Angeles, 2001).

#### **Local**

To comply with SMARA, the City adopted the 'G' Surface Mining Supplemental Use Provisions (LAMC § 13.03) in 1975. Subsequent amendments have brought the City's provisions into consistency with new state requirements. The 'G' provisions are land use, not mineral conservation regulations. They regulate the establishment of sand and gravel districts, extraction operations, mitigation of potential noise, dust, traffic, and other potential impacts, as well as post-extraction site restoration. Other conditions may be imposed by the City if deemed appropriate.

MRZ-2 sites are identified in two community plan elements of the City's General Plan—the Sun Valley-La Tuna Canyon and the Sunland-Tujunga-Lake View Terrace-Shadow Hills-East La Tuna Canyon community plans. In the Sun Valley-La Tuna Canyon Community Plan, a private parcel is identified as a potential gravel and sand source. In the Sunland-Tujunga-Lake View Terrace-Shadow Hills-East La Tuna Canyon Community Plan, the Tujunga Wash is designated as a Natural Resource Preserve, to be utilized primarily for flood control purposes and secondarily for open space and recreational purposes. The Community Plan also recognizes the Conservation Plan identification of the Tujunga Wash as a rock and gravel resource area. The natural resource preserve designation used in this Community Plan is consistent with the objective of SMARA in that it is intended to preclude development that would prevent future mining. The need to mine in the wash is not anticipated during the life of this Community Plan, and it is the intent of the plan to prohibit such mining through the year 2025 (City of Los Angeles, 1997).

#### *3.2.8.4 Significance Thresholds*

The Proposed Project would have a significant impact to mineral resources if it would:

Impact MR-1: Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.

Impact MR-2: Result in the loss of availability of a locally important mineral resource recovery site that is delineated on a local general plan, specific plan, or other land use plan.

#### *3.2.8.5 Impact Analysis*

***Impact MR-1: The Proposed Project could potentially result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.***

The adoption of the Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials within the Solid Resource collection activities would not result in development that could result in loss of availability of mineral resources (sand and gravel deposits in the Sun Valley and the Sunland-Tujunga-Lake View Terrace-Shadow Hills-East La Tuna Canyon communities).

Future new or expanded transfer stations, processing facilities, and new truck base yards would likely be located in industrial areas or on land zoned for industrial uses (due to the industrial nature of the facilities). Organics processing facilities could also be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Industrial areas and agricultural areas are designated in the City's General Plan and some sand and gravel deposits are located in the east San Fernando Valley, within industrial areas.

Due to the uncertainty of where the future facilities would be located, the potential for the future facilities to result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state is not known. If future sites include locations that contain mineral resources, such as areas mapped MRZ-2a, MRZ-2b, MRZ-3, MRZ-3a or MRZ-3b, there is a potential for a significant impact. As future facilities are proposed, they would be subject to additional review pursuant to CEQA. At that time, the potential site-specific impacts would be analyzed.



Additionally, if future facilities were proposed in areas that support oil well or gas wells, there is potential for an impact. The presence of oil or gas in the subsurface can be toxic and would be a major consideration for future Solid Resource facility siting. Wells are identified as new, active, active injector, dual, plugged, or geothermal. If the siting of a future facility is located in an area supporting oil or gas wells, coordination with the Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR) District 1 would be required. The local permitting agency in coordination with DOGGR District 1 would conduct a Construction Site Review. The Construction Site Review process varies depending on where the land being developed is located.

Mitigation measures MR-1 through MR-4 are identified to keep future facilities from being sited on areas mapped as important mineral resources zones in state or local jurisdictions, as well as avoiding and or preserving active oil, gas, geothermal operations and other mineral resources. With implementation of these mitigation measures, it is anticipated that project level impacts would be reduced to below a level of significance.

***Impact MR-2: The Proposed Project could potentially result in the loss of availability of a locally important mineral resource recovery site that is delineated on a local general plan, specific plan, or other land use plan.***

The adoption of the Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials within the Solid Resource collection activities would not result in development that could result in loss of availability of mineral resources delineated on a local general plan, specific plan, or other land use plan.

The potential for future facilities to result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan is dependent upon where these facilities are sited. Given the uncertainty of the facility locations, the Proposed Project could result in a significant impact. As future facilities are proposed, they would be subject to additional review pursuant to CEQA. Part of that analysis would include a review of any applicable general plans, specific plans, or other land use plans to identify any locally important mineral resources. With implementation of mitigation measures MR-1 through MR-4, it is anticipated that project level impacts would be reduced to below a level of significance.

#### ***3.2.8.6 Cumulative Impacts***

The collection activities under the Proposed Project would have no effect on mineral resources because they would not result in any construction. In the event that a future facility is sited on land zoned for industrial use with underlying mineral resources, it would not preclude subsurface extraction of those minerals. Therefore, collection activities under the Proposed Project would not make a considerable contribution to a significant cumulative impact to mineral resources.

The Proposed Project could result in new or expanded facilities, transfer stations, and truck base yards that could affect areas with known mineral resources. However, Proposed Project and related project facilities would not preclude subsurface extraction of those minerals, which are expected to keep potential cumulative impacts to water quality and drainage patterns at a less than significant level. Mitigation measures MR-1 through MR-4 would be implemented to reduce potential impacts of new transfer stations, processing facilities and truck base yards, and Organic processing facilities under the Proposed Project to a less than significant level. Therefore, after

mitigation, the Proposed Project would not make a considerable contribution to a significant cumulative impact to mineral resources.

It is the presumption that new or expanded transfer stations, processing facilities and truck base yards that could be located with the City or in other jurisdiction would be subject to the same regulatory requirements and/or similar mitigation measures as those identified below for the Proposed Project to avoid and/or minimize the impacts of the construction and operation of such new or expanded facilities to a level of less than significant. Cumulative impacts associated with new or expanded facilities, truck base yards and Organic processing facilities will be further addressed in the project specific environmental document prepared by the lead agency for the jurisdiction in which such new or expanded facilities are located.

#### ***3.2.8.7 Mitigation Measures***

The Proposed Project could potentially result in significant impacts to mineral resources due to the siting of new or expanded transfer stations, processing facilities and truck base yards. Therefore, the following mitigation measures are recommended:

- MR-1:** Future facilities shall be sited so as to avoid areas mapped as MRZ-2, MRZ-3, and MRZ-3a by the California Mineral Land Classification System. Other known or potential mineral resource areas shall be avoided to the maximum extent.
- MR-2:** Future facilities shall be sited so as to avoid active oil, gas or geothermal operations. The project shall be designed so that no or only nonpermanent structures are atop or blocking the mineral resource area.
- MR-3:** Future facilities shall be sited so as to avoid area mapped as locally important mineral resources on general plans, specific plans, or other land use plans.
- MR-4:** Easements shall be established, when necessary, to preserve possible future use of mineral resources.

#### ***3.2.8.8 Level of Significance after Mitigation***

With implementation of mitigation measures MR-1, MR-2, MR-3, and MR-4, potential impacts to mineral resources resulting from the Proposed Project would be less than significant.



### 3.2.9 Noise

#### 3.2.9.1 Introduction

This section evaluates the potential noise from the Proposed Project. The analysis consists of an evaluation of the potential noise impact that could result from the Proposed Project related to exceedance of noise standards, ground borne noise and vibrations, permanent noise increases, temporary noise increases, and excessive noise levels in the vicinity of public or private airports.

This section evaluates the potential impacts related to the adoption of the Proposed Project, and at a conceptual level, on new or expanded Solid Resource material transfer stations, truck base yards, and processing facilities to divert materials from landfills. Collection activities would occur on and from existing Commercial Establishments. New or expanded transfer stations, processing facilities, and truck base yards are expected to be sited on lands with industrial or commercial manufacturing zoning designation, but could include lands zoned for agricultural uses for Organics processing facilities. The new or expanded facilities, transfer stations, and truck base yards have not yet been proposed; therefore, the evaluation of these facilities and truck base yards in this section is at a conceptual level.

A summary of the anticipated noise impacts from the Proposed Project, based on the evaluation below, is contained in Table 3.2.9-1.

**TABLE 3.2.9-1  
SUMMARY OF IMPACTS RELATED TO NOISE**

Environmental Impact Area	Potential Impact	Mitigation	Significant Impact After Mitigation
<b>NOI-1: Noise Standards</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>NOI-2: Groundborne Noise and Vibration</b>			
Collection System	No	None Required	No
New or Expanded Facilities	No	None Required	No
<b>NOI-3: Permanent Noise Increases</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>NOI-4: Temporary Noise Increases</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>NOI-5: Excessive Noise Levels within 2 Miles of a Public Airport</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>NOI-6: Excessive Noise Levels within the Vicinity of a Private Airport</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>Cumulative Impacts</b>	Yes	Yes	No

### 3.2.9.2 Environmental Setting

The City is the second largest city in the nation with numerous noise sources, including aircraft, rail, highway and freeway transportation systems, and the day-to-day activities of its residential, commercial, and industrial uses. Transportation systems are a primary source of urban noise, and they include noise generated by truck traffic. The traffic noise generated by trucks includes the noise associated with existing collection activities for Solid Resources and Comingled Recyclables. There are areas within the City where sensitive noise receptor are located near or in areas that are generally industrial in nature. Examples include industrial buildings that have been converted to live/work spaces in industrial areas of the City, or areas where lands zoned for residential uses are located near lands zoned for industrial uses.

#### Noise Characteristics

Sound is technically described in terms of the loudness (amplitude) and frequency (pitch) of the sound. A logarithmic scale is used to quantify noise. The standard unit of measurement for sound is the decibel (dB). The human ear is not equally sensitive to sound at all frequencies. The "A-weighted scale," abbreviated dBA, reflects the normal hearing sensitivity range of the human ear. On this scale, the range of human hearing extends from approximately 3 to 140 dBA. (City of Los Angeles, 2006) Table 3.2.9-2 provides examples of A-weighted noise levels from common sounds.

**TABLE 3.2.9-2  
TYPICAL NOISE LEVELS IN THE ENVIRONMENT**

Common Outdoor Noise Source	Noise Level (dBA)	Common Indoor Noise Source
	120 dBA	
Jet fly-over at 300 meters		Rock concert
	110 dBA	
Pile driver at 30 meters	100 dBA	
		Night club with live music
	90 dBA	
Large truck passes by at 15 meters		
	80 dBA	Noisy restaurant
		Garbage disposal at 1 meter
Gas lawn mower at 30 meters	70 dBA	Vacuum cleaner at 3 meters
Commercial/Urban area daytime		Normal speech at 1 meter
Suburban expressway at 90 meters	60 dBA	
Suburban daytime		Active office environment
	50 dBA	
Urban area nighttime		Quiet office environment
	40 dBA	
Suburban nighttime		

**TABLE 3.2.9-2  
TYPICAL NOISE LEVELS IN THE ENVIRONMENT**

<b>Common Outdoor Noise Source</b>	<b>Noise Level (dBA)</b>	<b>Common Indoor Noise Source</b>
Quiet rural areas	30 dBA	Library
		Quiet bedroom at night
Wilderness area	20 dBA	
	10 dBA	Quiet recording studio
Threshold of human hearing	0 dBA	Threshold of human hearing

Source: Port of Los Angeles, 2012

Noise is defined generally as unwanted sound. The degree to which noise can affect the human environment range from levels that interfere with speech and sleep (annoyance and nuisance) to levels that cause adverse health effects (hearing loss and psychological effects). Human response to noise is subjective and can vary greatly from person to person. Factors that influence individual response include the intensity, frequency, and pattern of noise; the amount of background noise present before the intruding noise; and the nature of work or human activity that is exposed to the noise source. (City of Los Angeles, 2006)

#### Community Noise Equivalent Level

The community noise equivalent level (CNEL) is an average sound level during a 24-hour day. The CNEL noise measurement scale accounts for noise source, distance, single-event duration, single-event occurrence, frequency, and time of day. Humans react to sound between 7:00 p.m. and 10:00 p.m. as if the sound were actually 5 decibels higher than if it occurred from 7:00 a.m. to 7:00 p.m. From 10:00 p.m. to 7:00 a.m., humans perceive sound as if it were 10 dBA higher than if it occurred from 7:00 a.m. to 7:00 p.m. due to the lower background noise level. Hence, the CNEL noise measurement scale is obtained by adding an additional 5 decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m., and 10 dBA to sound levels in the night after 10:00 p.m. and before 7:00 a.m. Because CNEL accounts for human sensitivity to sound, the CNEL 24-hour figure is always a higher number than the actual 24-hour average. (City of Los Angeles, 2006)

#### Audible Noise Changes

Studies have shown that the smallest perceptible change in sound level for a person with normal hearing sensitivity is approximately 3 decibels. A change of at least 5 decibels would be noticeable and likely would evoke a community reaction. A 10 decibel increase is subjectively heard as a doubling in loudness and would most certainly cause a community response. For a noise level to increase by 3 dBA, the intensity of the noise source would have to double. For example, if a traffic noise is the predominant noise source, the traffic volume would have to double for a 3 dBA increase to occur at a fixed receptor.

Noise levels decrease as the distance from the noise source to the receiver increases. Noise generated by a stationary noise source, or "point source," will decrease by approximately 6 decibels over hard surfaces and 9 decibels over soft surfaces for each doubling of the distance. For example, if a noise source over hard surfaces produces a noise level of 89 dBA at a reference

distance of 50 feet, then the noise level would be 83 dBA at a distance of 100 feet from the noise source, 77 dBA at a distance of 200 feet, and so on.

Generally, noise is most audible when traveling along direct line-of-sight. Barriers, such as walls, berms, or buildings that break the line-of-sight between the source and the receiver greatly reduce noise levels from the source because sound can reach the receiver only by bending over the top of the barrier (diffraction). Sound barriers can reduce sound levels by up to 20 dBA. However, if a barrier is not high or long enough to break the line-of-sight from the source to the receiver, its effectiveness is greatly reduced. (City of Los Angeles, 2006)

### ***Vibration Characteristics***

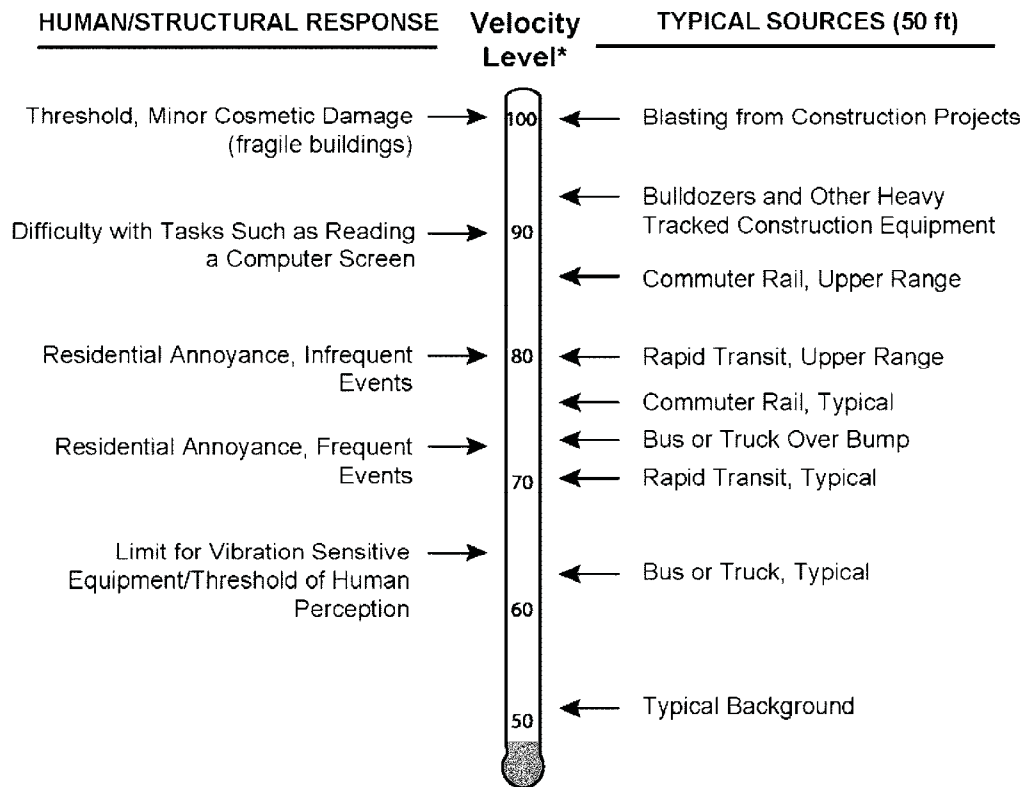
Groundborne vibration is measured in terms of the velocity of the vibration oscillations. As with noise, a logarithmic decibel scale is used to quantify vibration intensity. When evaluating human response, groundborne vibration is usually expressed in terms of root mean square (RMS) vibration velocity. RMS is defined as the average of the squared amplitude of the vibration signal. The vibration amplitude is expressed in decibels using a decibel reference of  $1 \times 10^{-6}$  inches/second. To avoid confusion with sound decibels, the abbreviation VdB is used for vibration decibels. (City of Los Angeles, 2006)

Figure 3.2.9-1 shows typical vibration levels from various sources as well as the human and structure response to such levels. The threshold of perception for most people is around 65 VdB. Vibration levels in the 70- to 80-VdB range are often noticeable but acceptable. Typically, vibration levels must exceed 100 VdB before building damage occurs, except for historic structures, which typically have a damage threshold of 95 VdB. (City of Los Angeles, 2006)

In addition, groundborne vibrations are often observed groundborne noise, as the vibrations move from the ground to structures.

### ***3.2.9.3 Regulatory Framework***

There are numerous federal, State, and local regulations and standards regarding noise that may be relevant to the Proposed Project. As discussed therein, federal noise standards have been set forth by the U.S. Department of Housing and Urban Development (HUD) for residential uses, while the State of California has established specific General Plan Guidelines that set forth acceptable noise categories for various types of land use. In addition, the City has established guidelines and regulations regarding noise within the Noise Element of its General Plan as well as within its Noise Regulation.



\* RMS Vibration Velocity in VdB relative to  $10^{-6}$  in/sec

Source: FTA, 1995; ATS Consulting, LLC, 2005

**FIGURE 3.2.9-1: TYPICAL VIBRATION SOURCES**

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 CITY OF LOS ANGELES, BUREAU OF SANITATION  
 November 2013

## **Federal**

The U.S. Department of Housing and Urban Development (HUD) provides noise standards for residential units developed under HUD funding. The HUD noise standards are included in Title 24 Part 51B of the Code of Federal Regulations (CFR). HUD has set a goal of 65 dBA Ldn (65 dBA CNEL for projects in California) as “acceptable” exterior noise standard for residential development and 45 dBA Ldn (45 dBA CNEL for projects in California) as a desirable maximum interior noise standard for residential units. While HUD noise standards do not apply to non-federally funded projects, they are generally consistent with standards used by other regulatory agencies, such as Federal Aviation Administration (FAA), as well as the State of California and City noise standards and building construction codes. As a note, some areas of the City have ambient noise levels that exceed these standards due to the level of urbanization and proximity to transportation noise sources. These standards are generally used by planning agencies during development of general plans, and when siting specific developments to assess compatibility and determine if noise mitigating measures should be incorporated into those developments.

## **State**

The State of California has adopted noise compatibility guidelines for general land use planning. The types of land uses addressed by the State standards and the acceptable noise categories for each land use are included in the *State of California General Plan Guidelines*, which are published and updated by the *Governor's Office of Planning and Research*. The level of acceptability of the noise environment is dependent upon the activity associated with the particular land use. According to the State, an exterior noise environment up to 65 dBA CNEL is “normally acceptable” for multifamily residential and hotel uses, without special noise insulation requirements, while 75 dBA CNEL and 80 dBA CNEL are identified as “clearly unacceptable” noise levels for residential and hotel uses, respectively.

## **Local City of Los Angeles Standards and Guidelines**

### **Noise Element**

The Noise Element of the City's General Plan establishes CNEL guidelines for land use compatibility and includes a number of goals, objectives, and policies for land use planning purposes. The City also has policies and regulations to control unnecessary, excessive, and annoying noise, as cited by the Los Angeles Municipal Code (LAMC) Chapter XI, Noise Regulations.

The overall purpose of the Noise Element of a General Plan is to protect citizens from the harmful and annoying effects of exposure to excessive noise. The following Noise Element policies relate to the Project:

- Policy 2.2: Enforce and/or implement applicable city, state, and federal regulations intended to mitigate proposed noise producing activities, reduce intrusive noise, and alleviate noise that is deemed a public nuisance.
- Policy 3.1: Develop land use policies and programs that would reduce or eliminate potential and existing noise impacts.

In addition, Appendix I of the Noise Element of the City's General Plan includes a table that identifies noise standards and the acceptable noise categories for each general land use type in the City. These standards are consistent with the State of California General Plan Guidelines. (City of Los Angeles, 1999)

### Noise Regulations

Chapter XI of the City of Los Angeles Municipal Code (Noise Regulation) establishes acceptable ambient sound levels to regulate intrusive noises (e.g., stationary mechanical equipment and vehicles other than those traveling on public streets) within specific land use zones. In accordance with the Noise Regulation, a noise level increase of 5 dBA (from regulated noise sources) over the existing ambient noise level at an adjacent property line is considered a noise violation. To account for people's increased tolerance for short-duration noise events, the Noise Regulations allows an additional 5 dBA increase for a noise lasting more than 5 but less than 15 minutes in any one-hour period (for a total of a 10 dBA increase above the ambient noise level), and an additional 5 dBA increase (for a total of a 15 dBA increase above the ambient noise level) for noise sources lasting 5 minutes or less in any one-hour period. The allowance for noise of short duration, as described in the LAMC, is provided as a negative adjustment to the measured sound level of the offending noise source and applicable during the hours of 7:00 a.m. to 10:00 p.m. In addition, noise sources that are repeated impulsive have a 5 dBA penalty (i.e., 5 dBA added to the measured impulsive sound to determine a noise violation). Impulsive sound as described by LAMC includes, but shall not be limited to, explosions, musical base drum beats, or the discharge of firearms.

The City's noise regulations include presumed daytime (7:00 a.m. to 10:00 p.m.) minimum ambient equivalent noise level (Leq) for properties zoned for residential use is 50 dBA, while the nighttime (10:00 p.m. to 7:00 a.m.) presumed minimum ambient noise level is 40 dBA. The presumed daytime minimum ambient noise level for properties zoned for commercial use is 60 dBA, while the nighttime presumed minimum ambient noise level is 55 dBA. The ambient noise levels in the Los Angeles downtown area typically exceed the City's presumed ambient noise levels.

Section 114.03 (Vehicles – Loading and Unloading) limits the operation of loading and unloading between the hours of 10:00 p.m. and 7:00 a.m. of the following day, which causes any impulsive sound, raucous or unnecessary noise within 200 feet of any residential building, including limiting Solid Resources pick-up between these hours. Loading and unloading, however, may occur between the hours of 6:00 a.m. to 11:00 p.m., if a permit is issued by the Department of Transportation.

In addition, the City's Noise Regulation (Section 112.05) limit noise from construction equipment located within any residential zone or within 500 feet of a residential zone to 75 dBA (Leq), measured at a distance of 50 feet from the source, unless compliance with this limitation is technically infeasible. Furthermore, the noise regulations prohibit construction activity, which makes loud noises to the disturbance of persons occupying sleeping quarters in any dwelling hotel or apartment or other places of residence between the hours of 9:00 p.m. and 7:00 a.m., Monday through Friday. The LAMC also prohibits construction activities on Saturday before 8:00 a.m. and after 6:00 p.m., or national holiday or at any time on Sunday, unless the City issues a permit for after-hours work.

#### 3.2.9.4 Significance Thresholds

The Proposed Project would have a significant impact to utilities if it would:

Impact NOI-1: Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Impact NOI-2: Expose persons to or generate excessive groundborne vibration or groundborne noise levels.

Impact NOI-3: Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

Impact NOI-4: Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

Impact NOI-5: Expose people residing or working in the project area to excessive noise levels if the project is located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport.

Impact NOI-6: Expose people residing or working in the project area to excessive noise levels if the project is located within the vicinity of a private airstrip or airport.

#### 3.2.9.5 Impact Analysis

***Impact NOI-1: The Proposed Project could potentially expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities under the Proposed Project (would replace the current collection activities where any number of Permitted Hauler trucks can collect Solid Resources from any area within the City. The proposed collection activities could result in some minor increases or decreases in weekly collection vehicle trips (relative to existing conditions) in each franchise zone, but the difference is considered minor. For a community noise level increase to be noticeable, the CNEL would generally have to increase by 3 dBA, which would require a doubling of the noise source. The change in collection activity trips relative to baseline would be a minor increase or decrease in number of collections and would not approach a doubling of the existing traffic, or a doubling of the vehicle miles traveled by collection vehicles; therefore, collection activities under the Proposed Project would not substantively or noticeably change the existing noise levels (CNEL) in any area of the City. Although there may be areas in the City that currently exceed recommended general plan noise levels, these represent existing conditions, and the collection activities under the Proposed Project are not expected to noticeably change these conditions. Therefore, collection activities under the Proposed Project would not result in substantively increased noise that could result in an exceedence of recommended general plan noise levels.

Future new and/or expanded processing facilities, transfer stations, and truck base yards would likely be located in industrial areas or on land zoned for industrial uses or commercial-manufacturing (due to the industrial nature of the facilities). Organics processing facilities could



also be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Industrial, manufacturing, and agricultural areas can have a noise level (CNEL) up to 74 dBA before the area is considered unacceptable, for purposes of considering land use siting. Activities at locations of future processing capacity, transfer stations, and truck base yards would include use of heavy equipment and/or heavy vehicles, which could be operated indoors or outdoors, and potentially could be operated at night. In addition, trips to and from the facilities, transfer stations and truck base yards would result in additional traffic noise. Ambient noise levels in industrial areas are generally a function of uses at the site, noise levels from nearby industrial uses, proximity to other noise sources such as highways and freeways, and the presence or absence of intervening structures that attenuate sound levels. Due to the uncertainty of future facility locations and the current traffic level in those vicinities, there is a potential for future facilities, transfer stations, and truck base yards to result in some permanent elevations in ambient noise from operations, including traffic noise.

Construction activities for future facilities will vary depending on the type of facility, but it is assumed that some type of grading and excavating would occur to prepare the site for structures. Additionally, equipment will be used to construct the facility and could include equipment such as cranes, concrete saws and pneumatic tools. Construction-related traffic, including construction crew trips and material deliveries are additional sources of noise associated with facility construction. Most of the heavy equipment that produces the highest noise levels would be in use during the excavation and grading phases of construction, as well as during the finishing phase of construction.

Therefore, there is a potential for new or expanded transfer stations, processing facilities and truck base yards to result in significant noise impacts.

Implementation of mitigation measures N-1 and N-9, described below, would mitigate potential noise impacts to less than significant levels.

Mitigation measure N-1 requires the preparation of a project-specific noise analysis once a facility has been proposed at a specific location. The project-specific noise analysis would determine the existing noise environment. It would also use project-specific traffic data to characterize the increase of the ambient noise environment due to the addition of traffic coming to and from the facility. Mitigation measure N-1 also requires further mitigation measures be implemented to reduce sound levels down to a level that is consistent with the applicable jurisdiction's noise ordinance or noise element.

Mitigation Measure N-9 requires operational noise levels from future facilities to not exceed the applicable community noise standards at the property line for future facilities, transfer stations and truck base yards.

***Impact NOI-2: The Proposed Project would not expose persons to or generate excessive groundborne vibration or groundborne noise levels.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities under the Proposed Project (3 collection routes per week for each franchise zone; one each for Solid Resources[Recyclables and Organics]) would replace the current collection activities where any number of Permitted Hauler trucks can collect Solid Resources and Recyclables from any area within the City. The proposed collection activities could result in some minor increases or decrease in weekly collection vehicle trips

(relative to existing conditions) in each franchise zone, but the difference is considered minor. As can be seen in Figure 3.2.9-1, vibration levels associated with a typical truck is at or below the threshold of perception (RMS vibration velocity less than  $65 \times 10^{-6}$  inches per second). This minimal level of vibration is not expected to translate into noticeable levels of groundborne noise in nearby structures. As a result, collection activities under the Proposed Project are not expected to substantively or noticeably change the existing levels of groundborne noise or groundborne vibration any area of the City. Therefore, collection activities under the Proposed Project would not expose persons to or generate excessive groundborne vibration or groundborne noise levels.

Future new and/or expanded processing facilities, transfer stations, and truck base yards would likely be located in industrial areas or on land zoned for industrial uses or commercial-manufacturing (due to the industrial nature of the facilities). Organics processing facilities could also be sited on lands zoned for agricultural uses, depending on the processing technology utilized. The construction of new or expanded processing facilities, transfer stations and truck base yards would involve excavation activities using heavy equipment, and could result in some vibrations and groundborne noise to nearby structures. However, potential vibration levels would likely be below levels that can cause damage to nearby structures. In addition, vibrations associated with processing activities and truck base yards would be consistent with those typically found in industrial and manufacturing areas. As a result, new processing capacity and truck base yards are not expected to result in excessive groundborne vibration or groundborne noise levels. Therefore, the propose project is not expected to result in significant impacts due to excessive groundborne vibration or groundborne noise levels.

***Impact NOI-3: The Proposed Project could result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities under the Proposed Project (3 collection routes per week for each franchise zone; one each for Solid Resources [Recyclables and Organics]) would replace the current collection activities where any number of Permitted Hauler trucks can collect these materials from any area within the City. The proposed collection activities could result in some minor increases or decrease in weekly collection vehicle trips (relative to existing conditions) in each franchise zone, but the difference is considered minor. For a community noise level increase to be noticeable, the CNEL would generally have to increase by 3 dBA, which would require a doubling of the noise source. The change in collection activity trips relative to baseline would be minor and would not approach a doubling of the existing traffic, and therefore, would not substantively or noticeably change the existing noise levels (CNEL) in any area of the City.

Future new and/or expanded processing facilities, transfer stations, and truck base yards, would likely be located in industrial areas or on land zoned for industrial uses or commercial-manufacturing (due to the industrial nature of the facilities). Organics processing facilities could also be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Construction activities would be short-term and therefore not anticipated to cause a substantial permanent increase in the ambient noise level. Activities at locations of future processing capacity, transfer stations and base yards would include use of heavy equipment and/or operation of heavy duty vehicles that could be operated indoors or outdoors, day or night, and as such, processing capacity sites could result in some elevated noise levels due to operations. Factors affecting noise levels from new facilities, transfer stations, and base yards include site layout, the height and composition of perimeter walls, noise suppression devices on equipment and vehicles, and other

factors. In addition, trips to and from the facilities, transfer stations and truck base yards could result in elevated noise levels. Although elevated noise levels in industrial, manufacturing, and agricultural areas are not generally considered to be significant due the presence of noise-generating manufacturing activities, traffic, equipment, and the lack of proximity to sensitive receptors such as residences and schools, the specific noise settings associated with future facilities are unknown. Due to the uncertainty of future facility locations and the current traffic level in those vicinities, there is a potential for future facilities, transfer stations, and truck base yards to result in some permanent elevations in ambient noise from operations, including traffic noise. Therefore, there is a potential for new or expanded transfer stations, processing facilities and truck base yards to result in significant permanent increases in noise levels.

Implementation of mitigation measures N-1 and N-9, described below, would mitigate potential noise impacts to less than significant levels.

***Impact NOI-4: The Proposed Project could result in substantial temporary or periodic increases in ambient noise levels in the project vicinity above levels existing without the project.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities under the Proposed Project (3 collection routes per week for each franchise zone; one each for Solid Resources [Recyclables and Organics]) would replace the current collection activities where any number of Permitted Hauler trucks can collect these materials from any area within the City. The proposed collection activities could result in some minor increases in weekly collection vehicle trips (relative to existing conditions) as collection vehicles traverse their service areas (franchise zones), but the difference is considered minor. In addition, there would be minor increases short-term elevations of ambient noise levels associated with collection vehicles transferring Solid Resources, Recyclables, or Organics from their bins to the trucks, but these activities would be of very short duration (several minutes) and would occur only once a week for each bin type. These short duration noise increases are consistent with existing Solid Resource collection activities that occur throughout the City, and are expected to be consistent with the City's noise regulations. Therefore, short duration elevations in noise related to materials transfer from bins to collection vehicles would not represent a substantial temporary or periodic increase in ambient noise levels in the project vicinity.

Future new and/or expanded processing facilities, transfer stations, and truck base yards, would likely be located in industrial areas or on land zoned for industrial uses or commercial-manufacturing (due to the industrial nature of the facilities). Organics processing facilities could also be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Activities at locations of future processing capacity, transfer stations, and truck base yards would include use of heavy equipment during construction, and as such, would result in temporary elevated noise levels in their vicinity. Elevated noise levels in industrial, manufacturing, and agricultural areas are not generally considered to be significant due the presence of noise-generating manufacturing activities, traffic, equipment, and the lack of proximity to sensitive receptors such as residences and schools. However, in the event a facility, transfer station, or truck base yard are sited an area that also has sensitive receptors in the vicinity, there is a potential for construction to result in a significant noise impact on those receptors.

Implementation of mitigation measures N-1 through N-8 would reduce potentially significant noise impacts on sensitive receptors resulting from facility construction to less than significant levels.

These measures require a project-specific noise study, limiting construction to the daytime hours, providing temporary barriers near sensitive receiving properties, and ensuring that construction equipment is adequately maintained and muffled.

***Impact NOI-5: The Proposed Project could expose people residing or working in the project area to excessive noise levels for portions of the project that are located within an airport land use plan or within 2 miles of a public airport or public use airport.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities under the Proposed project would not involve physical disturbances, or the placement of structures at any collection locations. Although collection activities would occur from establishments within 2 miles of a public airport, collection would not result in substantially elevated ambient noise levels, as described above, and would not result in changes in airport noise contours. Therefore, the Proposed Project would not expose people residing or working in the vicinity of a public use airport to excessive noise levels.

Future new and/or expanded processing facilities, transfer stations, and truck base yards, would likely be located in industrial areas or on land zoned for industrial or commercial-manufacturing uses (due to the industrial nature of the facilities). Organics processing facilities could also be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Airport land use plans generally limit industrial uses within the plan area to aviation-related industrial uses, which would generally preclude placement of processing facilities and truck base yards within such plan areas. Processing facilities, transfer stations, and truck base yards are, therefore, not expected to occur within an airport land use plan area, but could occur within 2 miles of an airport if industrial zones are located in their vicinity. If future facilities are placed within high noise level contours from a public airport, there is a possibility of people working in the facility to be exposed to airport-related noise, potentially resulting in a significant noise impact.

Implementation of mitigation measure N-10 would reduce this potential impact to below a level of significance. Mitigation measure N-10 requires the preparation of a project-specific noise study to include an analysis of the potential for the facility's adjacency to an airport to result in exposure of employees to excessive noise levels. If excessive noise levels are identified, mitigation measures shall be implemented to reduce the interior noise levels to acceptable and applicable community noise levels.

***Impact NOI-6: The Proposed Project could expose people residing or working in the project area to excessive noise levels for portions of the project that are located within the vicinity of a private airstrip or airport.***

There are numerous private airports in Los Angeles and the vicinity, which serve the aviation, hospital, news, public safety (such as police and fire stations), and other industries. The majority of these private airports are heliports atop structures, but they also include airports such as the Goodyear Blimp Base Airport in Carson.

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities under the Proposed Project would not involve physical disturbances, or the placement of structures at any collection locations. Although collection activities could occur from establishments within the vicinity of a private airport, collection would not result in substantially elevated ambient noise levels, as described above,

and would not result in changes in airport noise contours. Therefore, the Proposed Project would not expose people residing or working in the vicinity of a private airport (or airstrip) to excessive noise levels.

Future new and/or expanded processing facilities, transfer stations, and truck base yards, would likely be located in industrial areas or on land zoned for industrial or commercial-manufacturing uses (due to the industrial nature of the facilities). Organics processing facilities could also be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Processing facilities, transfer stations, and truck base yards could potentially be sited in industrial or manufacturing areas, which could occur within the vicinity of a private airport. If future facilities are placed within high noise level contours from a public airport, there is a possibility of people working in the facility to be exposed to airport-related noise, potentially resulting in a significant noise impact.

Implementation of mitigation measure N-10 would reduce this potential impact to below a level of significance.

#### *3.2.9.6 Cumulative Impacts*

The collection activities under the Proposed Project are not anticipated to result in significant impacts to sensitive receptors from noise. Therefore, collection activities under the Proposed Project would not make a considerable contribution to a significant cumulative noise impact.

The Proposed Project could result in new or expanded facilities, transfer stations, and truck base yards that could result in noise impacts. In order for additive noise or cumulative noise impacts to occur, Project facilities, transfer stations and truck base yards would have to be located in close proximity to new facilities associated with related projects and diversion programs. For additive construction noise impacts to occur, the related project facilities and Proposed Project facilities would have to both be sited close to one another, and be constructed concurrently, or at least have overlapping construction schedules. Although the locations of Project facilities and related project facilities are unknown, if they are sited close to one another, there is a potential for significant cumulative noise impacts to occur.

Mitigation measures N-1 through N-8 would be implemented to reduce potential impacts of new transfer stations, processing facilities and truck base yards, and Organic processing facilities under the Proposed Project to a less than significant level. Therefore, after mitigation, the Proposed Project would not make a considerable contribution to a significant cumulative impact resulting from noise.

It is the presumption that new or expanded transfer stations, processing facilities and truck base yards that could be located with the City or in other jurisdiction would be subject to the same regulatory requirements and/or similar mitigation measures as those identified below for the Proposed Project to avoid and/or minimize the impacts of the construction and operation of such new or expanded facilities to a level of less than significant. Cumulative impacts associated with new or expanded facilities, truck base yards and Organic processing facilities will be further addressed in the project specific environmental documentation prepared by the Lead Agency for the jurisdiction in which such new or expanded facilities are located.

### 3.2.9.7 Mitigation Measures

The Proposed Project could potentially result in significant noise impacts from the siting of new or expanded processing facilities, transfer stations, and truck base yards. The following mitigation measures are recommended:

- N-1:** A noise study shall be prepared for future facilities<sup>1</sup>. The noise study shall include measurements of the existing noise environment and quantify the facility's noise contribution to the ambient environment for both the construction and operation phase. If impacts are identified, mitigation measures shall be implemented to reduce sound levels to a level that is consistent with the applicable jurisdiction's noise ordinance or noise element. Such mitigation measures could include, but are not limited to: fencing; noise walls; or increasing the distance between noise generating equipment and off-site sensitive receptors. The noise study shall be submitted to, and approved by, the Planning Director, or designee, of the jurisdiction where the facility will be constructed.

#### Construction-Related Noise Mitigation (N-2 through N-8)

- N-2:** Construction activities shall be limited to 7:00 AM to 7:00 PM, Monday through Saturday. If the local jurisdiction has more stringent construction timing limits, those limits shall be applied.
- N-3:** The construction contractor shall operate and maintain a City-approved haul truck traffic route along major traffic arteries.
- N-4:** All construction equipment shall be equipped, operated, and maintained with manufacturer-recommended mufflers or the equivalent.
- N-5:** Mobile and stationary construction equipment shall be turned-off when not in operation.
- N-6:** All stationary noise-generating construction equipment, such as pumps and generators, shall be located as far as possible from nearby noise-sensitive receptors. Noise-generating equipment shall be shielded from nearby noise sensitive receptors by noise-attenuating buffers, such as structures or haul truck trailers. Water tanks and equipment storage, staging, and warm-up areas will be located as far from noise sensitive receptors as possible.

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<sup>1</sup> The City, acting as Lead CEQA Agency, may not require preparation of a noise study during CEQA documentation for facilities located in industrial areas due to the lack of sensitive receptors in the vicinity. In this case, the City may chose to qualitatively evaluate potential noise impacts within the CEQA documentation (accepted when a Negative Declaration is determined to be appropriate CEQA documentation) which may not include or require measurement of ambient noise levels.

#### Operational-Related Noise Mitigation (N-9)

- N-7:** Operational activities at future facilities shall not produce noise levels at the property line that exceed the levels identified in the applicable jurisdiction's noise ordinance. If proposed activities are forecast to exceed applicable noise standard levels at the property line, noise attenuation measures shall be implemented or incorporated in the facility design to reduce the operational noise level at the property line noise levels to the applicable community noise standard level. Such measures could include, but are not limited to, fencing, sound walls, and screening of mechanical equipment.

#### Noise Mitigation for Facilities Proximate to Public and Private Airports

- N-8:** If future facilities are proposed within two miles of a public or private airport, the project-specific noise study shall include an analysis of the potential for the facility's adjacency to an airport to result in exposure of employees to excessive noise levels. If excessive noise levels are identified, mitigation measures shall be implemented to reduce the interior noise levels to acceptable levels. Such mitigation could include, but is not limited to, enhanced insulation or dual-paned windows.

#### *3.2.9.8 Level of Significance after Mitigation*

With implementation of mitigation measures N-1 through N-8, potential noise impacts from the Proposed Project would be less than significant.

### 3.2.10 Population-Housing

#### 3.2.10.1 Introduction

This section evaluates the potential impacts to population and housing from the Proposed Project. The analysis consists of an evaluation of the potential impact the Proposed Project could have on population growth (direct or indirect) and displacement of existing housing or people, necessitating the construction of replacement housing elsewhere.

The impact evaluation focuses on the collection of Solid Resources from Commercial Establishments to divert materials from landfills, and at a conceptual level, on new or expanded processing facilities which would be required to process diverted materials, and new or expanded truck base yards. Collection activities would occur on and from existing Commercial Establishments. New or expanded processing facilities and truck base yards are expected to be sited on lands with industrial or commercial manufacturing zoning designation, but could include lands zoned for agricultural uses for Organics processing facilities. The new or expanded facilities and truck base yards have not yet been proposed; therefore, the evaluation of these facilities in this section is at a conceptual level.

A summary of the Proposed Project's anticipated impacts on population and housing, based on the evaluation below, is contained in Table 3.2.10-1.

**TABLE 3.2.10-1  
SUMMARY OF IMPACTS RELATED TO POPULATION AND HOUSING**

Environmental Impact Area	Potential Impact	Mitigation	Significant Impact After Mitigation
<b>PH-1: Population Growth</b>			
Collection System	No	None Required	No
New or Expanded Facilities	No	None Required	No
<b>PH-2: Existing Housing</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>PH-3: Existing Residents</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>Cumulative Impacts</b>	Yes	Yes	No

#### 3.2.10.2 Environmental Setting

The City covers a highly urbanized, densely populated area having a generally declining growth rate over the last several decades, with the last decade (2000 to 2010) having the slowest growth rate of 0.3 percent, as shown in Table 3.2.10-2. According to the United States Census Bureau, the total population in the City was approximately 3.86 million in 2012 (U.S. Census Bureau, 2013). The total population in the County of Los Angeles was approximately 9.96 million and approximately 38 million in the State of California over the same period (U.S. Census Bureau, 2013a). Within the City, nearly 50 percent of the population is Caucasian (white) and 48.5 percent is Hispanic/Latino, with the balance of the population being Asian, Black, and Native American. Between 2010 and 2013, there was an average annual compounded growth in population of



0.2 percent within the City, which was one-third the level of the annual compounded growth rate (0.6 percent) for the State of California (DOF, 2013a). The City has seen exponential growth since the initial U.S. Census counts in 1890, as shown in Table 3.2.10-2.

**TABLE 3.2.10-2  
CITY OF LOS ANGELES, HISTORICAL POPULATION  
AND GROWTH RATES BY CENSUS**

Year	Population	Average Annual Compounded Growth Rate during the Prior Decade
1890	50,395	---
1900	102,479	7.4%
1910	319,198	12.0%
1920	576,673	6.1%
1930	1,238,048	7.9%
1940	1,504,277	2.0%
1950	1,970,358	2.7%
1960	2,479,015	2.3%
1970	2,816,061	1.3%
1980	2,966,850	0.5%
1990	3,485,398	1.6%
2000	3,694,820	0.6%
2010	3,792,621	0.3%

Source: U.S. Census, <http://factfinder2.census.gov/>

As of January 1, 2013, Los Angeles County and the City of Los Angeles had a total of 3,463,382 and 1,425,372 housing units, respectively (DOF, 2013a). Housing estimates by the City, Los Angeles County, and the State of California are presented in Table 3.2.10-3. In Los Angeles County, single-family homes accounted for 1,948,879 units; multifamily dwellings accounted for 1,456,213 units; and mobile homes accounted for 58,290 units. In the City, single-family homes accounted for 644,051 units; multifamily dwellings accounted for 771,240 units; and mobile homes accounted for 10,081 units. New housing authorizations for Los Angeles County totaled 7,468 units in 2010, of which about 32.7 percent were single-family units and 67.3 percent were multifamily units (DOF, 2013b). These authorizations were valued at \$2,842,479. The median home price in Los Angeles County in June 2013 was \$440,000. Median home prices in the City ranged (by zip code) from \$187,000 to \$1.6 million, with an average of \$613,890 (DataQuick, 2013). As of January 1, 2013, vacancy rates for Los Angeles County and the City were 5.9 percent and 6.8 percent, respectively (DOF, 2013a). As such, housing supply is not considered to be limited in the City because the vacancy rate exceeds the federal standard vacancy rate of 5.0 percent.

**TABLE 3.2.10-3  
2013 HOUSING ESTIMATES BY CITY, COUNTY, AND STATE**

Area	Total Units	Single-Family	Multifamily	Mobile Homes	Percent Vacant
City of Los Angeles	1,425,372	644,051	771,240	10,081	6.8
Los Angeles County	3,463,382	1,948,879	1,456,213	58,290	5.9
California	13,785,797	8,983,275	4,243,133	559,389	8.1

Source: DOF, 2013a

### *3.2.10.3 Regulatory Framework*

The 2006-2014 Housing Element of the General Plan is the City's blueprint for meeting the housing and growth challenges in the City. The Housing Element identifies the City's housing conditions and needs, and identifies goals, objectives, and policies that are the foundation of the City's housing and growth strategy. In addition, it provides the array of programs the City has committed to implement to create sustainable, mixed-income neighborhoods across the City (City of Los Angeles, 2009b).

Housing Element Policy 2.3.4, which applies to solid waste collection, states, "Promote and facilitate reduction of waste in construction and building operations."

As part of this Policy 2.3.4, the Housing Element identifies Program C - Recycling Collection in Residential Development, which specifically applies to the Proposed Project. Program C - Recycling Collection in Residential Development states:

"Provide on-site recycling bins and weekly curbside pick-up for all residential developments. Single-family homes and multifamily complexes under five units are provided with recycling service directly from the City's Bureau of Sanitation. Expand recycling program citywide to all multifamily complexes on a voluntary basis through a City-contracted waste hauler."

### *3.2.10.4 Significance Thresholds*

The Proposed Project would have a significant impact to population or housing if it would:

Impact PH-1: Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).

Impact PH-2: Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.

Impact PH-3: Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

### 3.2.10.5 Impact Analysis

***Impact PH-1: The Proposed Project would not induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City.

The development of new or expanded transfer stations, processing facilities, truck base yards, and Organics processing facilities would likely result in the creation of some additional jobs, which could result in a slight increase in demand for housing. However, the number of additional jobs created would be small, especially in comparison to the City's population. Therefore, the Proposed Project is not expected to induce substantial population growth.

Because specific locations for new or expanded transfer stations, processing facilities, truck base yards, and Organics processing facilities have not been identified (such new or expanded facilities could be located both within the City and in other jurisdictions outside the City), the potential locations for new residential units (if needed) are unknown at this time. However, vacancy rates in both the City and Los Angeles County exceed 5 percent; therefore, sufficient housing and vacancies exist to absorb a minor increase in population.

Furthermore, although processing capacity is considered a key component of Solid Resource diversion infrastructure, as are truck base yards that support collection, Solid Resource diversion programs are not likely a driving factor in determining whether people (other than as a result of new jobs created) or businesses locate within the City. Therefore, additional processing capacity and truck base yards are not expected to indirectly induce substantial population growth.

Consequently, the Proposed Project may result in a small increase in population from the modest number of jobs created; however, it is not expected to induce substantial population growth in an area, either directly or indirectly. Therefore, impacts would be less than significant.

***Impact PH-2: The Proposed Project could displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials from the Solid Resource collection activities would occur in developed areas of the City using existing infrastructure, and would not result in removal or displacement of any existing housing, necessitating the construction of replacement housing elsewhere.

Future new or expanded transfer stations, processing facilities and new truck base yards would likely be located in industrial areas or on land zoned for industrial uses due to the industrial nature of the facilities. Organics processing facilities could be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Industrial areas and agricultural areas in the City are established in the General Plan and generally preclude residences. It is unlikely that housing would be demolished to accommodate future new or expanded facilities. However, outside the City, there is the possibility that lands zoned for industrial or agricultural uses could contain residences. As a consequence, if the expanded or new transfer stations, processing facilities and truck base yards would be located on lands zoned for industrial uses or agriculture that contain

residences, they could result in adverse impacts to existing housing from construction-related disturbances and site development. If displacement of housing were to occur, implementation of mitigation measures PH-1 and PH-2 would mitigate the adverse impacts to below a level of significance.

Under mitigation measure PH-1, property owners shall be appropriately compensated, and displaced people shall be relocated, if future new or expanded facilities result in the displacement of existing residential units.

Under mitigation measure PH-2, all applicable federal, state, and local laws regarding acquisition of property, compensation to displaced property owners or tenants, and relocation assistance and benefits for persons who may be displaced shall be adhered to or exceeded, if acquisition of public or private residences are necessary.

***Impact PH-3: The Proposed Project could displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials from the Solid Resource collection activities would occur within developed areas of the City using existing infrastructure, and is not expected to result in removal or displacement of people that would necessitate the construction of replacement housing elsewhere.

Future new or expanded transfer stations, processing facilities, and new truck base yards would likely be located in industrial areas or on land zoned for industrial uses due to the industrial nature of the facilities. Organics processing facilities could be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Industrial areas and agricultural areas in the City are established in the General Plan and generally preclude residences. It is unlikely that residents would be displaced to accommodate future new or expanded facilities. However, outside the City, there is the possibility that people reside on lands zoned for industrial or agricultural uses. As a consequence, if the expanded or new transfer stations, processing facilities and truck base yards would be located on lands zoned for industrial uses or agriculture that house residents, they could result in adverse impacts to existing housing from construction-related disturbances and site development. If displacement of residents were to occur, implementation of mitigation measures PH-1 and PH-2 would mitigate the adverse impacts to below a level of significance.

#### ***3.2.10.6 Cumulative Impacts***

The collection activities under the Proposed Project would not affect population and housing because population growth, displacement of residents and housing would not occur. Therefore, collection activities under the Proposed Project would not make a considerable contribution to a significant cumulative impact to population and housing.

The Proposed Project could cause the need for new or expanded transfer stations, processing facilities, truck base yards, and Organics processing facilities. Although construction and operation of the related project facilities could increase employment, which could result in shifts in population and/or increases in demand for housing, the level of cumulative employment is not expected to be substantial, and significant cumulative population impacts are not anticipated. If, however, those related facilities occur on lands that contain existing residences, they could result in impacts to

housing. Mitigation measures PH-1 and PH-2 would be implemented to reduce potential impacts of new transfer stations, processing facilities, truck base yards, and Organics processing facilities under the Proposed Project to a less-than-significant level. Therefore, after mitigation, the Proposed Project would not make a considerable contribution to a significant cumulative impact to population and housing.

It is the presumption that new or expanded transfer stations, processing facilities, and truck base yards that could be located in the City or in other jurisdiction would be subject to the same regulatory requirements and/or similar mitigation measures as those identified below for the Proposed Project to avoid and/or minimize the impacts of the construction and operation of such new or expanded facilities to a level of less than significant. Cumulative impacts associated with new or expanded processing facilities, truck base yards, and Organics processing facilities will be further addressed in the project-specific environmental documentation prepared by the lead agency for the jurisdiction in which such new or expanded facilities are located.

#### *3.2.10.7 Mitigation Measures*

The Proposed Project could result in significant impacts from the displacement of people or existing housing due to the siting of new or expanded transfer stations, processing facilities, and truck base yards, necessitating the construction of replacement housing elsewhere. The following mitigation measures are recommended:

- PH-1:** If future new or expanded facilities result in the displacement of existing residential units or persons, appropriate compensation to property owners or relocation of displaced people shall occur.
- PH-2:** If acquisition of public or private residences is necessary for construction of future new or expanded facilities, all applicable federal, state, and local laws regarding acquisition of property, compensation to displaced property owners or tenants, and relocation assistance and benefits for persons who may be displaced shall be adhered to or exceeded, as appropriate.

#### *3.2.10.8 Level of Significance after Mitigation*

With implementation of mitigation measures PH-1 and PH-2, potential impacts to population and housing resulting from the Proposed Project would be less than significant.

### 3.2.11 Public Services

#### 3.2.11.1 Introduction

This section evaluates the potential impacts to public services from the Proposed Project. The analysis consists of an evaluation of the potential impact that the Proposed Project would have on public services, including fire, police, school, and park facilities.

The impact evaluation focuses on the collection of Solid Resource materials diverted from landfills, and at a conceptual level, on new or expanded processing facilities which would be required to process diverted materials, and new or expanded truck base yards. Collection activities would occur on and from existing Commercial Establishments. New or expanded processing facilities and truck base yards are expected to be sited in industrial areas as well as on lands with industrial or commercial manufacturing zoning designation, but could include lands zoned for agricultural uses for Organic processing facilities. The new or expanded facilities and truck base yards have not yet been proposed; therefore, the evaluation of these facilities in this section is at a conceptual level.

Table 3.2.11-1 provides a summary of the Proposed Project's anticipated impacts on public services resources, based on the evaluation that follows.

**TABLE 3.2.11-1  
SUMMARY OF IMPACTS RELATED TO PUBLIC SERVICES**

Environmental Impact Area	Potential Impact	Mitigation	Significant Impact After Mitigation
<b>PS-1: Fire Protection Facilities</b>			
Collection System	No	None Required	No
New or Expanded Facilities	No	None Required	No
<b>PS-2: Police Protection Facilities</b>			
Collection System	No	None Required	No
New or Expanded Facilities	No	None Required	No
<b>PS-3: Schools</b>			
Collection System	No	None Required	No
New or Expanded Facilities	No	None Required	No
<b>PS-4: Park Facilities</b>			
Collection System	No	None Required	No
New or Expanded Facilities	No	None Required	No
<b>PS-5: Other Public Facilities</b>			
Collection System	No	None Required	No
New or Expanded Facilities	No	None Required	No
<b>Cumulative Impacts</b>	No	None Required	No

The analysis of public services consists of a summary of the regulatory framework to be considered during the decision-making process, a description of the existing conditions within the City, thresholds for determining if the Proposed Project would result in significant impacts, anticipated impacts (direct, indirect, and cumulative), identifying mitigation measures, and level of significance after mitigation. The potential for impacts to public health has been analyzed in

accordance with Appendix G of the State CEQA Guidelines; California Fire Code, California Education Code and local Los Angeles ordinances.

### *3.2.11.2 Environmental Setting*

The Los Angeles Police Department (LAPD) provides police protection services in the City. In addition to administrative and special investigative units, the City is divided into four smaller operational units, or bureaus: Central Bureau, South Bureau, West Bureau, and Valley Bureau. To facilitate response times, LAPD has approximately 21 individual police stations throughout the bureaus. LAPD employs approximately 10,000 sworn and over 3,500 civilian personnel (LAPD, 2013), providing an average of approximately 2.4 officers for every 1,000 residents. (LAPD, 2008)

The Los Angeles Fire Department (LAFD) is a full-spectrum life safety agency, providing fire suppression, emergency medical care, technical rescue, hazardous materials handling, disaster response, and community service to the City. The Board of Fire Commissioners, a five-person civilian board appointed by the Mayor and affirmed by the City Council, oversees the LAFD. The LAFD has 3,586 uniformed personnel and 353 support personnel at 106 neighborhood fire stations serving a 471-square-mile jurisdiction (LAFD, 2013). The location and number of stations that would be called in the event of a fire or other emergency depends on a number of factors including the type of emergency, severity of emergency, and availability of nearest fire station. In actuality, the resources of the entire LAFD force could be available collectively. (City of Los Angeles, 2006)

The Los Angeles Unified School District (LAUSD) is the primary school district within the City. The LAUSD boundaries include more than 720 square miles (that includes the City and all or part or all of 31 smaller municipalities plus several unincorporated sections of Southern California), with over 640,000 enrolled students in kindergarten through 12th grade, at over 900 schools and 187 public charter schools. (LAUSD, 2013).

Since 1960, the LAUSD student population has increased by roughly 250,000 students and shifted dramatically from 85 percent white, mostly middle-class to four-fifths Asian, Black, and Latino families, typically living in low-income neighborhoods. The District had not built a new school since the 1930s. So, by the 1990s almost 25,000 children were bused out of high-density areas to faraway schools with sufficient space. In addition, numerous overcrowded schools were operating year-round and on multiple shifts to accommodate the increasing school enrollment. LAUSD students have lower standardized test scores as compared to other school districts in southern California and at the overall state level. The public response to the overcrowding prompted passage of \$19.5 billion of bonds that were used to fund a construction of new school facilities between 2002 through 2008, alleviating overcrowding and subsequently improving test scores. (Welsh et al., 2012)

The Los Angeles Department of Recreation and Parks administer over 15,700 acres of parkland, including 4,282 acres in Griffith Park. Additional parks and recreational facility information is contained in Section 3.2.12, Recreation.

### *3.2.11.3 Regulatory Framework*

No federal agencies or regulations are applicable to the analysis of public services.

**State****California Fire Code**

The Office of the State Fire Marshal's Code Development and Analysis Division reviews all of California's regulations relating to fire and life safety for relevancy, necessity, conflict, duplication and/or overlap. The division also prepares the California State Fire Marshal's fire and life safety regulations and building standards for review and adoption by the California Building Standards Commission. (OSFM, 2013)

The California Fire Code (CFC, California Code of Regulations, Title 24, Part 9) establishes regulations affecting or relating to buildings, structures, processes, premises and a reasonable degree of life and property safeguards regarding:

1. The hazard of fire and explosion arising from the storage, handling or use of structures, materials, or devices;
2. Conditions hazardous to life, property or public welfare in the use or occupancy of, buildings, structures, or premises;
3. Fire hazards in the buildings, structures or on premises from use of, occupancy of, or operation;
4. Matters related to the construction, extension, repair, alteration or removal ,of fire suppression or alarm systems;
5. Conditions affecting the safety of fire fighters and emergency responders during emergency operations.

The CFC applies to all occupancies and applications not regulated by a state agency.

**California Education Code**

Each of the state school districts is subject to the regulations of the California Education Code and the governance of the State Board of Education relative to funding, school curriculum, operations, and facilities (including location considerations). The State Board of Education also governs the structure of the school, the classroom size, and inter-district transfers for students between school districts. (City of Los Angeles, 2006)

**Local City of Los Angeles****Fire Code**

Chapter 5, Article 7 of the Los Angeles Municipal Code governs Fire Protection and Prevention for structures within the City (Art. 7, Ch. V, Amended in Entirety, Ord. No. 162,123, Eff. 5/12/87). The Fire Code prescribes laws for the safeguarding of life and property from fire, explosion, panic, or other hazardous conditions which may arise in the use or occupancy of buildings, structures, or premises within the City.



The Los Angeles Fire Department is undergoing a process to update the Fire Code to integrate the current Los Angeles Fire Code with the International Fire Code (IFC)<sup>1</sup> /California Fire Code (CFC) and publish the IFC/CFC with Los Angeles Fire Code Amendments, which will be known as the new "Los Angeles Fire Code."

#### *3.2.11.4 Significance Thresholds*

The Proposed Project would have a significant impact to public services if it would:

Impact PS-1: Result in or require the provision of new or physically altered fire protection facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives.

Impact PS-2: Result in or require the provision of new or physically altered police protection facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives.

Impact PS-3: Result in or require the provision of new or physically altered schools, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives.

Impact PS-4: Result in or require the provision of new or physically altered park facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives.

Impact PS-5: Result in or require the provision of new or physically altered public facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives.

#### *3.2.11.5 Impact Analysis*

***Impact PS-1: The Proposed Project would not result in or require the provision of new or physically altered fire protection facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives.***

The adoption of the Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities would occur within developed areas of the City using existing infrastructure, and would not result in the need for new or altered fire protection facilities in order to maintain acceptable service ratios, response times or other performance objectives.

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<sup>1</sup> Internationally, code officials recognize the need for a modern, up-to-date fire code addressing conditions hazardous to life and property from fire, explosion, handling or use of hazardous materials and the use and occupancy of buildings and premises. The International Fire Code® (2012 edition) is designed to meet these needs through model code regulations that safeguard the public health and safety in all communities, large and small. This comprehensive fire code establishes minimum regulations for fire prevention and fire protection systems using prescriptive and performance-related provisions (International Code Council. 2012.)

Future new and/or expanded processing facilities that would handle/process increased Comingled Recyclables and Organics to be diverted from disposal at processing facilities, as well as new base yards, would likely be located in industrial areas or on land zoned for industrial uses (due to the industrial nature of the facilities). Industrial areas are generally established in the applicable General Plan. Organics processing facilities could also be sited in industrial areas as well as on lands zoned for agricultural uses, depending on the processing technology utilized. New or expanded facilities and truck base yards would be subject to standard code compliance reviews that occur during the building permit process, and these reviews ensure that applicable fire, life, and safety code requirements are complied with. Compliance with applicable sections of the Fire Code and the California Fire Code is expected to keep future processing facilities and base yards from resulting in the need for new or expanded fire protection facilities.

The ability of a fire department to respond to potential fire calls will depend on the location of the new facilities in relation to a station, as well as staffing at that station. At this time, the specific location of future facilities has not been identified. Development projects within the City and other jurisdictions are required to pay development impact fees, a portion of which pays for the increased demand for fire protection services. Such fee payments would be required of future facilities that are constructed to go towards the acquisition of additional fire personnel and equipment. Payment of these fees, which would be required as part of the development of future facilities, would reduce potential impacts to fire protection services to a less than significant level. In addition, the modest increase in population that could result from the increase in employment (see Section 3.2.10, Population and Housing) would be minor and not create a need for additional fire protection facilities.

Therefore, the Proposed Project is not expected to result in the need for or provision of new or physically altered fire protection facilities, or impacts associated with their alteration or construction.

Once new processing facilities and base yards are proposed and their locations identified, they would be further evaluated in site-specific CEQA environmental documentation at that time.

***Impact PS-2: The Proposed Project would not result in or require the provision of new or physically altered police protection facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives.***

The adoption of the Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials within the Solid Resource collection activities would not result in development or increased population that could increase demand for police protection services. Therefore, collection activities under the Proposed Project would not require the need for, or the provision of, new or physically altered police protection facilities.

Future new and/or expanded processing facilities that would handle/process increased Comingled Recyclables and Organics processing, as well as new base yards, would likely be located in industrial areas or on land zoned for industrial uses (due to the industrial nature of the facilities), which are generally established in the applicable General Plan. Organic processing facilities could also be sited in industrial areas as well as on lands zoned for agricultural uses, depending on the processing technology utilized. New processing capacity and base yards would likely be added in areas already within established police service areas; and the relatively benign nature of the

processing facilities (further separation of distinct streams of recyclable materials from Comingled Recyclables and separation of Organics) and base yards (collection vehicle storage and support) are not expected to substantively increase demand for police services or the need for new or expanded police protection facilities. In addition, the modest increase in population that could result from the increase in employment (see Section 3.2.10, Population and Housing) would be minor and not create a need for additional police protection facilities. Development projects within the City and other jurisdictions are required to pay development impact fees, a portion of which pays for the increased demand for police protection services. Such fee payments would be required of future facilities that are constructed to go towards the acquisition of additional police protection personnel and equipment. Payment of these fees, which would be required as part of the development of future facilities, would reduce potential impacts to police protection services to a less than significant level.

Once new processing facilities and base yards are proposed and their locations identified, they would be further evaluated in site-specific CEQA environmental documentation at that time.

***Impact PS-3: The Proposed Project would not result in or require the provision of new or physically altered schools, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives.***

The adoption of the Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials within the Solid Resource collection activities would not result in physical changes or new development that could significantly increase demand for school services. Therefore, collection activities under the Proposed Project would not require the need for or the provision of new or physically altered schools.

Future new or expanded transfer stations, processing facilities, and truck base yards would likely be located in industrial areas or on land zoned for industrial or commercial manufacturing uses due to the industrial nature of the facilities. Organic processing facilities could also be sited in industrial areas as well as on lands zoned for agricultural uses, depending on the processing technology utilized. At the time a new facility is proposed, the developer will be required to pay school fees appropriate for commercial or industrial development. The developer will be responsible for the fee rate in effect at the time the building permit is obtained. Other school districts have similar fee structures. Should the facilities be built outside the City, the developer would pay applicable fees to the appropriate school district. These fees will provide for additional educational facilities and resources. Pursuant to Government Code Sections 65995(h) and 65996(b) (SB 50), the payment of statutorily capped fee amounts provides "full and complete mitigation of the impacts of any legislative or adjudicative act... on the provision of adequate school facilities." The modest increase in population that could result from the increase in employment (see Section 3.2.10, Population and Housing) would be minor and not create a need for additional school facilities. Therefore, new processing capacity and slight increase in employment under the Proposed Project would not require the need for or the provision of new or physically altered schools.

Therefore, the Proposed Project is not expected to result in the need for or the provision of new or physically altered schools, or impacts associated with their alteration or construction.

Once new processing facilities and base yards are proposed and their locations identified, they would be further evaluated in site-specific CEQA environmental documentation at that time.

***Impact PS-4: The Proposed Project would not result in or require the provision of new or physically altered park facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives.***

The adoption of the Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials within the Solid Resource collection activities would not result in development that could substantively increase demand for park or recreational facilities, which could in turn require new or expanded park facilities.

Future new or expanded transfer stations, processing facilities, and truck base yards would likely be located in industrial areas or on land zoned for industrial or commercial manufacturing uses due to the industrial nature of the facilities. Organic processing facilities could also be sited in industrial areas as well as on lands zoned for agricultural uses, depending on the processing technology utilized. Development is not anticipated to result in any park development or increased population that could significantly affect park facilities. Therefore, the Proposed Project would not result in or require the provision of new or physically altered park facilities, or impacts associated with their alteration or construction.

Once new processing facilities and base yards are proposed and their locations identified, they would be further evaluated in site-specific CEQA environmental documentation at that time.

***Impact PS-5: The Proposed Project would not result in or require the provision of new or physically altered public facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives.***

The adoption of the Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials within the Solid Resource collection activities would not result in physical changes or new development that could substantively increase demand for other public facilities, which could in turn require their expansion or new public facilities.

Future new or expanded transfer stations, processing facilities, and truck base yards would likely be located in industrial areas or on land zoned for industrial or commercial manufacturing uses due to the industrial nature of the facilities. Organic processing facilities could also be sited in industrial areas as well as on lands zoned for agricultural uses, depending on the processing technology utilized. The new processing capacity and base yards would only create a small number of jobs, which would be too small to increase demand for other public services, which could in turn require their expansion or the need for new public facilities.

Therefore, the Proposed Project would not result in or require the provision of new or physically altered public facilities, or impacts associated with their alteration or construction.

Once new processing facilities and base yards are proposed and their locations identified, they would be further evaluated in site-specific CEQA environmental documentation at that time.

#### *3.2.11.6 Cumulative Impacts*

The collection activities under the Proposed Project are consistent with applicable plans, policies and regulations related public services, including fire, police, library or other public services. Although related project diversion activities within Los Angeles County and the State may cause the need for new or expanded facilities and base yards, those facilities, similar to the Proposed Project, are not likely to result in substantive demand of public services that would necessitate construction of new public service facilities. Therefore, the Proposed Project is not expected to make a considerable contribution to a significant cumulative public services impact.

As with the Proposed Project, future diversion activities within Los Angeles County and the State associated with related projects could cause the need for new or expanded transfer stations, processing facilities, truck base yards, and Organic processing facilities. Related projects in the county, region, or State would also be obligated to pay developer impact fees to offset impacts resulting from the respective project. Payment of the fees would reduce potential impacts of new transfer stations, processing facilities and truck base yards, and Organic processing facilities to a less than significant level. Therefore, the Proposed Project would not make a considerable contribution to a significant cumulative impact to public services.

It is the presumption that new or expanded transfer stations, processing facilities and truck base yards that could be located with the City or in other jurisdictions would be subject to the same regulatory requirements and/or similar mitigation measures as those identified below for the Proposed Project to avoid and/or minimize the impacts of the construction and operation of such new or expanded facilities to a level of less than significant. Cumulative impacts associated with new or expanded facilities, and truck base yards will be further addressed in the project specific environmental documentation prepared by the lead agency for the jurisdiction in which such new or expanded facilities are located.

#### *3.2.11.7 Level of Significance*

Potential impacts to public services resulting from the Proposed Project are expected to be less than significant.

### 3.2.12 Recreation

#### 3.2.12.1 Introduction

This section evaluates the potential impacts to recreation from the Proposed Project. The analysis consists of an evaluation of the potential impact that the Proposed Project could have on the use of existing neighborhood and regional parks or other recreational facilities, and the need for construction or expansion of recreational facilities.

The impact evaluation focuses on the collection of Solid Resource materials diverted from landfills, and at a conceptual level, on new or expanded processing facilities which would be required to process diverted materials, and new or expanded truck base yards. Collection activities would occur on and from existing Commercial Establishments. New or expanded processing facilities and truck base yards are expected to be sited in industrial areas as well as on lands with industrial or commercial manufacturing zoning designation, but could include lands zoned for agricultural uses for Organics processing facilities. The new or expanded facilities and truck base yards have not yet been proposed; therefore, the evaluation of these facilities in this section is at a conceptual level.

A summary of the Proposed Project's anticipated impacts on recreation, based on the evaluation below, is contained in Table 3.2.12-1.

**TABLE 3.2.12-1  
SUMMARY OF IMPACTS RELATED TO RECREATION**

Environmental Impact Area	Potential Impact	Mitigation	Significant Impact After Mitigation
<b>REC-1:</b>			
Collection System	No	None Required	No
New or Expanded Facilities	No	None Required	No
<b>REC-2:</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>Cumulative Impacts</b>	Yes	Yes	No

#### 3.2.12.2 Environmental Setting

The City is characterized as an urbanized area framed by open space. The Pacific Ocean, San Gabriel Mountains, Santa Susana Mountains, Baldwin Hills, and the Santa Monica Mountains are examples of natural open space resources in the City and County of Los Angeles.

In the City, the Department of Recreation and Parks maintains publicly accessible parks, beaches, mountain trails, campgrounds, and historical sites. The Department of Recreation and Parks administers more than 15,700 acres of parkland, including 4,282 acres in Griffith Park, one of the largest municipal parks within the boundaries of an American city. Operations of the Department of Recreation and Parks include 184 recreation centers, 61 swimming pools, 11 lakes, 7 camps both in and out of town, more than a dozen museums and historic sites, and hundreds of programs for youth, senior, physically disabled, and volunteers. There are 13 municipal golf courses throughout the City where well over a million rounds of golf are played each year (City of Los Angeles, 2013).

Two flood control basins leased from the federal government provide varied recreational facilities. Hansen Dam Recreation Area provides two lakes, a golf course, picnic areas, children's play areas, a softball field, and bridle trails. Sepulveda Dam Recreation Area is a major sports center comprising three 18-hole golf courses, tennis courts, baseball and softball diamonds, soccer fields, and volleyball and handball courts (City of Los Angeles, 2013).

Facilities at neighborhood, community, and regional parks provide recreational opportunities such as baseball, basketball, swimming, tennis, and soccer.

The County of Los Angeles Department of Parks and Recreation owns and operates 177 parks, including natural areas, wildlife sanctuaries, lakes, trails, and arboreta and botanic gardens, as well as local, community, and regional parks. The County of Los Angeles Department of Parks and Recreation operates the world's largest municipal golf system with 19 courses at 17 locations and owns cultural venues, including the John Anson Ford Amphitheatre and the Hollywood Bowl (County of Los Angeles, 2013).

### ***3.2.12.3 Regulatory Framework***

Recreational planning is accomplished through various land use plans, including City and County general plans, specific plans, and recreational use plans.

#### ***Local***

##### **Public Facilities and Services**

The City is in the process of updating several General Plan Elements, including the Public Facilities and Services Element. Prior to the General Plan Update, the City adopted four plans related to public facilities, including Major Equestrian and Hiking Trails (adopted 1968), Public Libraries (adopted 1968), Public Recreation (adopted 1980), and Public Schools (adopted 1968). When the Framework Element was adopted in 1996, the City identified a revised general plan structure that proposed to condense these four plans into a new element called Public Facilities and Services. Due to resource limitations, the consolidated plan has not yet been assembled.

However, the existing Public Recreation Plan contains pertinent information, goals, and policies. The Public Recreation Plan sets forth recreation standards intended to provide a basis for satisfying the needs for neighborhood and community recreational sites. The plan emphasizes neighborhood and community recreational sites and parks because of their immediate importance to the daily lives of the City's people, especially its children (City of Los Angeles, 1980).

Policies regarding the provision of recreational facilities in the City include the following:

- Recreational facilities and services should be provided for all segments of the population on the basis of present and future projected needs, the local recreational standards, and the City's ability to finance.
- Park and recreation sites shall be acquired and developed first in those areas of the City found to be most deficient in terms of the recreation standards.
- Recreational use should be considered for available open space and unused or underused land, particularly publicly owned lands having potential for multiple uses.

- High priority will be given to areas of the City that have the fewest recreational services and the greatest numbers of potential users.

#### 3.2.12.4 Significance Thresholds

The Proposed Project would have a significant impact to recreation if it would:

Impact REC-1: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated.

Impact REC-2: Require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

#### 3.2.12.5 Impact Analysis

***Impact REC-1: The Proposed Project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials within the Solid Resource collection activities would not result in development that could increase the use of existing neighborhood and regional parks, or otherwise cause deterioration of existing recreational facilities.

Future new or expanded transfer stations, processing facilities and new truck base yards would likely be located in industrial areas or on land zoned for industrial uses (due to the industrial nature of the facilities). Organics processing facilities could also be sited in industrial areas as well as on lands zoned for agricultural uses, depending on the processing technology utilized. Industrial areas and agricultural areas are designated in the applicable General Plan and are generally not located close to recreational facilities. In addition, industrial uses are not generators of demand for recreational uses; rather, demand for recreation is linked to residential uses<sup>1</sup>, which would not be increased by the Proposed Project. As such, the expanded or new transfer stations, processing facilities, truck base yards, and Organics processing facilities on industrial or agricultural lands would not increase the use of existing neighborhood and regional parks, or otherwise cause deterioration of existing recreational facilities.

Therefore, the Proposed Project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration would occur or be accelerated.

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<sup>1</sup> To implement the State Quimby Act, the City established the Subdivision Fees Trust (Los Angeles Municipal Code § 17.12) in 1971. Pursuant to Los Angeles Municipal Code Section 17.12, most residential development projects requesting a subdivision or a zone change are required, as a condition of approval of the project, to either dedicate land for recreation and park purposes or pay a fee in-lieu (Quimby Fees) (City of Los Angeles, 2013).



***Impact REC-2: The Proposed Project could potentially require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials within the Solid Resource collection activities would not result in any development, including the construction or expansion of recreational facilities.

Future new or expanded transfer stations, processing facilities, and new truck base yards would likely be located in industrial areas or on land zoned for industrial uses (due to the industrial nature of the facilities). Organic processing facilities could also be sited in industrial areas as well as on lands zoned for agricultural uses, depending on the processing technology utilized. Industrial areas and agricultural areas in the City are established in the General Plan and are generally not located close to recreational facilities. It is unlikely that recreational facilities would be impacted to accommodate future new or expanded facilities. However, the locations of future new or expanded facilities are unknown at this time; if future facilities are constructed near land zoned for recreational use, a potentially significant impact could occur. Additionally, outside of the City, there is the possibility that future new or expanded facilities could be constructed in an area that currently supports recreation. As a consequence, if the expanded or new transfer stations, processing facilities, truck base yards, or Organics processing facilities would be located on or near lands that support recreation, they could result in direct or indirect impacts to recreation from construction-related disturbances and site development, and potentially require the construction or expansion of recreational facilities elsewhere that might have an adverse physical impact on the environment. If impacts to recreational facilities were to occur, implementation of mitigation measure REC-1 would mitigate the adverse impacts to below a level of significance.

Under mitigation measure REC-1, replacement recreation facilities shall be acquired or constructed in the general vicinity prior to demolition of existing recreational facilities, if future facilities are located on a site that results in an impact to existing recreation facilities.

***3.2.12.6 Cumulative Impacts***

The collection activities under the Proposed are not anticipated to result in significant impacts to recreation because no substantive increase in population or residential land uses, which could cause the need for new or expanded recreational facilities, is anticipated. Therefore, collection activities under the Proposed Project would not make a considerable contribution to a significant cumulative impact to recreation.

As with the Proposed Project, future diversion activities within Los Angeles County and the State associated with related projects could cause the need for new or expanded transfer stations, processing facilities, truck base yards, and Organic processing facilities, and if those related project facilities occur on or near land that supports recreation, they could result in impacts to recreation. Mitigation measure REC-1 would be implemented to reduce potential impacts of new transfer stations, processing facilities and truck base yards, and Organics processing facilities under the Proposed Project to a less than significant level. Given that the Proposed Project would be required to avoid and/or mitigate for all direct impacts, and it can be presumed that other related projects within the County and State would also be subject to the same regulatory requirements that mandate avoidance and/or minimization of impacts, the Proposed Project would not make a

considerable contribution to a significant cumulative impact to population and housing, and no additional mitigation is required. Therefore, after mitigation, the Proposed Project would not make a considerable contribution to a significant cumulative impact to recreation.

It is the presumption that new or expanded transfer stations, processing facilities and truck base yards that could be located with the City or in another jurisdiction would be subject to the same regulatory requirements and/or similar mitigation measures as those identified below for the Proposed Project to avoid and/or minimize the impacts of the construction and operation of such new or expanded facilities to a level of less than significant. Cumulative impacts associated with new or expanded facilities, truck base yards and Organics processing facilities will be further addressed in the project-specific environmental documentation prepared by the Lead Agency for the jurisdiction in which such new or expanded facilities are located.

#### *3.2.12.7 Mitigation Measures*

While unlikely, the Proposed Project could potentially result in significant impacts to recreation due to the siting of new or expanded transfer stations, processing facilities and truck base yards on or near lands that support recreation, necessitating the construction or expansion of recreational facilities that might have an adverse physical effect on the environment elsewhere. The following mitigation measure is recommended:

**REC-1:** If future new or expanded facilities are located on a site that results in an impact to existing recreation facilities, replacement recreation facilities shall be acquired or constructed prior to demolition of existing recreational facilities. Replacement recreational facilities shall be located in the general vicinity of the demolished recreational facility.

#### *3.2.12.8 Level of Significance after Mitigation*

With implementation of mitigation measure REC-1, potential impacts to recreation resulting from the Proposed Project would be less than significant.

### 3.2.13 Utilities-Service Systems

#### 3.2.13.1 Introduction

This section evaluates the potential impacts to utilities and service systems from the Proposed Project. The analysis consists of an evaluation of the potential impact that the Proposed Project could have on water or wastewater treatment facilities, stormwater drainage facilities, water supply, existing landfill, and solid waste statutes and regulations.

The impact evaluation focuses on the collection of Solid Resources and at a conceptual level, on new or expanded processing facilities that would be required to process diverted materials, and truck base yards. Collection activities would occur on and from existing Commercial Establishments. New or expanded processing facilities and truck base yards are expected to be sited on lands with industrial or commercial manufacturing zoning designation, but could include lands zoned for agricultural uses for Organics processing facilities. The new or expanded facilities and truck base yards have not yet been proposed; therefore, the evaluation of these facilities in this section is at a conceptual level.

A summary of the Proposed Project's anticipated impacts on utilities and service systems, based on the evaluation below, is contained in Table 3.2.13-1.

**TABLE 3.2.13-1  
SUMMARY OF IMPACTS RELATED TO UTILITIES AND SERVICE SYSTEMS**

Environmental Impact Area	Potential Impact	Mitigation	Significant Impact After Mitigation
<b>UT-1: Wastewater Treatment Requirements</b>			
Collection System	No	None Required	No
New or Expanded Facilities	No	None Required	No
<b>UT-2: Water/Wastewater Treatment Facilities</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>UT-3: Stormwater Drainage Facilities</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>UT-4: Water Supply</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>UT-5: Wastewater Treatment Capacity</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>UT-6: Landfill Capacity</b>			
Collection System	No	None Required	No
New or Expanded Facilities	No	None Required	No

**TABLE 3.2.13-1  
SUMMARY OF IMPACTS RELATED TO UTILITIES AND SERVICE SYSTEMS**

<b>Environmental Impact Area</b>	<b>Potential Impact</b>	<b>Mitigation</b>	<b>Significant Impact After Mitigation</b>
<b>UT-7: Solid Waste Regulations</b>			
Collection System	No	None Required	No
New or Expanded Facilities	No	None Required	No
<b>UT-8: Energy</b>			
Collection System	No	None Required	No
New or Expanded Facilities	Yes	Yes	No
<b>Cumulative Impacts</b>	Yes	Yes	No

### 3.2.13.2 Environmental Setting

#### **Wastewater**

Wastewater generated within the City is collected and treated by Sanitation's wastewater conveyance and treatment systems. Sanitation operates and maintains the wastewater collection and treatment for the City and 29 contract cities and agencies. The City's sewage system consists of more than 6,700 miles of public sewers that convey approximately 400 million gallons per day (mgd) of wastewater within the Hyperion Service Area and the Terminal Island Service Area to four treatment and/or water reclamation plants (Sanitation, 2013).

Wastewater generated in the Hyperion Service Area is conveyed in the sewer system and treated at one or more treatment plants, primarily the Hyperion Treatment Plant (HTP), the Donald C. Tillman Water Reclamation Plant, and the Los Angeles - Glendale Water Reclamation Plant. However, a small amount of wastewater is treated at the Los Angeles County Sanitation Districts' Joint Water Pollution Control Plant in Carson. Wastewater generated in the Terminal Island Service Area is conveyed primarily from the Harbor area and treated at the Terminal Island Water Reclamation Plant (TIWRP) (Sanitation, 2013).

The HTP is located in the community of Playa Del Rey. It has a treatment capacity of 450 mgd, and its solids handling facilities can process approximately 468 dry tons of solids per day. The HTP performs both primary treatment and secondary treatment of wastewater (i.e., degradation of biological content) (Sanitation, 2013). The Donald C. Tillman Water Reclamation Plant (DCTWRP) is located in the Sepulveda Basin and has a treatment capacity of 80 mgd. Solids resulting from processing at the TIWRP are placed back into the sewer system to be conveyed and treated at the HTP. Effluent from TIWRP is discharged to the Los Angeles River under a National Pollutant Discharge Elimination System (NPDES) permit. The Los Angeles - Glendale Water Reclamation Plant (LAGWRP) is located in northeast Los Angeles near the border of the City of Glendale (just south of I-5 and SR-134) and has a treatment capacity of 20 mgd. Solids resulting from processing at the LAGWRP are placed back into the sewer system to be conveyed and treated at the HTP. Effluent from LAGWRP is discharged to the Los Angeles River under an NPDES permit. Capacities and current treatment levels of the various treatment and water reclamation plants are provided in Table 3.2.13-2.

Treated wastewater from the HTP is discharged into the Santa Monica Bay through a 5-mile outfall pipe. All discharges into the Santa Monica Bay from HTP are regulated by an NPDES permit. The HTP outfall discharges secondary treated wastewater at a depth of 187 feet. The HTP also has a 1-mile outfall that is in standby condition in case of an emergency. A small remaining portion of wastewater is reused to recharge seawater barrier wells. Treated biosolids are not discharged into the Santa Monica Bay; rather, they are primarily reused as fertilizer, soil amendments, composting material, or handled by deep-well injection. (Sanitation, 2013a)

**TABLE 3.2.13-2  
WASTEWATER TREATMENT/RECLAMATION PLANTS SUMMARY**

<b>Treatment/ Water Reclamation Plant</b>	<b>Treatment Level</b>	<b>Capacity (mgd)</b>	<b>Average Flow (mgd)</b>
Donald C. Tillman Water Reclamation Plant (TIWRP)	Tertiary to Title 22 Standards with Nitrification/Denitrification	80	67
Los Angeles - Glendale Water Reclamation Plant	Tertiary to Title 22 Standards with Nitrification/Denitrification	20	20
Hyperion Treatment Plant	Tertiary; Advanced treatment (MF/RO) of 5 mgd	450	362
Terminal Island Water Reclamation Plant	Full secondary	30	17.5

Source: City of Los Angeles Department of Public Works, Bureau of Sanitation. 2013. About Wastewater. Web site <http://www.lacitysan.org/wastewater/factsfigures.htm>.

## **Water**

The Los Angeles Department of Water and Power (LADWP) manages the water supply and water delivery for the City. The LADWP serves approximately 3.9 million residents within a 469 square mile area with its system of 7,100 miles of water pipelines. The City's water supply has four sources of water—the Metropolitan Water District (MWD), the Los Angeles Aqueduct (LAA), groundwater, and recycled water. These four water sources comprise 52 percent, 36 percent, 11 percent, and 1 percent of the City's water supply, respectively (Sanitation, 2013). During the 2010-2011 fiscal year, LADWP supplied approximately 480,302 acre-feet of water (Sanitation, 2013).

LADWP is responsible for water resources planning for the City. To meet the requirements of the California Urban Water Management Planning Act (described below), the LADWP prepares and adopts an Urban Water Management Plan (UWMP) every 5 years to forecast future water demands and water supplies. The 2010 Urban Water Management Plan was adopted in May 2011 and projects future water demand based on demographic growth (643,785 acre-feet per year by 2030), and well as passive and active water conservation efforts. Single-family residential water use is the largest category of demand in LADWP's service area, representing about 36 percent of the total. Multifamily residential water use is the next largest category of demand, representing about 29 percent of the total. Industrial use is the smallest category, representing only 4 percent of the total water demand. The UWMP also provides strategies for reducing per capita water use per the requirements of the California Water Conservation Act. Water conservation measures include further cost-effective conservation, recycled water implementation, and stormwater capture programs (LADWP, 2011).

With its current water supplies, planned future water conservation, and planned future water supplies, LADWP reliably will be able to provide water to its customers through the 25-year planning period covered by the 2010 UWMP (LADWP, 2011).

#### Local Groundwater

LADWP traditionally extracts groundwater from 9 well fields throughout City-owned property within Owens Valley. In accordance with a long-term groundwater management plan, groundwater pumped from Owens Valley by LADWP is used in Owens Valley and in the City. LADWP's planned pumping for the 2011-12 runoff year is 91,000 acre-feet (LADWP, 2011). Additionally, LADWP currently exercises its adjudicated extraction rights in five local groundwater basins: San Fernando, Sylmar, Eagle Rock, Central, and West Coast. These local sources provide approximately 87,000 acre-feet, 3,405 acre-feet, 15,000 acre-feet, 1,503 acre-feet, and 500 acre-feet of groundwater, respectively (Sanitation, 2013).

LADWP plans to continue production from its groundwater basins in the coming years to offset reductions in imported water supplies. However, extraction from the groundwater basins is limited by the water quality and is subject to overdraft protection. Both LADWP and California Department of Water Resources (DWR) have programs in place to monitor wells to prevent overdraft. LADWP's groundwater pumping practice is based on a "safe-yield" operation. The objective, over a period of years, is to extract an amount of groundwater equal to the native and imported water that recharges the groundwater basins. (Sanitation, 2013)

#### Los Angeles Aqueduct

Snowmelt runoff from the Eastern Sierra Nevada Mountains and groundwater from Owens Valley Groundwater Basin are collected and conveyed to the City via the LAA. LAA supplies can fluctuate yearly due to varying hydrologic conditions. In recent years, the LAA supplies have been less than the historical average because of LADWP's obligations to perform environmental restoration in Mono and Inyo counties. Average deliveries from the LAA system have been approximately 239,100 acre-feet of water annually over the last 5 fiscal years. Based on computer modeling results, LADWP projects that the average annual LAA delivery is expected to be approximately 244,000 acre-feet per year in year 2030 (Sanitation, 2013).

#### Metropolitan Water District of Southern California

The LADWP purchases water from MWD to supplement its water supplies from the LAA and local groundwater basins. MWD is the largest water wholesaler for domestic and municipal uses in Southern California. The MWD imports its water supplies from Northern California through the State Water Project, California Aqueduct, and the Colorado River through the MWD-owned Colorado River Aqueduct. MWD is a consortium of 26 member agencies, including LADWP. The MWD service area encompasses the service areas of its 26 member agencies, covering approximately 5,200 square miles, and includes portions of the Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura counties. Per Section 135 of the MWD Act, each of MWD's 26 member agencies has a preferential right to purchase water from MWD (Sanitation, 2013).

Due to the effects of dry weather conditions and environmental restrictions on water pumping operations within San Francisco Bay/Sacramento-San Joaquin River Delta (Delta), the MWD water supplies may not meet future water demand of its member agencies. To address this possibility,

the MWD and its 26 member agencies have prepared a Water Supply Allocation Plan. If the MWD cannot meet member water demand for any given year, it uses a formula within the Water Supply Allocation Plan to allocate water to member agencies in a fair and efficient manner. As of June 30, 2006, LADWP has a preferential right to purchase 21.16 percent of MWD's total water supply (Sanitation, 2013).

### Recycled Water

Recycled water is produced by HTP, TIWRP, DCTWRP, and the LAGWRP. Currently, recycled water is provided for landscape irrigation and commercial uses (Sanitation, 2013).

### Water Conservation

The City consistently ranks among the lowest in per person water consumption when compared to other California's cities. This significant accomplishment has resulted from the City's sustained implementation of effective water conservation policies, programs, and ordinances since the 1980s (Sanitation, 2013).

The City's commitment to and success in effectively implementing water conservation measures is most clearly illustrated by citywide water use during the fiscal year 2009/2010, which was below the 1979 water use levels. Water conservation can be seen as both a demand control measure and/or a supply asset. LADWP identifies conservation as a crucial supply asset in a continued effort to reduce MWD purchases and increase local supply reliability through 2035. To this end, LADWP has set a water conservation goal in the Water Supply Action Plan of reducing potable water demands by an additional 50,000 acre-feet per year by 2030. Furthermore, state legislation, which postdates several City water conservation ordinances, has only strengthened the City's commitment to water conservation and provides added assurance that the City will continue its leadership role in managing demand for water in the near and distant future (Sanitation, 2013).

### **Solid Resources**

Sanitation and Permitted Haulers are responsible for the collection and handling of Solid Resources in the City. Solid Resources generated by single-family and smaller multifamily residences is collected by Sanitation, which has a fleet of approximately 750 vehicles that collect Solid Waste, Commingled Recyclables, yard trimmings, and bulky items from more than 750,000 homes (Sanitation, 2013). Over 870,000 tons of Solid Resources are collected from single-family homes and smaller multifamily residences (Sanitation, 2013).

Commercial Establishments negotiate with Permitted Handlers to provide the collection and handling of the Solid Resources generated under the current open market system. Approximately 2 million tons of Solid Resources are collected from Commercial Establishments annually (Sanitation, 2013).

Solid Waste collected within the City reaches a number of different landfills in the general region (both in and out of Los Angeles County), including Antelope Valley, Calabasas, Chiquita, Lancaster, Scholl Canyon, and Sunshine Canyon landfills, as well as disposal sites outside Los Angeles County such as the El Sobrante Landfill in Riverside County. Table 3.2.13-3 lists the location, permitted capacity, remaining capacity, permitted daily intake capacity, the average daily volume of Solid Waste disposed of at the landfills serving the City, and the approximate tons per day of Solid Waste that the City disposed of at each landfill.

**TABLE 3.2.13-3  
SOLID WASTE FACILITIES SERVING THE CITY**

Facility	Location	Closure Date	Remaining Capacity (tons)	Permitted Daily Intake Capacity (tons)	Average Daily Disposal (tons)*	Daily Solid Waste from the City (tons)**
<b>Class III Landfills</b>						
Antelope Valley	Palmdale	1/1/2042	16,090,000	1,800	365	254
Calabasas	Agoura	2028	5,710,000	3,500	779	295
Chiquita Canyon	Valencia	11/24/2019	4,900,000	6,000	4,264	1,393
El Sobrante	Corona	1/1/2045	145,530,000	10,000	5,281	618
Lancaster	Lancaster	12/31/2012	310,000	3,000	809	220
Puente Hills	Industry	10/31/2013	7,550,000	13,200	5,116	1,049
Sunshine Canyon	Los Angeles City/County	12/31/2037	82,390,000	12,100	7,801	3,762
Scholl Canyon	Glendale	4/1/2030	3,620,000	3,400	747	5
<b>Total Class III Landfills</b>			<b>266,100,000***</b>	<b>53,000</b>	<b>25,162</b>	<b>7,596</b>
<b>Inert Waste Facilities and Other Solid Waste Facilities</b>						
Azusa Land Reclamation	Azusa	1/1/2025	64,210,000	6,500	357	51
Commerce Solid Waste to Energy	Commerce	N/A	466,640,000	1,000	345	91
Southeast Resource Recovery	Long Beach	N/A	1,601,960,000	2,240	1,496	94
<b>Total Inert and Other Facilities</b>			<b>2.13 billion</b>	<b>9,740</b>	<b>2,198</b>	<b>236</b>

Sources: CalRecycle Solid Waste Information System (SWIS), Los Angeles County Countywide Integrated Waste Management Plan, Riverside County Waste Management Department – 2012 Quarterly Disposal Reports.

Note: Landfills located outside Los Angeles County may limit the amount of Solid Waste generated in the City and other jurisdictions external to their county. For example, Solid Waste to El Sobrante originating in Los Angeles County could be limited to 4000 tons per day (LA County, 2012).

\* 2011 Annual Report for Los Angeles County Countywide Integrated Waste Management Plan.

\*\* Data derived from 2012 Solid Waste Information Management System, Detailed Solid Waste Disposal Activity Report by Jurisdiction of Origin, <http://dpw.lacounty.gov/epd/swims/disposal/reports.aspx>, by dividing Annual tonnage by 365 days. For El Sobrante, information derived from Riverside County 2012 quarterly disposal reports.

\*\*\* for the landfill only in Los Angeles County, remaining capacity landfill capacity is approximately 120 million tons (determined by excluding remaining capacity of El Sobrante)

As shown in Table 3.2.13-3, the City primarily uses the Sunshine Canyon and Chiquita Canyon landfills. The Class III landfills accepting waste from the City have a total daily intake capacity of 53,700 tons per day and a remaining capacity of 266 million tons. The Puente Hills and Lancaster landfills closed on October 31, 2013, bringing the daily intake capacity to 42,800 tons and remaining capacity of 258 million tons.

In 2012, approximately 2.86 million tons of Solid Waste originating in the City was disposed of at the landfills and other Solid Waste facilities listed in Table 3.2.13-3.



## **Energy**

Electricity service in the City is provided by LADWP. To ensure a reliable supply of power, the LADWP maintains a diversified energy generation mix including coal, natural gas, large hydroelectric, nuclear, and renewable power such as wind, biomass, solar and cogeneration. The LADWP draws its energy supply from in-basin power plants and several out-of-state facilities in Nevada, Utah, and the Pacific Northwest. The LADWP 2007 Power System Integrated Resource Plan (IRP) is the energy resource planning document that provides a framework for addressing the future energy needs of the City's residents and businesses. This plan focuses on renewable power, greenhouse gas reduction, and energy efficiency. The IRP (2010) and Power Reliability Program are currently being updated (LADWP, 2010). The LADWP supplies more than 22 million MW hours of electricity a year for the City's 1.4 million customers. The average resident uses about 5,000 kilowatt-hours of electricity per year. Business and industry consume about 70 percent of the electricity in Los Angeles, but residences constitute the largest number of customers. In addition to serving these consumers, the LADWP lights public streets and highways, powers the City's water system, and sells electricity to other utilities (LADWP, 2010).

Natural gas service within the City is provided by the Southern California Gas Company (SoCalGas). SoCalGas is the nation's largest natural gas distribution utility, providing energy to 20.5 million consumers through 5.7 million meters in more than 500 communities. The company's service territory encompasses approximately 20,000 square miles of diverse terrain throughout Central and Southern California, from Visalia to the Mexican border. Natural gas is purchased on the open market and is distributed through 5.5 million gas meters. The CPUC regulates the operations of SoCalGas (SoCalGas, 2010).

For non-City areas, each city and county has departments and public agencies that supply and regulate public services and utility systems. Depending where future facilities are located, local plans and policies would be applicable to those facilities.

## **Regulatory Framework**

### **State**

#### **California Urban Water Management Planning Act**

The California Urban Water Management Planning Act (first effective on January 1, 1984) requires that every urban water supplier prepare and adopt a UWMP every 5 years. Since its original enactment, there have been several amendments added to the Act. The main goal of the UWMP is to forecast future water demands and water supplies under average and dry year conditions, identify future water supply projects such as recycled water, provide a summary of water conservation best management practices (BMPs), and provide a single and multi-dry year management strategy (LADPW, 2011).

#### **California Water Conservation Act**

The California Water Conservation Act of 2009, Senate Bill x7-7, requires water agencies to reduce per capita water use by 20 percent by the year 2020 (20x2020). This includes increasing recycled water use to offset potable water use.

### California Integrated Waste Management Act

The response to reduced landfill capacity, the State of California passed AB 939, the California Integrated Waste Management Act, in 1989. The Act requires that the state and local agencies shall promote, in order of priority, 1) source reduction, 2) recycling and composting, and 3) environmentally safe transformation and environmentally safe land disposal, at the discretion of the city or county.

AB 939 required each local city and county governing body to divert 25 percent of all solid waste from landfills by 1995, and 50 percent of all solid waste generated by January 1, 2000, through source reduction, recycling, and composting activities, and requires the participation of the residential, commercial, industrial, and public sectors. The Act also declares that the lack of adequate areas for collecting and loading Commingled Recyclable materials that are compatible with surrounding land uses is a significant impediment to diverting Solid Resources and constitutes an urgent need for state and local agencies to address access to Solid Resources for source reduction, recycling, and composting activities.

California's Department of Resources Recycling and Recovery (CalRecycle) administers recycling and waste reduction programs that were formerly managed by the California Integrated Waste Management Board and Department of Conservation. CalRecycle oversees and assists local governments to develop and implement programs mandated by AB 939 and subsequent legislation.

Under AB 939, cities and counties must prepare source reduction and recycling elements reports, which outline the source reduction, recycling, composting, and public education and information programs that jurisdictions will implement.

AB 341 established a policy goal of the State that not less than 75 percent of Solid Resources generated be source reduced, recycled, or composted by the year 2020. The bill also directed CalRecycle, among other actions to 1) develop and adopt regulations for mandatory commercial recycling, with compliance beginning July 1, 2012, and 2) submit a report to the legislature with a plan for reaching 75 percent diversion statewide by 2020.

#### Local

### Industrial Waste Control Ordinance

According to Section 64.30 of the Los Angeles Municipal Code, Industrial Waste Control Ordinance, industrial facilities and certain commercial facilities that plan to discharge industrial wastewater to the City's sewage collection and treatment system are required to first obtain an industrial wastewater permit. The permit provides a means for the City to protect its sewer collection and treatment systems and to prevent regulated toxic wastewater constituents from passing through to receiving waters and recovered biosolids.

Certain businesses that are classified as Significant Industrial Users (SIUs) have more stringent requirements than other types of businesses. An SIU is a discharger that is either subject to Federal Categorical Pretreatment Standards, discharges 25,000 gallons or more per day of processed wastewater, or is designated to have a reasonable potential to adversely affect the operation of the City's wastewater treatment plants. SIUs are further classified as Categorical Industrial Users (CIUs) if subject to federal discharge limitations developed by EPA for different industrial categories. EPA has developed regulations for over 20 industrial categories. Examples of

facilities classified as CIUs include electroplating shops, steam electric power plants, and pharmaceutical facilities. In addition to the federal discharge limitation, CIUs are subject to the City's local limits. Local limits as specified in the Industrial Waste Control Ordinance are established specifically to protect the City's treatment plants and are applied to all types of industries. All other SIUs are classified as Non-Categorical Significant Industrial Users (NCSIUs) and are subject to the City's local limits only. All SIUs are subject to monitoring and reporting requirements to assess and assure compliance with the applicable discharge limitations (Sanitation, 2013).

### Urban Water Management Plan

The LADWP UWMP serves as the Water System's primary resource planning document for achieving compliance with the requirements of California's Urban Water Management Planning Act. The UWMP serves as the master plan for water supply and resources management consistent with the City ' goals and policy objectives (LADWP, 2013).

### Los Angeles County Integrated Waste Management Plan

The California Integrated Waste Management Act requires each county to prepare and administer a Countywide Integrated Waste Management Plan. This plan consists of the Solid Waste reduction planning documents for each county and the cities (within the county jurisdiction), in addition to an Integrated Waste Management Summary Plan (Summary Plan) and a Countywide Siting Element. The Summary Plan, approved by CalRecycle on June 23, 1999, describes the steps to be taken by local agencies, acting independently and in concert, to achieve the mandated State diversion rate by integrating strategies aimed toward reducing, reusing, recycling, diverting, and marketing Solid Waste generated within the County. The Countywide Siting Element, approved by CalRecycle on June 24, 1998, identifies how, for a 15-year planning period, the county and the cities within its jurisdiction would meet their long-term disposal capacity needs to safely handle Solid Resources generated in the county that cannot be reduced, recycled, or composted. Los Angeles County has prepared its 2011 Annual Report to provide an annual update to the Los Angeles County Countywide Integrated Waste Management Plan (Los Angeles County, 2012).

### Solid Waste Integrated Resources Plan (SWIRP)

The City is preparing a Solid Waste Integrated Resources Plan (SWIRP), which is an innovative stakeholder-driven process to develop a 20-year master plan to achieve Zero Waste in Los Angeles. The SWIRP will outline the City's objectives to provide sustainability, resource conservation, source reduction, recycling, renewable energy, maximum material recovery, public health and environmental protection for Solid Resources management planning through 2030.

### Renew LA

In February 2006, the City Council adopted RENEW L.A., a plan for Solid Resources management for the City for the next 20 years. RENEW L.A. provides the foundation for the SWIRP planning process and establishes the vision for Zero Waste, including the goal of 90 percent diversion by 2025. RENEW L.A. recognizes that to manage Solid Resources appropriately in the future, the City, including its residents and businesses, will need a new paradigm of sustainability and resource conservation. The strategies outlined in RENEW L.A. were carried forward in the stakeholder planning process for SWIRP (summarized above) and include but are not limited to:

- Residential food scrap collection (co-collected with yard trimmings in the green bin)

- Blue Bin recycling at all Commercial Establishments
- Preprocessing of commercial waste at mixed-material processing facilities
- Investment in new technologies – RENEW L.A. includes a description of “conversion technologies,” including thermal conversion technologies (gasification and pyrolysis), anaerobic digestion, Solid Waste composting, autoclaving, and fermentation.

#### City of Los Angeles General Plan – Infrastructure and Public Services Element

As discussed in Section 3.2.7, Land Use Planning, the Infrastructure and Public Services Element of the General Plan lists the following specific goals and objectives regarding Solid Resources (City of Los Angeles, 2001):

GOAL 9D - An integrated Solid Resources management system that maximizes source reduction and materials recovery and minimizes the amount of waste requiring disposal.

GOAL 9E - Adequate Recycling Facility Development - expanded siting of facilities that enhance the City's reduction, recycling, and composting efforts using methods and strategies that are economically, socially, and politically acceptable.

GOAL 9F - Adequate collection, transfer, and disposal of mixed Solid Resources - the City shall seek to ensure that all mixed Solid Resources that cannot be reduced, recycled, or composted is collected, transferred, and disposed of in a manner that minimizes adverse environmental impacts.

GOAL 9G - An environmentally sound Solid Resources management system that protects public health, safety, and natural resources and minimizes adverse environmental impacts.

GOAL 9H - A cost-effective Solid Resources management system that emphasizes source reduction, recycling, reuse, and market development and is adequately financed to meet operational and maintenance needs.

OBJECTIVE 9.12 - Support integrated Solid Resources management efforts.

#### POLICIES:

9.12.1 Prepare a 30-year policy plan that provides direction for the Solid Resources management decision-making process.

9.12.2 Establish citywide diversion objectives.

9.12.3 Define specific programmatic tasks, roles, and responsibilities for source reduction, composting, special waste, and public education goals, as well as an implementation schedule.

#### *3.2.13.3 Significance Thresholds*

The Proposed Project would have a significant impact to utilities if it would:

Impact UT-1: Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board (RWQCB).

Impact UT-2: Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Impact UT-3: Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Impact UT-4: Not have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed.

Impact UT-5: Result in a determination by the wastewater treatment provider, serving or potentially serving the project, that it does not have adequate capacity to serve the Proposed Project's projected demand in addition to the provider's existing commitments.

Impact UT-6: Be served by a landfill without sufficient permitted capacity to accommodate the Proposed Project's Solid Waste disposal needs.

Impact UT-7: Not comply with federal, state, and local statutes and regulations related to solid waste.

Impact UT-8: Require new (off-site) energy supply facilities or not incorporate energy conservation measures into facility design or operations.

#### *3.2.13.4 Impact Analysis*

##### ***Impact UT-1: The Proposed Project would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources from Commercial Establishments within the City. The collection activities associated with diversion of materials in the Solid Resources collection activities would occur within developed areas of the City using existing infrastructure, and would not result in discharges of wastewater, or any cause new development that could discharge wastewater.

In addition, future new or expanded processing facilities, and truck base yards would likely be located in industrial areas or on land zoned for industrial uses (due to the industrial nature of the facilities), which are generally served by sewer systems that convey wastewater to one or more wastewater treatment or water reclamation plants that serve the City and the surrounding areas. Organics processing facilities could be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Facilities sited on lands zoned for agricultural uses could require use of alternative wastewater disposal systems such as septic systems due the lack of nearby sewer lines. New or expanded facilities and truck base yards would generate small amounts of wastewater associated with washroom and possibly shower facilities. Wastewater could also be generated from processing and general maintenance activities, but such wastewater would be subject to pretreatment under industrial waste discharge requirements. Based on this, wastewater generated in the City by new processing capacity and truck base yards would be consistent with wastewater generated within each wastewater treatment service area, and is not expected to result in exceedences of wastewater treatment requirements of the applicable RWQCB that issues the effluent discharge permits for City wastewater treatment and water reclamation plants.

For future new or expanded facilities sited outside the City, wastewater treatment requirements would be determined based on the individual jurisdiction and RWQCB of that jurisdiction. As future facilities are proposed, they would be subject to additional review pursuant to CEQA. Part of that analysis would include a review of wastewater infrastructure and demand.

Therefore, the Proposed Project is not expected to result exceedences of wastewater treatment requirements of the applicable RWQCB that issues the effluent discharge permits for City wastewater treatment and water reclamation plants.

***Impact UT-2: The Proposed Project could require or result in the construction of new water or wastewater treatment facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources in the City. The collection activities associated with diversion of materials in the Solid Resources collection activities would not result in physical changes or new development that would result in the need to construct new or expanded water or wastewater treatment facilities.

Future new or expanded processing facilities, and truck base yards would likely be located in industrial areas or on land zoned for industrial uses (due to the industrial nature of the facilities), which are generally served by sewer systems that convey wastewater to one or more wastewater treatment or water reclamation plants that serve the City or the surrounding areas. Organics processing facilities could be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Facilities sited on lands zoned for agricultural uses could require use of alternative wastewater disposal systems such as septic systems due the lack of nearby sewer lines. New or expanded facilities and truck base yards would generate small amounts of wastewater associated with washroom and possibly shower facilities. Although small amounts of wastewater would be generated by new processing capacity and truck base yards, there is currently adequate wastewater treatment capacity within the City's treatment plant service areas to accommodate wastewater flows. In addition, the City has developed a wastewater facilities plan to ensure that adequate treatment capacity is available (City of Los Angeles, 2006). Furthermore, LADWP has adequate water supplies to accommodate the water demand in the City for the 25-year planning horizon under the UWMP. For new or expanded facilities sited outside the City, wastewater treatment capacity and water demand would be determined based on the individual jurisdiction, and each water purveyor is required to prepare a UWMP every 5 years. Projection of water supply capacity is typically determined based on population growth and is generally consistent with the applicable general plan. If the facility is sited in an area consistent with the general plan land use designation for that jurisdiction, it is presumed that water supply would be sufficient. However, the locations of future facilities are unknown at this time; future new or expanded processing facilities, truck base yards, and Organics processing facilities could necessitate the construction of new water or wastewater treatment facilities, or expansion of existing facilities, which could cause significant environmental effects. Implementation of mitigation measures UT-1 and UT-2 would mitigate the potential adverse impacts to below a level of significance.

Under mitigation measure UT-1, future processing facilities would incorporate water conservation design features, including water-efficient landscaping, use of recycled water for irrigation and truck-washing, and high-efficiency water fixtures.

Under mitigation measure UT-2, development applications for future new facilities greater than 40 acres of land, having more than 650,000 square feet of floor area, or employing more than 1,000 persons would include a water supply assessment.

***Impact UT-3: The Proposed Project would not require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources from Commercial Establishments within the City. The collection activities associated with diversion of materials in the Solid Resources collection activities would not result in physical changes or new development that would result in the need to construct new storm drainage facilities or expand existing facilities.

In addition, future new or expanded processing facilities, and truck base yards would likely be located in industrial areas or on land zoned for industrial or commercial manufacturing uses due to the industrial nature of the facilities. Organics processing facilities could be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Although the new or expanded facilities and truck base yards would result in the placement of new or modified impervious surfaces upon future sites zoned for industrial use or agriculture, stormwater retention BMPs incorporated into the future facilities, as required by the local permitting agencies (see discussion in Section 3.2.6, Hydrology–Water Quality), would minimize potential effects upon the local storm drain systems in the City. The locations of future facilities are unknown at this time; however, future new or expanded facilities outside the City would be required to comply with all local, state, and federal stormwater discharge requirements, as well as applicable NPDES permits. Nonetheless, future new or expanded processing facilities, truck base yards, and Organics processing facilities could contribute to runoff that would exceed the capacity of existing or planned stormwater drainage systems.

Therefore, the Proposed Project could require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. Implementation of mitigation measures WQ-4, WQ-5, and WQ-6 described in the Hydrology-Water Quality section would mitigate the potential adverse impacts to below a level of significance.

***Impact UT-4: Sufficient water supplies may not be available to serve the Proposed Project from existing entitlements and resources, and new or expanded entitlements may be needed.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources from Commercial Establishments within the City. The collection activities associated with diversion of materials in the Solid Resources collection activities would not result in physical changes or new development that would increase water use or result in the need to secure new water supplies.

Future new or expanded processing facilities, and truck base yards would likely be located in industrial areas or on land zoned for industrial uses (due to the industrial nature of the facilities), which are generally served by existing water infrastructure that serves the City or the surrounding areas. Organics processing facilities could also be sited on lands zoned for agricultural uses,

depending on the processing technology utilized. Facilities sited on lands zoned for agricultural uses could require use of alternative water systems such as groundwater wells due the lack of nearby potable water conveyance. Although the expanded or new processing facilities and truck base yards would result in some water demand associated with washroom and shower facilities, the amount would be small because processing is not water intensive. In addition, LADWP has adequate water supplies to accommodate the water demand in the City for the 25-year planning horizon under the UWMP. For new or expanded facilities sited outside the City, water demand would be determined based on the individual jurisdiction, and each water purveyor is required to prepare a UWMP every 5 years. Projection of water supply capacity is typically determined based on population growth and is generally consistent with the applicable general plan. If the facility is sited in an area consistent with the general plan land use designation for that jurisdiction, it is presumed that water supply would be sufficient. However, the locations of future facilities are unknown at this time; future new or expanded processing facilities, truck base yards, and Organics processing facilities could be located in an area that would result in the need to secure new water supplies. Implementation of mitigation measures UT-1 and UT-2 would mitigate the potential adverse impacts to below a level of significance.

***Impact UT-5: The Proposed Project could result in a determination by the wastewater treatment provider serving, or potentially serving, the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources from Commercial Establishments within the City. The collection activities associated with diversion of materials in the Solid Resources collection activities would not result in physical changes or new development that would result in a determination by the wastewater treatment service provider that it does not have adequate capacity to serve the Proposed Project's projected wastewater treatment demand.

Future new or expanded processing facilities, and truck base yards would likely be located in industrial areas or on land zoned for industrial uses (due to the industrial nature of the facilities), which are generally served by sewer systems that convey wastewater to one or more wastewater treatment or water reclamation plants that serve the City or the surrounding areas. Organics processing facilities could be sited on lands zoned for agricultural uses, depending on the processing technology utilized. Facilities sited on lands zoned for agricultural uses could require use of alternative wastewater disposal systems such as septic systems due the lack of nearby sewer lines. New or expanded facilities and truck base yards would generate small amounts of wastewater associated with washroom and possibly shower facilities. Although small amounts of wastewater would be generated by new processing capacity and truck base yards, there is currently adequate wastewater treatment capacity in the City's treatment plant service areas to accommodate wastewater flows. In addition, the City has developed a wastewater facilities plan to ensure that adequate treatment capacity is available (City of Los Angeles, 2006). Furthermore, LADWP has adequate water supplies to accommodate the water demand in the City for the 25-year planning horizon under the UWMP. For new or expanded facilities sited outside the City, wastewater treatment capacity and water demand would be determined based on the individual jurisdiction, and each water purveyor is required to prepare a UWMP every 5 years. Projection of water supply capacity is typically determined based on population growth and is generally consistent with the applicable general plan. If the facility is sited in an area consistent with the general plan land use designation for that jurisdiction, it is presumed that water supply would be



sufficient. However, the locations of future facilities are unknown at this time; future new or expanded processing facilities, truck base yards, and Organics processing facilities could necessitate the construction of new water or wastewater treatment facilities, or expansion of existing facilities, which could cause significant environmental effects. Implementation of mitigation measures UT-1 and UT-2 would mitigate the potential adverse impacts to below a level of significance.

***Impact UT-6: The Proposed Project would not be a net Solid Waste generator and would therefore be served by landfills with sufficient permitted capacity.***

Elements of the Proposed Project (see Section 2.4) include diversion targets for Commingled Recyclables and Organics, landfill reduction targets and/or disposal limits, preservation and expansion of existing Organics collection, and fair and equitable rate structure, all of which facilitate a reduction in the amounts of Solid Waste that would be disposed of in landfills over time. These elements would have the effect of prolonging landfill capacity. In addition, the Proposed Project would require Franchised Haulers to establish contingency plans to provide back-up collection services in the event of service disruptions, thereby improving the reliability of the City's Solid Resources system.

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources from Commercial Establishments within the City. Although the Proposed Project would result in the diversion of materials (approximately 1.5 million tons per year of Commingled Recyclables and Organics by 2030) from landfills, these collection activities would occur on and from existing developments using existing urban infrastructure and similar collection methods, and would not result in generation of Solid Wastes. To the contrary, the purpose of the Proposed Project is to increase the source-separated Commingled Recyclables and Organics that would be collected and diverted from Solid Waste landfills; thereby prolonging remaining landfill capacity. Therefore, collection activities under the Proposed Project would not adversely affect remaining landfill capacity.

Future new or expanded processing facilities, and truck base yards would likely be located in industrial areas or on land zoned for industrial uses (due to the industrial nature of the facilities). Organics processing facilities could be sited on lands zoned for agricultural uses, depending on the processing technology utilized. These processing facilities would accept source-separated materials from Solid Resources generated, and further process the materials into commodities for subsequent marketing and reuse. Although residual wastes would remain at the processing facilities that would be disposed of at landfills, the residual wastes would be a fraction of the source-separated materials diverted from landfills.

The net result of the collection of source-separated inert Commingled Recyclables and source-separated Organics would be to divert a significant portion of existing Solid Resources tonnage away from landfill disposal to be recycled or reused. Currently, approximately 161,000 tons of Commingled Recyclable and Organics are collected annually from Commercial Establishments and diverted from landfills. Under the Proposed Project, the amount of Commingled Recyclable and Organics collected annually from Commercial Establishments and diverted from landfills would increase to over 1.5 million tons annually (approximately 4,200 tons per day) by 2030. The baseline landfill capacity reduction condition is one where total remaining landfill capacity is being reduced by approximately 7,600 tons per day of waste generated in the City. The Proposed Project would have the effect of slowing down the baseline landfill capacity reduction condition by

substantially lowering the amount of wastes generated that need to be disposed of in a landfill to below the existing Solid Waste disposal tonnage of 7,600 tons per day. As a consequence, the Proposed Project would not result in significant impacts to Solid Waste landfill capacity.

***Impact UT-7: The Proposed Project would comply with federal, state, and local statutes and regulations related to solid waste.***

The Proposed Project would not result in physical changes related to the basic methods used to collect Solid Resources from Commercial Establishments within the City. The Proposed Project would result in the diversion of materials (Commingled Recyclables and Organics) from landfills and is expected to meet the landfill diversion level required in the California Integrated Waste Management Act and AB 341. In addition, the Proposed Project would be consistent with the Los Angeles County Countywide Integrated Waste Management Plan, RENEW L.A. Zero Waste Goals, and the Infrastructure and Public Services Element of the City's General Plan. Therefore, collection activities, and new or expanded processing capacity and truck base yards under the Proposed Project would not conflict with statutes or regulations related to Solid Resources. To the contrary, the Proposed Project is considered to implement the policies, goals, and requirements put forth in state and local laws, ordinances, and plans regarding Solid Resources management. Therefore, significant Solid Waste impacts would not occur because the Proposed Project would comply with applicable statutes and regulations related to Solid Resources. In fact, the City would gain significant Solid Waste benefits with implementation of the Proposed Project.

***Impact UT-8: The Proposed Project is not expected to require new (off-site) energy supply facilities but could require energy conservation measures in the project design and/or facility operations.***

New or expanded materials processing facilities, transfer stations, and truck base yards would utilize energy for facility operations. However, the new or expanded facilities are not expected to result in intensive energy demands. In addition, the City currently has the energy capacity for future facilities; however, incorporating design features that would reduce consumption of energy into future building plans would reduce the demand for power. These "sustainability features" may include the use of energy efficient lighting and machinery. Alternative energy sources would also reduce electrical consumption from LADWP. With the incorporation of energy conserving measures specified in Mitigation Measure UT-3, a less than significant impact is identified. In addition to mitigation, compliance with Title 24 would reduce impacts to a less than significant level.

#### ***3.2.13.5 Cumulative Impacts***

The collection activities under the Proposed Project are consistent with applicable plans, policies, and regulations related to utilities and service systems. The Proposed Project will have a positive cumulative effect on utilities and service systems in that the Proposed Project will advance the City toward its stated goal of Zero Waste. Therefore, collection activities under the Proposed Project would make a cumulatively considerable contribution to a significant positive cumulative impact to utilities or service systems.

As with the Proposed Project, future diversion activities in Los Angeles County and the state associated with related projects could cause the need for new or expanded processing facilities, truck base yards, and Organics processing facilities. If those related project facilities create a need for additional water supply, or water and wastewater treatment facilities that cannot be met using existing infrastructure, the projects could result in impacts to utilities and service systems.

In addition, landfill capacity in Los Angeles County and the surrounding areas are facing limited capacity conditions, with remaining landfill capacities diminishing. The baseline condition is that of remaining landfill capacity diminishing at a rate of approximately 25,000 tons per day, of which the City's contribution is about 7,600 tons per day. Other cities and jurisdictions with Solid Resources management responsibilities in Los Angeles County and the rest of California are also implementing diversion measures to reduce disposal of Solid Waste in landfills in order to comply with mandatory diversion rates and to prolong remaining landfill capacities. The Proposed Project would help the City meet state-mandated landfill diversion goals and reduce the amount of Solid Resources that would have to be disposed of in landfills, which would reduce the rate at which landfill capacity is diminishing. Mitigation measures UT-1 and UT-2 would be implemented to reduce potential impacts of new processing facilities, truck base yards, and Organic processing facilities under the Proposed Project to a level that is less than significant. Therefore, after mitigation, the Proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact to utilities or service systems.

On balance, the Proposed Project, in conjunction with the other diversion activities of other jurisdictions in Los Angeles County and the state, is expected to have beneficial effects on the current rates at which landfill capacities are diminishing. Therefore, the Proposed Project would have a cumulatively considerable benefit to landfill capacity. Cumulative impacts associated with new or expanded facilities, truck base yards, and Organics processing facilities will be further addressed in the project-specific environmental document prepared by the Lead Agency for the jurisdiction in which such new or expanded facilities are located.

#### **3.2.13.6 Mitigation Measures**

The Proposed Project could result in significant impacts to utilities and service systems due to the construction and operation of new or expanded processing facilities, and truck base yards, resulting in increased demand for water or wastewater treatment facilities and additional water supply. The following mitigation measures are recommended:

- UT-1:** Future processing facilities shall incorporate water conservation design features. These features may include, but are not limited to, the following:
- Landscaping plans shall incorporate water-efficient, well-adapted plants and native shrubs, trees, and grasses (i.e., drought and heat tolerant).
  - Recycled water for landscaping irrigation shall be used to the maximum extent practicable.
  - High-efficiency/low-flow toilets and sink faucets shall be used.
  - If truck washing will occur onsite, a water recycling system shall be implemented to reduce water demand.
- UT-2:** Development applications for future new facilities greater than 40 acres of land, having more than 650,000 square feet of floor area, or employing more than 1,000 persons shall include a water supply assessment. The water supply assessment shall be prepared by the water agency serving the facility and shall require the facility to document wholesale water supplies, and to identify and quantify the existing and planned sources of water available to the water supplier in 5-year increments for the 20-year projection. For each identified supply, the assessment shall detail the quantity available and state

whether it is a water supply entitlement, water right, or water service contract; document the project demand; document dry year supplies; document dry year demand; and determine if the projected water supply is sufficient or insufficient for the proposed facility.

**UT-3:** Future new or expanded materials processing facilities, transfer stations, and truck base yards shall be required to incorporate energy efficient design features.

These features shall include, but are not limited to, the following:

- Energy efficient light fixtures;
- Energy efficient equipment/machinery; and
- Alternative energy source (i.e., solar power, wind power, thermal).

#### ***3.2.13.7 Level of Significance after Mitigation***

With implementation of mitigation measures UT-1, UT-2, and UT-3, potential impacts to utilities and service systems resulting from the Proposed Project would be less than significant.

## **SECTION 4**

### **ALTERNATIVES TO THE PROPOSED PROJECT**

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This section of the Draft Program EIR describes alternatives to the Proposed Project. Alternatives have been analyzed consistent with the recommendations of Section 15126.6 of the State CEQA Guidelines, which require evaluation of a range of reasonable alternatives to the Proposed Project, or to the location of the Proposed Project, that would feasibly attain most of the basic objectives of the Proposed Project but could potentially avoid or substantially lessen any of the significant effects of the Proposed Project, and evaluation of the comparative merits of the alternatives. The CEQA Guidelines also require the evaluation of the No Project Alternative. The discussion of alternatives is intended to focus on four criteria:

- Alternatives to the Proposed Project or their location that may be capable of avoiding or substantially reducing any significant effects that a project may have on the environment
- Alternatives capable of accomplishing most of the basic objectives of the Proposed Project and potentially avoid or substantially lessen one or more of the significant effects
- The presentation of sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the Proposed Project
- The No Project Alternative analysis of what would be reasonably expected to occur in the foreseeable future if the Proposed Project was not approved (status quo)

Alternatives addressed in this Draft Program EIR were derived from work undertaken by the City, as well as from comments received in response to the NOP for the EIR and the comments provided by interested parties who attended the public scoping meetings. During the initial conceptual phase of the Proposed Project, several alternatives were considered. In addition to the Proposed Project and the No Project Alternative, three alternatives were evaluated, as required by CEQA. Pursuant to Section 15126.6(e) (2) of the CEQA Guidelines, the analysis of alternatives should be limited to those that are determined to be capable of feasibly attaining most of the basic objectives of the Proposed Project. Section 15364 of the State CEQA Guidelines defines feasibility as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, and environmental, legal, social, and technological factors."

This section describes the alternatives evaluation process including the Proposed Project, the No Project Alternative, and three project alternatives. Section 2.4.4 of this Draft Program EIR addresses the alternatives eliminated from further consideration. This evaluation also analyzes potential environmental impacts and the ability of each of the alternatives to meet most of the basic objectives of the Proposed Project. The Proposed Project, No Project Alternative, and three project alternatives are deemed to represent a reasonable range and have been carried forward for detailed analysis:

Proposed Project:	Exclusive system with a single Franchise Hauler per wasteshed
No Project:	Status quo
Alternative 1:	Non-exclusive system
Alternative 2:	Exclusive system with multiple Franchise Haulers per wasteshed
Alternative 3:	City collection of all Solid Resources

Section 3 of this Draft Program EIR provides the evaluation of the Proposed Project for each the environmental issue areas under CEQA, which determined that, except for Transportation, Air Quality, Greenhouse gases, and Cultural Resources, there would be no significant impacts associated with implementation of the Proposed Project with implementation of the mitigation measures included in the Draft Program EIR.

#### **4.1 PROPOSED PROJECT**

Under the Proposed Project, the City would adopt an authorizing ordinance to establish and implement an exclusive franchise program on a citywide basis for collection and handling of Solid Resources from all Commercial Establishments serviced by Permitted Haulers. The Proposed Project would replace the existing open market collection and handling system for Solid Resources. The Proposed Project would establish 11 franchise collection zones (8 medium to large zones and 3 small zones), in each of which an exclusive Franchised Hauler will collect Commingled Recyclables and Organics to be diverted from landfills, and collect and dispose of Solid Wastes. Figure 2-1 depicts the boundaries of the exclusive franchise zones. As part of the management of the Commingled Recyclables and Organics, new or expanded material recovery facilities (MRFs) and Organics processing facilities may be required, as could new or expanded truck base yards. However, these facilities have not yet been proposed, nor have their locations been identified. At the time that new MRFs, Organics processing facilities, and base yards are proposed and their locations identified, the site-specific impacts of those facilities would be evaluated in subsequent CEQA environmental documentation by the Lead Agency with jurisdiction of the facility locations. Further details of the Proposed Project are provided in Section 2.

##### **4.1.1 Objectives and Feasibility**

The Proposed Project is intended to accomplish the Project Goals described in Section 2.2, and would assist the City in meeting its Zero Waste Goals, increase Solid Resource diversion and recycling services to Commercial Establishments, improve truck routing efficiency, and protect worker safety while meeting or exceeding City and State goals and mandates for Solid Waste reduction and increased diversion of recyclable materials.

Achieving the City's goal of Zero Waste is dependent on the successful implementation of source-separation of Commingled Recyclables and Organics, their collection and transport to MRFs and Organics processing facilities, and the concurrent development of material processing and organics processing capacity to match collection of those materials. The Proposed Project would be implemented by way of a franchise agreement with Franchised Haulers, and would have the ability to allocate the material streams in a manner that facilitates diversion from landfill disposal. As a consequence, the Proposed Project is expected to assist the City in meeting its Zero Waste Goals. Similarly, the Proposed Project is expected to assist the City in meeting or exceeding California's requirements for Solid Resource diversion and mandatory recycling set forth in AB 341.

The Proposed Project would require health and safety standards at Franchised Hauler facilities and processing facilities providing means of meeting the goal to improve the health and safety of Solid Resource workers.

The routing inefficiencies of the current system are described in Section 2.1. Numerous overlapping collection routes collect Solid Resources from the same geographical areas under the open market system. The Proposed Project would replace this system with an exclusive Franchised Hauler structure which would minimize overlapping of collection routes within each zone. As a consequence, the Proposed Project would introduce routing efficiencies, resulting in substantially lower vehicle miles traveled (VMTs) than the project alternatives that allow overlapping routes from multiple Franchised Haulers or Permitted Haulers. These routing improvements would meet the objective to improve the efficiency of the City's Solid Resources program.

The Proposed Project would be implemented by way of a franchise agreement that would require that Franchised Hauler fleets be comprised of late model, fuel efficient, clean fuel collection vehicles. As a consequence, the Proposed Project would allow the City to achieve its goals of improving air quality and reducing greenhouse gas emissions (GHGs) by using late model, low emission, clean fuel vehicles. However, although the collection activities would result in fewer GHG emissions than baseline conditions, the incremental GHG emissions from the future facilities would make a cumulative contribution to global climate change, which is considered potentially significant. Implementation of mitigation measures AQ-1 through AQ-20 would reduce the construction and operational emissions associated with future facilities; however, residual operational-related impacts that contribute to a cumulative impact could remain.

The franchise agreement would require Franchised Haulers to meet, or exceed a defined level of customer service standards. As a consequence, the Proposed Project would allow the City to achieve its goals of providing a high level of customer service.

The franchise agreement would also require Franchised Haulers to establish fair and equitable rates achieving its goal establishing fair and equitable rates. Furthermore, the City would require Franchised Haulers to establish a system for back-up collection in the event of an emergency or service disruption to ensure reliable collection services.

#### *4.1.1.1 Environmental Impacts*

Section 3 of this Draft Program EIR evaluates the potential for the Proposed Project to result in significant impacts to the various resource areas itemized in the CEQA Initial Study Checklist, which determined that the Proposed Project would result in less than significant impacts after mitigation to all resource areas except traffic, air quality, greenhouse gases, and cultural resources. The Proposed Project could potentially result in significant impacts related to operation of new or expanded MRFs, Organics processing facilities, or truck base yards, depending on site-specific and other conditions. Table 4-1 summarizes the impacts of the Proposed Project by resource area. Table 4-1 also summarizes the anticipated impact to the same resource areas for each alternative (discussed below). Table 4-1 lists the greatest impact—for example, if only one area has a less than significant impact, and all other areas are mitigable, the table will list the impact as less than significant (L).

**TABLE 4-1  
ENVIRONMENTAL ISSUE AREAS<sup>a</sup>**

<b>D PEIR Section</b>	<b>Environmental Resource Area</b>	<b>Proposed Project</b>	<b>No Project</b>	<b>Alternative 1 - Non-Exclusive</b>	<b>Alternative 2 - Exclusive</b>	<b>Alternative 3 - City Collection</b>
3.2.1	Aesthetics	<b>M</b>	<b>N</b>	<b>M</b>	<b>M</b>	<b>M</b>
3.2.2	Agriculture	<b>M</b>	<b>N</b>	<b>M</b>	<b>M</b>	<b>M</b>
3.1.1	Air Quality	<b>S</b>	<b>L</b>	<b>S</b>	<b>S</b>	<b>S</b>
3.2.3	Biological Resources	<b>M</b>	<b>N</b>	<b>M</b>	<b>M</b>	<b>M</b>
3.1.2	Cultural Resources	<b>S</b>	<b>N</b>	<b>S</b>	<b>S</b>	<b>S</b>
3.2.4	Geology and Soils	<b>M</b>	<b>N</b>	<b>M</b>	<b>M</b>	<b>M</b>
3.2.5	Hazards and Hazardous Materials	<b>M</b>	<b>N</b>	<b>M</b>	<b>M</b>	<b>M</b>
3.2.6	Hydrology and Water Quality	<b>M</b>	<b>N</b>	<b>M</b>	<b>M</b>	<b>M</b>
3.2.7	Land Use and Planning	<b>M</b>	<b>N</b>	<b>M</b>	<b>M</b>	<b>M</b>
3.2.8	Mineral Resources	<b>M</b>	<b>N</b>	<b>M</b>	<b>M</b>	<b>M</b>
3.2.9	Noise	<b>M</b>	<b>N</b>	<b>M</b>	<b>M</b>	<b>M</b>
3.2.10	Population and Housing	<b>M</b>	<b>N</b>	<b>M</b>	<b>M</b>	<b>M</b>
3.2.11	Public Services	<b>L</b>	<b>N</b>	<b>L</b>	<b>L</b>	<b>L</b>
3.2.12	Recreation	<b>M</b>	<b>N</b>	<b>M</b>	<b>M</b>	<b>M</b>
3.1.4	Transportation and Traffic	<b>S</b>	<b>N</b>	<b>S</b>	<b>S</b>	<b>S</b>
3.2.13	Utilities and Service Systems	<b>M</b>	<b>N</b>	<b>M</b>	<b>M</b>	<b>M</b>
3.1.3	Greenhouse Gases	<b>S</b>	<b>N</b>	<b>S</b>	<b>S</b>	<b>S</b>

CEQA Impact Classification

S - significant or potentially significant unavoidable impact

M - significant but mitigable to less than significant impact

L - less than significant impact

N - no impact

One of the primary elements of the Proposed Project is the collection of source-separated Commingled Recyclables and Organics from Commercial Establishments within the City. This would result in an increase in the number of material streams that would be collected to three (Solid Waste, Commingled Recyclables, and Organics) compared to current conditions under which Solid Waste is the stream primarily collected. As a result, the Proposed Project (and the Alternatives) would result in changes to the VMTs by Permitted and Franchised Hauler trucks throughout the City. The number of VMTs represents a primary differentiator between the Proposed Project and the other alternatives. VMTs also affect the amount of air emissions and greenhouse gases generated by collection trucks; thus, a summary of the Proposed Project VMTs (as well as VMTs by Alternative) is provided in Table 4-2.



**TABLE 4-2  
FORECAST 2030 VMT AND VHT**

<b>Alternatives</b>	<b>2030 VMT</b>	<b>% Change</b>	<b>% Change (No Project vs. Project Alternatives)</b>	<b>2030 VHT</b>	<b>% Change</b>	<b>% Change (No Project vs. Project Alternatives)</b>
2012 Existing Conditions	9,143,221			853,608		
2030 Alternatives						
No Project	10,488,034	15%	-	992,597	16%	-
Proposed Project	10,287,273	13%	-2%	1,073,843	26%	10%
Alt 1. Non-Exclusive	16,107,380	76%	61%	1,587,034	86%	70%
Alt 2. Exclusive, Multiple Franchised Haulers	16,056,981	76%	61%	1,582,618	85%	69%
Alt 3. City Collection	10,287,273	13%	-2%	1,073,843	26%	10%

## 4.2 ALTERNATIVES TO THE PROPOSED PROJECT

Three alternatives that achieve the basic objectives of the Proposed Project have been evaluated, as has the No Project Alternative, which does not meet the Project Goals and Objectives. Nonetheless, the No Project Alternative is evaluated, as required by CEQA.

### 4.2.1 No Project Alternative

#### 4.2.1.1 *Alternative Components*

Under the open market system, any Permitted Hauler that meets permitting requirements can collect and dispose of Solid Resources generated by Commercial Establishments within the City. As a result, numerous overlapping collection truck routes collect Solid Resources from the same geographical areas.

The No Project Alternative (Status Quo) maintains the “status quo” of Solid Resources collection from Commercial Establishments through an open market system, and the current operating conditions described in Section 2.1 would remain in effect.

#### 4.2.1.2 *Objectives and Feasibility*

The No Project Alternative is not expected achieve the basic Project Goals of the Proposed Project outlined in Section 2.2.

Achieving the City's goal of Zero Waste is dependent on the successful implementation of source-separation of Commingled Recyclables and Organics, their collection and transport to MRFs and Organics processing facilities, and the concurrent development of MRFs and Organics processing capacity to match collection of those materials. Because the No Project Alternative would keep the open market system, there is no ability with this alternative to direct or allocate the Solid Waste and source-separated material streams in a manner that facilitates diversion from landfill disposal. As a consequence, the No Project Alternative is not expected to be able to meet the City's Zero

Waste Goals. Similarly, the No Project Alternative is not expected to be able to meet or exceed State requirements for Solid Resource diversion and mandatory recycling.

The No Project Alternative would not require health and safety standards at Permitted Hauler facilities or MRFs or Organics processing facilities and thus, would not meet the goal to improve the health and safety of Solid Resources workers.

As described above, numerous overlapping collection truck routes collect Solid Resources from the same geographical areas under the open market system, and the No Project Alternative would continue this system of overlapping collection routes, which would not meet the objective to improve the efficiency of the City's Solid Resources system.

The open market system does not have provisions that require clean fuel collection vehicles, and as a consequence, continuation of the open market system under the No Project Alternative would not allow the City to achieve its goals of improving air quality by using clean fuel vehicles.

The open market system does not have provisions that require customer service standards, and as a consequence, continuation of the open market system under the No Project Alternative would not allow the City to achieve its goals of providing a high level of customer service.

The open market system does not have provisions that require rates to be consistent or fair and equitable, nor does it have provisions to ensure the provision of reliable service. As a consequence, continuation of the open market system under the No Project Alternative would not allow the City to achieve its goal of establishing fair and equitable rates.

#### *4.2.1.3 Comparative Environmental Impacts*

The No Project Alternative would result in minimal changes to the environment because it is a continuation of an existing collection system. A discussion of the anticipated impacts of the No Project Alternative follows.

**Aesthetics:** The No Project Alternative would continue the existing open market system for the collection of Solid Resources from Commercial Establishments in the City. This alternative is not expected to result in new development that could result in impacts to aesthetic resources.

**Agriculture:** The No Project Alternative would continue the existing open market system for the collection of Solid Resources from Commercial Establishments in the City. This alternative is not expected to result in new development that could result in impacts to agricultural resources.

**Air Quality:** The No Project Alternative would continue the existing open market system for the collection of Solid Resources from Commercial Establishments in the City. The No Project Alternative would result in similar VMTs as the Proposed Project. Section 3.1.1, Air Quality, included emission calculations for the No Project Alternatives, and emissions would be below significance. As a consequence, the No Project Alternative is not expected to result in significant air quality impacts.

**Biology:** The No Project Alternative would continue the existing open market system for the collection of Solid Resources from Commercial Establishments in the City. This alternative is not expected to result in new development that could result in impacts to biological resources.

**Cultural Resources:** The No Project Alternative would continue the existing open market system for the collection of Solid Resources from Commercial Establishments in the City. This alternative is not expected to result in new development that could result in impacts to cultural resources.

**Geology:** The No Project Alternative would continue the existing open market system for the collection of Solid Resources from Commercial Establishments in the City. This alternative is not expected to result in new development that could result in impacts to geology or geologic features.

**Hazards:** The No Project Alternative would continue the existing open market system for the collection of Solid Resources from Commercial Establishments in the City. This alternative is not expected to expose people to hazards or hazards materials.

**Hydrology:** The No Project Alternative would continue the existing open market system for the collection of Solid Resources from Commercial Establishments in the City. This alternative is not expected to expose people to flood hazards or result in new development that could adversely affect water quality.

**Land Use:** The No Project Alternative would continue the existing open market system for waste the collection of Solid Resources from Commercial Establishments in the City. This alternative would not result in new development that could conflict with land use plans, or that could divide an established community.

**Mineral Resources:** The No Project Alternative would continue the existing open market system for the collection of Solid Resources from Commercial Establishments in the City. This alternative would not result in new development that could cause the loss of mineral resources.

**Noise:** The No Project Alternative would continue the existing open market system for the collection of Solid Resources from Commercial Establishments in the City. This alternative would not result in new development that could cause temporary or permanent elevations in ambient noise levels.

**Population and Housing:** The No Project Alternative would continue the existing market open system for the collection of Solid Resources from Commercial Establishments in the City. This alternative would not result in new development that could result in the population growth, or displacement of people or housing.

**Public Services:** The No Project Alternative would continue the existing open market system for the collection of Solid Resources from Commercial Establishments in the City. This alternative would not result in new development that could increase demand for police or fire protection services, or parks and schools.

**Recreation:** The No Project Alternative would continue the existing open market system for the collection of Solid Resources from Commercial Establishments in the City. This alternative would not result in new development that could cause the deterioration of existing recreational resources or require new or expanded recreational facilities.

**Transportation:** The No Project Alternative would continue the existing open market system for the collection of Solid Resources from Commercial Establishments in the City. This alternative would result in slightly higher VMTs than the baseline conditions and approximately the same as the Proposed Project. The No Project Alternative is not expected to result in significant transportation impacts.

**Utilities:** The No Project Alternative would continue the existing open market system for the collection of Solid Resources from Commercial Establishments in the City. This alternative would continue the collection of Solid Waste and its disposal in landfills, with minimal levels of the diversion of source-separated Commingled Recyclables and Organics away from landfills. This alternative would not generate wastes for disposal in landfills, and would therefore not be considered to significantly affect landfills capacity. However, the No Project Alternative would not substantively extend existing landfill capacity through the diversion level that would be required through the Proposed Project and other alternatives. Therefore, the No Project Alternative would not result in a beneficial impact of extending remaining landfill capacity.

**Greenhouse Gases:** The No Project Alternative would continue the existing open market system for the collection of Solid Resources from Commercial Establishments in the City. This alternative would result in generation of approximately 2,200 Metric tons of greenhouse gases, which is negligible compared to the state inventory. Therefore, the No Project Alternative is expected to result in less than significant impacts to greenhouse gases.

#### 4.2.2 Alternative 1: Non-Exclusive System

##### 4.2.2.1 *Alternative Components*

Alternative 1 would replace the existing open market system for the collection of Solid Resources from Commercial Establishments within the City with a non-exclusive franchise system of collection. The non-exclusive franchise system would be comprised of the following key features and operating conditions:

- Citywide franchise agreement (no franchise zones aside from the City boundaries)
- Unlimited number of Franchised Haulers, provided they meet the franchise agreement terms and conditions
- Private Franchised Hauler set rates (no uniform rates)
- Compliance with AB 341
- Collection of three streams: Blue Bin Commingled Recyclables, Green Bin Organics, and Black Bin Solid Waste
- Recycling services would include a Blue Bin system for the collection of Commingled Recyclables, and a Green Bin system for the collection of Organics, which would be phased in over time
- The City would mandate that every business is provided a recycling service
- The City would mandate maximum annual disposal levels and specific diversion requirements by Franchised Hauler to promote Solid Resource diversion from landfills
- The City would mandate that all Solid Resource collection vehicles operated by the Franchised Haulers be late model, low emission, clean fuel vehicles

- The City would require employees working under the franchise agreement to be paid, at a minimum, a living wage
- The Franchised Haulers would assist the City in complying with existing and new regulations
- New or expanded MRFs, Organics processing facilities, and truck base yards would be developed
- The location and processing capacity of the new or expanded MRFs and the locations of potential/future truck base yards are not known at this time.

#### 4.2.2.2 *Objectives and Feasibility*

Alternative 1 is expected to achieve most of the basic goals and objectives of the Proposed Project, as outlined in Section 2.2.

Achieving the City's goal of Zero Waste is dependent on the successful implementation of source-separation of Commingled Recyclables and Organics, their collection and transport to MRFs and Organics processing facilities and the concurrent development of material processing and organics processing capacity to match collection of those materials. Because Alternative 1 would replace the open market system with a non-exclusive franchise system that is implemented by way of a franchise agreement with Franchised Hauler, this alternative has the ability to allocate the Solid Waste and source-separated material streams in a manner that facilitates diversion from landfill disposal. As a consequence, Alternative 1 is expected to be able to meet the City's Zero Waste Goals. Similarly, Alternative 1 is expected to be able to meet or exceed state requirements for Solid Resources diversion and mandatory recycling (AB 341).

Alternative 1 would require health and safety standards within the Franchised Hauler's operation and any facilities used, and thus, would meet the goal to improve the health and safety of Solid Resources workers.

As described in Section 2.1, numerous overlapping collection truck routes collect Solid Resources from the same geographical areas under the open market system, and Alternative 1 would replace this system with a non-exclusive franchise system that also allows overlapping collection routes throughout the City. As a consequence, this Alternative would not introduce routing efficiencies. It would result in substantially greater VMTs than the Proposed Project, and would not meet the objective to improve the efficiency of the City's Solid Resources system.

Alternative 1 would require that Franchised Hauler fleets be comprised of late model, low emission, clean fuel collection vehicles. As a consequence, Alternative 1 would allow the City to achieve its goals of improving air quality by using late model, low emission, clean fuel vehicles.

Alternative 1 would require Franchised Haulers to meet a minimum level of customer service standards. As a consequence, Alternative 1 would allow the City to achieve its goals of providing a high level of customer service.

Under Alternative 1, Franchised Haulers would establish their own rates to allow the multiple Franchised Haulers to compete for collection services. As a consequence, Alternative 1 would not allow the City to achieve its goal of establishing fair and equitable rates. Furthermore, since multiple Franchised Haulers would compete to provide collection services in each zone, the City

would not require Franchised Haulers to establish a system for back-up collection in the event of an emergency or service disruption.

#### *4.2.2.3 Comparative Environmental Impacts*

Alternative 1 would result in some changes to the environment, including greater VMT related to overlapping collection of Commingled Recyclables, Organics, and Solid Wastes. In addition, Alternative 1 could indirectly result in new or expanded MRFs and Organics processing facilities to process collected Commingled Recyclables and Organics. Alternative 1 could also indirectly result in new or expanded and truck base yards. A discussion of the anticipated impacts of Alternative 1 follows.

**Aesthetics:** Alternative 1 would indirectly result in the same new or expanded MRFs, and truck base yards as the Proposed Project; would result in similar potential impacts to aesthetic resources (potentially significant); would employ the same mitigation as the Proposed Project, and would result in the same residual impact after mitigation (less than significant).

**Agriculture:** Alternative 1 would indirectly result in the same new or expanded MRFs, and truck base yards as the Proposed Project; would result in similar potential impacts to agricultural resources (potentially significant); would employ the same mitigation as the Proposed Project, and would result in the same residual impact after mitigation (less than significant after mitigation).

**Air Quality:** Collection activities under Alternative 1 would result in greater VMTs than the collection activities under Proposed Project (see Table 4-2). Section 3.1.1, Air Quality, included emission calculations for Alternative 1, and determined that emissions would be below significance. As a consequence, collection activities under Alternative 1 are not expected to result in significant air quality impacts. Future facilities under Alternative 1 could result in the same air quality impacts as those under the Proposed Project.

**Biology:** Alternative 1 would indirectly result in the same new or expanded MRFs, and truck base yards as the Proposed Project; would result in similar potential impacts to biological resources (potentially significant); would employ the same mitigation as the Proposed Project, and would result in the same residual impact after mitigation (less than significant after mitigation).

**Cultural Resources:** Alternative 1 would indirectly result in the same new or expanded MRFs, and truck base yards as the Proposed Project; would result in similar potential impacts to cultural resources (potentially significant); would employ the same mitigation as the Proposed Project, and would result in the same residual impact after mitigation (potentially significant for historic resources and less than significant for archaeological and paleontological resources).

**Geology:** Alternative 1 would indirectly result in the same new or expanded MRFs, and truck base yards as the Proposed Project; would result in similar potential geology and soils impacts (potentially significant); would employ the same mitigation as the Proposed Project, and would result in the same residual impact after mitigation (less than significant after mitigation).

**Hazards:** Alternative 1 would indirectly result in the same new or expanded MRFs, and truck base yards as the Proposed Project; would result in similar potential hazardous materials impacts (potentially significant); would employ the same mitigation as the Proposed Project, and would result in the same residual impact after mitigation (less than significant after mitigation).

**Hydrology:** Alternative 1 would indirectly result in the same new or expanded MRFs, and truck base yards as the Proposed Project; would result in similar potential hydrology and water quality impacts (potentially significant); would employ the same mitigation as the Proposed Project, and would result in the same residual impact after mitigation (less than significant after mitigation).

**Land Use:** Alternative 1 would indirectly result in the same new or expanded MRFs, and truck base yards as the Proposed Project; would result in similar potential land use impacts (potentially significant); would employ the same mitigation as the Proposed Project, and would result in the same residual impact after mitigation (less than significant after mitigation).

**Mineral Resources:** Alternative 1 would indirectly result in the same new or expanded MRFs, and truck base yards as the Proposed Project; would result in similar potential mineral resource impacts (potentially significant); would employ the same mitigation as the Proposed Project, and would result in the same residual impact after mitigation (less than significant).

**Noise:** Alternative 1 would indirectly result in the same new or expanded MRFs, and truck base yards as the Proposed Project; would result in similar potential noise impacts (potentially significant); would employ the same mitigation as the proposed Project, and would result in the same residual impact after mitigation (less than significant).

**Population and Housing:** Alternative 1 would indirectly result in the same new or expanded MRFs, and truck base yards as the Proposed Project; would result in similar potential population and housing impacts (potentially significant); would employ the same mitigation as the proposed Project, and would result in the same residual impact after mitigation (less than significant).

**Public Services:** Alternative 1 would indirectly result in the same new or expanded MRFs, and truck base yards as the Proposed Project, and would result in the same potential public services impacts (less than significant).

**Recreation:** Alternative 1 would indirectly result in the same new or expanded MRFs, and truck base yards as the Proposed Project; would result in similar potential impacts to recreation (potentially significant); would employ the same mitigation as the proposed Project, and would result in the same residual impact after mitigation (less than significant).

**Transportation:** Alternative 1 would result in approximately 16 million VMT and 1.6 million VHT by 2030. This translates into a 61 percent increase in VMT and a 76 percent increase in VHT in 2030 compared to existing conditions and a 70 percent increase compared to the No Project Alternative. The changes in VMT and VHT will occur throughout the City's 460 square miles. However, the estimated changes in Franchised Hauler VMT and VHT by 2030 are relatively small changes for a small subset of the vehicles on the road dispersed over a large area. Existing VHT citywide (for vehicles and trucks) is estimated to be 989 million vehicle hours per year. By 2035, the VHT is expected to increase to 1.14 billion vehicle hours per year. The overall increase in project-related VHT (approximately 81,200 hours) represents a change in overall VHT in the City of less than 0.01 percent. These projected changes in VHT are not expected to translate into a substantial increase in traffic or any change in roadway operations. Impacts to the overall transportation system are expected to be less than significant. Regarding facilities, Alternative 1 would indirectly result in the same new or expanded MRFs and Organics processing facilities, and truck base yards as the Proposed Project; would result in similar potential transportation impacts (potentially

significant); would employ the same mitigation as the proposed Project, and would result in the same residual impact after mitigation (potentially significant).

Utilities: Alternative 1 would indirectly result in the same new or expanded MRFs, and truck base yards as the Proposed Project; would result in similar potential impacts to utilities (potentially significant); would employ the same mitigation as the proposed Project, and would result in the same residual impact after mitigation (less than significant).

Greenhouse Gases: The collection activities under Alternative 1 would result in generation of approximately 7,400 Metric tons of greenhouse gases compared to the 2102 baseline, which is negligible compared to the state inventory. Therefore, as with the Proposed Project, the collection activities under Alternative 1 are not expected to result in significant impacts to greenhouse gases. Future facilities under Alternative 1 could result in a significant cumulative impact to greenhouse gas emissions.

#### 4.2.3 Alternative 2: Exclusive System with Multiple Franchised Haulers per Wasteshed

##### 4.2.3.1 *Alternative Components*

Alternative 2 would replace the existing open market system for the collection of Solid Resources from Commercial Establishments within the City with an exclusive franchise system that limits the number of waste Franchised Haulers per collection zone. Exclusive Franchise System with multiple Franchised Haulers would be comprised of the following key features and operating conditions:

- Eleven franchise zones (same as Proposed Project)
- Up to 5 Franchised Haulers per zone (2 large and 3 small each)
- Private Franchised Haulers set rates (no uniform rates)
- Compliance with AB 341 and Zero Waste Goals
- Collection of up to three streams: Blue Bin Commingled Recyclables, Green Bin Organics, and Black Bin Solid Waste
- Recycling services would include a Blue Bin system for the collection of Commingled Recyclables, and a Green Bin system for the collection of Organics, which would be phased in over time
- The City would mandate that every business is provided a recycling service
- The City would mandate maximum annual disposal levels and specific diversion requirements for each franchise zone to promote Solid Resources diversion from landfills
- The City would mandate that all Solid Resources collection vehicles operated by the Franchised Haulers be late model, low emission, clean fuel vehicles
- The City would require employees working under the franchise agreements to be paid, at a minimum, a living wage
- The Franchised Haulers would assist the City in complying with existing and new regulations
- New or expanded MRFs and Organics processing facilities, and truck base yards are expected to be completed



- The location and processing capacity of the new or expanded recycling facilities and the locations of truck base yards are not known at this time

#### *4.2.3.2 Objectives and Feasibility*

Alternative 2 is expected to achieve most of the basic Program Goals and Objectives outlined in Section 2.2.

Achieving the City's goal of Zero Waste is dependent on the successful implementation of source-separation of Commingled Recyclables and Organics, their collection and transport to MRFs and Organics processing facilities, and the concurrent development of material processing and organics processing capacity to match collection of those materials. Alternative 2 would replace the open market system with an exclusive franchise system with up to 5 Franchised Haulers per zone. Alternative 2 would be implemented by way of a franchise agreement with Franchised Haulers, and would have the ability to allocate the Solid Waste and source-separated recyclable material streams in a manner that facilitates diversion from landfill disposal. As a consequence, Alternative 2 is expected to be able to meet the City's goal of Zero Waste. Similarly, Alternative 2 is expected to be able to meet or exceed State requirements for Solid Resources diversion and mandatory recycling, set forth in AB 341.

Alternative 2 would require health and safety standards at Franchised Hauler facilities or MRFs and Organics processing facilities, and thus, would meet the goal to improve the health and safety of Solid Resources workers.

As described above, numerous overlapping collection truck routes collect Solid Resources from the same geographical areas under the open market system. Alternative 2 would replace this system of overlapping collection routes, with an exclusive franchise system that also allows up to 5 Franchised Haulers to service each zone. Thus, some overlapping collection routes would still occur within each zone under Alternative 2. As a consequence, this Alternative would not introduce the degree of routing efficiencies, as it would result in greater VMT and VHT than the Proposed Project. Alternative 2 would not meet the objective to improve the efficiency of the City's Solid Resources system.

Alternative 2 would require that Franchised Hauler fleets be comprised of late model, low emission, clean fuel collection vehicles. As a consequence, Alternative 2 would allow the City to achieve its goals of improving air quality by using clean fuel vehicles.

Alternative 2 would require Franchised Haulers to meet a minimum level of customer service standards. As a consequence, Alternative 2 would allow the City to achieve its goals of providing a high level of customer service.

Under Alternative 2, Franchised Haulers would establish their own rates to allow Franchised Haulers to compete for collection. As a consequence, Alternative 2 would not allow the City to achieve its goal of establishing fair and equitable rates. Furthermore, since multiple Franchised Haulers would compete to provide collection services in each zone, the City would not require Franchised Haulers to establish a system for back-up collection in the event of an emergency or service disruption.

#### **4.2.3.3 Comparative Environmental Impacts**

Alternative 2 would result in some changes to the environment, including greater VMTs related to overlapping collection of Commingled Recyclables, Organic materials, and Solid Wastes. In addition, Alternative 2 could indirectly result in new or expanded MRFs and Organics processing facilities to process collected Commingled Recyclables and Organics. Alternative 2 could also indirectly result in new or expanded truck base yards. A discussion of the anticipated impacts of Alternative 2 follows.

**Aesthetics:** Alternative 2 could indirectly result in the same new or expanded MRFs, and truck base yards as the Proposed Project; would result in similar potential impacts to aesthetic resources (potentially significant); would employ the same mitigation as the Proposed Project, and would result in the same residual impact after mitigation (less than significant).

**Agriculture:** Alternative 2 could indirectly result in the same new or expanded MRFs, and truck base yards as the Proposed Project; would result in similar potential impacts to agricultural resources (potentially significant); would employ the same mitigation as the Proposed Project, and would result in the same residual impact after mitigation (less than significant).

**Air Quality:** Collection activities under Alternative 2 would result in greater VMTs than the Proposed Project (see Table 4-2 above). Section 3.1.1, Air Quality, included emission calculations for Alternative 2, and determined that emissions would be below significance. As a consequence, the collection activities under Alternative 2 are not expected to result in significant air quality impacts. Future facilities under Alternative 2 could result in the same air quality impacts as those under the Proposed Project.

**Biology:** Alternative 2 would indirectly result in the same new or expanded MRFs, and truck base yards as the Proposed Project; would result in similar potential impacts to biological resources (potentially significant); would employ the same mitigation as the proposed Project, and would result in the same residual impact after mitigation (less than significant).

**Cultural Resources:** Alternative 2 would indirectly result in the same new or expanded MRFs, and truck base yards as the Proposed Project; would result in similar potential impacts to cultural resources (potentially significant); would employ the same mitigation as the proposed Project, and would result in the same residual impact after mitigation (potentially significant for historic resources and less than significant for archaeological and paleontological resources).

**Geology:** Alternative 2 would indirectly result in the same new or expanded MRFs, and truck base yards as the Proposed Project; would result in similar potential geology and soils impacts (potentially significant); would employ the same mitigation as the proposed Project, and would result in the same residual impact after mitigation (less than significant).

**Hazards:** Alternative 2 would indirectly result in the same new or expanded MRFs, and truck base yards as the Proposed Project; would result in similar potential hazardous materials impacts (potentially significant); would employ the same mitigation as the proposed Project, and would result in the same residual impact after mitigation (less than significant).

**Hydrology:** Alternative 2 would indirectly result in the same new or expanded MRFs, and truck base yards as the Proposed Project; would result in similar potential hydrology and water quality impacts (potentially significant); would employ the same mitigation as the proposed Project, and would result in the same residual impact after mitigation (less than significant).

**Land Use:** Alternative 2 would indirectly result in the same new or expanded MRFs, and truck stations and truck base yards as the Proposed Project; would result in similar potential land use impacts (potentially significant); would employ the same mitigation as the proposed Project, and would result in the same residual impact after mitigation (less than significant).

**Mineral Resources:** Alternative 2 would indirectly result in the same new or expanded MRFs, truck base yards as the Proposed Project; would result in similar potential mineral resource impacts (potentially significant); would employ the same mitigation as the proposed Project, and would result in the same residual impact after mitigation (less than significant).

**Noise:** Alternative 2 would indirectly result in the same new or expanded MRFs, truck base yards as the Proposed Project; would result in similar potential noise impacts (potentially significant); would employ the same mitigation as the proposed Project, and would result in the same residual impact after mitigation (less than significant).

**Population and Housing:** Alternative 2 would indirectly result in the same new or expanded MRFs, and truck base yards as the Proposed Project; would result in similar potential population and housing impacts (potentially significant); would employ the same mitigation as the proposed Project, and would result in the same residual impact after mitigation (less than significant).

**Public Services:** Alternative 2 would indirectly result in the same new or expanded MRFs, and truck base yards as the Proposed Project, and would result in the same potential public services impacts (less than significant).

**Recreation:** Alternative 2 would indirectly result in the same new or expanded MRFs, and truck base yards as the Proposed Project; would result in similar potential impacts to recreation (potentially significant); would employ the same mitigation as the proposed Project, and would result in the same residual impact after mitigation (less than significant).

**Transportation:** Alternative 2 would result in approximately 16 million VMT and 1.6 million VHT by 2030. This translates into a 61 percent increase in VMT and a 76 percent increase in VHT in 2030 compared to existing conditions and a 70 percent increase compared to the No Project Alternative. The changes in VMT and VHT will occur throughout the City's 460 square miles. However, the estimated changes in Permitted and Franchised Hauler VMT and VHT by 2030 are relatively small changes for a small subset of the vehicles on the road dispersed over a large area. Existing VHT citywide (for vehicles and trucks) is estimated to be 989 million vehicle hours per year. By 2035, the VHT is expected to increase to 1.14 billion vehicle hours per year. The overall increase in project-related VHT (approximately 81,200 hours) represents a change in overall VHT in the City of less than 0.01 percent. These projected changes in VHT are not expected to translate into a substantial increase in traffic or any change in roadway operations. Impacts to the overall transportation system are expected to be less than significant. Regarding facilities, Alternative 2 would indirectly result in the same new or expanded MRFs, and truck base yards as the Proposed Project; would result in similar potential transportation impacts (potentially significant); would

employ the same mitigation as the proposed Project, and would result in the same residual impact after mitigation (potentially significant).

Utilities: Alternative 2 would indirectly result in the same new or expanded MRFs, and truck base yards as the Proposed Project; would result in similar potential impacts to utilities (potentially significant); would employ the same mitigation as the proposed Project, and would result in the same residual impact after mitigation (less than significant)

Greenhouse Gases: The collection activities under Alternative 2 would result in generation of approximately 7,400 Metric tons of greenhouse gases compared to the 2012 baseline, which is negligible compared to the state inventory. Therefore, as with the Proposed Project, the collection activities under Alternative 2 are not expected to result in significant impacts to greenhouse gases. Future facilities under Alternative 2 could result in a significant cumulative impact to greenhouse gas emissions.

#### 4.2.4 Alternative 3: City Collection (City Crews/City Trucks)

Under Alternative 3, the City's Bureau of Sanitation would collect and manage Solid Resources from all Commercial Establishments currently serviced by private Permitted Haulers. Alternative 3 would replace the existing open market operating conditions described in Section 2.1 with essentially the same operating conditions as the Proposed Project, described in Section 2.3, except the following: 1) collection would be based on existing wastesheds, and 2) the City would perform the collection activities. City collection of all materials would be comprised of the following key features:

- Collection zones based on existing wastesheds
- The City would establish a fair and equitable rate structure for each collection zone. The rate structure may be similar for multiple or all franchise collection zones. This rate structure would detail the rate schedule for solid waste and recycling collection services businesses will pay.
- The City would establish a formula and caps on how rates charged to Solid Resources collection services businesses can be increased annually.
- Under the Proposed Project, three collection streams are anticipated—Blue Bin Commingled Recyclables, Green Bin Organics, and Black Bin Solid Waste.
- Recycling services would include a blue bin system for the collection of Commingled Recyclables, and a Green Bin system for the collection of Organics, which would be phased in over time.
- The City would mandate that every business is provided a recycling service.
- The City would implement maximum annual disposal levels and specific diversion requirements to promote Solid Resources diversion from landfills.
- The City's Solid Resources collection vehicles would be late model low emission clean fuel vehicles.
- The City would ensure that employees would be paid, at a minimum, a living wage.
- The City would comply with existing and new regulations.
- New or expanded recycling facilities would be needed as recycling increases under Alternative 3.

- New or expanded facilities that support collection activities, such as truck base yards, could be required.
- The location and processing capacity of the new or expanded recycling facilities and the locations of truck base yards are not known at this time.

Alternative 3 would involve:

- City's existing collection fleet for servicing single-family residences are designed to collect Commingled Recyclables, Organics, and Solid Waste from the side of the trucks, from standardized trash receptacles (Blue, Green, and Black bins). Under this alternative, the City would purchase a new fleet collection of trucks designed for front-end collection and would provide/replace Solid Resource Containers at all Commercial Establishments, as the existing ones are owned by private Permitted Haulers.
- City has multiple truck staging yards strategically located throughout the City which would be used to meet demand requirements.

Alternative 3 has essentially the same environmental profile as the Proposed Project except that instead of using private Permitted Haulers, City collection vehicles and equipment would be utilized to collect Solid Resources from Commercial Establishments from throughout each of the City's wastesheds.

Because Alternative 3 is effectively the same as the Proposed Project, the ability of this alternative to meet the Program Objectives and its environmental impacts would be the same as the Proposed Project.

#### **4.3 ENVIRONMENTALLY SUPERIOR ALTERNATIVE**

Based upon the analysis conducted in Section 3 and the comparative qualitative environmental analysis conducted in this section, including the information reflected in Tables 4-1 and 4-2, the Alternatives were ranked relative to the Proposed Project for each resource area to identify the Environmentally Superior Alternative. Because the alternatives ranking is relative to the Proposed Project, the Proposed Project is ranked as "0" in all resource areas, making it neutral. If impacts of an alternative are similar to that of the Proposed Project for a given resource area, that alternative is ranked the same as the Proposed Project and given a "0". If an alternative would result in adverse impacts compared to the Proposed Project, or if it would result in impacts that are less beneficial than the Proposed Project, that Alternative is ranked lower and given a "-1" or a "-2" depending on the impact level. Conversely, if an alternative would result in less potential impacts than the Proposed Project, that Alternative is ranked higher and given a "1" or "2" depending on the impact level. An explanation of the rankings is provided below Table 4-3.

As can be seen in Table 4-3, the No Project Alternative is ranked the highest, largely because it would not result in new or expanded MRFs, Organics processing facilities, or truck base yards. However, as discussed in Section 4.2.1.2, it would not meet a number of the basic Project goals and objectives, as stated in Section 2.2. CEQA requires the identification of an Environmentally Superior Alternative, other than the No Project Alternative. Therefore, based on the rankings in Table 4-3, the Proposed Project and Alternative 3 are ranked the highest, and are deemed to be Environmentally Superior. Alternatives 1 and 2 are ranked the lowest primarily because they result in the greatest relative air quality and GHG emissions.

**TABLE 4-3  
COMPARISON OF ENVIRONMENTAL ISSUE AREAS BY ALTERNATIVE**

<b>D PEIR Section</b>	<b>Environmental Resource Area</b>	<b>Proposed Project</b>	<b>No Project</b>	<b>Alternative 1 - Non-Exclusive</b>	<b>Alternative 2 - Exclusive</b>	<b>Alternative 3 - City Control</b>
3.2.1	Aesthetics	0	1	0	0	0
3.2.2	Agriculture	0	1	0	0	0
3.1.1	Air Quality	0	0	-1	-1	0
3.2.3	Biological Resources	0	1	0	0	0
3.1.2	Cultural Resources	0	1	0	0	0
3.2.4	Geology and Soils	0	1	0	0	0
3.2.5	Hazards and Hazardous Materials	0	1	0	0	0
3.2.6	Hydrology and Water Quality	0	1	0	0	0
3.2.7	Land Use and Planning	0	1	0	0	0
3.2.8	Mineral Resources	0	1	0	0	0
3.2.9	Noise	0	1	0	0	0
3.2.10	Population and Housing	0	1	0	0	0
3.2.11	Public Services	0	1	0	0	0
3.2.12	Recreation	0	1	0	0	0
3.1.4	Transportation	0	2	-1	-1	0
3.2.13	Utilities and Service Systems	0	-2	0	0	0
3.1.3	Greenhouse Gases	0	1	-2	-2	0
	<b>TOTAL</b>	<b>0</b>	<b>14</b>	<b>-4</b>	<b>-4</b>	<b>0</b>

Comparison of Impacts to Proposed Project

0 Adverse Impacts similar to Proposed Project

-1 Adverse Impacts slightly greater than Proposed Project (or beneficial impacts less than the Proposed Project).

-2 Adverse Impacts moderately greater than Proposed Project (or beneficial impacts less than the Proposed Project).

+1 Adverse Impacts slightly less than Proposed Project

+2 Adverse Impacts moderately less than Proposed Project

**Aesthetics:** All alternatives except the No Project Alternative are ranked the same as the Proposed Project because they would result in new or expanded processing facilities, and truck base yards, which would have the same potential to affect aesthetic resources. The No Project Alternative would not result in the need for new or expanded processing facilities, and truck base yards.

**Agriculture:** All alternatives except the No Project Alternative are ranked the same as the Proposed Project because they would result in new or expanded processing facilities, and truck base yards, which would have the same potential to affect agricultural and forest resources. The No Project Alternative would not result in the need for new or expanded processing facilities, and truck base yards.

**Air Quality:** The rankings are based on the level of VMTs as a proxy, and consider whether the fleet under the alternative is based on clean fuels or diesel. Higher VMTs alternatives are ranked lower relative to the Proposed Project.

**Biology:** All alternatives except the No Project Alternative are ranked the same as the Proposed Project because they would result in new or expanded processing facilities, and truck base yards, which would have the same potential to affect biological resources. The No Project Alternative would not result in the need for new or expanded processing facilities, and truck base yards.

**Cultural Resources:** All alternatives except the No Project Alternative are ranked the same as the Proposed Project because they would result in new or expanded processing facilities, and truck base yards, which would have the same potential to affect cultural resources. The No Project Alternative would not result in the need for new or expanded processing facilities, and truck base yards.

**Geology:** All alternatives except the No Project Alternative are ranked the same as the Proposed Project because they would result in new or expanded processing facilities, and truck base yards, which would have the same potential to affect geology and soils. The No Project Alternative would not result in the need for new or expanded processing facilities, and truck base yards.

**Hazards:** All alternatives except the No Project Alternative are ranked the same as the Proposed Project because they would result in new or expanded processing facilities, and truck base yards, which would have the same potential to result in hazardous materials impacts or other hazards. The No Project Alternative would not result in the need for new or expanded processing facilities, and truck base yards.

**Hydrology:** All alternatives except the No Project Alternative are ranked the same as the Proposed Project because they would result in new or expanded processing facilities, and truck base yards, which would have the same potential to result in impacts to hydrology and water quality. The No Project Alternative would not result in the need for new or expanded processing facilities, and truck base yards.

**Land Use:** All alternatives except the No Project Alternative are ranked the same as the Proposed Project because they would result in new or expanded processing facilities, and truck base yards, which would have the same potential to affect land use. The No Project Alternative would not result in the need for new or expanded processing facilities, and truck base yards.

**Mineral Resources:** All alternatives except the No Project Alternative are ranked the same as the Proposed Project because they would result in new or expanded processing facilities, and truck base yards, which would have the same potential to affect mineral resources. The No Project Alternative would not result in the need for new or expanded processing facilities, and truck base yards.

**Noise:** All alternatives except the No Project Alternative are ranked the same as the Proposed Project because they would result in new or expanded processing facilities, and truck base yards, which would have the same potential to result in noise impacts. The No Project Alternative would not result in the need for new or expanded processing facilities, and truck base yards.

**Population and Housing:** All alternatives except the No Project Alternative are ranked the same as the Proposed Project because they would result in new or expanded processing facilities, and truck base yards, which would have the same potential to affect population or housing. The No Project Alternative would not result in the need for new or expanded processing facilities, and truck base yards.

**Public Services:** All alternatives except the No Project Alternative are ranked the same as the Proposed Project because they would result in new or expanded processing facilities, and truck base yards, which would have the same potential to affect public services. The No Project Alternative would not result in the need for new or expanded processing facilities, and truck base yards.

**Recreation:** All alternatives except the No Project Alternative are ranked the same as the Proposed Project because they would result in new or expanded processing facilities, and truck base yards, which would have the same potential to affect recreation. The No Project Alternative would not result in the need for new or expanded processing facilities, and truck base yards.

**Transportation:** Alternatives 1 and 2 are ranked lower than the Proposed Project because they would result in greater VMT and VHT, even though the higher level of VMT and VHT would not result in significant impacts to the transportation system. The No Project Alternative is ranked slightly higher because it would result in slightly less VMTs than the Proposed Project. Alternative 3 is ranked the same as the Proposed Project because they would have the same VMTs.

**Utilities:** All alternatives except the No Project Alternative are ranked the same as the Proposed Project because they would result in new or expanded processing facilities, and truck base yards, which would have the same potential to affect utilities. The No Project Alternative would not result in the need for new or expanded processing facilities, and truck base yards, and this Alternative is ranked lower than the Proposed Project because it would not divert a substantive level of Solid Resources away from landfill disposal, and would therefore not extend remaining landfill life.

**Greenhouse Gases:** Alternatives 1 and 2 are ranked moderately lower than the Proposed Project because they would result in greater greenhouse gases (see Table 3.17-2). The No Project Alternative is ranked slightly lower because it would result in slightly greater greenhouse gases than the Proposed Project. Alternative 3 would generate the same amount of greenhouse gases as the Proposed Project.

## **4.4 ALTERNATIVES ELIMINATED FROM FURTHER CONSIDERATION**

### **4.4.1 Alternatives Considered and Withdrawn**

A number of alternatives were considered during preparation of this Draft Program EIR, but were eliminated from further discussion and analysis. These alternatives are described in Section 2.4.4 of this Draft Program EIR, along with the rationale leading to their exclusion from further analysis. Alternatives considered but eliminated from further evaluation include the following:

1. 15 to 20 Franchise Zones
2. 25 Franchise Zones
3. 8 to 10 Franchise Zones
4. Mixed Waste Material Recovery Facility ("dirty" MRF) Processing Instead of Source Separation
5. Alternative: Multi-streams, Single-streams, and Mixed-Waste Stream Collection



## **SECTION 5**

### **SIGNIFICANT UNAVOIDABLE IMPACTS AND IRREVERSIBLE ENVIRONMENTAL CHANGES**

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This section of the Draft Program EIR summarizes the potential for implementation of the Proposed Project to result in significant environmental effects and irreversible environmental changes that cannot be avoided or reduced to a less than significant impact through the implementation of appropriate mitigation measures.

#### **5.1 SIGNIFICANT UNAVOIDABLE IMPACTS**

Consistent with the requirements of Section 15126.2(b) of the State CEQA Guidelines, significant impacts, including those that can be mitigated but not reduced to the level below significance, are described in this section of the Draft Program EIR. Where there are impacts that cannot be alleviated without imposing an alternative design, the implications of the impacts and reasons why the project is being proposed, notwithstanding its effects, are also described. The potential for the implementation of the Proposed Project to result in significant environmental impacts has been analyzed in Section 3 of this Draft Program EIR.

Based on the analysis contained in Section 3 of this Draft Program EIR, the Proposed Project would be expected to result in significant impacts to Cultural Resources, Transportation, Air Quality and Greenhouse Gas. Table 5-1 reflects the impact conclusions for these particular resource areas.

##### ***Air Quality***

Based on the analysis in Section 3, of this Draft Program EIR, emissions of the nonattainment pollutants (PM<sub>10</sub>, PM<sub>2.5</sub>, and ozone precursors NO<sub>x</sub> and ROG) during the operation of the collection activities under the Proposed Project would not exceed the CEQA Thresholds of Significance established by SCAQMD. However, construction and operation of new or expanded processing facilities, transfer stations, or truck base yards could result in emissions that exceed SCAQMD thresholds. Additionally, future stationary source emissions from the facilities would further contribute to exceedences to the SCAQMD thresholds, in conjunction with emissions from related projects. Implementation of mitigation measures would reduce the construction and operational emissions associated with future facilities; however, residual impacts could remain. Therefore, potentially significant and unmitigated project and cumulative impacts are identified.

##### ***Cultural Resource***

There are project level and cumulative level impacts due to the potential for future facilities to be located on land with sensitive cultural resources. Due to the uncertainty of the importance of the cultural resources located on land where future facilities will be sited, these facility-related impacts are considered potentially significant.

##### ***Greenhouse Gas***

Based on the analysis in Section 3, of this Draft Program EIR, the Proposed Project's GHG emissions would not contribute a substantial amount to the State emissions inventory, and would not interfere with the AB 32 Scoping Plan and the long-term goal of AB 32 to reduce GHG emissions to 1990 levels by 2020. Implementation of the Proposed Project is not expected to

conflict or delay the implementation of the policies, plans, and regulations set forth by the state and local agencies to reduce GHG emissions. Operational GHG emissions resulting from implementation of the Proposed Project would be considered to be less than significant on climate change. However, although the collection activities would result in fewer GHG emissions than baseline conditions, the incremental GHG emissions from the future facilities would make a cumulative contribution to global climate change, which is considered potentially significant. Implementation of mitigation measures would reduce the construction and operational emissions associated with future facilities; however, residual operational-related impacts that contribute to a cumulative impact could remain.

### ***Transportation***

There are project-level and cumulative level impacts due to truck trips associated with future facilities. While the majority of these trips would be the rerouting of already occurring trips (trips would go to the future facilities instead of the landfill), due to the uncertainty of where future facilities would be located, these trips are considered a potentially significant impact.

Mitigation has been incorporated to reduce impacts to the extent feasible for these two resource areas. However, the City forecasts that the amount of recyclables and Organics that ultimately would be diverted from landfill disposal would exceed the capacity of existing facilities for material processing, and additional capacity in the form of materials recovery facilities and Organics processing facilities will be required to meet the City's Zero-Waste goals under the Proposed Project. In addition, new or expanded transfer stations and truck base yards could be required to support collection of recyclables and Organics diverted from landfills.

Cumulative impact analysis is a function of the impact of the Proposed Project, as well as the impact of other projects that are proposed in the vicinity. Based on the analysis contained in Section 3 of this Draft Program EIR, the Proposed Project would be expected to result in significant cumulative impacts to Cultural Resources and Transportation.

Site-specific environmental impacts that are associated with future new or expanded materials processing facilities, transfer stations, and truck base yards would be evaluated in compliance with CEQA when plans for such facilities are developed and their locations are identified. This analysis will be accomplished by the local jurisdiction in which expanded or new materials handling facilities, transfer stations, or truck base yards are located.

## **5.2 IRREVERSIBLE ENVIRONMENTAL CHANGES**

Consistent with CEQA requirements, this section summarizes the potential for implementation of the Proposed Project to result in significant irreversible environmental changes. Such a change refers to an irretrievable commitment of nonrenewable resources, or other environmental changes that commit future generations to similar uses.

Construction and operation of future facilities will contribute to the incremental depletion of resources, including renewable and non-renewable resources. Resources such as lumber used in building construction, are generally considered renewable resources, and would be replenished over the lifetime of the project. Non-renewable resources, such as natural gas, petroleum products, steel, copper and other materials are typically considered to be in finite supply and would not be replenished over the lifetime of the project. Therefore, the Proposed Project could result in a substantial irreversible commitment of resources or in irreversible environmental changes.

**TABLE 5-1  
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS**

Resource Area	Environmental Impacts	Significance Determination	Mitigation Measures	Impact after Mitigation
Air Quality	<b>AQ-2 Violate Air Quality Standard:</b> <ul style="list-style-type: none"> <li>Emission reductions would occur with implementation of the Proposed Project.</li> </ul>	Potentially Significant	For facility operations: AQ-14 through AQ-20. For facility construction: AQ-1: Future facilities within the SCAQMD will prepare and implement a fugitive dust control program pursuant to the provisions of SCAQMD Rules 402 and 403 prior to any ground disturbance. For future facilities outside of the SCAQMD, adherence to any applicable fugitive dust control programs will be required. AQ-2: Minimize combustion emissions during construction activities. AQ-3: Low VOC paintings and coatings will be used on future facilities. AQ-4: Excavation, grading, and other construction activity will be limited to one activity or phase at a time. AQ-5: Hours of operation of heavy-duty equipment will be limited to a maximum of 8 hours per day, 5 days per week.	Potentially Significant
	<b>AQ-3 Cumulative Increase in Criteria Pollutant:</b> <ul style="list-style-type: none"> <li>Overall emissions are estimated to drop as a result of the Proposed Project.</li> </ul>	Potentially Significant	AQ-1 through AQ-21	Potentially Significant
	<b>AQ-4 Sensitive Receptor Exposure:</b> <ul style="list-style-type: none"> <li>Sensitive receptors will not be exposed to air pollutants.</li> </ul>	Potentially Significant	AQ-1 through AQ-20	Potentially Significant

**TABLE 5-1  
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS**

<b>Resource Area</b>	<b>Environmental Impacts</b>	<b>Significance Determination</b>	<b>Mitigation Measures</b>	<b>Impact after Mitigation</b>
<b>Cultural Resource</b>	<b>CUL-1 Historical Resources:</b> <ul style="list-style-type: none"> <li>• Diversion of materials from the municipal solid waste collection activities would not result in physical changes or new development that could damage or otherwise adversely affect a historic resource.</li> <li>• Expanded or new processing facilities could potentially damage, demolish, or otherwise adversely affect historic resources.</li> </ul>	Potentially Significant	CR-1: Prior to development, the project applicant shall employ a cultural resource professional who meets the Secretary of the Interior's Professional Qualifications Standards for Architectural History to determine if the project would cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the CEQA Guidelines. The cultural resource professional in conjunction with the Lead Agency shall determine if any significant historical resources would be adversely affected by the proposed development.	Potentially Significant
<b>Transportation</b>	<b>TR-1 Conflict with Plan, Ordinance or Policy:</b> <ul style="list-style-type: none"> <li>• Collection activities would not result in any development, including the construction or expansion of transportation facilities.</li> <li>• Trips associated with new or expanded processing or other facilities could result in conflicts with applicable transportation plans.</li> </ul>	Potentially Significant	TR-1: Prior to the approval of any future facility, a project-level traffic impact report shall be prepared by a qualified traffic consultant. The traffic report shall identify mitigation measures to reduce project- and cumulative-level impacts to the maximum extent practicable.	Potentially Significant
	<b>TR-2 Conflict with Congestion Management Plan:</b> <ul style="list-style-type: none"> <li>• Collection activities would not cause a conflict with a congestion management plan.</li> <li>• Trips associated with new or expanded processing or other facilities could result in conflicts with applicable congestion management plan.</li> </ul>	Potentially Significant	TR-1	Potentially Significant

**TABLE 5-1**  
**SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS**

Resource Area	Environmental Impacts	Significance Determination	Mitigation Measures	Impact after Mitigation
<b>Cumulative Impacts</b>				
	<p>Siting of future facilities under the Proposed Project could make a cumulatively considerable contribution to a significant cumulative impact in the following areas:</p> <ul style="list-style-type: none"> <li>• Agricultural Resources</li> <li>• Aesthetic Resources</li> <li>• Air Quality</li> <li>• Biological Resources</li> <li>• Cultural Resources</li> <li>• Hazardous Materials</li> <li>• Hydrology and Water Quality</li> <li>• Land Use</li> <li>• Mineral Resources</li> <li>• Noise</li> <li>• Population and Housing</li> <li>• Public Services</li> <li>• Recreation</li> <li>• Transportation</li> <li>• Utilities</li> <li>• Greenhouse Gas Emissions</li> </ul>	Potentially Significant	Project-level mitigation for each resource areas; for cumulative impacts related to Greenhouse gas emissions, implement air quality mitigation measures (AQ-1 through AQ-20).	<p>Less Than Significant for all resource areas except for the following resource areas, which remain potentially significant:</p> <ul style="list-style-type: none"> <li>• Air Quality</li> <li>• Cultural Resources</li> <li>• Transportation</li> <li>• Greenhouse Gas Emissions</li> </ul>

## **SECTION 6**

### **GROWTH-INDUCING IMPACTS**

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This section of the Draft Program EIR analyzes the potential for the implementation of the City's Proposed Project regarding an exclusive franchise system for the collection and hauling of Solid Resources from Commercial Establishments (including large multifamily complexes), to result in growth-inducing impacts. Such impacts normally occur when a project fosters economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment; or removes impediments to development allowing increased population. The types of projects that are normally considered to result in growth-inducing impacts are those that provide infrastructure suitable to support additional growth, provide a substantial source of job creation, or remove an existing barrier to growth.

The Proposed Project would not create or contribute to growth-inducing impacts. Further, any jobs related to the implementation of the Proposed Project, if any, would be expected to be filled primarily by the existing labor force in the area. The Proposed Project is intended to support the City in meeting its Zero Waste Goals by expanding Solid Resources collection services to Commercial Establishments through the creation of a system for collection and diversion of Solid Waste, Commingled Recyclables, and Organics. Implementation of these services is to be provided by Franchised Haulers that will become partners with the City to institute reliable and consistent services across the 11 exclusive franchise zones and to increase diversion of materials from landfill disposal to beneficial reuse. Although some jobs may be created, the Proposed Project does not contain elements that would be expected to foster substantial economic or substantial population growth, nor would the Proposed Project remove an existing barrier to growth.

The Proposed Project does not include any development and would not be expected to result in the construction of additional housing either directly or indirectly. However, the Proposed Project forecasts that the amount of Commingled Recyclables and Organics that ultimately would be diverted from landfill disposal would exceed the capacity of existing facilities for processing, and additional capacity in the form of materials recovery facilities (MRFs) and Organics processing facilities will be required to meet the City's Zero Waste Goals under the Proposed Project. In addition, new or expanded transfer stations and truck base yards could be required to support collection of recyclables and Organics diverted from landfills. The Proposed Project might indirectly result in the construction and operation of new or expanded processing facilities and truck base yards that could result in additional economic development (new jobs) and growth. As such, growth inducing impacts that may be associated with new or expanded facilities will be addressed in the project-specific environmental document prepared by the Lead Agency for the jurisdiction in which such new or expanded facilities are located.

## **SECTION 7**

### **ORGANIZATIONS AND PERSONS CONSULTED**

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The organizations and agencies listed below were consulted during preparation of this Draft EIR.

#### **City of Los Angeles**

- Fire Department
- Police Department
- Department of Public Works, Bureau of Sanitation
- Department of Planning
- Department of Recreation and Parks
- Department of Water and Power

#### **County of Los Angeles**

- Department of Parks and Recreation
- Department of Public Works
- Department of Regional Planning

#### **Los Angeles Unified School District**

#### **Riverside County**

- Waste Management Department

#### **State of California**

- Department of Conservation
- Department of Transportation
- Environmental Protection Agency
- Office of the Fire Marshall
- Regional Water Quality Control Board, Los Angeles Region

#### **United States**

- US Census Bureau

## **SECTION 8**

### **REPORT PREPARATION PERSONNEL**

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The following individuals contributed to the preparation of this document.

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Appendix A  
Notice of Preparation for Programmatic EIR /  
Comment Letters

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**NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT (EIR)  
AND PUBLIC SCOPING PROCESS**

**DATE:** February 20, 2013

**TO:** Responsible and Trustee Agencies  
Local and Regional Agencies  
Interested Public and Groups  
State Clearing House, Office of Planning and Research

**PROJECT NAME:** Notice of Preparation (NOP) of an Environmental Impact Report (EIR) for City Ordinance: City-Wide Exclusive Franchise System for Municipal Solid Waste Collection and Handling

**PROJECT LOCATION:** Citywide

**COUNCIL DISTRICT:** Citywide

**DUE DATE FOR PUBLIC COMMENTS:** March 27, 2013

**SUBJECT:** Notice of Preparation of an Environmental Impact Report and Public Scoping Meetings

The City of Los Angeles, Department of Public Works, Bureau of Sanitation (Sanitation) will be the Lead Agency for preparation of an Environmental Impact Report (EIR) to identify and analyze the potential environmental impacts associated with a proposed City ordinance to establish and implement a City-wide exclusive franchise system for municipal solid waste collection and handling services for large multi-family residential units (5 units or more), commercial, industrial, and institutional (Commercial).

**Proposed City-Wide Exclusive Franchise System Goals**

- Meet City's Zero Waste goal of 90% by 2025;
- Meet and exceed California environmental laws;
- Improve health and safety for solid waste workers;
- Improve efficiency by minimizing collection routes;
- Improve air quality and reduce greenhouse gas (GHG) emission by requiring low emission, late model clean fuel vehicles;
- Meet customer needs with uniform rates and cutting edge programs City-wide;
- Furthering strategic planning for long-term waste infrastructure needs, including sorting, transfer and processing facilities;
- Maximizing accountability for waste haulers and processing facilities; and
- Foster long-term competition

### **Overview of City's Existing Waste Collection System**

Currently, solid waste collection, management, and disposal in the City is handled both by Sanitation crews and by various permitted private solid waste haulers. The City provides solid waste collection, recycling and green waste collection services primarily to single family properties and multi-family properties with 4 units or less. Some larger multi-family dwellings (5 units or more) were "grand-fathered" into public collection and will continue to receive City services under the proposed exclusive franchise system. Private solid waste haulers currently collect from all large multi-family dwelling and commercial sites not collected by the City, based on an open permit system.

There are currently between 500 and 750 permitted waste haulers operating in the City. These permitted private haulers provide solid waste collection and disposal services to approximately 75,000 accounts, including large multi-family dwellings, office buildings, commercial buildings, stores and shops, shopping malls, hotels, institutions (such as hospitals and schools), sports and entertainment venues, and TV/movie studios. Approximately 45 haulers serve commercial establishments and the remaining waste haulers primarily collect construction and demolition (C&D) debris. The top 15 haulers collect 97 percent of the solid waste, with the top four haulers collecting 85 percent of the solid waste.

Private waste haulers wishing to collect waste within the City must obtain a Private Waste Hauling Permit from the City. The City does not currently limit the number of waste hauling permits issued annually. Under this system, commercial customers negotiate directly with permitted waste haulers for waste and/or recycling services. The City is not involved with pricing for service or the services offered, including recycling.

There are very few requirements placed on permitted waste haulers. Haulers must obtain an annual permit, submit an annual report and pay quarterly fees. Waste haulers are not required to: provide recycling services, operate clean fuel vehicles, offer similar cost for similar services, reduce vehicle miles traveled, and are not subject to increased scrutiny for worker safety.

The existing open permit system limits the ability of the City to address compliance with State mandates and the City's diversion goals. Although the City has obtained a 72 percent diversion rate, nearly three million tons of solid waste from the City is still disposed in landfills annually. Nearly 70 percent of the City's solid waste disposed of in landfills is from large multi-family dwellings (5 units or more) and commercial customers. Much of the material disposed at landfill sites can be recovered for recycling or composting. Assembly Bill (AB) 341 (Oct 2011) mandated that by July 1, 2012 recycling is to be provided to multi-family dwellings over five units and businesses which dispose of a certain volume/tonnage of solid waste per week. Recycling is not provided to all customers through the current system.

In addition, the existing open permit system limits the ability of the City to address environmental and health impacts associated with solid waste collection and hauling. Unlike the City's solid waste collection truck fleet which are moving to clean alternative fuels, private solid waste haulers in the City are not required to use clean alternative fuel vehicles, which results in a negative impact on local air quality. In addition, existing

waste haulers base their collection routes on their individual customer lists that may be distributed throughout the City resulting in:

- Collection vehicles of multiple firms crossing paths on City streets to serve customers in the same areas on a daily basis.
- Vehicles which need to travel longer distances between stops and service fewer accounts during the day. This results in more collection vehicles on the street than necessary, resulting in an inefficient system, and negative impacts on air quality.
- Recycling is currently not in place at all large multi-family dwelling and commercial establishments in the City, and the addition of recycling services will create more vehicle trips for the 45 haulers servicing commercial accounts.

The existing open permit system also does not allow the City to monitor compliance by private waste haulers with state laws regarding worker health and safety requirements for their employees collecting and processing commercial solid waste collected in the City.

#### **Project Description**

On November 14, 2012 the City Council adopted the actions in the Energy and Environment and Ad Hoc on Waste Reduction and Recycling Committee Majority Report, under Council File No. 10-1797. The City Council instructed Sanitation to develop an Exclusive (one hauler per franchise area) Franchise System. Under the proposed system the waste collection system provided by permitted private haulers will shift from the current open permit system to an exclusive franchise. The City will establish a number of franchise collection zones in which a single franchised waste hauler will collect, manage, and dispose solid waste from both commercial and multifamily properties.

To meet Exclusive Franchise System Goals the franchise system will:

- Establish mandatory recycling programs
- Facilitate compliance with State mandates, including SB 32, AB 818, and AB 341;
- Implement clean fuel trucks for waste collection, under South Coast Air Quality Management District Rule 1193, to reduce air emissions;
- Maximize the efficiency of waste collection truck routing to reduce air emissions, street impacts and noise;
- Promote worker health and safety; and
- Further strategic planning for long-term waste infrastructure needs, including sorting, transfer and processing facilities.

To meet the City's Zero Waste goals and State mandatory commercial recycling requirements, the City will need to expand recycling and waste prevention services and program offerings in the commercial and multi-family sectors. An exclusive franchising system would allow the City to introduce new program and service offerings in these sectors by creating a simple, uniform waste collection and recycling system provided by

franchise holders that would divert more material from landfill disposal to beneficial reuse.

The EIR will be used by the City for consideration of the following discretionary action. The City proposes to adopt an authorizing ordinance to establish and implement an exclusive franchise system on a City-wide basis for collection and handling of municipal solid waste (including organic material and recyclables) from industrial, commercial, institutional and large multi-family (5 units or more) residential units serviced by permitted private waste haulers. This proposed exclusive franchise system would replace the City's current open permit waste collection and handling system for these sectors. The proposed exclusive franchise system would advance environmental protection, reduce negative community impacts, achieve efficiency and increase accountability of waste hauling companies.

The proposed exclusive franchise system would allow for the creation of 10 to 20 waste service zones for franchisees. The following is the currently proposed methodology for developing waste service zones:

- Use the Bureau of Sanitation's defined wastesheds as the basis for service zone development
- Size service zones from 2,000 to 15,000 accounts
- Use major features (roads) and geography (mountains) in drawing zone boundaries
- Create smaller zones near the City owned and operated Central Los Angeles Recycling and Transfer Station (CLARTS)

Under the proposed exclusive franchise system, the City would issue requests for proposals ("RFPs") for each service zone; and select one private waste hauler per service zone at the culmination of a competitive bid process. If the ordinance is approved by the City Council, the earliest date for implementation of the proposed City-wide exclusive commercial franchise system for waste collection and handling would be January 1, 2017.

The industrial, commercial, institutional and large multi-family (5 units or more) waste collection franchise system would cover all solid waste now collected in the City pursuant to City permit, except certain exempted categories. It would not cover solid waste collected from single-family residential and small multi-family (4 or less) units now collected directly by City employees. The following waste categories would be exempt from the proposed project: construction and demolition waste; radioactive, pharmaceutical, hazardous and medical waste; recyclables that have been sold or donated by the generator; and green waste removed from a site as incidental to landscaping businesses. The proposed project would include extensive public education and outreach as well as waste hauler and processing facility incentives to ensure full participation and compliance with the project.

**Issues to Be Addressed In the EIR:** Based on the project description, and the Lead Agency's understanding of the environmental issues associated with the proposed project, the following topics have tentatively been identified to be analyzed in detail in the EIR:

- Air Quality
- Public Services/Facilities
- Solid Waste
- Traffic Circulation
- Land Use
- Cumulative Effects and
- Other: Green House Gases

Based on public and agencies input during the Notice of Preparation/Public Scoping process, should other environmental topics be identified that could result in a potential significant impact, such topics will also be addressed in the EIR.

Alternatives to be analyzed in the EIR will be defined based on their potential to reduce or eliminate significant environmental impacts associated with the proposed project. The specific alternatives to be evaluated in the EIR may include, but are not limited to, a non-exclusive franchise system; an exclusive system with multiple haulers per watershed; City collection of all material; and the No Project alternative.

### **Public Review Period**

This Notice of Preparation (NOP) for the Proposed Project will be available for public and agency review from February 20, 2013 to March 27, 2013 (35 calendar days). The NOP is a request for environmental information that you or your organization believes should be addressed in the EIR. As the Lead Agency, the City will use the EIR when considering the adoption of the City ordinance and other actions related to the proposed project. If you would like to provide written comments, please send your written comments so they are received no later than March 27, 2013, to:

Daniel K. Meyers, Assistant Division Manager  
Solid Resources Citywide Recycling Division  
City of Los Angeles Department of Public Works  
Bureau of Sanitation  
1149 S. Broadway, 5<sup>th</sup> Floor  
Los Angeles, CA 90015-2213

Or comments may be e-mailed to the Bureau of Sanitation at:  
[san.franchisecomments@lacity.org](mailto:san.franchisecomments@lacity.org)

In accordance with the time limits established by CEQA, response to this NOP should be sent to the above address or e-mailed at the earliest possible date, but no later than 30 calendar days after you have received this notice (CEQA Guidelines, §15082, subd. (b); Appendix I.)

**Public Scoping Meetings:** The City Bureau of Sanitation will hold Public Scoping meetings to receive public input on the proposed project, as follows:

- March 4, 2013, 5:30 p.m. to 7:30 p.m. – Panorama Recreation Center, 8600 Hazeltine Ave, Panorama City, CA 91402
- March 6, 2013, 5:30 p.m. to 7:30 p.m. – Wilmington Recreation Center (Multi-Purpose Room), 325 Neptune Ave., Wilmington, CA 90744
- March 12, 2013, 5:30 p.m. to 7:30 p.m. – Deaton Auditorium (in Police Administration Building), 100 W. 1<sup>st</sup> Street, Los Angeles, CA 90015
- March 13, 2013, 5:30 p.m. to 7:30 p.m. – Cheviot Recreation Center Auditorium, 2551 Motor Ave., Los Angeles, CA 90064

*Where to Find the NOP:* The NOP is available for review at the City of Los Angeles Bureau of Sanitation at 1149 S. Broadway, 5<sup>th</sup> Floor, Los Angeles, CA 90015, and at [www.lacitysan.org](http://www.lacitysan.org) under *What's new ...*, and at the following public libraries:

- Central Library, 630 W 5<sup>th</sup> Street, Los Angeles, CA 90071
- Van Nuys Branch Library, 6250 Sylmar Ave, Van Nuys, CA 91401
- West L.A. Regional Branch Library, 11360 Santa Monica Blvd, Los Angeles, CA 90025
- San Pedro Regional Branch Library, 931 S. Gaffey Street, San Pedro, CA 90731

Your interest and participation in the EIR process for this proposed project is appreciated.

**NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT (EIR)  
AND PUBLIC SCOPING PROCESS**

**DATE:** February 26, 2013

**TO:** Responsible and Trustee Agencies  
Local and Regional Agencies  
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State Clearing House, Office of Planning and Research

**PROJECT NAME:** Notice of Preparation (NOP) of an Environmental Impact Report (EIR) for City Ordinance: City-Wide Exclusive Franchise System for Municipal Solid Waste Collection and Handling

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**DUE DATE FOR PUBLIC COMMENTS:** March 27, 2013

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*Original 2/20/2013 noticed revised 2/26/2013 to add two additional Scoping Meetings*

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1149 S. Broadway, 5<sup>th</sup> Floor  
Los Angeles, CA 90015-2213

Or comments may be e-mailed to the Bureau of Sanitation at:  
[san.franchisecomments@lacity.org](mailto:san.franchisecomments@lacity.org)

In accordance with the time limits established by CEQA, response to this NOP should be sent to the above address or e-mailed at the earliest possible date, but no later than 30 calendar days after you have received this notice (CEQA Guidelines, §15082, subd. (b); Appendix I.)

**Public Scoping Meetings:** The City Bureau of Sanitation will hold Public Scoping meetings to receive public input on the proposed project, as follows:

- March 4, 2013, 5:30 p.m. to 7:30 p.m. – Panorama Recreation Center, 8600 Hazeltine Ave, Panorama City, CA 91402
- March 6, 2013, 5:30 p.m. to 7:30 p.m. – Wilmington Recreation Center (Multi-Purpose Room), 325 Neptune Ave., Wilmington, CA 90744
- March 12, 2013, 5:30 p.m. to 7:30 p.m. – Deaton Auditorium (in Police Administration Building), 100 W. 1<sup>st</sup> Street, Los Angeles, CA 90015
- March 13, 2013, 5:30 p.m. to 7:30 p.m. – Cheviot Recreation Center Auditorium, 2551 Motor Ave., Los Angeles, CA 90064

#### **Additional Scoping meeting**

- **March 7, 2013, 5:30 pm to 7:30 pm - Lou Costello Recreation Center, 3141 E. Olympic Bl., Los Angeles, CA 90023**
- **March 11, 2013, 5:30 pm to 7:30 pm - South LA Sports Activity Center, 7020 S. Figueroa St., Los Angeles, CA 90003**
- **March 14, 2013, 5:30 p.m. to 7:30 p.m. - Granada Hills Charter High School Library, 10535 Zelzah Avenue, Granada Hills, CA 91344**

*Where to Find the NOP:* The NOP is available for review at the City of Los Angeles Bureau of Sanitation at 1149 S. Broadway, 5<sup>th</sup> Floor, Los Angeles, CA 90015, and at [www.lacitysan.org](http://www.lacitysan.org) under *What's new ...*, and at the following public libraries:

- Central Library, 630 W 5<sup>th</sup> Street, Los Angeles, CA 90071
- Van Nuys Branch Library, 6250 Sylmar Ave, Van Nuys, CA 91401
- West L.A. Regional Branch Library, 11360 Santa Monica Blvd, Los Angeles, CA 90025
- San Pedro Regional Branch Library, 931 S. Gaffey Street, San Pedro, CA 90731
- **Granada Hills Branch, 10640 Petit Avenue, Granada Hills, CA 91344**

Your interest and participation in the EIR process for this proposed project is appreciated.

From: **bill** <[w.hopkins@mindspring.com](mailto:w.hopkins@mindspring.com)>

Date: Wed, Mar 27, 2013 at 12:29 PM

Subject: City-Wide Exclusive Franchise System for Municipal Solid Waste Collection and

Handling To: [san.franchisecomments@lacity.org](mailto:san.franchisecomments@lacity.org)

Daniel K. Meyers, Assistant Division Manager,  
City of Los Angeles, Department of Public Works, Bureau of Sanitation  
Solid Resources Citywide Recycling Division,  
1149 S. Broadway, 5th Floor, MS #944  
Los Angeles, CA 90015-2213

Re: Public Scoping Process for Proposed City Ordinance: City-Wide Exclusive Franchise System for Municipal Solid Waste Collection and Handling.

Delivered via Email to: [san.franchisecomments@lacity.org](mailto:san.franchisecomments@lacity.org)

Dear Sir:

Exclusive waste hauling franchise is a bad idea for Los Angeles citizens, and especially for residents near the Sunshine Canyon landfill, and those living in the San Fernando Valley.

I am a resident of Granada Hills, and a board member of the Granada Hills North Neighborhood Council. I am writing to request that the proposed exclusive waste hauling franchise system be dropped and replaced with a non-exclusive system. A non-exclusive system is the only way to be fair to both waste haulers and our citizens. There are just way too many unanswered/unaddressed questions in the current proposed exclusive franchise system for this to go forward.

What's the impact on RENEW LA? Waste generated within a watershed should stay there, but it won't under the proposed plan. How can rates be fair? Only large corporations will have any chance of a successful bid, and two of those also own/operate their own landfills. Conflict of interest alarms

should be going off. Will past bad (waste hauler) performers be rewarded with even more customers?

REDUCE, REUSE, RECYCLE.

Thank you.

Bill Hopkins  
Resident, Granada Hills  
Elected board member of  
Granada Hills North Neighborhood Council.

--

Thank you for contacting  
Solid Resources Citywide Recycling Division  
Bureau of Sanitation  
City of Los Angeles

From: **Hieu "Hugh" Ly** <[hieu@breakawayspirits.com](mailto:hieu@breakawayspirits.com)>

Date: Fri, Mar 22, 2013 at 5:45 AM

Subject: Exclusive Franchise System - personal

comment To: [san.franchisecomments@lacity.org](mailto:san.franchisecomments@lacity.org)

To Whom It May Concern:

I don't believe that the "Exclusive" system works in favor of the people. Citizens (prospective customers/clients) should have the "freedom" to choose their service provider.

This country is stronger when manufacturers / service providers compete for customers demands & needs.

The is what makes our country better than everyone else. FREEDOM. Freedom to choose or not to choose. Freedom to select who you hire for a specific job. Freedom to buy a specific brand.

How can limiting a customer's options be good for the customer? How can creating exclusive agreements between government & private businesses benefit the majority ? (exceptions of course – national security)

Waste hauling is like any other trade or skilled profession. Some are better at it. Some do more for their clients. Quality of work differs from each company. Some companies might offer hauling simply as a collateral service to another service such as demo.

To establish exclusive agreements would be detrimental to the small business owners who've already have established relationships through years of working with various builders and companies.

Please keep me updated if possible.

Thank you,

Hieu "Hugh" Ly

[hieu@breakawayspirits.com](mailto:hieu@breakawayspirits.com)

P.S. Please take a look at the City of Irvine's Exclusive System - I've personally had to deal with this issue on behalf of a clean up company!

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\*\*

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Thank you for contacting  
Solid Resources Citywide Recycling Division

Bureau of Sanitation  
City of Los Angeles

From: **Hieu "Hugh" Ly**  
<[hieu@breakawayspirits.com](mailto:hieu@breakawayspirits.com)> Date: Fri, Mar 22, 2013  
at 6:03 AM  
Subject: C&D Waste Hauler  
To: [san.franchisecomments@lacity.org](mailto:san.franchisecomments@lacity.org)

Morning,

Me again. What should existing private haulers be informed on at this moment? Changes that will affect their business, would there be a grace period for compliance and contract accessibility?

What type of assurance should small businesses receive? That their business will not be negatively impacted.

Thanks,

Hieu "Hugh" Ly

[hieu@breakawayspirits.com](mailto:hieu@breakawayspirits.com)



BreakAway Spirits

2143 S. Hathaway St.

Santa Ana, CA 92705

[www.breakawayspirits.com](http://www.breakawayspirits.com)

T: [714.754.4009](tel:714.754.4009)

F: [714.754.1630](tel:714.754.1630)

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\*\*

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Thank you for contacting  
Solid Resources Citywide Recycling Division  
Bureau of Sanitation  
City of Los Angeles

From: **Jaime Garcia** <[jgarcia@hasc.org](mailto:jgarcia@hasc.org)>  
Date: Tue, Mar 26, 2013 at 4:31 PM  
Subject: Exclusive Waste Franchise & Notice of Preparation  
To: "[san.franchisecomments@lacity.org](mailto:san.franchisecomments@lacity.org)" <[san.franchisecomments@lacity.org](mailto:san.franchisecomments@lacity.org)>

March 27, 2013

Daniel Meyers

Assistant Division Manager

City of Los Angeles Department of Public Works

Bureau of Sanitation

1149 South Broadway, 5<sup>th</sup> FL

Los Angeles, CA 90015

Dear Mr. Myers,

In response to the Notice of Preparation issued by the Bureau of Sanitation, the Hospital Association of Southern California would like the following items addressed in the EIR. This list is subject to change since the hospital section of the Draft Implementation Plan is still pending.

\*\*\*\*\*

- Size of collection zones
- Address adverse impact lack of timely pick-ups will have on air quality
- Address exclusive franchise net benefit to hospital sector in terms of reduced truck trips
- Plan for monthly reports and charts documenting waste volume by pickup; recycling volume by category; and total diversion as percentage of total waste
- Address public health risk/exposure exclusive franchise presents to hospitals
- Plan that outlines back-up hauler to step-in should it be needed on short notice to protect public health at a hospital
- Plan that fosters innovation to reduce waste, reduce costs and achieve environmental stewardship
- Report must address how any existing hospital based recycling program / effort will not be undermined.
- Auditing tool to monitor waste hauler and their facilities to ensure that waste is being properly handled in an exclusive franchise.

**Jaime Garcia**

Regional Vice President - Greater Los Angeles Area

Hospital Association of Southern California

Ph. [213-538-0702](tel:213-538-0702) I Fax [213-629-4272](tel:213-629-4272) I Cell [213-200-4280](tel:213-200-4280)

--

Thank you for contacting  
Solid Resources Citywide Recycling Division  
Bureau of Sanitation  
City of Los Angeles

From: **John Beccaria**

<[johnbeccaria@att.net](mailto:johnbeccaria@att.net)> Date: Mon, Mar 25,  
2013 at 11:02 AM Subject: solid waist  
franchise proposal

To: [san.franchisecomments@lacity.org](mailto:san.franchisecomments@lacity.org)

as you know i attended your meeting and told you why this is a bad idea, unless you grant the three aagla sponsored amendments (laBonge-Englander),and let me remind you, these meetings are very poorly attended because it was planned this way, you don't want anyone to know and come, this is maybe illegal, all property owners and business owners affected by this proposed so called franchise should have been notified, invited by mail you know WHO they are

--

Thank you for contacting  
Solid Resources Citywide Recycling Division  
Bureau of Sanitation  
City of Los Angeles

From: **Joyce Dillard** <[dillardjoyce@yahoo.com](mailto:dillardjoyce@yahoo.com)>

Date: Wed, Mar 27, 2013 at 4:28 PM

Subject: Comments to City-Wide Exclusive Franchise System for Municipal Solid Waste Collection and Handling due 3.27.2013

To: SAN-Hauler Franchise <[san.franchisecomments@lacity.org](mailto:san.franchisecomments@lacity.org)>

Your website is not available. Please extended the deadline accordingly.

Joyce Dillard

--

Thank you for contacting  
Solid Resources Citywide Recycling Division  
Bureau of Sanitation  
City of Los Angeles

From: **Kathy Hersh** <[kathylhersh@gmail.com](mailto:kathylhersh@gmail.com)>

Date: Mon, Mar 18, 2013 at 9:02 AM

Subject: Proposed City Ordinance: City-Wide Exclusive Franchise System for Municipal

Solid To: [san.franchisecomments@lacity.org](mailto:san.franchisecomments@lacity.org)

To Whom it May Concern:

I am a condo owner and HOA board member of our building located in Westwood (LA 90025). I just learned of the above-referenced project through the Westwood South of Santa Monica HOA. I am writing to express my intense opposition to this proposed city ordinance. Since it first opened in 2001, our building has utilized private trash and recycling services. These services have been reliable and are considered to be a reasonable and important expense that helps to ensure the pristine nature of our building and property.

It is no secret that many of the services provided by the City of LA are inferior to those offered by the private sector. It is also no secret that the solvency of the City of LA is questionable due in large part to the extraordinary financial obligations that the City of LA has to unions and to various pension funds that it cannot adequately fund. If the City funds falter, we could end up with trash and debris piling up on properties and streets.

It is unsatisfactory enough to be forced into dealing with cable companies that the City has gifted with exclusivity in certain sectors. If I want TV in this building, I have no choice but to use the service provided by the company that 'owns' my area. We are not permitted to have satellites or dishes on the premises. I am at the mercy of the cable company and its pricing whims.

I do not want to see this same scheme implemented with respect to trash disposal and I do not want politicization to infect our trash disposal services as it has with others. I urge you to be mindful of the very serious consequences of your proposal and my objection to same.

Thank you,  
Kathy Hersh

--

Thank you for contacting  
Solid Resources Citywide Recycling Division  
Bureau of Sanitation  
City of Los Angeles

March 20, 2013

Mr. Daniel K. Meyers, Assistant Division Manager  
City of Los Angeles, Department of Public Works  
Bureau of Sanitation  
Solid Resources Recycling Division  
1149 S. Broadway, 5<sup>th</sup> Floor, MS#944  
Los Angeles, CA 90015-2213

E-Mail: [san.franchisecomments@lacity.org](mailto:san.franchisecomments@lacity.org)

**Subject: Notice of Preparation (NOP) of an Environmental Impact Report (EIR) for City Ordinance: City-Wide Exclusive Franchise System for Municipal Solid Waste Collection and Handling**

Dear Mr. Meyers:

We are pleased to submit our written comments in response to the Notice of Preparation (NOP) concerning the City-wide Exclusive Franchise System for Municipal Solid Waste Collection and Handling. We applaud the City's desire to maximize environmental and economic efficiency generated by conformance with AB 341.

To achieve goals established in NOP the City has the option to proceed with Multi-Stream Collection, Single Stream Collection, or Mixed Waste Collection. The Draft Environmental Impact Report (DEIR) needs to thoroughly evaluate the environmental impacts of the three systems. In addition the DEIR needs to evaluate the materials processing options driven by the collection system alternatives. Items that need to be evaluated include, but are not limited to:

#### **Transportation and Traffic**

With the three base collection systems there will be the requirement for one, two or multiple trucks to service an individual site. What will be the differential in traffic, traffic congestion, and road maintenance requirements, for the three base collection systems? What will be the annual total truck miles driven differential for the three base systems?

Often a front-loader truck is used to service commercial and multi-family establishments. When the front-loader truck is servicing a site it often obstructs movement of other vehicles on the site. At times this obstructs traffic flow on the public street. What would be the differential impact of multi-can collection as opposed to mixed waste collection?



## **Air Quality**

With the three base collection systems there will be the requirement for one, two or multiple trucks to service a site. What will be the differential in collection truck emissions for the base collection systems?

US-EPA has developed the Waste Reduction Model (WARM) for solid waste diversion. What will be the CO<sub>2</sub>e emission differential for organic waste that would eventually be disposed of in a landfill as a result of the three base collection systems and their associated processing systems. Substantial divertible materials are often inadvertently or overtly placed in black bin thereby missing the opportunity for diversion leading to eventual fugitive methane emission from a landfill. Also there are CO<sub>2</sub>e emissions resulting from production and transportation of new materials that would have been offset with material recovered in the waste stream if it had not been placed in a black bin? What combination of collection and processing would minimize CO<sub>2</sub>e emission?

## **Noise**

With the three base collection systems there will be the requirement for one, two or multiple trucks to service an individual site. It could be assumed that most of the commercial and multi-family sites will be serviced with front-loader trucks. There is substantial noise pollution created when bins are moved and emptied. What will be the differential in the number of noise incidence for the three base collection systems? With the potential for substantial increase in noise incidence will there be the need for additional requirements for hours of operation to minimize impact on sensitive receptors during traditional sleep hours?

Going from an existing single bin to a multiple bin system may require expansion of trash enclosures to contain two or more bins. If bins are serviced with a front-loader truck the trash enclosure may need to be more than the total width of all bins plus standard clearances. This will require substantial expansion of trash enclosures. Often trash enclosures are masonry requiring pneumatic (jack-hammer) removal and replacement. What will be the environmental effect of removal and expansion of thousands of trash enclosures?

## **Parking**

With possible required expansion of trash enclosures due to multi-can collection, there is often a loss of adjacent parking spaces. Parking at existing commercial and multi-family establishments is often in short supply. A loss of a single parking space can push a business below minimum municipal parking requirements. What will be the cumulative effect of loss of parking spaces?

## **Resources**

One of the greatest concentrations of resources in the World today is the US waste stream. Waste placed in a bin that does not go to diversion processing is not only lost, but must be replaced with virgin sources, and often results in methane generation to the environment. A number of studies have shown exceedingly large usable commodity value contained in black bin waste. What is the potential resource value of this lost material, the cost to the environment to replace it with virgin sources, and the CO<sup>2</sup>e generation from its disposal? Cal Recycle has stated in a recent AB 341 meeting, that all material may need to be processed in a material recovery facility (MRF) due to the large volume of usable materials in black bin waste. They went on to say, without processing of black bin waste the goal of 75% diversion may not be obtainable. What is the cumulative environmental effect of usable materials contained in black bin waste in multi-bin collection systems in which the material is not processed and diverted? This should include a discussion on all organic materials.

## **Odors**

With a combination of multiple can collection and front-loader trucks, bins may be serviced only partially full resulting in inefficient collection, or bins will wait to be serviced until full possibly resulting in odors. Single can collection results in much faster turnover of material with less opportunity for odor generation. Odors from all collection systems need to be evaluated along with the net environmental effect of servicing of bins that are not full, in an effort to avoid odors.

## **Combined Effects and Other Items**

In many congested areas of the World waste is collected at night to avoid traffic issues. The downside to night collection is noise created by automated collection during times of heightened sensitive receptors (people sleeping). Lifting and dumping a front-loader bin results in significant metal-to-metal impact creating high frequency, high decibel, objectionable noise that can travel for significant distance. Multi-bin collection will multiply the problem. What will be the net noise, and traffic impact of the different collection options?

To maximize collection efficiency and minimize environmental impact bins must be full or near full when serviced. Also the bin should be as large as practical to again minimize cycles of service. However the longer the material sits in a bin the more there is a heightened opportunity for vectors (rodents, insects) and odors. The document should evaluate bin size, cycle of service, odor generation, and CO<sub>2</sub>e emission resulting from cycle of service for the various collection systems.

With multi-bin collection there will be a degree of segregated commodities in concentrated form that will encourage scavenging. This concentration at commercial and multi-residential will be much greater than with single-family residential. Scavenging often results in litter and at times safety and security problems for workers, patrons, and residences in the vicinity. Litter, safety and security needs to be evaluated for the various collection methods.

Public participation is often an issue with multi-can collection in single-family residential programs. What will be the participation when there is an anonymity to participation or the lack thereof. What will be the contamination in multi-bin collection?

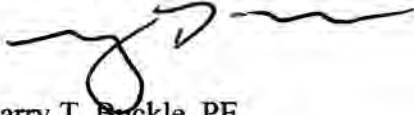
Can 75% diversion of multi-family and commercial waste be achieved without processing of the entire waste stream? If processing of the entire waste stream is required, why have multi-can collection? Would multi-can collection be considered to be a significant environmental impact that is avoidable?

What will be the multi-family infrastructure requirements for transferring segregated materials from the living unit to the place of deposit? Older complexes have garbage shoots that do not have the ability to facilitate segregation.

What will be the environmental effect from expansion of thousands of trash enclosures? What will be the loss of marginal financial businesses when forced to pay for trash enclosure expansion?

Again, thank you for the opportunity to comment.

Sincerely,

A handwritten signature in black ink, appearing to read 'Larry T. Buckle', with a stylized flourish extending to the right.

Larry T. Buckle, PE  
President and CEO  
International Engineering Services, Inc.



Quality Housing • Ethics • Professionalism

March 25, 2013

Daniel K. Meyers, Assistant Division Manager  
City of Los Angeles Department of Public Works  
Bureau of Sanitation  
1149 S. Broadway, 5th Floor  
Los Angeles, CA 90015-2213

***Re: Notice of Preparation of an Environmental Impact Report for an Exclusive Waste Collection Franchise***

Dear Mr. Meyers:

The California Apartment Association serves property owners who own and operate approximately 65,000 rental units within the greater Los Angeles area. An exclusive Waste Collection Franchise will have a significant impact on our members and their tenants.

It is imperative that the City release a draft implementation plan before any environmental study can begin that outlines the size, number, and delineation of collections zones as well as the names and locations of the facilities to which waste and materials collected in each zone will be transported.

The EIR must be clear about the number of truck trips and vehicle miles that will be generated by the proposal. The City does not have a traffic model for any of the waste proposals to be studied, so it begs the question as to how a model for the traffic and air quality impacts an exclusive franchise will generate.

The two container system proposed by the City will likely result in more truck trips than the current system as is the case in San Jose. The air quality impacts of all vehicle trips within each proposed zone must be analyzed.

As directed by Councilmember Paul Krekorian at the Ad Hoc Committee on Waste and Reduction, the EIR must study a non-exclusive franchise system that would delineate similar environmental requirements. This is the only way to determine which system would have the least amount of impact on the environment. For each system studied, the EIR must identify: traffic volumes and annual vehicle miles; vehicle emissions; transportation routes; and land use impacts, including the need for new and expanded processing facilities.

Sincerely,

Beverly A. Kenworthy  
Executive Director



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O'Melveny & Myers  
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Paul Hastings, Jacoby & Walter  
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Related California  
Rising Realty Partners  
Roe & Kneidel  
Shannon Group  
Shogren/Mullin  
SIPA Pictures  
Soth & Wilmer  
SNR Denton  
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Volunteers of America  
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Walt Disney Company  
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Wells Fargo  
Woods Developmental Hotel & Sales  
Wills Insurance Services  
Wolcott & Le Ke  
Xyston Holdings  
Yalla Properties

March 27, 2013

Daniel K. Meyers, Assistant Division Manager  
City of Los Angeles, Department of Public Works  
Bureau of Sanitation  
Solid Resources Citywide Recycling Division  
1149 S. Broadway, 5<sup>th</sup> Floor, MS #944  
Los Angeles, CA 90015-2213  
San.franchisecomments@lacity.org

RE: Comments on Scoping Process for EIR on Citywide Exclusive Franchise System for  
Municipal Solid Waste (Council File 10-1797)

Dear Mr. Meyers,

CCA is a membership organization representing nearly 450 businesses employing over 350,000 people in the Los Angeles region. We are writing to voice our serious concerns about the city's proposal to create an exclusive franchise for multifamily and commercial waste hauling services in Los Angeles. Thank you for giving us the opportunity to comment on the EIR aspects of the city's program for the collection of Waste at commercial properties.

In moving to a franchise system, there are myriad issues that must be explored and thoughtfully considered, if the city is going to move forward in a manner that does not actually undermine its stated policy objectives of improving the environment, while maintaining public safety and customer service levels. We respectfully ask that the following issues be addressed:

- 1. Project Description:** Before beginning the actual analysis of the environmental impacts, the city should release its draft implementation plan, outlining details about the size, number and geographical outlines of the proposed collection zones, as well as the names and locations of the specific facilities to which materials in each zone will be sent.
- 2. Traffic Impacts:** For each collection zone, define the number of truck-trips and vehicle miles that will be generated by the proposed system. This information should be used in developing a comprehensive traffic model.
- 3. Air Quality Impacts:** Building on the project description and traffic modeling issues raised above, the EIR must go further and analyze projected vehicle emissions associated with the logistics of the new system.
- 4. Land Use Impacts:** Given that the proposed system may create the need for new or expanded processing facilities, the EIR must identify the number, type, capacity and location of these facilities.

[illegible]

**5. Alternatives:** Finally, we ask that the alternatives study include an analysis of several different system designs, including an alternative with 20 zones. For each of the studied alternatives, including the study of the existing open permit system, the EIR must identify: 1) traffic volumes and annual vehicle miles generated; 2) vehicle emissions; 3) transportation routes and use of public streets and freeways; and 4) land use impacts and the use and need for new or expanded processing facilities.

Moving to a franchise system for waste hauling is a very complicated endeavor. We must be equipped with answers to all of these questions in order to make the landmark policy decisions we will face in the near future. This is a critical issue affecting every single Angeleno; please take the time to do a thorough and thoughtful analysis.

Thank you for your consideration.

Sincerely,

*Carol E. Spry*

Carol E. Schatz  
President & CEO

CITY OF LOS ANGELES  
CALIFORNIA

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**Granada Hills North Neighborhood Council**

**GRANADA HILLS  
NORTH  
NEIGHBORHOOD  
COUNCIL**

11862 Balboa Boulevard, #137  
Granada Hills, CA 91344-2753

Telephone: (818) 923-5592

March 27, 2013

[www.ghnnc.org](http://www.ghnnc.org)

Daniel K. Meyers, Assistant Division Manager,  
City of Los Angeles, Department of Public Works, Bureau of Sanitation  
Solid Resources Citywide Recycling Division,  
1149 S. Broadway, 5<sup>th</sup> Floor, MS #944  
Los Angeles, Ca 90015-2213

**Re:** Additional Scoping Meeting, NOP for an EIR and Public Scoping Process for Proposed City  
Ordinance: City-Wide Exclusive Franchise System for Municipal Solid Waste Collection and  
Handling.

Delivered Via Email to: [san.franchisecomments@lacity.org](mailto:san.franchisecomments@lacity.org)

Dear Sir:

For many years the residents of Granada Hills have suffered the impacts that the Sunshine Canyon Landfill has created. Sunshine Canyon Landfill takes almost all the residential trash generated by the City of Los Angeles and other parts of Los Angeles County as well. As a result the residents of Granada Hills must not only suffer from the pollution and odor from the degradation of the trash we also are subjected to the countless number of trucks that go through and around our community spewing diesel fumes that contain toxic substances into the air.

Now you are planning to select specific haulers to implement this new ordinance and while your intentions appear to be focused on reducing and controlling the waste that is dumped to increase recycling is good, but you must acknowledge that the end result will impact Granada Hills and Sylmar residents almost exclusively.

In your presentation you state that the key topics to be analyzed in the EIR include Air Quality including Green House Gases, Public Health, Public Services/Facilities, Solid Waste, Traffic Circulation, Land Use and Cumulative impacts.

The air quality complaints in the Granada Hills North Neighborhood Council (GHNNC) area are very high due to the Sunshine Canyon Landfill. Will you exclude those companies based on their violation history? In 2011 Sunshine Canyon had more complaints than the other fifteen active dumps combined that operate in Southern California. You only have to look at the South Coast Air Quality District complaint logs to see how much of a nuisance the current operation is causing. The Deputy City Attorney William Carter, who says their independent research shows there are "significant odor problems." He also said, "that this is one of the most significant environmental problems in Los Angeles." He has advised the AQMD that the agency could refer the case to the City Attorney's Office for criminal prosecution.

The numerous air quality impact increases the risk to public health and is another reason to exclude Sunshine Canyon Landfill as a dumping site and something you can not ignore.

As far as Traffic Circulation is concerned in Granada Hills we are surrounded by freeways, the 405, 5, 210 and the 14. At least twice a day commuters travel through the Granada Hills community from points north. Adding more trucks to the freeways will push even more commuters to use our community as a short cut. If Sunshine is not excluded use through the RFP Granada Hills residents will suffer the impact that more traffic will bring. We do not need any more traffic.



The GHNNC residents already live with many locally unacceptable land uses. At the Sunshine Canyon Landfill a new plant will be installed to use landfill gas to provide energy. A good idea, but it will generate more pollution than we have without the new plant. We have the DWP and the MWD filtration plants within one mile of the Sunshine Canyon Landfill. Currently the DWP and MWD are undergoing massive construction to meet the water quality standards. This includes the use of many trucks and equipment for the movement of soil and building. Both the DWP and MWD use and store large amounts of chlorine to sanitize the water. When you consider the Cumulative Impacts please consider what we are already exposed to here in Granada Hills.

The Granada Hills community has pushed for the use of alternatives to landfilling at least since 1987. We support the RENEW LA plan and it should be implemented. Each watershed should take care of their own trash. According to RENEW LA, by 2011 the City of Los Angeles was supposed to be dumping only 500 tons per day at Sunshine Canyon. Alternate technologies are available and this should be the priority. This is another reason that any RFP that is written should prohibit the use of Sunshine Canyon as a dumping site for trash generated by multifamily or commercial accounts. If BFI/Republic is granted any watershed they should not be allowed to dump the waste at Sunshine Canyon. The City of Santa Clarita included this in their RFP when they adopted this same type of ordinance, so it is possible.

Adopting non-exclusive franchise zones is essentially what we have now, right? How will adopting an exclusive system with multiple haulers per watershed still accomplish the goals you have set? How will you prevent a hauler from taking trash from one watershed to another? The RENEW LA program requires each watershed responsible for processing the waste generated in that watershed. With an exclusive system it is likely that only the large company haulers will be selected because they can undercut the small haulers. Unless the City creates a fair methodology to qualify the bidders then the vetting process will squeeze the independent companies out. What will happen if no companies, non-exclusive or exclusive, qualify to bid for a certain watershed? If a company is selected and then is found to be out of compliance or in violation what will happen? Will they lose the contract?

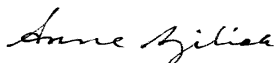
There would be more control if the City collects all material and eliminates the private haulers. Where will the trash be dumped? If it will still all go to Sunshine Canyon then it will not help Granada Hills residents.

A no project alternative keeps our issues as they are, however, it is unrealistic to believe that a no project alternative will be chosen.

The Proposed City-Wide Exclusive Franchise System Goals to meet the City's Zero Waste goal of 90% by 2025, to improve air quality and reduce greenhouse gas (GHG) emission by requiring low emission, late model clean fuel vehicles, to meet customer needs with uniform rates and cutting edge programs City-wide, to improve efficiency by minimizing collection routes, to maximize accountability for waste haulers and processing facilities and to further the strategic planning for long-term waste infrastructure needs, including sorting, transfer and processing facilities are admirable goals. However, how you plan to improve health and safety for solid waste workers, to foster long-term competition and to meet and exceed California environmental laws is unclear. How will exclusive contract improve the safety of solid waste workers? It is likely that employees of small haulers will lose their jobs. Having an exclusive contract will shut out small haulers and create decrease competition. It will send a majority of multifamily and commercial trash to Sunshine Canyon and increase impact to the environment.

Many of our issues can be resolved if you agree that any RFP that is written should prohibit the use of Sunshine Canyon as a dumping site for trash generated by multifamily or commercial accounts.

Sincerely,



Anne Ziliak, Chair  
Planning and Land Use Management Committee  
Granada Hills North Neighborhood Council  
[aziliak@ghnnc.org](mailto:aziliak@ghnnc.org)



March 27, 2013

Daniel K. Meyers, Assistant Division Manager  
City of Los Angeles, Department of Public Works  
Bureau of Sanitation  
Solid Resources Citywide Recycling Division  
1149 S. Broadway, 5<sup>th</sup> Floor, MS #944  
Los Angeles, CA 90015-2213  
[San.franchisecomments@lacity.org](mailto:San.franchisecomments@lacity.org)

**SUBJECT: Comments related to the Public Scoping Process for the EIR regarding the City-Wide Exclusive Franchise System for Municipal Solid Waste Collection and Handling from the LA Fashion District Business Improvement District (BID)**

Dear Mr. Meyers:

On behalf of the Board of Directors of the LA Fashion District Business Improvement District (BID) we are writing to comment during the Public Scoping Process for the EIR regarding the City-Wide Exclusive Franchise System for Municipal Solid Waste Collection and Handling.

The LA Fashion District BID delivers Clean services to the business community over and above what is provided by City services. Over 40% of the annual BID budget is directed toward Clean services – approximately \$ 1.5 million per year. The funding comes from property owners who pay for these extra services through a special assessment. We pick up 5.3 tons of trash a day from streets and sidewalks, a lot of which is a result of illegal dumping, and empty the 250 adopt-a-baskets that we service in the district. The BID employs 32 contract workers to sweep miles of sidewalks and gutters twice a day in the 100 block district. We drive the district 3-4 times a day to pick up loaded bags of trash. In 2012 we picked up 579,000 bags of trash using 3 collection trucks that can navigate the narrow streets. We visit the city transfer station 3 times a day. On weekends we store the trash in roll offs located in a parking lot that the BID pays to use. On Monday mornings the trash is hauled to the waste collection facility. It is a 24 hour a day/7 day a week process.

The BID's Clean services are very important to Fashion District visitors – 82% of pedestrians said the District's cleanliness was very a important reason in their decision to patronize the Fashion District. The negative impact of a dirty public environment would be devastating to the business and residential community. We want to continue to deliver BID Clean services to our owners and residents and at the same time find a way to collaborate with the City of Los Angeles on this proposed ordinance.

1 Our experience has been that as trash fees increase so does illegal dumping. Only the BIDs are there to pick up this trash. Illegal dumping is a major issue in the LA Fashion District and becomes a city wide problem when items jam the storm drains, attract rats and maggots, and ultimately pollute the Santa Monica Bay. Items dumped from offenders inside and outside the district range from food to copy machines, to construction materials. *We believe the exclusive franchise system may have the unintended impact of increasing illegal dumping in the Fashion District.*

2 It is not clear if BIDs will be allowed to continue to pick up trash from district streets. The LA Fashion District BID has existed since 1996 because property owners know that the City cannot pick up trash on a daily basis. The owners are willing to pay through a special assessment for services over and above what the city is capable of delivering. However, the BID must be allowed to continue to pick up trash and deliver it to collection sites. *The exclusive franchise system may not allow BIDs to perform this service which is the foundation for economic development in the Fashion District.*

3 Most of the streets and alleys in the LA Fashion District are very narrow. The BID uses smaller equipment to navigate the district to collect trash from litter cans and illegal dumping. We suggest that this issue be considered when selecting haulers. *The exclusive franchise system may not have the choice in equipment that currently exists with many haulers service the Fashion District.*

4 The LA Fashion District is a mixed use business and residential community with different needs in terms of noise and time of day when trash can be collected. Currently waste is collected at different times of day and night that were developed as a response to those different needs. *The exclusive franchise system may not have the ability to provide flexible collection times that suit the specific needs of our many residents and business owners.*

5 The LA Fashion District has specialized vendors that require specific types of pick-up service. The Flower District generates tons of cut flower trash daily. Cutters generate tons of fabric cuttings and plastic garment bags are used on every individual garment that is delivered to stores. Each of these requires special pick up containers. *The exclusive franchise system may not have the same choice of recycling containers as the current system*

We are immediately available to discuss our concerns. Thank you for your consideration.

Sincerely,

Kent Smith, Executive Director  
LA Fashion District BID  
(213) 488-1153 x 712  
[kent@fashiondistrict.org](mailto:kent@fashiondistrict.org)

cc: Councilmember Jose Huizar, District 14  
Board of Directors, LA Fashion District BID

March 26, 2013

Daniel Meyers, Assistant Division Manager  
Solid Resource Citywide Recycling Division  
City of Los Angeles Department of Public Works  
Bureau of sanitation  
1149 S. Broadway, 5<sup>th</sup> floor  
Los Angeles, CA 90015-2213

**Subject: Comments on Notice of Preparation (NOP) for City Ordinance: City-Wide  
Exclusive Franchise System for Municipal Solid Waste Collection and Handling**

Dear Dan:

I have two main comments on the NOP for the exclusive franchise:

1. It is imperative that the EIR analyze a 20 franchise zone option, which I suggest would include 8 large zones and 12 small zones with the latter spread throughout the City. In this way, our small haulers will all have a chance no matter what part of the City they operate in. Also, they will have options besides just using CLARTS, and more of our local players, including some of the larger companies, will have a chance to win a zone.
2. The NOP mentions that one of the goals of the franchise system is to facilitate compliance with AB341. In this light, and as it is written in the legislation, MRF processing of mixed commercial waste should be allowed as an alternative to the blue can system as long as it achieves similar results. I personally believe in many areas of the City, a MRF would greatly outperform source separate collection in the commercial and multi-family sectors. I strongly suggest that the EIR evaluate mixed waste MRF processing as a viable alternative to the blue can system; and allow the bidders to propose either or a combination of the two in order to achieve the mandated diversion levels.



NATURAL RESOURCES DEFENSE COUNCIL

March 27, 2013

*Via Email*

Daniel K. Meyers, Assistant Division Manager  
Solid Resources Citywide Recycling Division  
City of Los Angeles Department of Public Works  
Bureau of Sanitation  
1149 S. Broadway, 5th Floor  
Los Angeles, CA 90015-2213  
[san\\_franshisecomments@lacity.org](mailto:san_franshisecomments@lacity.org)

**Re: EIR Scoping Meeting Comments**

Dear Mr. Meyers:

On behalf of the Natural Resources Defense Council ("NRDC"), I submit to you my comments at the EIR scoping meeting for Notice of Preparation (NOP) of an Environmental Impact Report (EIR) for City Ordinance: City-Wide Exclusive Franchise System for Municipal Solid Waste Collection and Handling in South Los Angeles on March 11, 2013.

*Hi, my name is Linda Escalante, and I represent the Natural Resources Defense Council (NRDC). As you may know, NRDC is a national environmental organization -- and, among our many endeavors, we are committed to the highest standards in our waste and recycling industry because we see the direct impact the industry has on our environment.*

*Like many of the other organizations and individuals who have been concerned about the impacts of our waste system on our communities, our city and our environment -- NRDC is pleased to see the Bureau's plan for moving forward on an Environmental Impact Report for an exclusive franchise.*

*We believe the goals, the scope and the methodology the Bureau has provided in the Notice of Preparation will result in the best possible process for determining the environmental impact of the exclusive waste franchise.*

*Based on what we have seen, we are confident the Bureau has set forth a process that will ensure communities like South, our city, and our environment are prioritized and protected in the new system.*

*We look forward to the completion of the EIR, and to the success of a long effort undertaken by community and environmental partners, small businesses and they City starting a few years ago. We are very proud to have been a part of this.*

Sincerely,

A handwritten signature in black ink, consisting of several loops and a long horizontal stroke extending to the right.

Linda Escalante  
CA Advocacy Coordinator  
[lescalante@nrdc.org](mailto:lescalante@nrdc.org)



Bennett and Marilyn Cohon  
P.O. Box 641398  
Los Angeles, California 90064

March 24, 2013

Daniel K. Meyers, Assistant Division Manager  
City of Los Angeles, Department of Public Works  
Bureau of Sanitation  
Solid Resources Citywide Recycling Division  
1149 S. Broadway, 5<sup>th</sup> Floor, MS #944  
Los Angeles, CA 90015-2213

Re: Proposed City Ordinance: City-Wide Exclusive Franchise System for  
Municipal Solid Waste Collection and Handling

Dear Mr. Meyers,

We attended one of the public scoping meetings for the above-named proposal. There were representatives of only 3 businesses present. When I asked about outreach, the employees had no answer. I was then told in a very patronizing manner by a Sierra Club representative that it was our responsibility to check in to the Sanitation Department site. When I asked questions, there were no answers. The lack of outreach and the absence of candor were quite disheartening, to say the least.

Some questions that we feel need to be addressed before this proposal should even be considered:

(1) By awarding exclusive franchises for the eleven (or whatever your current number might be) districts, you will be putting the nearly 150 small trash hauling companies out of business virtually overnight. How are these small, mostly family-owned businesses to be compensated?

(2) We would like to see you study the possibility of setting up districts in which groups of small companies could participate in a "cooperative" venture.

(3) One of the stated "purposes" of this proposal is to encourage more re-cycling. The City has demonstrated a total inability to curtail the brigades of scavengers who remove all of the recyclables from the blue bins. What is the plan for these exclusive franchisees to increase the re-cycling? And how will they address the scavenger issue?

(4) We were told that there is a mysterious and complex formula to determine the percentage of total waste being recycled. The public needs to know how that is calculated, and how the exclusive franchise system would actually increase that percentage. Perhaps incentives to the scavengers would yield a greater percentage being recycled.

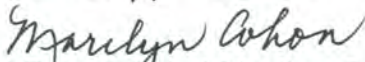
(5) By using the business model of uncompetitive and monopolistic structure such as the cable franchise system, what assurances will businesses and multi-family housing have that we will not see resulting cost spikes and unresponsive trash hauling companies which do not have to earn our business?

(6) On what grounds are some businesses, such as entertainment companies, able to carve exceptions for themselves from the requirements to use the City-appointed exclusive franchises?

(7) The City needs to truly demonstrate that this is not a solution in search of a problem. How is this not merely a gift to major union and business contributors?

When there is a proposal that would radically change a basic and critical service to so many businesses and multi-family buildings, the City needs to demonstrate that there has been credible outreach, and knowledgeable responses at the scoping meetings. So far, it appears to be a stealth operation, which is a totally unacceptable approach to this proposal.

Yours truly,



Bennett and Marilyn Cohon

cc: Mayor Antonio Villaraigosa  
Councilmember Paul Koretz  
Los Angeles City Councilmembers  
City Attorney Carmen Trutanich





## MITCHELL ENGLANDER

LOS ANGELES CITY COUNCILMEMBER, TWELFTH DISTRICT

March 26, 2013

Daniel K. Meyers, Assistant Division Manager  
Solid Resources Citywide Recycling Division  
City of Los Angeles Department of Public Works  
Bureau of Sanitation  
1149 S. Broadway, 5th Floor  
Los Angeles, CA 90015-2213

RE: WASTE FRANCHISE IMPLEMENTATION /SCOPING PLAN

Dear Mr. Meyers:

As Councilmember for the district that hosts one of largest landfills in the United States, Sunshine Canyon, I have had the misfortune of hosting the final resting place for the entire city's single-family residential waste stream.

It is my fear that the proposed waste franchise will add the additional burden of the city's multi-family and commercial waste residual to the mix. Doing so would increase exponentially the truck traffic that traverses the north San Fernando Valley on its way to the landfill, as well as many other negative impacts – including odors, pollution and methane emissions.

As you may be aware, the Sunshine Canyon Landfill is already the subject of a Stipulated Order of Abatement for Odors, issued by the South Coast Air Quality Management District.

It is my strong desire and that of the residents of Granada Hills to not see even one additional ton of trash dumped in the landfill until these odor issues are resolved once and for all. However, enduring the additional traffic, pollution, odors and other negative impacts of this program cannot be tolerated, period.

For these reasons, I strongly believe that only waste generated in the San Fernando Valley should be eligible for tipping at the Sunshine Canyon Landfill – and I would like to see any RFP that is issued reflect that intention prior to its issuance and contain provisions for verifying the origin of tipped waste subsequent to its award.

I appreciate your attention to and consideration of these comments.

Sincerely,

  
MITCHELL ENGLANDER  
Councilmember, Twelfth District

City Hall Office • 200 N. Spring Street, Room 405 • Los Angeles, CA 90012 • Phone (213) 473-7012 • Fax (213) 473-6925  
Chatsworth Office • 9207 Oakdale Ave. • Chatsworth, CA 91311 • Phone (818) 882-1212 • Fax (818) 701-5254



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## Appendix B

### Implementation Plan

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# The City of Los Angeles

## Final Implementation Plan for Exclusive Commercial and Multifamily Franchise Hauling System



Prepared by  
Bureau of Sanitation

CITY OF LOS ANGELES



**SANITATION**  
DEPARTMENT OF  
PUBLIC WORKS

Solid Resources Citywide  
Recycling Division

Karen Coca, Division Manager  
Dan Meyers, Assistant Division Manager

Enrique C. Zaldivar, Director  
Alex E. Helou, Assistant Director

Supported by



1000 Wilshire Suite 2100  
Los Angeles, CA 90017



# FINAL REPORT

## Exclusive Commercial and Multifamily Solid Waste Franchise Hauling System Implementation Plan

### Executive Summary

The City's Bureau of Sanitation was directed by the City Council on November 14, 2012, to proceed with the development of an implementation plan for the Exclusive Commercial and Multifamily Solid Waste Franchise system, including the consideration of 23 items in the adopted Energy and Environment/Ad Hoc on Waste Reduction and Recycling joint committee report. Sanitation prepared a series of preliminary reports, which were discussed at length in additional joint EE/Ad Hoc WRR Committee meetings. Information was gathered and refined through research, information requests, and public meetings.

A critical element for the Final Report is consideration of Goals for the Exclusive Franchise system. These goals mirror many of the needs expressed by the stakeholders, including the waste haulers, environmental organizations, business groups, labor groups, and community groups. These 10 goals encompass the major elements of the program, and frame the recommendations that Sanitation is presenting for consideration of the City Council.

#### **Recommendations for City Council Action**

Sanitation recommends that the following goals and actions be adopted for the Exclusive Commercial Franchise System, and direction be given to proceed with the development of a Request for Proposals:

1. **Meet the City's Zero Waste Goals:**

- a. Blue Bin recycling, at minimum, at every customer site (also supports Goal 2);
- b. Preserve existing organic waste separation and recycling programs;
- c. Offer green waste collection to all Multifamily customers;
- d. Include Landfill disposal reduction targets in Franchise agreements with accountability for performance including liquidated damages.

2. **Meet and Exceed State requirements for waste diversion and mandatory recycling:**

- a. Phase in Citywide organics diversion programs (also supports Goal 1);
- b. Encourage, through RFP evaluation criteria, proposers to exceed required targets in their proposals by including innovative programs and new technologies (also supports Goal 1).

3. **Improve Health and Safety for Solid Waste Workers** enforced by provisions in Franchise Agreements:

- a. City certification and inspection of all facilities;
- b. Right to inspect facilities for compliance with appropriate rules and regulation;

- c. Require compliance with Living Wage Ordinance (LWO) provisions;
- d. Require compliance with Service Contract Workers Retention Ordinance (SCWRO) and First Source Hiring Ordinance (FSHO);
- e. Establish a City hotline for employee complaints, and protection from retaliation for reporting problems.

4. **Improve Efficiency of the City's solid waste system:**

- a. Adopt the Exclusive Commercial Franchise Zone Map with 11 zones;
- b. Require routing efficiencies in proposals, and monitor Vehicle Miles Traveled (VMT) in franchise agreements.

5. **Improve the City's air quality**

- a. Require late model low emission clean fuel vehicles.

6. **Provide the highest level of Customer Service**

- a. Require contractors to use all forms of communication with their customers (call center, online, etc);
- b. Require extensive, ongoing outreach programs;
- c. Include Customer needs, such as Hospitals, and specialized services in RFP and franchise agreements, and through continuing stakeholder involvement;
- d. Provide access to customer service data by Sanitation in order to evaluate performance and customer satisfaction;
- e. Establish an alternative for studios, with requirements that they 1) Use of one of the franchise haulers; 2) Meet all franchise requirements including waste diversion, accurate reporting, payment of fees, and clean air vehicles, among others; and 3) Require third party auditing of all standards.

7. **Create a consistent, clearly defined system, fair and equitable rates, and contingency plans to ensure reliable service including:**

- a. Include only a capped cost of living increase in franchise agreements;
- b. Designate the uniform rate model as the preferred alternative, and allow Sanitation to negotiate the best practical and achievable model;
- c. Require detailed contingency plans in each franchise agreement, and requirements that they be updated annually. Contingency plans shall include, at minimum 1) Backup provisions in franchise agreements for each service zone, and 2) Monetary penalties for a lapse in service in franchise agreements, such as performance bonds and liquidated damages provisions.
- d. Exempt material types from the Exclusive Commercial Franchise System, including Medical waste, Hazardous waste, Radioactive waste, Pharmaceutical waste, and Construction and Demolition Debris

8. **Create a system that ensures Long Term Competition:**

- a. Require compliance with City's Business Inclusion Program (MBE/WBE/OBE/DVE/EB Subcontracting);
- b. Designate three small Exclusive Franchise Zones geared towards smaller waste haulers;
- c. Designate that no more than 49% of service may be performed by one company.

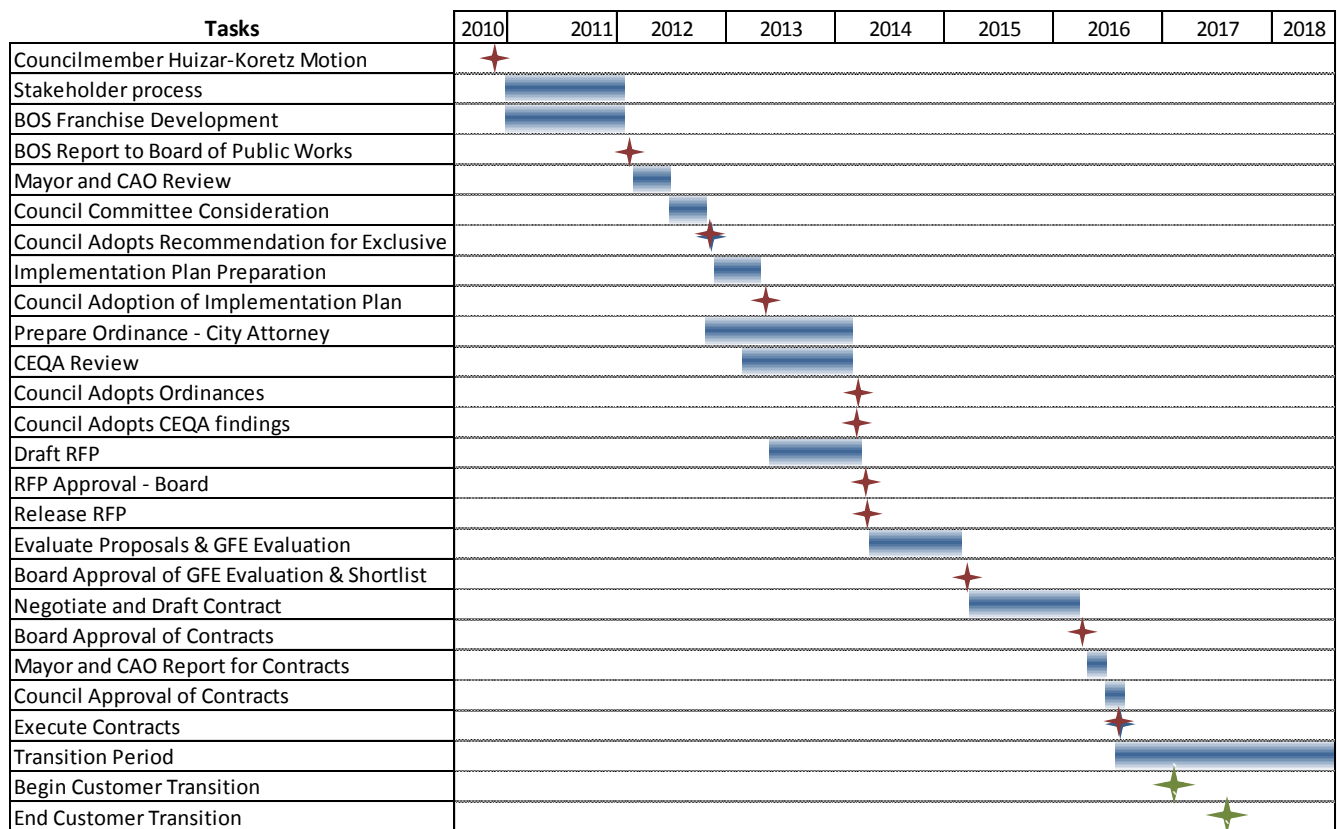
**9. Ensure Sufficient Staffing to meet Program Goals**

- a. Continue AB939 fee as currently adopted;
- b. Designate a City Franchise fee to achieve the City's fiscal goals.

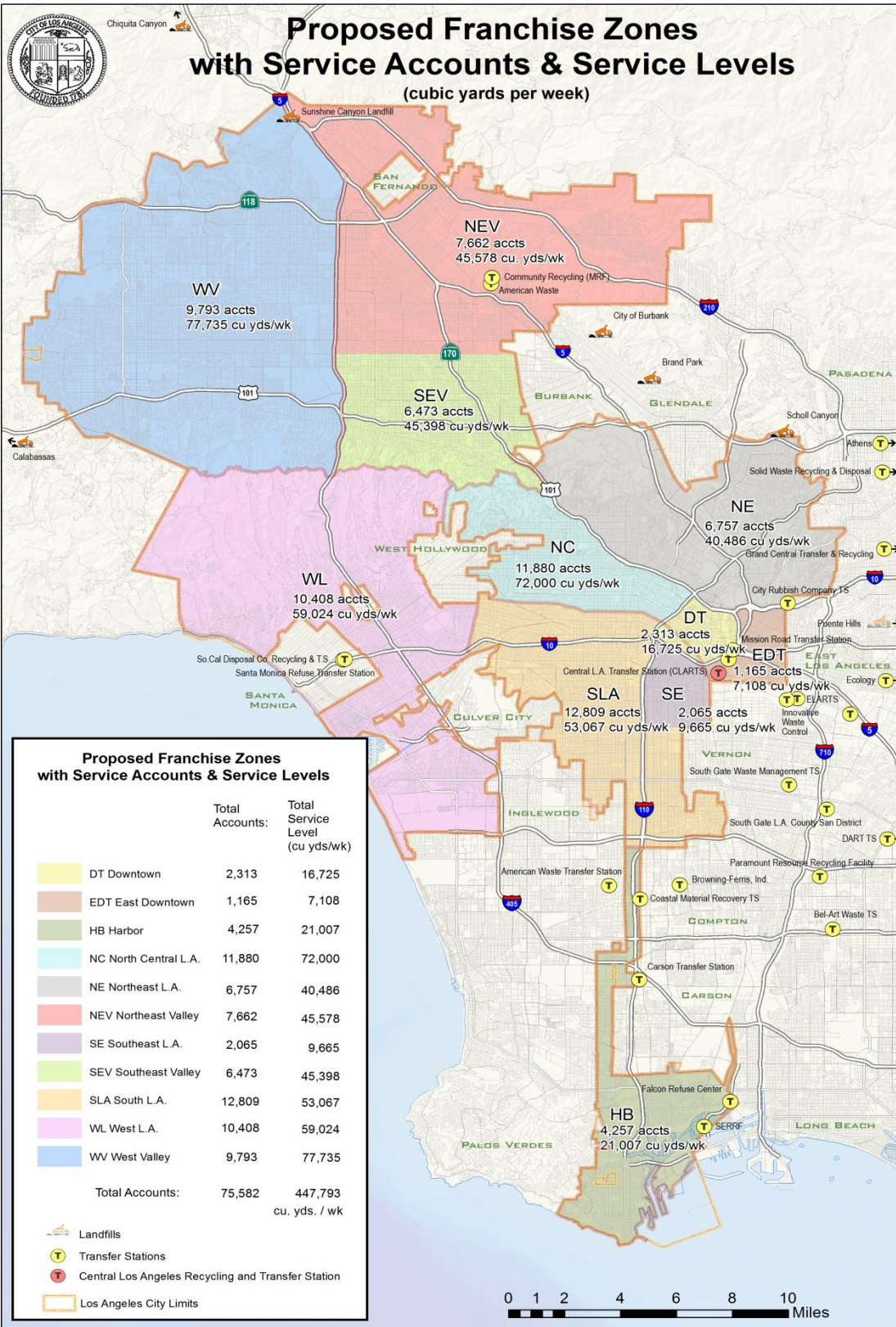
**10. Ensure reliable system infrastructure to provide uninterrupted service to Customers**

- a. Provide for infrastructure development sufficient for management of solid waste

## Franchise Implementation Timeline







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## Attachments

A	CH2MHILL Compiled Notes from Interviews of 12 Cities and Counties (document provided separately)
B	Comments received on the Franchise

# Acronyms and Definitions

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## ACRONYMS

CAO:	City Administrative Officer
CDD:	City Community Development Department's Workforce Development System
CEQA:	California Environmental Quality Act
CLA:	Chief Legislative Analyst
C&D:	Construction and Demolition Debris
DTSC:	California Department of Toxic Substances Control
EIR:	Environmental Impact Report
FSHO:	First Source Hiring Ordinance
IWMA:	Integrated Waste Management Act
LWO:	Living Wage Ordinance
OSHA:	Occupational Safety and Health Administration
RFP:	Request for Proposals
SCAQMD:	South Coast Air Quality Management District
SCWRO:	Service Contract Workers Retention Ordinance
SRCRD:	Solid Resources Citywide Recycling Division of the City of Los Angeles Bureau of Sanitation
SWIRP:	Solid Waste Integrated Resources Plan
USDOT:	United States Department of Transportation
VMT:	Vehicle Miles Traveled

## DEFINITIONS

AB 939:	Assembly Bill 939 (Chapter 1095, Statutes of 1989) is also known as the Integrated Waste Management Act. The Integrated Waste Management Act created the Board now known as CalRecycle and also required each jurisdiction in the state to submit detailed solid waste planning documents for CalRecycle approval, set diversion requirements of 25 percent in 1995 and 50 percent in 2000, established a comprehensive statewide system of permitting, inspections, enforcement, and maintenance for solid waste facilities, and authorized local jurisdictions to impose fees based on the types or amounts of solid waste generated. A more detailed description of the Integrated Waste Management Act is found at CalRecycle's Website ( <a href="http://www.calrecycle.ca.gov/Laws/Legislation/CalHist/1985to1989.htm">http://www.calrecycle.ca.gov/Laws/Legislation/CalHist/1985to1989.htm</a> ).
AB 341:	Assembly Bill 341 ( <a href="#">Chapter 476, Statutes of 2011 [Chesbro, AB 341]</a> ) directed CalRecycle, among other actions to 1) develop and adopt regulations for mandatory commercial recycling, with compliance beginning July 1, 2012; and 2) submit a report to the Legislature with a plan for reaching 75% diversion Statewide by 2020.
Board:	The City of Los Angeles Board of Public Works.
Blue Bin:	Blue recycling containers for the collection of commingled recyclables (single stream).
CalRecycle:	The Department of Resources Recycling and Recovery of the State of California. CalRecycle is the state's regulatory agency on solid waste management.
City:	The City of Los Angeles

## Commingled

**Recyclables:** Material that has been separated or kept separate from the solid waste stream, at the point of generation, for the purpose of additional sorting or processing the material for recycling or reuse in order to return the material to the economic mainstream in the form of raw material for new, reused, or reconstituted products which meet the quality standards necessary to be used in the marketplace. Co-Mingled recyclables shall not consist of Construction and Demolition Waste.

## Commercial

**Establishment:** All industrial, retail, wholesale, services, restaurant, hotel, motel, institutional and other premises, which are subject to the existing City of Los Angeles AB939 Compliance Permit system regulating the collection of solid waste. Commercial premises do not include those single family and multi-unit residential facilities and governmental institutions for which solid waste management services are provided by the City.

## Commercial

**Organics:** Organic Waste that is segregated from commercial waste for recycling or other beneficial uses.

## Commercial

**Waste:** Solid Waste generated at Commercial Establishments/Premises.

## Construction

### And Demolition

**Waste:** Solid waste that results directly from construction, remodeling, repair, demolition, or deconstruction of buildings and other structures, does not contain hazardous waste (as defined in California Code of Regulations, Title 22, Section 66621.3, *et seq.*), and contains no more than one percent (1%) putrescible wastes by volume, calculated on a monthly basis. Construction and Demolition Waste includes, but is not limited to, asphalt, concrete, Portland cement, brick, lumber, wallboard, roofing material, ceramic tile, pipe, glass, carpet or associated packing.

**Diversion:** As defined in California statute, the combined efforts of waste prevention, reuse, and recycling practices.

**Gross receipts:** Those receipts defined as Gross Receipts in Los Angeles Municipal Code Section 21.00 (a) generated by the collection of Solid Waste including, but not limited to, service, container rental, disposal and processing charges. For purposes of this Section and Sections 66.32.1 through 66.32.5, Gross Receipts shall not be applicable to receipts generated by the collection and sale of Source-Separated Materials or Co-Mingled Recyclables.

## Multi-Family

**Establishment:** For purposes of the Exclusive Commercial Franchise system, a Commercial Establishment.

**Permittee:** A Person issued an AB 939 Compliance Permit pursuant to the provisions of Subsection (a) of Section 66.32.1.

## Permitted

**Hauler:** Any Person engaged in the business of providing or responsible for the collection, removal or transportation of Solid Waste, Construction and Demolition Waste, Source-Separated Materials, or Co-Mingled Recyclables generated within the City.

**Sanitation:** The City of Los Angeles Bureau of Sanitation

**Solid Waste:** Waste that CalRecycle has deemed acceptable for disposal at a Class III Landfill, and shall include Source-Separated Material and Co-Mingled Recyclables under specified conditions. Solid Waste for the purpose of the Exclusive Commercial Franchise system does not include Construction and demolition waste.

## Source Separated

**Material:** Material that has been separated or kept separate from the solid waste stream at the point of generation and has not been commingled with other solid waste or recyclable materials.

**Zero Waste:** a philosophy and a design principle for the 21st Century. It includes 'recycling' but goes beyond recycling by taking a 'whole system' approach to the vast flow of resources and waste through human society. Zero Waste maximizes recycling, minimizes waste, reduces consumption and ensures that products are made to be reused, repaired or recycled back into nature or the marketplace.

# Limitations of the Existing System

## 1.1 Background

Waste collection and disposal in the City of Los Angeles (City) is handled by public and private solid waste haulers. Public collection of refuse, recycling, and green waste is primarily provided by Sanitation to single family properties and multifamily properties with four (4) units or less. This is due to the moratorium approved by the City Council in 1991, which prevents most apartment buildings of five (5) or more units from participating in the City's automated waste collection program. Since this moratorium was adopted, multifamily dwellings of five (5) or more units have been primarily serviced by private waste haulers, although some larger buildings (with five (5) units or more), that had continually received City service before the moratorium, were "grandfathered" in to public collection and will continue to receive curbside services from Sanitation. Private solid waste haulers collect from all multifamily and commercial sites not collected by City crews.

Under the current waste hauler permit system, businesses are allowed to select and negotiate waste disposal and/or recycling contracts with any of the City's permitted private waste haulers. With the adoption of the construction and demolition debris ordinance a significant number of construction contractors that haul their own waste became permitted waste haulers. Because of this new requirement a significant number of waste haulers have been added to the permit system. The number of contractors, permitted as waste haulers, entering and leaving the permit system varies greatly. There are at any given time between 500 and 750 permitted private waste haulers providing some kind of waste hauling. Most of these permitted haulers are construction related contractors who have taken out permits to haul construction and demolition debris. Of the haulers operating in the City, approximately 140 are traditional haulers where waste hauling is their primary business. Only 68, of the 140 traditional haulers, collect enough waste to report receipts (required of those hauling more than 1,000 tons per year), the fifteen (15) top grossing waste haulers control 97% of the business, and the top four (4) control 85% (Table 1-1). Service is provided to at least 75,000 service accounts, including sites such as large office buildings, malls, and hotels, while in contrast the City of San Jose has 8,000 service accounts in its new exclusive commercial franchise.

Although the existing waste hauler permit system and AB939 Compliance Fee has been an effective tool used by Sanitation in establishing significant recycling programs, it limits the City's ability to address many of the current challenges it faces. These challenges include compliance with new State mandates, City diversion goals, and the environmental and health impacts of waste hauling. AB 341, signed into law in October 2011, creates green jobs by mandating recycling to every multifamily dwelling over five units and businesses which dispose of a certain level of trash each week. CalRecycle is also charged with adopting a plan to bring the entire state to 75% waste diversion by 2020. In 2006, the City signaled its intent to divert more waste from landfill by the adoption of the RENEW LA plan, which establishes a Zero Waste goal of 90% diversion by 2025, with Mayor Villaraigosa establishing an interim goal of 75% waste diversion by 2013. Due to the existing permit structure, waste haulers are not required by the State to operate clean alternative fuel vehicles, which negatively impacts local air quality. In addition, multiple haulers operating in a given area translate to more refuse trucks on the road, traffic impacts, and more localized

TABLE 1-1  
Market Share Existing Haulers

Market Share of Existing Haulers	
Company Name	Market Share
Consolidated Disposal Service, LLC	35.47%
Arakelian Enterprises, Inc.	22.55%
USA Waste of California (SV)	19.41%
Crown Disposal Co. Inc	9.72%
Commercial Waste Services	1.81%
Universal Waste Systems, Inc	1.78%
NASA Services, Inc.	1.45%
AAA Rubbish, Inc	1.27%
American Reclamation, Inc.	1.14%
Southern California Disposal Co., Inc.	0.82%
Local Rubbish, Co. Inc.	0.50%
Haul-Away-Rubbish Service, Inc.	0.41%
Waste Resources Inc.	0.39%
United Pacific Waste	0.37%
Apex Waste Systems, Inc.	0.33%
All Other	2.58%

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emissions. The current permit system also does not monitor compliance by private waste haulers with state laws regarding employee health and safety requirements for their employees collecting and processing commercial waste.

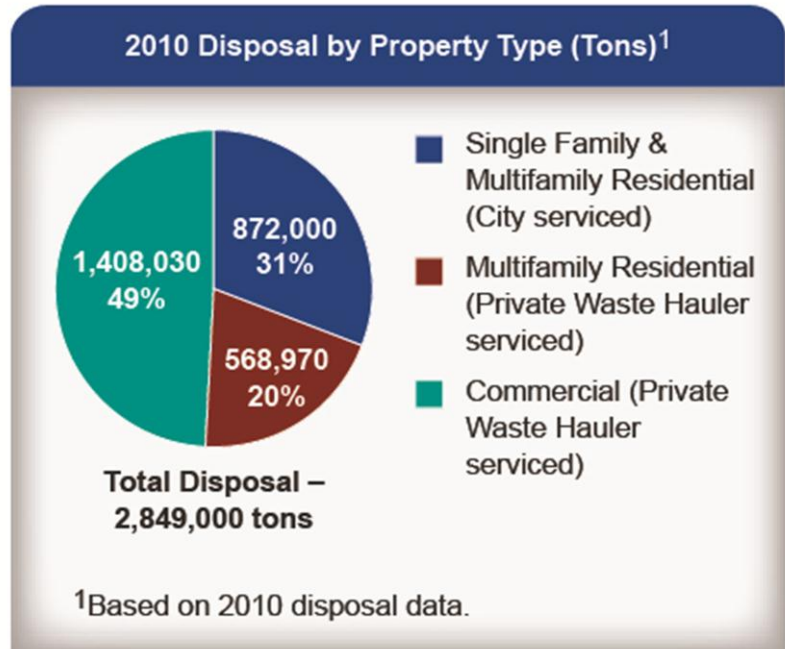
## 1.2 Limited City Ability to Drive Zero Waste Progress

The City has made considerable strides over the last decade to become a Zero Waste City. In 1994, the City adopted an integrated solid waste management plan to reach a 75 percent diversion goal by the year 2020. Mayor Antonio Villaraigosa raised the bar higher, challenging Sanitation to divert 75 percent of the City's waste by 2013. In addition, the Mayor and City Council directed Sanitation to reach a Zero Waste goal of 90 percent diversion by 2025. Major diversion programs have been implemented, including curbside automated recycling and green waste diversion programs for Sanitation serviced single and multifamily customers. Under the direction of Mayor Villaraigosa, recycling services were offered to all multifamily properties and restaurants. Sanitation also commenced the Solid Waste Integrated Resources Plan (SWIRP) process, which included extensive stakeholder outreach, to provide a platform to launch the programs necessary to reach Zero Waste.

Approximately thirty-one percent of the annual disposal is generated by single and small multifamily residential properties collected by Sanitation. The remaining sixty-nine percent is generated by larger multifamily and commercial properties collected by the City permitted private waste haulers (see Figure 1-1).

Since 2002, Sanitation has implemented a number of significant new waste diversion programs. The multifamily

residential recycling program has expanded blue bin recycling to 430,000 households since citywide expansion in 2007. The partnership to expand recycling at LAUSD has resulted in 658 schools being provided weekly service, and over 120,000 students educated on waste reduction and recycling. Over 38,000 tons of food waste each year has been recycled through Sanitation's Restaurant Food Waste Recycling Program. Also, since 2010 all construction and demolition material must be recycled, which is estimated to reduce City disposal by over 100,000 tons per year.



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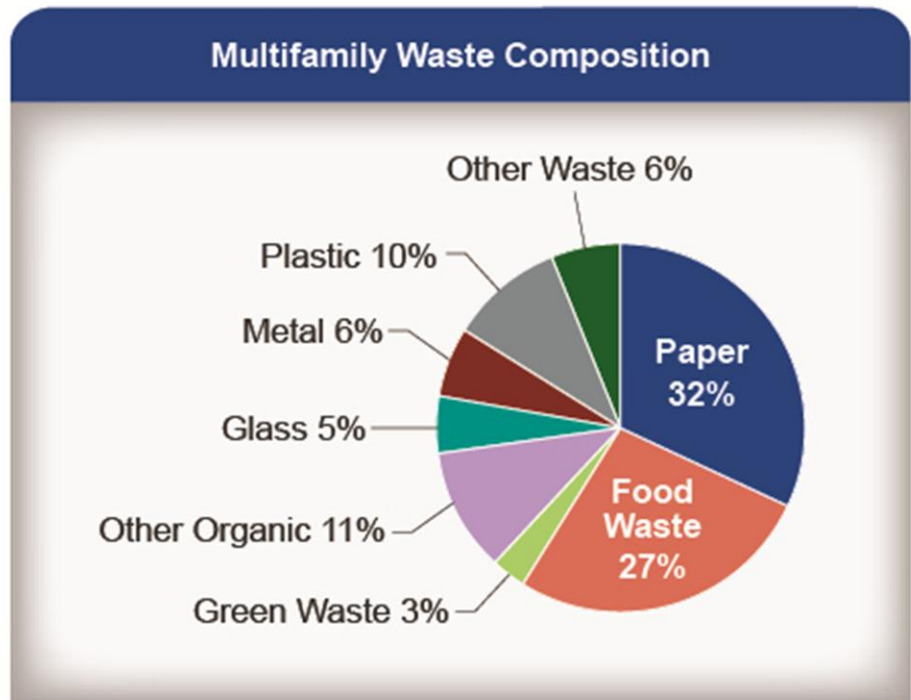
FIGURE 1-1  
Disposal by Property Type (tons)

The City has achieved a 72% diversion rate; however, there is still nearly 3 million tons of solid waste disposed annually. Much of the material remaining in the commercial waste stream is recyclable. Sanitation has performed a series of waste characterizations to assist in the development of new recycling programs (see Figures 1-2 and 1-3). These waste characterizations show that a substantial amount of recyclable material remains in the multifamily and commercial waste streams. Recycling programs are needed to divert this material before they reach the landfill.

To meet the City's Zero Waste goals, the City will need to expand services and program offerings in the commercial and multifamily sectors. An exclusive franchising system would greatly enhance the City's ability to do so, by allowing it to efficiently and effectively introduce new program and service offerings in these sectors by creating a simple, uniform recycling system provided by franchise holders that will become partners with the City to move more material from landfill disposal to beneficial reuse.

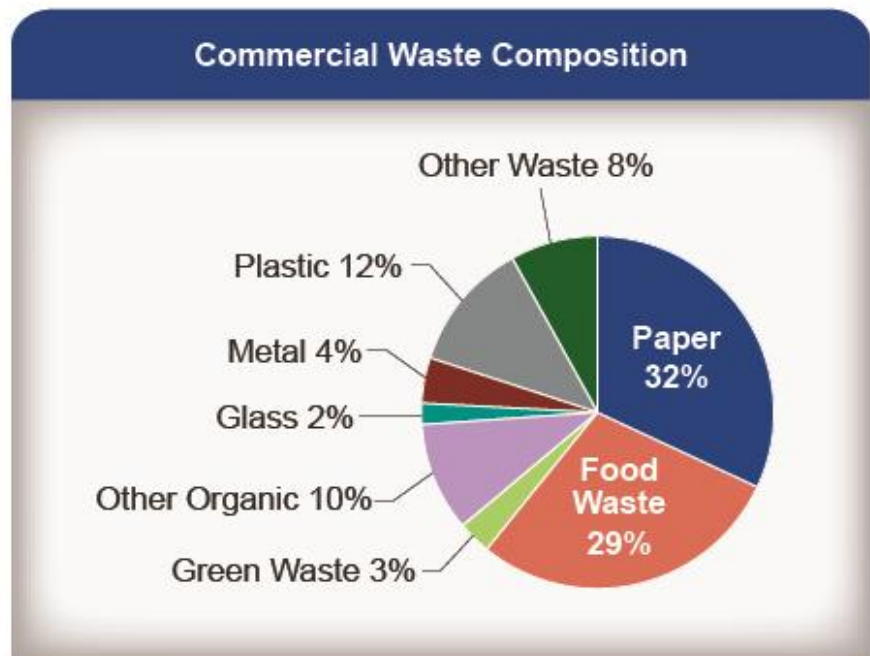
### 1.3 Limited City Ability to Measure Recycling Performance

The City must have accurate, consistent, and reliable data to comply with State requirements and meet its diversion goal. With the passage of AB818 and AB341, recycling is required at every multifamily dwelling over five units, and all commercial businesses that generate more than four cubic yards of trash per week. The City is required to monitor compliance and notify businesses if



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FIGURE 1-2  
Multifamily Waste Composition



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FIGURE 1-3  
Commercial Waste Composition

they are out of compliance with this measure. In order to reach the zero waste goals the City needs the capabilities to monitor and track a waste hauler's compliance with required diversion programs, participation and program effectiveness.

The current waste hauler permit system does not allow the City to effectively monitor or track recycling in the multifamily and commercial sectors. There are limited reporting requirements under the current permit system and additional information is difficult to obtain. Waste haulers must compete for customers in the City and closely guard their customer lists. In addition, as customers can select and change their waste haulers at will, an individual waste hauler's customers list is in a constant state of change. Material flow is also very difficult to track. Waste haulers report delivering material to over 200 different facilities, based on 2010 annual waste hauler reports. These facilities are located both inside and outside of the City boundaries.

Sanitation has made a number of information requests from permitted waste haulers and receiving the data has been problematic. Waste haulers have sited confidentiality concerns with transmitting data to the City, as they believe that the information received could be used by other waste haulers to gain a competitive advantage or poach accounts. The issue of gathering information from waste hauler is compounded by the fact that there are no standards for what information is gathered by permitted haulers or how it is maintained. Basic information, such as the definition of a service account or how recycling is tracked, varies by waste hauler. This variation in data was highlighted with Sanitation's recent request for information from waste haulers in an attempt to meet the requirements of AB341. Some waste haulers did not differentiate between recycling and waste accounts, while others listed every waste bin as a separate account.

An exclusive franchise system would allow the City to establish and enforce consistent and timely reporting requirements for haulers under franchise, thereby allowing Sanitation to more effectively measure the City's performance relative to its Zero Waste goals, introduce new programs, and pilot new innovative strategies.

## **1.4 Open System That Creates Inefficiencies and Negative Environmental Impacts**

The existing open competitive collection system promotes an overall ineffective system. Waste haulers must base on their collection routes on their individual customer list that can be distributed throughout the entire City. This results in the collection vehicles of multiple firms crossing paths on City streets to serve customers in the same areas every day. Vehicles may need to travel longer distances between stops and serve fewer accounts during the day than if the collection system was an "exclusive zone." This results in more collection vehicles on the street each day than necessary, resulting in an inefficient system, and negative impacts on air quality.

This inefficiency is compounded by the need to provide recycling services to all customers. Businesses impacted by AB341 must subscribe to a recycling service, and many may work with their current waste hauler. Recycling routes must also be as efficient as possible to minimize the number of trucks as well as vehicle miles traveled in the City's solid resources collection system.

## **1.5 Customers Pay Different Rates for the Same Services**

Unit rates for waste service are known to vary in the City from business to business for the same or similar service. Under the current permit system individual businesses negotiate their own prices with permitted waste haulers. The City has no oversight on the rates charged to customers, or the structure of rates (how rates vary by level of service). The rates negotiated by each business vary depending on:

- The size of a business. Large businesses with multiple accounts can often use their size to negotiate lower rates;
- The negotiating skill of the customer;
- The pricing structure of the particular waste hauler with whom the customer is negotiating;
- The unique service characteristics of the customer's location, such as the push-out distance of the container from the storage location to the point of collection;



- Unique container access conditions, such as underground parking garages where containers may be stored requiring a special collection vehicle to position the container for the refuse truck
- Special services required, such as locking containers.

As stated by large businesses in the City during the stakeholder process, they can often use their larger waste needs to negotiate lower rates. Conversely, small businesses with lower waste quantities do not have the same bargaining power to negotiate lower rates, and often pay more for the same level of service provided to a larger business. Some small businesses indicated during the stakeholder process that they often find that other businesses are paying a different rate for the same level of service.

Recycling programs are typically provided at additional cost to businesses. In addition to the varied rates for service, a business that wishes to recycle must negotiate a separate rate for that service. The cost effectiveness for a business to recycle not only depends on the negotiation skills of the business but also the structure of a haulers business. Waste haulers that have not integrated recycling fully into their business model may not be able to offer cost effective recycling programs. If a business remains under contract with a hauler who does not offer recycling under the current system, then there are limited options available to the business to establish a cost effective recycling program.

An exclusive franchise system would give the City the ability to establish uniform rates throughout the City for the same level of service, and establish rates structures and “bundles” of service offerings that create incentives to recycle and reduce waste. And, an exclusive franchise system would eliminate the need for customers to shop for and negotiate rates with different service providers.

## **1.6 Limited City Ability to Achieve Broader Policy Goals**

The City requires its contractors to comply with requirements that include meeting certain health and safety standards for its workforce, and to abide by the City’s living wage ordinance. Under the current open market permit based system, the City cannot require the collection companies operating in the City to meet these standards. An exclusive franchise system would allow the City to require collectors to meet these standards via terms included in franchise agreements. The City would also be able to require that these standards be met at any transfer station, material recovery facility, or waste processing facility utilized by a franchise hauler as a subcontractor.

## SECTION 2

# Franchise Program Goals

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Following the adoption of the policy by City Council of the Exclusive Franchise Model (one waste hauler per service area), the proposed goals of the City's Exclusive Commercial and Multifamily Franchise system include:

1. Meet the City's Zero Waste goals by establishing the maximum disposal for each zone, and implementing waste diversion programs that are consistent with the SWIRP Guiding Principles.
2. Meet and exceed California requirements for waste diversion and mandatory commercial and multifamily recycling.
3. Improve health and safety for solid waste workers under City contract provisions.
4. Improve efficiency of the City's solid waste system by maximizing system routing.
5. Improve the City's air quality by requiring late model low emission clean fuel vehicles.
6. Provide the highest level of Customer Service through communication and delivery of services.
7. Create a consistent, clearly defined system with uniform unit rates and contingency plans to ensure reliable service.
8. Create an environment that ensures long-term competition by utilizing a Request for Proposal (RFP) process that yields the best value service template for customers.
9. Ensure sufficient staffing to meet Program Goals.
10. Ensure reliable system infrastructure to provide uninterrupted service to City customers.

## 2.1 Meet the City's Zero Waste Goals

The City adopted the RENEW LA plan, which calls for a series of actions to move Los Angeles to Zero Waste by 2025, or 90% diversion with only a small inert residual left for disposal. Many of the RENEW actions have been adopted by the City, including the mandatory Construction and Demolition Debris recycling program, Solid Waste Alternative Technologies (SWAT) ordinance to establish zones where these facilities can be sited with a Conditional Use Permit, implementation of the multifamily recycling program, development of a Green Business Certification program, and restaurant food waste program.

Sanitation also provides business technical assistance on waste diversion through the Business Waste Assessment program. These programs, while very successful, are implemented by City staff on a limited basis due to limited funding and reduced staffing. The Exclusive Franchise system will bring a comprehensive recycling program to all businesses and residents in the City through the requirements in the Franchise agreements.

To align commercial collection services with the City's Zero Waste goals, new exclusive commercial franchise agreements will require that the disposal of solid waste at landfills from each zone decreases during the term of the agreement. In the Request for Proposals (RFP) responses, proposers could be required to provide a specific plan for how they would accomplish this, or support this goal, in their proposed collection zones.

### 2.1.1 SWIRP Guiding Principles

In 2007, Sanitation commenced a stakeholder-driven solid waste integrated resources plan process (SWIRP) to establish a 20-year blueprint to move the City to Zero Waste by 2025. A set of Guiding Principles were approved by the stakeholders, as follows:

- Education to decrease consumption
- City leadership as a model for Zero Waste practices
- Education to increase recycling
- City leadership to increase recycling

- Manufacturer responsibility
- Consumer responsibility
- Convenience
- Incentives
- New safe technology
- Protect public health and the environment
- Equity (Environmental Justice)
- Economic Efficiency

Many of the programs and policies contemplated through the SWIRP process can be satisfied by the implementation of an Exclusive Commercial Waste franchise system in Los Angeles. These programs include:

- Recycling at all homes and businesses in Los Angeles.
- Management of green and organic materials from the commercial and multifamily sectors, which will include food waste recycling from restaurants.
- Disposal reduction targets for Franchised Haulers in their zones.
- Implementing a commercial rate structure that encourages diversion, such as free recycling services.
- Increased outreach and education.
- Increased business technical assistance, through Franchise Hauler requirements and minimum standards.

## 2.2 Meet and Exceed California Environmental Laws

California is on the forefront of states in waste diversion policies and requirements. In 1989, AB939 was adopted by the State Legislature, and requires that all jurisdictions in California divert 50% of their generated solid waste materials from landfill disposal by 2020. In 2011, California adopted AB341, which requires that CalRecycle present a plan to bring the state to 75% by 2020, and mandates that most business and multifamily complexes have a recycling program. CalRecycle has also adopted a Strategic Directive 6.1, with a goal to reduce the amount of organics in the waste stream by 50% by 2020, or, they estimate, about 10 million tons of material each year.

The City continues to meet and exceed the requirements of the State of California. The City's diversion rate for the 2010 reporting year is 72%. Also, the City has a program that creates an incentive for permitted private waste haulers to provide collection and recycling of organics at restaurants. This voluntary program reaches about 10% of all food service establishments, in order to assist California in meeting its organics diversion goals, and to bring the City to Zero Waste, our Exclusive Franchise agreements must address the diversion of organics from the landfill. Targeting organics is important to our diversion goals since food waste is estimated by the United States Environmental Protection Agency to comprise approximately 25 percent of the waste stream.

Sanitation believes the Exclusive Franchise will improve environmental performance well beyond what state law requires, toward the City's Zero Waste goals. Not only will the City set diversion goals to reduce landfilling, it will also encourage competition for franchises, innovation and partnerships that can exceed those goals and build long-term capacity for recycling and diversion.

## 2.3 Improve Health and Safety for Solid Waste Workers Enforced by Provisions in Franchise Agreements

During the discussion and throughout the public hearings regarding the Franchise, a clear message was that the City's standard contract requirements such as the Living Wage and Worker retention programs would assist solid waste workers in improving their working conditions. These improvements will be implemented through the contract and subcontract provisions in the Franchise agreements. In addition, Sanitation is proposing an expansion of the current Certification process to include inspection of all facilities utilized under the Franchise agreements to enforce compliance with current laws and regulations, as well as enforce City compliance provisions. Violations will be enforced through liquidated damages and other means.

## **2.4 Improve Efficiency of the City's solid waste system by maximizing system routing**

Through the Request for Proposals and evaluation process, Sanitation will strive to minimize vehicle miles traveled (VMT) to provide the services required under the franchise agreements. Franchise haulers will be required to monitor and report on their VMT per route under the Exclusive Franchise system to allow the City to monitor and enforce those provisions relating to air quality. Franchise agreements could require haulers to provide an annual assessment of opportunities to reduce VMTs in their collection areas, and to establish VMT reduction goals for each hauler.

## **2.5 Improve Air Quality by Requiring Clean Fuel Vehicles**

The City will require that vehicles operating within the City under the Exclusive Franchise system be low emission clean fuel, and require that the Franchise haulers utilize late model vehicles to take advantage of new technologies, to reduce greenhouse gas (GHG) production by the City, and localized impacts to neighborhoods. Diesel-fueled solid waste collection vehicles emit many air pollutants, including particulate matter (PM) and oxides of nitrogen (NOx) that cause adverse health impacts. According to the California Air Resources Board, exposure to diesel PM may result in both cancer and noncancerous health effects. NOx, a contributor to ozone or smog, has also been found to have adverse health effects in humans, including respiratory irritation, suppression of the immune system, and asthma exacerbation.

## **2.6 Provide the highest level of Customer Service**

The Exclusive Franchise system must maintain and improve the level of service provided to customers. Specialized customer needs will be met by the haulers under the Franchise agreements. To provide an incentive, liquidated damages for poor service will be included in all agreements, and an annual review will be conducted on Franchise performance measures. Under the franchise, it will be easy for customers to access and use a broad range of services, and franchise haulers will be required to provide on-site customer assistance to support customer recycling efforts. Further, processes and systems will be put in place to ensure the timely resolution and response to customer requests and complaints.

## **2.7 Create a consistent, clearly defined system with uniform unit rates and contingency plans to ensure reliable service.**

Customers that are in the City's system would benefit from a consistent program which does not depend on service location. Service locations throughout the City should have access to the same programs, with similar rates, for the same types of services. Sanitation recommends that the City seek to create a uniform unit rate system to aid in customer service and transparency, and to eliminate variations that would create confusion. Rates should be predictable throughout the term of the franchise agreements, with limited increases based on a clear measure. Simplicity of rate calculations and changes should also be coupled with contingency plans which provide clear guidance to franchise holders and their customers as to what options are available if service is interrupted. Sanitation recommends that this be a stated goal in the system design. This target would be pursued through the proposals for the Exclusive Franchise System, negotiation, bundling, and other methods. Should any variation in the rate schedule remain, it will be transparent and disclosed at the time awards are recommended to the Board and Council.

## **2.8 Create an environment that ensures long-term competition by utilizing an RFP process that yields the best value service template for customers**

Ensuring that the Exclusive Franchise system remains competitive over the long term is a critical goal during the development of the new system. Putting measures into place such that the City receives wide participation in the Request For Proposals (RFP) process, making sure that a diversity of haulers are well represented through the design of the Franchise zones, and creating incentives for local solid waste haulers to remain part of the system, will ensure that ongoing competition remains. Exclusive Franchise zones include three that are sized for potential participation by smaller haulers, and Sanitation will welcome proposals which utilize small and niche haulers to perform some of the hauling of materials under the franchise agreements. These measures are tempered by the need to develop sufficient facilities for large scale waste diversion programs, which will also be considered during evaluation of franchise zone proposals.

## **2.9 Ensure sufficient staffing to meet Program Goals**

The development of an Exclusive Franchise system will require sufficient staff to implement program goals. One source is the current AB939 permit fee charged to private waste haulers for the right to collect and manage solid waste from commercial and multifamily properties. This fee was approved and implemented before Proposition 26 was approved by the State's voters, therefore it is not subject to review. This fee must continue to fund staff for the administration and management of private waste haulers, as well as compliance with environmental laws and implementation of Zero waste programs.

The action by the City Council in November approved the unfreeze of six positions for the development of the Franchise Implementation Plan and system. Staff needs beyond the program development phase must be analyzed after further design elements are designed. Additional resources will be needed for contract development and management, customer service and enforcement. These resources will be identified as the franchise system is further developed.

## **2.10 Ensure reliable system infrastructure to provide uninterrupted service to City customers.**

An essential component of the Solid Waste Integrated Resources Plan (SWIRP) is the identification and development of future facilities to meet the City's recycling and solid waste needs. SWIRP analyzes and identifies facilities for a 20-year planning period, to meet the City's Zero Waste goal by 2025. During Phase I of the SWIRP, stakeholders discussed facility options and toured example facilities. In Phase II, stakeholders identified specific facility needs with a goal of maximizing diversion before reaching landfill disposal. Management of materials for the Exclusive Commercial Franchise system will require additional facilities for processing of blue bin recyclables, green materials and organics like discarded food, and solid waste such as mixed materials processing and alternative technologies. Facilities to be contemplated include small, neighborhood facilities, as well as large, regional facilities to manage the materials currently. As yet, Sanitation has not identified the specific facility needs for the Exclusive Commercial Franchise system, but will continue to plan the City's needs in conjunction with the SWIRP.

## SECTION 3

# What We Envision for 2017: Recommended Strategies

This section provides specific information about how the exclusive franchise system will be designed and implemented to meet the goals outlined in Section 2.

The City's consultant, CH2M HILL, interviewed and gathered documents from other jurisdictions to inform the City's development of its franchise implementation plan. CH2M HILL's survey sample was targeted to jurisdictions with multiple, exclusive collection zones. Thus, it is a targeted sample (12 jurisdictions) and not necessarily representative of how jurisdictions have addressed all of the policy issues the City wishes to address with an exclusive franchise system. Where CH2M HILL's interviews and/or review of other jurisdictions' documents can help inform the City's direction, information obtained has been provided.

## 3.1 Collection Zones

The development of an Exclusive Commercial Franchise system in the City of Los Angeles requires that collection zones be established for the purpose of developing an RFP and awarding franchises. Sanitation has an established wasteshed system, with six separate collection areas, and proposes using these wastesheds as the starting point for developing exclusive franchise collection zones.

In order to gain insight into the experiences of other jurisdictions with multiple exclusive franchise zones, Sanitation commissioned a survey by CH2M HILL. After some initial online research and consultation with industry contacts, twelve jurisdictions were identified that were of interest to Sanitation. A summary of relevant information about the jurisdictions surveyed is shown in Table 3-1.

TABLE 3-1  
Summary Statistics for Surveyed Jurisdictions

Jurisdiction	Exclusive Collection Areas	Estimated Population	Square Miles <sup>a</sup>	No. of Firms	Services Franchised <sup>b</sup>
Collier County, FL. <sup>c</sup>	2	285,000	2,305	2	R/MF/C
Fresno, CA.	4 <sup>d</sup>	501,000	105	2 <sup>d</sup>	R/MF/C
Fresno County, CA. <sup>c</sup>	14	342,000	6,017	12	R/MF/C
Lee County, FL.	5	423,000	1,212	5	R/MF/C
Norwalk, CA.	2	106,000	9	2	R/MF/C
Palm Beach County Solid Waste Authority (SWA), FL. <sup>c</sup>	11 <sup>e</sup>	558,000	2,386	4	R/MF/C
Phoenix, AZ.	10	1,470,000	517	3 <sup>f</sup>	R
Portland, OR.	19	584,000	145	19	R
Reno, NV.	2	422,000	69	2	R/MF/C
Seattle, WA.	4	621,000	143	2	R/MF/C
Stockton, CA.	2	292,000	62	2	R/MF/C
Vancouver, WA.	2	165,000	46	1	R/MF/C

<sup>a</sup> County data include area for cities and towns.

<sup>b</sup> R = single-family residential; M = multi-family residential; C = commercial.

<sup>c</sup> Applies mainly in unincorporated areas of County.

<sup>d</sup> Data shown are for commercial and multi-family; residential RFP included two zones that were awarded to one firm.

<sup>e</sup> In process of changing to four collection areas.

<sup>f</sup> Managed competition process: Currently, the City and two private firms provide collection services.

### 3.1.1 Methodology of Establishing Collection Zone Boundaries

Sanitation recommends eleven (11) exclusive franchise zones for the City of Los Angeles. Eleven franchise zones of varying size and density will allow private waste haulers to design proposals that bring the maximum flexibility into the system, and result in a number of haulers being awarded exclusive franchise zones, while containing administrative costs. Having a number of haulers operating under the Exclusive Franchise system in the City will provide 1) backup in case of service interruptions, 2) options in case of emergency, and 3) sufficient competition for future RFPs for the system. Based on compiled information received from the waste haulers, these areas should vary from approximately 1,000 to 13,000 service locations.

A franchise system for the City, due to its size, geography, and demographics, will be the largest and most challenging to develop in the nation. Approximately 1.8 million tons of waste is disposed annually from commercial businesses. The City is over 460 square miles in area. Sanitation issued a request in October 2011 to all permitted waste haulers in order to gather detailed information on the number of service locations throughout the City. Based on the responses to the information request, Sanitation estimates that there are about 75,000 commercial service locations (accounts) within the City. The exact number of accounts, their locations, and service levels will change as staff receives additional information, because of data recording variations amongst hauling companies. However, since the respondents included the top ten waste hauling companies who make up nearly 95% of the City's commercial waste system, 75,000 locations is assumed to be fairly accurate.

As shown in Table 3.1, the number of franchise areas in the communities surveyed ranged from two to nineteen. A number of reasons were provided as the basis for the number of areas, and the number of areas that could be awarded to one company:

- Collier County established its areas around the two main population centers in the County, and the initial agreements were negotiated with its two main service providers (rather than an RFP process). It has two firms operating in its two areas.
- Fresno divided the City into four quadrants around major arterials that resulted in relatively similar numbers of accounts per zone. It allowed firms to propose on multiple zones: after reviewing responses, it awarded its four zones to two firms.
- Fresno County issued an RFP and any firm that could meet its bonding, performance, and insurance requirements was guaranteed a franchise area. Without an RFP, Portland took the same approach and negotiated franchise agreements with approximately 100 firms.
- The Palm Beach County SWA's new four zone system will have franchise areas that match the outer boundaries of their original 11-zone system, with each area being served by a transfer station or waste-to-energy facility. With the 11-zone system, no firm was allowed more than 55 percent of the residential accounts. With the four-zone system, a single firm can serve no more than three zones.
- Phoenix targets their zones to be approximately 40,000 living units. In 2006-07 they commissioned consultant research into the optimal size of collection zones. That research concluded that 30-60,000 living units per zone would be optimal. It uses a managed competition process where a new zone is bid every two years for a six-year term. No private firm may serve a particular zone for consecutive contracts, which the City requires to ensure their municipal collection services don't lose touch with residents in a particular area of the City.

- *Franchise boundaries typically are drawn around major geographic dividers such as main roads, water bodies, or mountains.*
- *No jurisdiction used political districts as the basis for franchise area boundaries.*
- *To ensure competition for future contracts, most jurisdictions limit the number of customers served by one firm to 40-55 percent of all customers.*
- *Some jurisdictions decided on the number of contracts to award after reviewing RFP responses.*

- Portland's system has evolved through consolidation from 69 exclusive franchises to 19 today. The City established a maximum of 50,000 accounts served by any one firm, but recently changed that to a 40 percent of all account maximum because one firm was nearing that 50,000 account limit.
- Reno had a single exclusive franchise and expanded to include a second firm that had taken advantage of the initial franchise covering wet waste only, and it had secured significant business by offering lower rates for dry waste service.
- Seattle used research by a consultant that indicated economies of scale are reached at approximately 5 to 10 trucks, or 20-40,000 living units per zone. Based on that research, Seattle thought they could have up to seven zones economically, but settled on four to reduce the administrative burden associated with multiple zones. After evaluating proposals, it awarded its four zones to two firms.

It should be noted that some jurisdictions (e.g., Fresno, Seattle) decided on the number of contracts to award after evaluating RFP responses. They awarded multiple zones to the highest rated proposers.

Most of the jurisdictions that have evaluated the optimum number of zones expressed concern about allowing any one firm to have too great of a market share. One person interviewed (from Fresno) responded that it would prefer one zone rather than two because the administrative challenges of multiple zones is high, and in his opinion the risk is low that a single firm would automatically win a new bid at relatively high prices because other firms would not be willing or able to provide competitive proposals.

In designing service area boundaries, the main criteria cited for establishing boundaries follow.

- Key geographic features (rivers, mountains)
- Major roadways
- Prior patterns of service for collection firms
- Proximity to unloading facilities (processing, transfer, disposal)

For example, Phoenix has mountains to work around and has one area that can be accessed by only one road going in and out, and Fresno County has four rate service areas that reflect differing building densities and mountain areas. Multiple jurisdictions pointed out the importance of clear delineation of boundaries to minimize confusion for collection firms and customers. Many considered expected future growth as well when establishing boundaries.

No jurisdiction has boundaries that are influenced by Council or Commissioner districts. That was considered during early deliberations in Fresno, but it was not acted on because it would have resulted in more zones than they felt was necessary (seven), the Council boundaries are less clearly delineated than what they have now, and Council districts change with each census which would require redrawing boundaries.

Some lessons learned offered by survey respondents follow:

- Clarity in boundary delineation simplifies management and administration.
- Having different rates in different areas leads to confusion and is not desirable.
- Administrative complexity increases substantially with multiple franchise areas, and economic efficiency can suffer if zones are too small: many survey respondents think fewer areas would be better than what they have now.
- Better, more proactive communication with customers prior to implementation of the new system would have reduced confusion and complaints during startup.

- *No jurisdiction has boundaries that are influenced by political districts.*
- *Administrative complexity increases dramatically as the number of franchise areas increase.*
- *Differing rates in different areas leads to confusion and is not desirable.*



- Franchise agreements can evolve and improve through time.
- Vancouver wished it had included commercial recycling in its initial commercial franchise. Its provider offers this service now and participation is growing, but it could have been farther along.

Sanitation's current wastesheds are used to track the flow of waste and recyclables of material collected by the City's curbside collection program. For future planning purposes the boundaries of the City wastesheds and franchise zones should align. This allows Sanitation to look at both public and private waste flow as a whole for the first time. This ability will assist Sanitation in siting future facilities to meet the needs of both waste streams. In addition, Sanitation's current wastesheds already make use of obvious boundary delineations. The Santa Monica range that establishes the Valley area is used as the southern boundary of two of Sanitation's existing wastesheds. The San Pedro wasteshed was established considering the geographic nature of its location. The 405 freeway, the unofficial dividing line between the east and west valley, divides the valley in two equal sections. The current boundary between two of Sanitation's wastesheds closely tracks the 405 freeway.

The goal of establishing the franchise zones is to provide cost effective collection opportunities for both small and large waste haulers. Staff has evaluated the challenges that smaller waste haulers might face in preparing a proposal and providing service to their customers. Many small to medium size waste haulers currently service less than 1,000 accounts. These haulers may not have the resources to provide service to large service areas that could exceed 10,000 accounts and may not have the capital to secure additional resources. Additionally, the need to match the size of the zone to available resources was a concern voiced by smaller haulers that did not own their own solid waste facilities. Smaller haulers feel that larger haulers that own their own facilities may use their leverage over tipping fees to place smaller haulers at a competitive disadvantage.

Taking the factors that could affect small haulers into consideration, staff believes that developing zones with smaller numbers of service accounts, smaller geographical areas, and in close proximity to public owned waste facilities will allow smaller haulers to successfully propose for an area and continue to service and increase business. Small zones with 1,000 to 3,000 accounts should provide small haulers with the ability to propose while provide them with the opportunity to grow. To address the concern of competitive tipping fees, smaller zones should be created adjacent to the City owned and operated Central Los Angeles Recycling and Transfer Station (CLARTS). This proximity will provide small haulers with direct access to publically owned facility and stable and transparent rates.

The top four waste haulers in the City service 10,000 to 40,000 accounts. Sizing the larger franchise zones between 4,000 to 15,000 accounts will allow haulers to propose on one or multiple zones. The larger zones will allow larger haulers to utilize their existing infrastructure and capital to provide competitive proposals.

#### **Recommendations:**

- **Zones sized with a range of 1,000 to 13,000 accounts.**
- **Existing Sanitation Wasteshed boundaries be used as a basis for developing zones.**
- **Use major geographical features such as roads or mountains to delineate boundaries.**

### **3.1.2 Franchise Zone Boundaries and Cap on Zones Awarded**

Building from the stated goals above, Sanitation developed eleven zones that range from 1,000 to nearly 13,000 accounts, utilizing existing Sanitation Wasteshed boundaries, and utilizing major geographical features to delineate boundaries, see Figure 3-1 and Table 3-3 below. These zones were developed to promote competition, help promote level rates, allow for competition from smaller waste haulers, while balancing the cost of administering multiple contracts.

As noted above, Sanitation issued a request to all permitted waste haulers to gather detailed information on the number of service locations in the City, based on zip codes. As part of that request, Sanitation also requested the level of service for the corresponding zip codes. This service was captured as the number of cubic yards of service

per week. For example if a business had a three cubic yard bin collected once per week, that would equate to three cubic yards of service, where as if business had two – four cubic yard bins collected twice per week that would equate to sixteen cubic yards of service. Staff took both the number of service locations and service level into consideration when drafting the zone boundaries. Table 3-3 below notes the service locations and service levels for each proposed Franchise Zone. The exact number of accounts, their locations, and service levels will change as staff receives additional information, because of data recording variations amongst hauling companies.

TABLE 3-2  
Franchise Zones Service Levels

Proposed Zone		Total Service Locations <sup>1</sup>	Percent of total based on Service Locations	Total Cubic Yards of Service per week <sup>1</sup>	Percent of total based on Cubic Yards
1	WV	9,793	13%	77,735	17%
2	NEV	7,662	10%	45,578	10%
3	SEV	6,473	9%	45,398	10%
4	WL	10,408	14%	59,024	13%
5	NC	11,880	16%	72,000	16%
6	NE	6,757	9%	40,486	9%
7	SLA	12,809	17%	53,067	12%
8	HB	4,257	6%	21,007	5%
9	DT	2,313	3%	16,725	4%
10	EDT	1,165	2%	7,108	2%
11	SE	2,065	3%	9,665	2%
<b>TOTAL:</b>		<b>75,582</b>		<b>447,793</b>	

**Note:**

**1 – Based on Waste Hauler Self-Reported Data**

The larger zones will vary in size, ranging from over 4,000 accounts to zones with nearly 13,000 accounts. The larger zones will allow larger haulers to utilize their existing infrastructure and capital to provide competitive proposals. Also, varying the size of the zones allows the City to bundle (combine) zones in the contracting process. The bundling process provides the City with a means to:

- Combine zones that may have disproportional rates to help level rates across the City. This is discussed in more detail in Section 3.3.
- Ensure all zones receive competitive proposals. If a hauler wants larger market share they will have to propose on areas that may appear to be less profitable.
- Protect small zones
- Limit any single haulers market share.

Sanitation proposes that the franchise zones in the Valley area be divided east-west using the 405 freeway. This provides a clear and distinguishable boundary and mirrors the existing wastesheds. To provide additional franchise opportunities, the east valley area will be divided along major east–west thoroughfares. The east valley area will be divided along Vanowen Street. North of Vanowen the type customers serviced begin to change from retail to industrial. By grouping customer types, waste haulers will be able to maximize their diversion efforts.

The West LA and Harbor wastesheds were kept as single franchise zones. Although large, the west Los Angeles wasteshed presents a number of service related issues. There are a limited number of solid waste facilities located near West LA. In addition, a large area of this wasteshed consists of difficult to access, and hilly terrain.

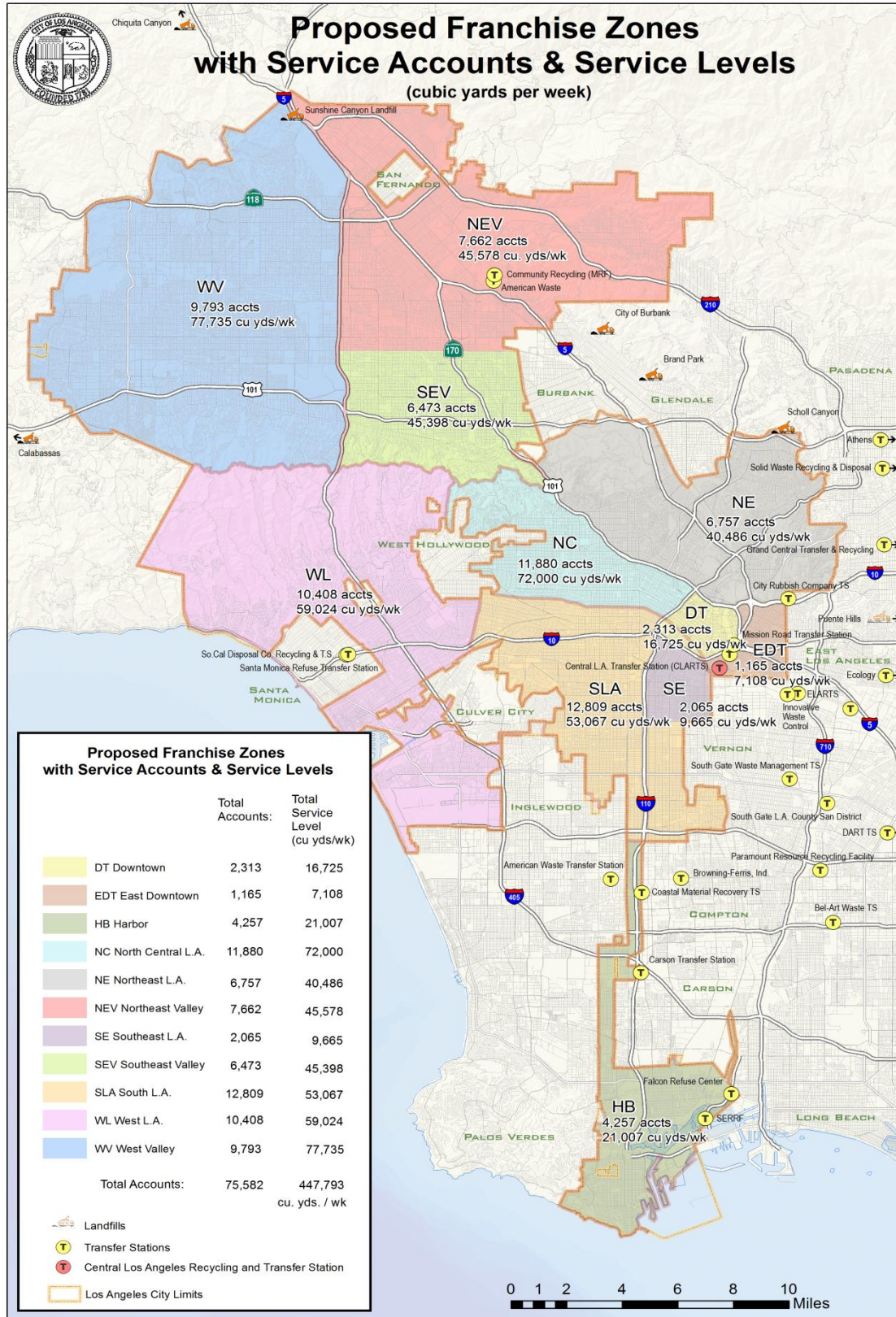
However, there is also a portion of this watershed with a high concentration of businesses. Sanitation believes that the assumed difficult and more costly portion should remain with the portion with a high concentration of business. This will provide the waste hauler with an overall economical area to service and promote level rates. Given the geographically isolated nature of the Harbor watershed, as compared to the rest of the City, the Harbor watershed should not be further divided. As shown in Figure 3-3, although distant from the center of the City there are a number of transfer stations located near the Harbor franchise zone.

As stated previously many small to medium size waste haulers currently service less than 1,000 accounts and may not have the resources to provide service to large service areas. When surveyed, these haulers indicated that small zones should be sized in the 2,000 account range. Sanitation designated three smaller zones that will provide opportunities for small to medium size waste haulers. These franchise zones are South–East with 2,100 service locations, Downtown with 2,300 locations and East-Downtown 1,100 service locations. To address the concern of competitive tipping fees, the smaller zones were created adjacent to City owned and operated Central Los Angeles Recycling and Transfer Station (CLARTS). This proximity will provide small haulers with direct access to a publically owned facility and stable and transparent rates. To protect the intention of the smaller zones, these zones will not be included in the bundling process. This means that these zones are to be awarded to three separate waste haulers and cannot be combined with other zones.

Sanitation recommends the maximum market share any single could be awarded should range from 40 to 49 percent. Under the current permit system no single hauler has more than 40 percent of the waste hauling market share in the City. This cap will ensure that no single hauler dominates and that there will be a sufficient pool of qualified waste haulers to meet current and future collection and diversion needs, foster growth and maintain competition. Limiting the share any single hauler is awarded will also allow the City to effectively arrange for backup waste hauler(s) if the franchised hauler is unable to fulfill its contractual obligations. The exact size, as it relates to market share, of the proposed zones will be determined during the RFP and contracting process. Minor modifications to the maximum allowed percentage of market share may need to be modified during the RFP and contract process.

### **Recommendations**

- **Designate 11 Franchise Zones**
- **Adopt the Exclusive Commercial Franchise Zone Map**



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Figure 3-1 – Franchise Zone Map

### 3.1.3 Create Opportunities for Local Private Waste Haulers

Sanitation is recommending several methods to ensure that local permitted private waste haulers have the opportunity to compete in the new exclusive commercial waste franchise system. First, Sanitation recommends that experience in the City of Los Angeles be considered for the award of franchise zones. Sanitation also recommends that three collection zones be sized so that they are available for proposing by smaller waste hauling companies through the RFP process (see the Sanitation's map of proposed collection zones), and that all franchisees (prime contractors) adhere to the Business Inclusion Program, including subcontracting requirements. These measures will help to ensure that small local haulers remain viable and competitive in the local collection services industry.

Local private waste haulers have expressed a concern that the number of years needed to understand the structure and neighborhoods in the City will be lost during the RFP process. The City has an opportunity to retain waste haulers that are located in the local area, know the areas that they may be awarded, and have relationships with major customers. The evaluation of the proposals will include a significant experience requirement, and additional points will be awarded for long term experience within the City of Los Angeles. This experience is bolstered by providing the types of services for varying customer needs, as commercial accounts are not a one size fits all collection activity.

Three smaller collection zones should be located near the City's Central Los Angeles Recycling and Transfer Station (CLARTS), which charges the same rates to all customers. Haulers who service these three smaller exclusive franchise zones will be directed to CLARTS in their franchise agreements. In addition, there are several privately held recycling facilities in the same area which are not controlled by large waste hauling companies. These actions will ensure that small haulers have access to competitively priced transfer and processing facilities, and address concerns voiced in stakeholder meetings and in public hearings that waste haulers who do not own facilities may be 'shut out' of the franchise proposal and selection process.

Regarding subcontracting, Sanitation believes that the City's Business Inclusion Plan provides additional opportunities for small haulers. Each prime proposer will be required to meet the City's minimum percentage subcontracting goal, with the subcontracting consisting of all activities that can meet City requirements. No additional minimum subcontracting minimum will be imposed on franchisees, although they will be permitted to voluntarily subcontract a portion of their work required to be performed. In some cases, subcontracting may be viewed as adding value to a proposal, as indicated in Section 3.7.6. Both the prime and its subcontractor(s) will be required to abide by all of the requirements set forth for the prime contractor, including but not limited to the City's living wage requirements, as well as any health and safety standards, which the City establishes through the contract.

Two jurisdictions – Lee County Florida and Seattle – have versions of living wage in their agreements, with Seattle's being quite comprehensive. One jurisdiction - The Solid Waste Authority of Palm Beach County, FL – has a small business minimum participation requirement in its agreements. Specifically, in the current solicitation they have a fifteen (15) percent goal for Small Business Enterprise (SBE) participation in contracts and purchases. The participation is calculated by dividing the proposed annual payments to be made to certified SBEs providing good and/or services necessary to support the required services under the agreement by 60 percent of the total annual residential and commercial bid. Seattle, in its last RFP process (2007), created a fourth collection zone (it previously had three), with the hope it would attract one or more small haulers (or new companies) to propose. Seattle, in fact, ended up choosing CleanScapes, a newly formed local collection company, to serve two collection areas.

#### **Recommendations:**

- **Three collection zones geared to smaller waste haulers.**
- **Compliance with the City's Business Inclusion Plan (MBE/WBE/OBE/DVE/EB Subcontracting).**

## 3.2 Fees and Funding Requirements

### 3.2.1 Franchise Fee Level

Sanitation is recommending that proposals include a gross receipts franchise fee paid quarterly, as well as an upfront payment submitted through the Request For Proposals (RFP) process. The minimum franchise fees will be set to meet the fiscal needs of the City. As shown in the data gathered by CH2M Hill and HFH, franchise fees for other jurisdictions range from 2% to 27%. Sanitation expects a reasonable minimum franchise fee to be in the range of 10%.

CH2MHILL's survey of other jurisdictions indicates that all have some form of fee included in collection rates that provides funding to the local jurisdiction's General Fund. Jurisdictions in Florida and California have franchise systems fee rates ranging from a few percentage points to over 20%. In Seattle and Vancouver, rates include a Utility Business and Occupation Tax, with proceeds going to each city's General Fund. Seattle's rate is 15.54%, while Vancouver's is 20%. Stockton required its franchisees to pay an upfront amount, at the beginning of the terms of the two franchises, which is paid over the first four years of each contract for a purchase of street sweeping equipment, a service that the City chose to outsource to its contractors. Portland dedicates a portion of its 8% franchise fee to support solid waste programs. The cities in California that CH2M HILL surveyed also included AB939 fees in customer rates (except Norwalk).

Current AB939 hauler fees are paid quarterly, and are based on 10% of gross receipts. Basing the additional franchise fee on gross receipts creates a revenue source that is, to a large extent, stable even during tough economic times. Creating either a flat fee, or a fee based on some other factor, such as disposal tonnage, would not guarantee a stable revenue each year and may not properly adjust to reflect adjustments in contract terms throughout the franchise. In addition, many jurisdictions have taken advantage of the competitive process by allowing proposers to submit up-front payments, in addition to ongoing franchise fees, to be considered in the evaluation of proposals. These upfront payments can be considerable.

Sanitation recommends that a minimum franchise fee be specified in the RFP. Proposers may also include an additional value for the franchise, either as an additional percentage franchise fee, or an upfront payment, or both. Proposers should consider that it is the City's intent to normalize rates across the City during the negotiation stage of the process.

#### Recommendations:

- **Establish a minimum annual franchise fee in the RFP.**
- **Existing AB939 Fee to continue in place**

### 3.2.2 Staffing Plan

In its original report to Council in February 2012 Sanitation requested the unfreeze approval of six (6) staff positions to provide adequate staffing for the Franchise Initiative thru its early stages of development. Council approved the unfreeze of these positions and just recently, in March 2013, the City's Managed Hiring committee approved the position for hiring. Sanitation believes that this level of staffing is adequate to support the Initiative up to the point of drafting the RFP. A subsequent assessment will be made once it is better known the extent of Sanitation's enforcement needs and contract responsibilities.

- *Fees range from a few % to over 20%*
- *Fee revenues usually dedicate to the jurisdiction's general fund*
- *Fees are included in franchise agreement*
- *Jurisdictions often build an additional fee into rates to cover solid waste program costs (including AB939 fee)*



### 3.3 Uniform Unit Rates that Change Predictably

Sanitation will seek fair and equitable rates for all customers, however, the feasibility of establishing a uniform rate schedule can only be determined after evaluation of the proposals for the Exclusive Franchise System. It's important to note that one of the goals of the exclusive franchise system is to drive diversion from landfills. An exclusive franchise system must provide and promote recycling options to businesses and provide the impetus to implement the RENEW LA plan adopted by the Los Angeles City Council. RENEW LA calls for the implementation of multiple recycling and diversion programs and alternative technologies to significantly reduce and eventually eliminate the reliance on landfills. Currently, each business or property owner negotiates rates with a hauler, as well as their level of service. There are no set amounts or rate schedules available that customers can use to determine if they are paying a fair rate for the service they are provided. In particular, this affects small businesses, many of which do not have the time to research, bid, and negotiate for recycling and waste services. Small businesses also have less negotiating power than larger businesses which can lead to them paying higher rates for the same service. A uniform rate structure has many advantages. Total customer costs will vary due to the type and amount of services they require, but adjacent businesses will be billed the same base rates for collection of recyclables and waste. Depending on the cost variations in the proposals, it cannot be predicted with certainty that this can be achieved at this time. It is Sanitation's recommendation that Council deem the Uniform Unit Rate Model as the preferred model but give Sanitation the authority to negotiate the best achievable and practical rate model.

#### 3.3.1 The Advantages of a Uniform Unit Rate Schedule City-Wide

A single, uniform rate schedule Citywide will ensure equity so that all of the City's business, institutional, and multifamily customers pay the same rates for the same service. The service will be much simpler to understand and more transparent: a rate matrix of services will be posted on the Sanitation website and communicated freely to all customers. Commercial customers with businesses in several zones, and Council Districts that have more than one zone, will not have starkly different costs for the same services.

A uniform city-wide rate structure does not mean a one size fits all approach. Business will have a suite of solid waste and recycling options to choose from that promote diversion and can be customized to fit their needs. Once customers know what choices are available to them, it will be much easier for them to tailor their mix of recycling, organics, and solid waste service so that their needs are met at the lowest possible cost. Further, a uniform rate schedule will make it much easier for Sanitation staff to work with customers to identify billing issues and quickly resolve them.

In CH2M HILL's survey, jurisdictions were split about evenly between those that have a single jurisdiction-wide rate schedule, and those that have different rates in different franchise areas. In jurisdictions where rates are different in different areas, complaints have been received from businesses with rates that were higher than from others in the City. For example, with multiple, exclusive zones there will be situations where businesses on either side of a main arterial, or different outlets of a business with multiple locations, will pay different rates for the same service. One jurisdiction surveyed, the Palm Beach County SWA, is in the process of changing to a system with different rates in different areas, to a system where commercial rates are consistent county-wide.

##### Advantages of Uniform, City-Wide Rate Schedule

- **Fairness** – all businesses, institutions, and multifamily customers pay the same rate for the same service.
- **Simplicity and Transparency** – rates and choices are clear; less confusion and fewer disputes about billing
- **Predictability** – easier for customers to budget for the cost of collection services
- **Driver for Waste Diversion** – Sanitation will set the rate to ensure that businesses have an incentive to divert waste from landfill.

### 3.3.2 Potential Methods for Implementing a Uniform Unit Rate Schedule City-Wide

Sanitation believes that the potential revenue for a long term exclusive franchise in the City of Los Angeles will result in extremely competitive rates through the RFP and contractual process. The size of the franchise contracts, and the ability to monetize their value will drive rates for commercial customers downward. The franchise effort and subsequent contracts will be among the largest in the Nation Although some zones may appear to be more expensive to collect from, proposals may not reflect that contrast, due to the large number of service accounts in each zone. Many of the proposed zones to be established have more service accounts, with more service needs, than entire franchise service contracts in most other cities. Waste contracts are fiercely competitive in even relatively small cities. Recently, Lawndale saw rates drop by 25% after going through a competitive bid process. Sanitation also believes that bundled zones, combining those zones perceived to be more costly with more desirable areas, may result in lower overall rates due to the larger combined value to the hauler.

In the responses the City will receive to its RFP, the proposed costs for services will differ by hauler and by franchise area. If the cost proposals by area are substantial because of differences in route density (driving time between stops) and differences in off-route travel time (driving from base yards to and from routes, and from routes to and from processing or disposal facilities), then implementing a uniform rate structure will be more problematic. Methods the City could utilize include the negotiation process, pairing high- and low-cost service areas (bundling), a compensation adjustment factor, and using an off-route mileage fee. These examples are described below, followed by a brief discussion of activities the City will need to do in order to establish a uniform rate schedule city-wide.

#### 3.3.2.1 Negotiation

City staff will be prepared to negotiate the cost proposals to seek uniform rates. It is expected that proposals will vary in price depending on a number of factors. After a review of the technical proposal to ensure that the proposers are capable and willing to provide the services expected of them by their customers through the franchise system, Sanitation will develop and use a rate model to seek a uniform system wide rate structure. Identification and analysis of all the potential proposers for each zone will be modeled to provide a first look at the variations in cost of service.

Sanitation will also conduct a survey of willing businesses to gather current contract costs for services throughout the City. These current costs will be used for comparison to the cost proposals submitted by the haulers. At that time and after full evaluation, decisions can be made to negotiate with the top proposers in each zone.

#### 3.3.2.2 Bundling Service Areas

A uniform City-wide rate schedule could be developed without a compensation adjustment by structuring Sanitation's RFP with options for pairing high cost service areas with low cost service areas. This method uses a negotiated process and pairing high- and low-cost franchise areas resulting in rates that are close to the initial proposal averaged over the entire bundle. Cost proposals may also be negotiated due to the potential award of a larger area. This option would avoid the complexities of implementing a compensation adjustment mechanism.

Fresno County and the cities of Reno and Stockton used a negotiated process to establish uniform county-wide rates after viewing proposals from multiple collection firms in multiple franchise areas.

#### 3.3.2.3 Using an Off-Route Mileage Fee

Another method is to use an off-route mileage fee. This could be used to eliminate or reduce substantially the difference between revenues and costs. In this approach, Sanitation would review responses to its RFP and establish an off-route mileage fee that would be added to the base rates charged customers in high cost zones. Thus, the base rates for service (e.g., a 4 cy bin 2 times per week) would be the same throughout the City, but customers in higher-cost zones would have a small mileage fee added to those rates..

Like bundling, this approach would require a similar level of expertise and negotiating skill during the implementation period, but would eliminate the ongoing complexity of a compensation adjustment process.



### 3.3.2.4 Compensation Adjustment Factor

The term “compensation adjustment factor” refers to the difference between revenues collected by each hauler and the amount owed each hauler for providing services. This requires franchisees to pay the City for revenue collected in excess of their cost of service, as determined in contract, and in turn the City reimburses franchisees for revenue collected that is below their cost of service. The challenge with this method is the inherent uncertainty in the amount of service that will be requested by customers in each franchise area each month and what information is available to design a uniform city-wide rate structure that results in a net compensation adjustment near zero each month. It would also add Administrative responsibilities. Sanitation would also need to establish and set aside money into a compensation adjustment fund that could be used if rates were not set high enough to cover required compensation adjustment payments. It would also need a mechanism to adjust rates at some point during the first year should rates be set too high or too low.

This method has similarities to the approaches used by the cities of Seattle, Phoenix and Lee County to set uniform rates City-wide.

Further data and cost of service modeling can augment efforts to set appropriate uniform city-wide rate for residential service. Portland’s Bureau of Planning and Sustainability conducts an annual rate review process, assisted by an independent economist who performs the rate analysis, a Certified Public Accountant who reviews hauler financial records, staff from Portland State University (PSU) to sample the weight of the various sizes of solid waste containers set out for collection, and a consulting firm that specializes in forecasting the market price of recyclable paper products. Rates are based on weighted average hauler cost including 9.5 percent hauler operating margin (profit plus state and federal taxes). The proposed rates are reviewed by the Portland Utility Review Board (PURB), a citizen panel with no hauling industry representation, and then forwarded to City Council for consideration and final adoption.

### 3.3.2.5 Actions Required to Establish City-Wide Rate Schedules

The City will need to conduct a series of activities prior to implementation. Many of those apply regardless of whether rates vary by franchise area or are uniform. A high-level list of the most important activities it must conduct follow.

#### Prior to Issuing an RFP

1. Establish franchise zone boundaries.
2. Estimate the number of accounts and the amount of service required by each account in each franchise area.
3. Evaluate the methods described above and other ideas that may be used to establish uniform rates and contractor compensation.
4. Evaluate and decide on what financial and productivity information will be requested from proposers, in what format.
5. Evaluate and decide on the structure of rates for garbage and recycling (i.e., establish how much more a two cubic yard bin should cost than to a one cubic yard bin), and decide on the minimum service level for recycling.
6. Estimate the average cost per cubic yard of collection in each franchise area and evaluate and decide upon strategic groupings of franchise areas that will be included in the RFP.

### 3.3.3 Implement Rate Adjustment Provisions that Eliminate Sudden Increases

Along with a uniform rate schedule, the Exclusive Franchise system will include clear and specific limitations for how rates will be adjusted over time. Businesses will be assured that rates will increase in a fair and orderly manner with annual increases capped and tied to a standard measure such as official published Consumer Price Indexes (CPI). This will help customers plan for and budget the cost of collection services more accurately and eliminate any sudden or sharp increases.

The CH2M HILL survey found that all jurisdictions surveyed allowed for annual adjustments to contractor compensation, and rate adjustments were considered annually. A variety of different price escalation methods are used. Most are tied to one of the consumer price indexes and contractor compensation is typically adjusted annually using a percent of the increase of that index and a cap on the total increase each year. Rate changes typically were tied to changes in contractor compensation plus any adjustments required for franchise fees, program administration, or state requirements.

#### **Recommendations:**

- **Set limitations on annual rate adjustments, such as using the Consumer Price Index (CPI).**

### **3.3.4 Implement Rates Structured to Drive Diversion from Landfills**

The rate schedule will be structured to help encourage additional diversion of material from landfills. Sanitation recommends that rates include a basic level of recycling service. Franchised waste haulers will be required to include, in their standard rates, one cubic yard of recycling service for every three cubic yards of solid waste, with a minimum collection frequency of once per week. Customers looking to save money and divert more material from landfill could request a larger bin and/or more frequent recycling, green waste, or organics service, and the unit cost of that service would be priced lower than a comparable service for solid waste. This would provide a powerful incentive for driving additional material away from landfills and toward more beneficial uses. Proposers will be asked to include a reduced recycling rate for materials not intended for disposal, and will be evaluated on the reduction below their waste hauling rates. The rates will also be structured to address the City's phased approach to organic recycling. The "bundled" rates established through the RFP will include the continued collection of organics from all participating restaurants and a reduced rate for green bin recycling at all multi-family properties that generate green waste.

In the CH2M HILL survey, most jurisdictions have a competitive market for commercial recycling, or businesses pay for recycling at a rate ranging from 50-80 percent of the rate for comparable garbage service. We did find the following examples where recycling is included with garbage service:

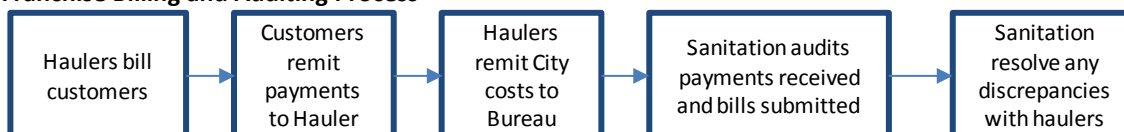
- In Fresno County, all customers that elect to subscribe to enhanced service receive a consistent recycling service throughout the county (although residential green waste services differ in different zones).
- In Lee County, contractors must offer recycling of up to two cubic yards weekly to all commercial customers at no additional cost. Commercial customers are not required to recycle, and recycling services are not exclusive to the franchisee: if customers want a larger recycling container, they are charged for that service on a negotiated basis.
- In Stockton, contractors must offer recycling of up to four cubic yards weekly to all commercial customers at no additional cost. Franchisees are entitled to added compensation for customers requesting service of more than four cubic yards of recycling per week. The recycling service is not exclusive.

### **3.3.5 Implement a Transparent Process for Ensuring that Franchise Billing and Compensation Terms are Met**

Once franchise agreements have been executed, Sanitation will implement a process to ensure that compensation paid to haulers, and fees received by the City, meet the terms of the agreements and are accurate. Sanitation anticipates that this "auditing" process will flow as shown in Figure 3-2 below.

FIGURE 3-2

#### **Franchise Billing and Auditing Process**



## 3.4 Efficiency in the System

### 3.4.1 Require Efficient Collection Routing

Reducing collection truck traffic on City streets and improving air quality are high priorities and selected franchisees must demonstrate how they support these goals over the life of the franchise.

To that end, Sanitation recommends that in their RFP responses, haulers be required to describe and explain how they plan to implement best operational practices, including routing efficiencies. Each proposer will be required to provide detail information on the number and types of vehicles they will use for collection, expected vehicle miles (VMTs) for the routes they plan to follow. Information provided by proposers will be used to compare the efficiency and costs effectiveness of each proposal (and against best practices) which will be considered in the final selection process.

In addition, Sanitation recommends that franchise agreements require haulers to establish vehicle tracking methods and processes to ensure maximum routing efficiencies. Auditing capability by the City should also be considered, which can also serve to track collection service lapses. Each franchisee will be required to report total VMTs (at least annually), compare actuals versus what the franchisee originally proposed, explain deviations, and explain how any needed improvements can/will be made. Collection vehicles may be required, for example, to have GPS tracking to ensure accurate VMT tracking and to support other goals related to customer service (for example, real time dispatch to respond to missed collections). The City may include VMT performance, versus plan, as a performance metric for each franchisee (and potentially apply liquidated damages for non-performance).

The recommendations described above will put the City on the cutting edge of driving efficiencies in solid waste collection and reducing collection vehicle emissions. CH2M HILL's survey of twelve jurisdictions did not find one that has addressed the issues of collection efficiencies via the RFP (or franchise agreements) as thoroughly LA is proposing to do. One jurisdiction, Seattle, required each RFP responder to explain how its collection vehicles will ensure efficiency, safety, mitigate noise, but did not request an explanation of how route efficiencies would be ensured. Seattle's contracts also include detailed requirements related to CNG vehicle use, and other vehicle standards. Seattle's contract requires regular detailed reporting of data on each collection route served and data for cycle time by vehicle at transfer facilities. Seattle does not receive, review or analyze contractor VMT data. Other jurisdictions that had conducted recent RFPs did not address the efficiency of vehicles, routing or clean vehicles at all, only in a very general way.

Although CH2M HILL did not interview San Jose, it obtained a copy of the City's franchise agreement and found innovative terms related to promoting efficient routing.

#### Recommendations:

- **Require routing efficiencies in proposals and contracts.**
- **Monitor VMT to ensure continued routing efficiency.**

#### Seattle 2007 RFP Question for Proposers: Chapter VII, Section B, Question 15

*"The City is interested in ensuring that contractors use collection trucks and equipment that are efficient and reduce emissions. The contract requires that all vehicles used in collection shall have either emission that are no greater than 2007 federal diesel engine requirements and use of 20% biodiesel or operate on CNG. Please discuss features of your proposed truck fleet that would save fuel, increase efficiency, and reduce impacts i.e. trucks with operate-in-gear-at-idle systems, trucks that do not allow extended idling, safer brake pads and hydraulic fluids, etc"*

### 3.4.2 Implement Efficiencies in the Provision of Customer Service

Sanitation's recommendation to establish an exclusive commercial franchise system will result in more efficient, customer focused service.

- First, the franchise requirements will result in franchised waste haulers refocusing their resources to customer service and eliminate the need for haulers to market and sell to potential new customers. Currently, haulers have staff to draft and process agreements with each customers, and to renegotiate as agreements expire. The focus of the franchise haulers will now be on providing outstanding customer service, and increasing diversion from landfills.
- Second, because it will be working with a smaller number of haulers, the City will be able to develop and implement new customer service offerings efficiently. As an example, development of multi-family and commercial customer service web portal will be much easier in the future. Such a portal could provide a "one stop shop" for service offerings information, educational material, account and billing information, pay online functions, and much more.

It is recommended that the RFP for exclusive commercial franchise collection request specific customer service focused proposals that capitalize on the efficiencies that the new system will generate. The RFP should, at a minimum, require the following:

- on-line billing and payment
- on-line account management including service management options
- 24/7 customer support
- on- line tracking of service requests

Franchise agreements should include specific provisions to provide innovative customer service offerings that result from the RFP process. Franchise agreements must also provide the City, with support of the haulers, the ability to implement new customer service options throughout the term of the agreements.

The proposed approach to capitalizing on efficiencies that will result from implementing exclusive commercial franchises will put the City on the cutting edge of customer service. CH2M HILL's survey of other jurisdictions RFPs and franchise agreements usually have requirements that haulers provide live "call center" capabilities (though hours of operation requirements vary), that haulers participate with the jurisdiction in customer education efforts, and that haulers commit to periodic customer information/education mailings at no expense to the jurisdiction. But, only one agreement reviewed (Fresno City) has explicit requirements regarding a franchisee's web site capabilities, how the hauler's web site is expected to be integrated with the jurisdiction's website, or other technology based customer services to be provided.

#### Recommendations:

- **Require contractors to use all forms of communication with their customers (call center, online, etc).**
- **Franchise agreements will allow changes if new technologies are developed.**
- **Service complaints, response times, and complaint resolution will be transparent/reported to Sanitation**

#### Examples of Opportunities for Efficiencies

- *On-line billing and payment through one web portal*
- *On-line account management through one web portal including service management options through one web portal*
- *24/7 customer support*
- *On- line tracking of service requests*
- *Collection day push messages to customers (text, email, and phone)*

## 3.5 Consistent Customer Service Standards

Customer service, including consistent delivery, prompt correction of issues, and convenience, will be a cornerstone of the new exclusive commercial franchise collection system. Under the current free market commercial collection system, customer service is inconsistently provided to businesses. Businesses have described the need to change hauling companies, sometimes more than once, to get the service that they require and expect. Exceptional customer service will be a requirement for all franchise haulers. The City will provide tools for communication that match customer needs, from live call center operators, to online communication through e-mail or text message, to providing a free smart phone application so that customers can send and receive timely information. Franchise agreements will include specific requirements for systems that can interface with the City, as well as liquidated damages for failure to provide the excellent service required by the customers.

### 3.5.1 Provide Consistent, Innovative Customer Service Offerings

The new franchise system will allow businesses to customize their waste and recycling services to meet their needs. Franchise agreements will allow businesses to mix and match a variety of collection services, including special collections or other specialized on-site needs. Franchisees will be required to perform on-site assessments to determine how much waste capacity is needed after blue bin recycling. Customers will be able to schedule their collection times for the days and times that meet their business needs, as long as the hauler is also able to efficiently move their collection vehicles through the City.

Sanitation is recommending, at a minimum, a Blue Bin recycling system that provides a consistent customer experience throughout the City, regardless of whether the customer is a business, a single family or multifamily household, or school. A key advantage of this approach is consistency and a service type that is familiar to those who already live in the City and receive residential service. Customer information and educational material will have consistent messages and common formats. Franchised haulers will be required to provide blue containers of the size needed by the business, and 'valet' type of collection if necessary, similar to that provided by the Private Hauler Multifamily Residential Recycling Program

Sanitation will include in the franchise agreements a model and list of unique waste services that customers can use to build collection programs that meet their specific needs. Customers will be able to receive service at non-peak hours, short turnaround, on-call, and other special circumstances when necessary. Franchise waste haulers will be required to meet customer needs through the customer service standards included in contracts with the City. Through the City's agreements with the Franchisees, the various customer service needs will be identified, required, and provided.

In its survey of other jurisdictions, CH2M HILL found that it is common to specify the level and quality of service in terms of base level and enhanced service level at no additional or for a specified cost. For example, Collier County, FL requires the followings additional services to be provided to commercial customers at no additional cost:

- Opening and closing doors and gates
- Unlocking and locking gates
- Changing containers for increases and decreases in service
- Exchanging the container for a different size, if requested more than two times in one year
- Rolling out the container from an outside enclosure and returning it to its original location

Similarly, the following services are often provided at a cost established in the franchise agreement:

- Privacy lock bar set-up
- Locks for containers
- Re-instatement fee (i.e., returning container (s) after service stopped)
- Loading container (i.e., bagged MSW outside container)
- Pressure washing 2, 4, 6 and 8 yard container
- Pressure washing roll-off compactor container (s) at the time of service
- Re-locating 2, 4, 6 and 8 yard Customer-owned containers, upon the Customer's request

- Maintenance of Customer-owned container (s)
- Collection of Bulky Waste and White Goods

Such services are typically specified in franchise agreements, as evidenced in the surveys performed by CH2M HILL.

CH2M HILL also found that some jurisdictions have negotiated terms in their franchise agreements that require franchise holders to provide various free services to the City (the costs of which are recovered in base collection rates). Included in Stockton's franchise agreement is free collection for City facilities, street sweeping, a certain number of neighborhood cleanups each year, collection of public litter containers, and several other services.

### 3.5.2 Establish Accountability for Performance

The City will require a high level of customer service through contract requirements, inspections, audits, and enforcement. Businesses will have the ability to utilize the City to ensure all contractual obligations are met. Sanitation will maintain the necessary staffing to respond to customer service issues and ensure compliance with contract requirements. The franchise contract will detail service requirements and specify financial penalties for poor customer service. These will range from failure or neglect to resolve any complaint within the requested time to the unauthorized disposal of recyclables. For example, the table to the right presents examples of liquidated damages or penalties associated with service lapses. Other measures may include the requirement to credit back to the customer for multiple missed pickups or other significant service lapses.

CH2M HILL found that some (Stockton is an example) jurisdictions apply liquidated damages for failure to meet certain diversion requirements, and one jurisdiction (Seattle) offers incentives for exceeding certain service related targets. Franchise agreements will be structured to allow the City to terminate a franchise for significant repeat failure to perform. Collier County includes in its franchise agreement a provision to address repeated violations, which is provided below:

*"If the Contractor's record of performance shows that the Contractor has frequently, regularly, or repetitively defaulted in the performance of any of the covenants, conditions, or requirements contained in this Agreement, and regardless of whether the Contractor has corrected each individual condition of default or paid liquidated damages, the Contractor shall be deemed a "habitual violator" and shall forfeit the right to any further notice or grace period to correct, and all of the prior defaults shall be considered cumulative and collectively shall constitute a condition of irredeemable default. Under such circumstances, the Board shall issue the*

*Contractor a final warning, citing the grounds therefore, and any single default by Contractor of whatever nature, subsequent to the issuance of the Board's notice, shall be grounds for immediate termination of this Agreement. In the event of any such subsequent default, the County may terminate this Agreement upon giving written notice to the Contractor, and termination shall be effective three (3) Days after the notice is delivered. All fees due to the Contractor hereunder, plus any and all charges and interest, shall be payable to the date of termination, and the Contractor shall have no further rights hereunder. Immediately upon receipt of the Board's final notice, the Contractor shall cease any further performance under this Agreement."*

TABLE 3-3  
Sample Penalties

1	Failure to comply with the provisions of the Contract	\$1,000 first incident; \$2,500 each subsequent incident.
2	Failure to meet transition timeline milestones	\$5,000 per milestone per Work Day, subject to a maximum of \$25,000 per milestone.
3	Failure to maintain customer service during office hours.	\$300 per incident.
4	Failure to maintain call center or telephone system performance	\$300 per incident.
5	Failure or neglect to reasonably resolve any complaint within the requisite time.	\$100 per incident per Work Day.
6	Failure to clean up spillage or litter during the course of FRANCHISEE's Collection operation.	\$500 per incident.
7	Failure to remove graffiti from any Container.	\$100 per incident.
8	Failure to properly cover material in Collection vehicles.	\$500 per incident.
9	Failure to maintain or timely submit to CITY all documents and reports.	\$300 per incident.
10	Failure to submit report corrections within CITY-approved timeframe.	\$300 per incident.
11	Failure to meet Annual Diversion Requirement.	\$25,000 per each one (1) percent diversion not reached

Fresno's franchise agreement provides for a performance review of the franchisee's performance in the 4<sup>th</sup> and 7<sup>th</sup> year of the agreement.

**Recommendations:**

- **Accountability for performance including liquidated damages for failure to meet performance standards**

### 3.5.3 Plan for Contingencies

The franchise system must include strategies and plans to respond to events that may interrupt collection, transfer, disposal and processing of solid waste and recyclables. These may include service interruptions, including but not limited to business failure, loss of insurance, labor disputes, natural disaster, franchise contract revocation or cancellation due to default, or other factors. During the stakeholder process and through the hearings on this matter, concerns were expressed regarding how the City would plan for these events. Making sure that customers receive reliable, uninterrupted service of their choosing is the key to contingency planning.

Sanitation recommends the following strategies:

**Inclusion of detailed contingency plans in each franchise agreement, and requirements that these be updated annually:** The contingency plan describes the Contractor's plan of action in the event that an emergency or other situation renders the Contractor's operations yard or equipment unusable. The Contingency Plan describes the steps that the Contractor will take to avoid interruptions in collection service.

**Inclusion of backup provisions in franchise agreements:** The ability of the City to trigger a response by franchise haulers in contiguous zones will allow an immediate response in case of service interruptions, emergencies, or in case of default by the current franchise holder. Other franchise holders in the City will, with the City's sole discretion, be asked to take over service if necessary.

**Performance bonds and liquidated damage provisions to allow Sanitation or another franchise hauler to provide services:** Another safeguard that will be included in the Exclusive Franchise agreements are performance bonds and a provision that will allow Sanitation, or a contractor of its choosing, to perform services when a franchise hauler fails to perform services under specified conditions. These provisions will require the non-performing franchise hauler to reimburse the City for all direct and indirect costs incurred while obtaining interim collection service, a financial guarantee backed by a performance bond.

Sanitation staff have had experience utilizing backup provisions in current hauler collection contracts to allow another contractor to move into an area of the City that was not receiving the appropriate service level. These provisions allowed the City to reduce its expenditures as well. Franchise holders will be required to assist in covering another zone, if they are notified, and the City can identify the appropriate party, taking into account their performance under their current franchise contract.

**Recommendations:**

- **Inclusion of detailed contingency plans in each franchise agreement, and requirements that these be updated annually.**
- **Inclusion of backup provisions in franchise agreements for each service zone.**
- **Inclusion of performance bonds.**
- **Inclusion liquidated damage provisions.**
- **Review other best practices employed by other jurisdictions to limit loss of service.**

### 3.5.4 Recognize and Reward Customer Successes

Just as penalties are strong incentives to perform, so are award programs to recognize exceptional service. Sanitation is proposing a program to recognize and reward businesses, financed and executed through the franchise agreements, which will identify and develop a pool of peer mentors to work with other businesses that need assistance in developing robust recycling and waste reduction programs of their own. Peer mentors will be those who have gone beyond the minimum requirements to embrace practices that minimize waste production, control purchasing, and maximize collection of recyclables to create as little residual waste as possible. The City's Green Lodging and Green Business Certification programs provide a model on how local businesses can receive certification that is recognized throughout California. Our franchise haulers will be able to nominate and assist businesses with the waste reduction portion of the certification. In addition, businesses should receive rewards for their efforts. A recognition program, including awards before the Mayor and City Council, networking opportunities, case studies and media outreach, can be part of the final franchise system approved by the City.

Sanitation proposes that the franchise haulers be required to have a minimum number of dedicated staff to assist businesses with waste assessments, recycling programs, and rewards. Permitted private waste haulers may also propose programs to subsidize equipment for businesses to reduce collected waste.

### 3.5.5 Provide Responsive Customer Service Supported by Technology

When customers have service questions or issues, such as inquiries about available services or to seek resolution to a complaint, it is important to address their need promptly and to provide different options for obtaining service, including by phone, through the web and other methods. These services can be provided by the City, by the franchisee, or a combination of the two. Properly administered customer service is a critically important success factor if the City is to meet its service excellence goals and State mandated recycling goals. The City plans to make digital communication a major part of its strategy for interfacing with customers.

Currently, many exclusive franchise agreements reviewed in Los Angeles County have very similar requirements for customer service. They require an office with a live operator and staff during daytime hours Monday through Friday, and some on Saturday, and also require the phone or pager number to a contact available 24 hours a day. Some local agreements require bilingual operators (English and Spanish), and have a specific requirement for taking messages and attempting to contact the customer to resolve their issue. These requirements are backed up by liquidated damages. The City believes that these requirements are a sound foundation for customer service, but need to reach further, requiring that the franchise hauler be reachable by phone, internet, text, and other methods. A robust system will be required that can interface with the City's systems to track customer service metrics and provide resolution assistance to customers in real time.

In its survey of other jurisdictions, CH2M HILL found that there are many methods employed for interfacing with customers, although most of the jurisdictions place most of the direct interface responsibility on the hauler, and agreements tend not to have many, if any, requirements related to web sites, on-line payment or account management, etc. Fresno City is the only jurisdiction surveyed that has specific language requiring the contractor to have a web site that provides information and educational information and electronic payment options for the customer. Some firms provide poor customer service, which led on jurisdiction (Phoenix) to have a City-operated call center for all zones. It also conducts quarterly customer satisfaction surveys and reports this information along with other contractual performance criteria in a quarterly customer service report card for service in all of its collection areas.

## 3.6 New Programs and Services to Customers

In 2011, the State Legislature adopted AB341, which requires all businesses over a certain level of waste disposal to subscribe to recycling services. Specifically, businesses including public entities that generate four cubic yards or more of commercial solid waste per week or multifamily residential establishments of five units or more shall arrange for recycling services. CalRecycle identifies many benefits associated with this law including:

- Opportunities for businesses or multifamily complexes to save money.
- Creating jobs in California by providing materials for recycling manufacturing facilities.



- Reducing greenhouse gas emissions.
- Keeping valuable materials out of landfills.
- Creating a healthy environment for the community and future generations by recovering natural resources.

Accordingly, the City should make sure that all businesses in the City, large and small, have access to convenient, standard waste reduction and recycling services. Through the use of exclusive commercial franchise agreements the City can establish the framework to achieve compliance with mandatory measures that have been adopted by California, and those being contemplated for future action through legislative and regulatory processes.

Sanitation believes the Exclusive Franchise will improve environmental performance well beyond what state law requires, toward the City's Zero Waste goals. Not only will the City set diversion goals to reduce landfilling, it will also encourage competition for franchises, innovation and partnerships that can exceed those goals and build long-term capacity for recycling and diversion.

In its survey of other jurisdictions CH2M HILL found that many have incorporated innovative recycling programs into their exclusive franchise agreements, as well as established a process to incorporate new programs over the term of the agreements. These programs include collection of bulky waste, white goods, electronic waste and organics. Stockton offers organics recycling to all customers – residential, multifamily and commercial – with the cost bundled in the solid waste rate along with recycling. In addition, jurisdictions in Florida that are subjected to natural disasters such as hurricanes have included provisions to engage their franchise service providers in the event of a declared natural emergency.

To support future innovation, Collier County has established a procedure to engage its franchise service providers to conduct pilot studies to evaluate strategies that may increase recycling, waste reduction, Collection efficiency, or reduce the County's costs. The franchise service providers are required to cooperate with the County in conducting such pilot studies, and subsequently are required to enter into good faith negotiations with the County if additional services are necessary from the Contractor to carry out the pilot studies. Similar provisions are found in other franchise agreements reviewed.

### **3.6.1 Offer Blue Bin Recycling City Wide**

Sanitation is recommending, as a standard, a Blue Bin recycling system that provides a consistent customer experience throughout the City, regardless of whether the customer is a business, a single family or multifamily household, or school. Customer information and educational material will have consistent messages and common formats. 1.2 million single and multifamily households currently receive Blue Bin recycling and education services through current Sanitation programs. All LAUSD schools in the City have blue bin recycling programs and education that mirror the Sanitation recycling program. Businesses should be able to recycle the wide variety of material types accepted in the Blue Bin through their recycling programs as well.

Franchised haulers will be required to provide, at a minimum, blue containers of the size needed by the business, and 'valet' type of collection if necessary, similar to that in the Private Hauler Multifamily Residential Recycling Program. The Blue Bin recycling system will be the standard operating in all parts of the City. Other types of diversion programs will be allowed as haulers reach for the higher goals of Zero Waste, but 100% rollout of the Blue Bin recycling program to all businesses is critical to Zero Waste achievement. Businesses will be able to continue successful programs with source separated paper or cardboard or other commodities that are not currently collected for a fee.

In CH2M HILL's surveys, commercial recycling typically is a competitive market, or businesses pay for recycling at a rate ranging from 50-80 percent of the rate for comparable garbage service. We did find the following examples where recycling is included with garbage service:

- In Fresno County, all customers that elect to subscribe to enhanced service receive a consistent recycling service throughout the county (although residential green waste services differ in different zones).
- In Lee County, contractors must offer recycling of up to two cubic yards weekly to all commercial customers at no additional cost. Commercial customers are not required to recycle, and recycling services are not exclusive to the franchisee: if customers want a larger recycling container, they are charged for that service on a

negotiated basis.

- In Stockton, contractors must offer recycling of up to four cubic yards weekly to all commercial customers at no additional cost. Franchisees are entitled to added compensation for customers requesting service of more than four cubic yards of recycling per week. The recycling service is not exclusive.

Many jurisdictions surveyed make contractors responsible for providing education and promotion.

One jurisdiction, Fresno County, established diversion targets for service areas made up of multiple franchise areas, and required that its contractors collectively meet a diversion target. This is the only jurisdiction surveyed that makes contractors responsible for meeting particular diversion targets. One jurisdiction surveyed, Stockton, levies liquidated damages on contractors that do not meet diversion targets. Fresno's contract holds its contractors liable for a proportionate share of any fines the State levies on the City for failing to implement agreed upon programs/services necessary to meet A.B. 939 and A.B. 341 requirements.



#### Recommendations:

- **Blue Bin recycling, at minimum, required at every customer site.**

### 3.6.2 Expanded Organics Programs

Sanitation is recommending that proposers of the Commercial Waste Franchise System include a description and plan for diverting organics, including food waste, from landfill disposal. After recyclables are separated from the rest of commercial waste, a large percentage of waste disposed in landfills is compostable organics.

To reach Zero Waste, the City must move forward with programs and processes to capture and recycle organic material. CalRecycle has adopted a Strategic Direction to reduce organics going to landfill by 50% by 2020, or about 10 million tons of material annually. Public meetings and discussion with CalRecycle staff indicate that the plan to move the State of California to 75% waste diversion will focus on organics diversion as one of the critical measures.

The City has already made great strides in promoting commercial organic recycling. In April 2004, Sanitation began a pilot program to evaluate the collection of food waste and other organic waste from restaurants. Restaurants that volunteered to participate in the pilot were asked to separate their organic waste for recycling into compost. Due to the success of the pilot, the program was expanded Citywide. There are now over 1,200 restaurants participating in the voluntary program. Although this commercial food waste recycling program is one of the largest in the nation, it is still only the beginning of the massive effort to divert at least 50% of the organics generated in the City from landfills. There are over 8,000 food service establishments alone in the City. To further complicate the effort necessary to divert organic waste, there is limited existing organics processing capacity. The organic processing infrastructure needs to be increased to handle organics currently being disposed.

In northern California, separated organics collection is well established in most of the heavily populated areas. In Los Angeles County, more of the exclusive franchise agreements over time have had requirements for the separation and recycling of organic materials. Some examples of mandatory



commercial organic recycling program include:

- West Hollywood - Requires that organic waste collected from restaurants be recycled
- San Francisco - mandates that all residents, plus businesses, restaurants and multifamily complexes compost organic waste.
- Redondo Beach – Requires that locations that generate food scraps recycle them.

Many jurisdictions are beginning their organic recycling programs through voluntary effort. These include:

- San Diego – Allows food waste generated at pre-approved commercial venues be accepted at their landfill/composting facility at a discounted tipping fee. Participants in their program include large venues such as Petco Park and Sea World, universities, hotels, and local restaurants.
- Berkeley – Encourages restaurant to participate in organic recycling. The city supplies carts or bins for organics and offers up to six days/week collection. Participants receive a discount of 20% off the current refuse rate for the food waste portion of their service.
- Dana Point – Offers organic recycling to all businesses.

In CH2M HILL's survey, most jurisdictions' franchise agreements cover the services that will be provided, and any new services or adjustments are covered as amendments to the agreements. But some agreements anticipated future organics service:

- Reno's agreement states that the franchisee may offer a food waste recycling service on a subscription basis. If so, the rate charged for the service will be negotiated with the City.
- Seattle negotiated a price that set forth the compensation should it elect to change residential garbage service from weekly to every other week.
- Collier County, FL used an innovative approach to future organics recycling in its franchise agreements. That approach is presented below:

*"If the County decides to collect and process Commercial Organics, the County shall give the Contractor an opportunity to submit a proposal for providing these services. If the County and Contractor are unable to negotiate a mutually acceptable agreement for the provision of these services, the County may issue a request for proposals or take such other action as it deems appropriate.*

*If the County executes a contract with a Person other than the Contractor for the Collection of Commercial Organics, the County shall give notice to the Contractor at least ninety (90) calendar days before the Person begins to collect Commercial Organics pursuant to its contract with the County. In such case, the County shall reimburse the Contractor for the lost profits the Contractor would have earned under this Agreement from the Collection of Commercial Organics during the remaining portion of the term of this Agreement, prior to any renewals of the Agreement, but only if and only to the extent that: (a) the County's Collection of Commercial Organics directly causes a reduction in the amount of Solid Waste collected annually by the Contractor; and (b) the reduction is greater than five percent (5%).*

*Lost profit is defined as a reduction in the Contractor's net revenue that was directly caused by a reduction in the amount of Commercial Organics collected by the Contractor under this Agreement. Lost profit does not include a reduction in net revenue that was caused by increased capital or operating expenses.*

*The parties shall determine whether there has been a reduction in the amount of Solid Waste collected under this Agreement by comparing (a) the amount of Solid Waste collected during the first twelve months after the County begins to collect Commercial Organics and (b) the amount of Solid Waste collected during the prior twelve months.*

*To calculate lost profits, the parties shall: (a) determine the net revenue the Contractor earned for the Collection of one ton of Commercial Organics during the twelve (12) months before the County began to collect Commercial Organics; (b) determine the extent to which the reduction in the Contractor's Collection of Solid Waste exceeded five percent (5%); (c) convert the value identified in subsection (b) into tons; and (d) multiply the Contractor's net revenue per ton, as determined pursuant to subsection (a), by the appropriate number of tons, as determined pursuant to subsection (c), and by the remaining number of years (or fractions thereof) in the term of the Agreement. This calculation may be expressed by the following formula:*

$$LP = NRPT \times ET \times T$$

*Where: LP is the amount of the Contractor's lost profit; NRPT is the Contractor's net revenue per ton; ET is the excess tonnage (i.e., the amount greater than a 5% reduction in the Contractor's Collections); and T is the time (years) remaining under the Agreement."*

**Resource Ventures, Seattle  
Partially Funded by Seattle Public  
Utilities Provides Businesses with:**

- *Recycling and waste reduction technical assistance*
- *Stormwater management technical assistance*
- *Water conservation technical assistance*
- *Other advice relating to reducing a business's environmental footprint*

Considering the many complexities and unknowns surrounding commercial organic recycling, staff recommends a phased set of goals and requirements be established in the RFP and Exclusive Franchise agreements. The immediate requirement will be to ensure that all current organic recycling is preserved. There are over 1,200 restaurants participating in Sanitation's existing commercial food waste diversion program. This requirement will also include the collection of green waste from multi-family properties where applicable. The "bundled" rates established through the RFP will include the continued collection of organics from all participating restaurants and green bin recycling at all multi-family properties that generate green waste.

The second phase will be to require organics recycling at all restaurants, and finally, mandatory diversion of organic waste. However, there is insufficient process capacity to handle all the potential organic material, therefore the proposer will not be expected to propose a price for the final phase of the diversion program. Existing facilities will need to be expanded or new facilities developed. As the location and cost of recycling at the facilities are unknown a bundled or all inclusive price cannot be developed for the final phase of the program. In lieu of a bundled rate proposal for the second phase, proposers will be asked to submit a separate rate with assumptions that can be bundled at a later date. Proposers will be asked to break this rate into three components; collection, hauling, and transfer/disposal. Proposers will be required give details on the assumptions used such as distance to facilities, \$/mile hauling cost, and tip fees. As part of the evaluation criteria, Sanitation will assess the reasonableness of the pricing provided by proposers for organics collection services, and use the cost and assumptions to establish future rates as new processing capacity becomes available.

**Recommendations:**

- **Preserve existing organic waste collection.**
- **Offer green waste collection to all Multifamily customers.**
- **Phase in organics diversion programs.**

### 3.6.3 Provide Waste Assessments Tailored to Business Needs

Sanitation recommends that the Exclusive Franchise Haulers conduct a minimum number of business waste assessments each year. A Business Waste Assistance program is a necessary tool in reaching Zero Waste. To comply with AB341, those cities with exclusive franchise arrangements are being encouraged by CalRecycle to perform waste assessments at their largest businesses to ensure compliance and gather recycling data.

Sanitation has performed on-site assessments of over 800 businesses over the last six years to help them recycle more material. One challenge in providing this assistance is the number of options and haulers that businesses have to work with to achieve high waste diversion goals. Businesses in the City will need continued assistance in setting up and understanding waste diversion programs, but for them, this job will become very convenient.

With a stable hauler base and minimum standards delivered through the franchise agreements, there will be increased customer service and focus on individual business needs for waste diversion. Franchise agreements will specify the number and type of waste assessments and on-site visits to be delivered to business customers in their franchise zones. The cost of these services will be included in rates and not offered as “extras” that the customer must pay more for.

In addition to waste assessment, it is common to require franchise service providers to provide directly, or to provide a financial contribution towards customer education. CH2M HILL found, for example, that Collier County, FL requires its franchise service providers to provide information to all Commercial Customers regarding the County’s Recycling Program, waste reduction program, Hazardous Waste collection program, and related matters. This information is distributed in March and November of each Agreement Year and the form and content of this information shall be subject to the Director’s approval. In addition, the franchise service providers are required to expend \$50,000 per Agreement Year assisting the County with educational, promotional, and public awareness activities. Most other agreements reviewed by CH2M HILL include similar provisions.

### 3.6.4 Further Expand Zero Waste Programs

To reach its zero waste goals, the City will need to go beyond the diversion standards and program offerings of other cities in California with franchise collection systems. Sanitation recommends that franchise agreements establish maximum disposal amounts for each collection area, and that franchisees be required to implement City diversion programs that are needed to meet zero waste goals.

Many jurisdiction in California set minimum diversion targets for their franchised waste haulers that align with State goals, and include general language in franchise agreements requiring haulers to make “best efforts” or “good faith efforts” to implement programs and services to meet these targets. This approach to achieving diversion targets is unlikely to result in high diversion rates; because the standards for haulers are not specific and the bar is not set very high.

Examples of programs and strategies to be considered in the franchise agreements include:

- Recycling services for all multi-family properties, businesses, and institutions.
- Organics programs, potentially mandatory, for businesses that large amounts of food waste such as restaurants.
- A hands-on assistance program to help businesses implement recycling and waste reduction services that meet their unique needs and save money.
- Rate structures that incentivize multifamily property managers and business to recycle more, including bundled services rates that include the cost of garbage, blue bin recycling, and organics.

CH2M HILL’s survey of other jurisdictions outside of California generally found that recycling services were part of every franchise agreement or contract. In most jurisdictions, multi-family residents and business are charged for recycling services and that rate is set between 50 and 80 percent of the rate for similarly-sized garbage service.. There were a few jurisdictions that offer limited free recycling service as part of garbage collection rate:

- In Fresno County, all customers that elect to subscribe to enhanced service receive a consistent recycling

service throughout the county (although residential green waste services differ in different zones).

- In Lee County, contractors must offer recycling of up to two cubic yards weekly to all commercial customers at no additional cost. Commercial customers are not required to recycle, and recycling services are not exclusive to the franchisee: if customers want a larger recycling container, they are charged for that service on a negotiated basis.
- In Stockton, contractors must offer recycling of up to four cubic yards weekly to all commercial customers at no additional cost. Franchisees are entitled to added compensation for customers requesting service of more than four cubic yards of recycling per week. The recycling service is not exclusive.

For organics, Vancouver (Wa.) has had in place, since 2006, an organics collection program that is fee for service, but the participation is low. Seattle has a fee for service yard/food waste collection program that is available to multifamily properties and commercial customers: the participation is low. In California, Stockton has an organics collection program that is available to all multifamily and commercial customers, the cost of which is bundled with garbage and recycling.

Most jurisdiction surveyed include requirements that haulers do some degree of recycling and waste reduction education (usually by mail), and participate with City in public events promoting recycling and waste reduction, and some agreements require the hauler to assist with pilot programs at no additional cost to the jurisdiction.

#### **Recommendations:**

- **Franchise agreements to have landfill disposal targets, including penalties for not meeting targets.**
- **Franchise agreements to include ability to implement new programs to reach Zero Waste.**
- **Proposers will be encouraged to exceed minimum targets in their proposals by including innovative programs.**

## **3.7 Special Service Requirements**

### **3.7.1 Exempt Hazardous and Certain Other Materials**

Certain types of special waste are regulated under a different sets of legal frameworks than municipal solid waste (MSW). Based largely on this Sanitation recommends the following exemptions be included in the exclusive franchise system:

- Medical waste
- Hazardous waste
- Radioactive waste
- Pharmaceutical waste
- Construction and Demolition Debris (C&D)
- Recyclables that have value to the generator, and are sold or donated
- Green waste removed from a site as incidental to a landscaping business, provided that the landscaping business documents the locations where green waste is recycled.
- Other specialty waste as designated by Sanitation (e.g., biosolids, fats, oils, and grease, etc.)

Hazardous waste and medical waste transportation are regulated by the California Department of Toxic Substances Control (DTSC), the California Health and Safety Code, and the United States Department of Transportation (USDOT). The majority of solid waste haulers do not hold the necessary registrations and licenses to haul hazardous and medical waste as defined by the California Health and Safety Code. In addition, medical and hazardous waste is not tracked as part of the State diversion requirements and does not affect the City's Zero Waste goal. Including hazardous material in the franchise will not help the City reach its zero waste and environmental goals and should be exempted.

From the standpoint of meeting the City's and State's recycling goals, and to maintain the healthy local market for C&D collections services, it makes sense to exclude C&D from the franchise system at this juncture. On December 17, 2010, the City Council approved a mandatory Citywide C&D Recycling program. The ordinance went into effect on January 1, 2011. Under this new ordinance, all mixed C&D waste generated within the City must be taken to City Certified Processors of C&D waste. As such, inclusion of this material in the franchise system is not necessary to meet State and City diversion goals. It should also be noted that the 5-year notice approved by the City Council on December 6, 2011, excluded the collection of C&D waste from a proposed franchise system. Many of the smallest waste hauling companies operating within the City solely collect C&D material. Exclusion of C&D helps protect the smallest of waste hauling businesses operating with the City.

Case law requires that source-separated recyclables that are sold by the owner (business) be exempt from the franchise requirements. On March 31, 1994, the Supreme Court of California noted that local governments may award an exclusive franchise for solid waste handling services; however, items with economic value to their owner do not fit the definition of solid waste. As such, the following must be exempt from the exclusive franchise system:

- All recyclable materials source separated from solid waste by the owner and/or operator of the premises from which the solid waste was generated, whereby the generator of the waste sells or is otherwise compensated by a collector of the recyclable materials in a manner resulting in a net payment to the owner and/or operator.
- Recyclable materials and green waste source separated at the premises by the owner and/or operator of the premises and donated to a youth, civic or charitable organization.

CH2M HILL's survey of other jurisdictions indicates that Sanitation's recommended waste exemptions are consistent with other jurisdiction's practices. No jurisdiction surveyed included any form of hazardous waste in its franchise agreement, all exclude source separated recycling (based on case law), and all exclude C&D. In Seattle's case, C&D service is provided under a separate contract with the City, and is provided by two haulers who compete to provide service city wide. Because C&D is generated irregularly, and not at a uniform rate throughout a jurisdiction, there are no real collection efficiencies to be gained by implementing an exclusive franchise system.

#### **Recommendation**

- **Exempt the following material types**
  - **Medical waste**
  - **Hazardous waste (including E-waste)**
  - **Radioactive waste**
  - **Pharmaceutical waste**
  - **Construction and Demolition Debris (C&D)**
  - **Recyclables that have value to the generator, and are sold or donated**
  - **Green waste removed from a site as incidental to a landscaping business, provided that the landscaping business documents the locations where green waste is recycled.**
  - **Other specialty waste as designated by Sanitation (e.g., biosolids, fats, oils, and grease, etc.)**

### **3.7.2 Hospitals**

Sanitation carefully examined the solid waste hauling needs of the hospital industry. In addition to numerous meetings and ongoing communications, City staff visited three hospitals within the City limits with assistance from the Hospital Associations of Southern California, including White Memorial Hospital in Boyle Heights, Keck-USC Hospital in Lincoln Heights, and Northridge Hospital Medical Center in Northridge. Staff also visited Kaiser Permanente in Anaheim. Kaiser Permanente was chosen because it is serviced by an exclusive solid waste hauler under franchise with the City of Anaheim. The hospitals visited were medium size hospitals with beds ranging

from 250 to 450 and represents varying methods of waste management. The waste generated by hospitals includes medical waste (often referred to as “red bag” waste due to the color of the container this waste need to be contained in), pharmaceutical waste, hazardous and toxic wastes, and regular commercial waste. Other waste includes electronic waste, construction and demolition debris, and food waste.

Although each hospital was unique in how they managed waste within their facilities and the level of waste diversion and recycling, they shared many similarities. Hospitals visited typically used multiple companies to assist in the management of the various waste streams, however the collection of mixed waste was performed by City permitted waste haulers. Bins containing mixed waste were kept separate from other waste streams and were typically collected on a regular schedule.

A number of meetings have been held with the Greater Los Angeles Area Hospital Association and representatives from the associated hospitals. Hospitals voiced a number of concerns about being included in the franchise system. The underlying concern centered on the waste hauler’s responsiveness and timely pick up of waste. Because there are different waste streams generated at hospitals that all need to be serviced, there are often small windows of time that companies are allotted to access the facility. Some hospitals have automated their waste collection. Such is the case with White Memorial, which has an auto-dialer connected to their waste compactor that calls the hauler when the compactor is full. Hospitals were also concerned with health and safety impacts that might arise if waste is not collected in a timely manner and the possibility of increased costs.

The Greater Los Angeles Area Hospital Association provided a list of challenges that should to be addressed in the franchise RFP and contract. The challenges included service needs such as ability to perform urgent unscheduled collection of waste, increased costs, preservation of revenue from the sale of recyclables, reporting and customer service. In addition, the contracts should contain liquidated damages and penalties.

The concerns of the hospitals can and will be addressed through the franchise process. The RFP and final franchise contracts will be structured to specifically address the needs of the hospitals. The franchise agreements will include at minimum requirements such as:

- Prescribed response time
- Collection windows (often hospitals need waste picked up within a predetermined window)
- Response procedures for emergency situations (such as hazardous waste commingled with solid waste)
- Prioritize provision of alternative haulers for hospitals in the event of any interruption in operations of the franchisee, for any reason, including but not limited to business failure, natural disaster, or a labor dispute.
- Customer service procedures
- Reporting requirements
- Technology support (such as auto-dialers)

Sanitation will continue to hold stakeholder meetings throughout the franchise initiative process, including the development of the RFP and contracts, and implementation. Hospitals will have the opportunity to continue to participate in the City’s ongoing stakeholder and outreach process. Other RFP and franchise contracts requirements will be developed through the stakeholder process, as the franchise process continues.

It is also important to note that much of the material generated at hospitals is exempt from the proposed franchise structure, as currently recommended. The collection of electronic waste and C&D debris is not included under the proposed franchise system. Hospitals will continue to secure vendors to collect exempted material, not necessarily the franchisee in their zone.

CH2MHILL’s survey of other jurisdictions indicates that Sanitation’s recommended inclusion of hospitals is consistent with other jurisdiction’s practices. No jurisdiction surveyed excluded hospitals from its franchise agreements, although medical waste is commonly excluded. In addition, Sanitation visited the new Kaiser Permanente Hospital in Anaheim. Staff found that the new hospital, serviced under an exclusive franchise agreement, established a good working relationship with the franchise hauler and all their service needs were being met.



**Recommendations:**

- **Hospital needs to be addressed in the Franchise Service requirements,**
- **Hospitals to be included in the franchise service model.**

**3.7.3 LEED Buildings**

Franchise agreements will include service requirements to support Leadership in Energy and Environmental Design (LEED) certification by City businesses. Many businesses have made significant efforts to protect the environment. This is highlighted when a business goes through the extra effort to become LEED Certified. Although many recognize LEED certification during the building construction process, the ideologies and requirements for resource management and conservation carry over to the operation and maintenance of a building. Resource management components necessary for LEED certification in existing buildings include:

- Establish and implement solid waste management policy.
- Perform a waste audit
- Divert ongoing consumables waste from landfills and incineration. Provide data for most recent 25% of recertification performance period.
- Divert durable goods waste from landfills and incineration. Provide data for most recent 25% of recertification performance period.

Sanitation will work with local business and the franchise waste haulers to ensure that the resource management components of LEEDs can be met. Franchise haulers will be required to conduct a minimum number of business waste assessments each year. Priority for these assessments or audits can be given to business seeking LEED certification. The cost of performing waste assessments will be included in rates and that the business will not need to pay extra for this service. Franchise haulers will be required to provide all businesses with recycling services. Business will be able to subscribe to a level of recycling that meet their needs. In addition, as the organics recycling program is developed businesses will have access to diversion programs that may not currently be available.

**3.7.4 Studios**

Recognizing the highly unique, and geographically fluid, circumstances under which major multinational motion picture studios operate, Sanitation recommends that they be covered by an alternative program in which they will be subject to the same standards and rigor of the exclusive franchise system, while also being afforded the additional operational flexibility demanded by their unique circumstances presented by the interrelationship in studio work and on-location filming.

City staff met with representatives from the studios and their association and conducted site visits to a number of studios located within the City, including Fox Studios on Avenue of the Stars, and Paramount Studios on Melrose Ave. These are two of the largest studios operating in Los Angeles. Both studios have implemented significant recycling programs.

Perhaps the most unique and demanding characteristic of their core operations is the dependence on the City of Los Angeles as their back drop for “on-location” shooting. On-location shooting includes filming for feature films, television shows, commercials, still photography, videos, documentaries, and other miscellaneous filming activities. On-location filming can occur at an endless number of locations throughout the City. Shooting can range from a few hours to several days. On-location filming involving the closure or use of City streets, bridges, or other infrastructure requires City permits, processed by Film LA, and approved each day by a Commissioner of the Board of Public Works. These permits strictly limit the time period during which such restrictions on the right-of-way can be imposed for filming purposes. Waste generated from on- location filming typically results from the demolition of temporary sets. Often sets are erected on site for filming and then immediately torn down. Waste must be removed from the temporary location as soon as the filming ends. This often occurs in the late evening or early morning hours so the site can return to its normal operation. Filming of a single movie may involve the set up and tear down at multiple locations throughout the City, crossing over proposed franchise boundaries,

sometimes on a day-to-day basis, without necessarily knowing, until close to the end of the shooting, how long the set may remain in place at any one location.

Additionally, though each studio visited was unique in how they managed waste within their facilities, they shared many similarities. Studios operate twenty-four hours a day and need the flexibility of having their waste service twenty-four hours per day and in a continuum between in studio and on-location shoots. Their operations produce a wide variety of waste such as hazardous waste, electronic waste, medical waste, construction and demolition debris, food waste and office waste, in a constantly changing quantity and mix. Due to the nature of the filming activity, as noted above, waste streams are irregular and collection needs and frequency vary on a daily basis, making it difficult to plan.

Studios have expressed to Sanitation specific additional challenges and needs that must be met for effective operations. These challenges include the need for specialized vehicles, such as small waste collection vehicles to navigate the narrow streets at studios, fast response time (typically within two hours of a request for pick up), and unique security challenges.

It is not uncommon for the City to work collaboratively with the filming industry. As noted in the CAO response to Council File 12-0002-S27, Impact of Waving Fees for TV Pilots Productions, the City has adopted various incentives to assist the film and television production industry including:

- Reduced business tax rates for entertainment productions
- Adjusted film production tax base
- Implemented tax breaks for entertainment creative talent
- Eliminated fees to film at most City facilities
- Created marketing program for FilmLA
- Prepared guide to Downtown Los Angeles parking lots
- Allowed film parking at DWP facilities
- Reduced or waived parking fees at City parking lots
- Installed film power nodes at City Hall, John Ferro Building and Griffith Park Old Zoo

Given the highly particular operational needs of the industry, the significant risk of production being shifted outside the City, an alternative program will be crafted for the studios, one that will ensure that these studios achieve the same environmental benefits that would have been gained through the franchise system, while also taking into account the unique circumstances of “on-location” and other unique “on-lot” production and operational challenges.

#### **Recommendations:**

- **Require major studios to employ a franchise hauler—one awarded one of the City service zones.**
- **Require that major studios be subject to the same collection system requirements as under the franchise system, including diversion standards, accurate reporting, AB939 Fees, Franchise Fees, and the employment of clean fuel vehicle fleets.**
- **Periodically, each studio will be subject to an independent third-party audit, at their own expense, of their satisfaction of the environmental and other requirements imposed by the general franchise system. The Bureau will report periodically on the results of the audit, and the City will retain the discretion to bring a studio under the general franchise system in the zone in which they are located, where the studio fails to achieve the environmental benefits achieved in the zone in which they are located.**
- **City staff will further define which studios will be covered by this alternative program, during the RFP development process, in consultation with the industry and through the ongoing stakeholder process.**

### **3.7.5 Special Multi-jurisdictional Boundary Areas**

In recognition of the fact that there exists areas along the City boundaries where a single business enterprise or multi-family complex may geographically straddle two or more political jurisdiction where the applicability of the

franchise system would prove impractical and it would serve all interested parties, a different service arrangement should be developed. One such example would be Universal City where the majority of the complex is within the County and a portion is within the City.

**Recommendation:**

- **Authorize the Director of Sanitation to negotiate MOU's with the appropriate jurisdictions**

### **3.7.6 Special Services**

It is the intent of the Bureau of Sanitation to address unique special services, such as those at Park La Brea, by encouraging proposers to partner with waste haulers, as subcontractors, that are geared to meet the special needs. Subcontractor(s) will be required to abide by the City's living wage requirements, as well as any health and safety standards the City establishes through the contractual process.

## **3.8 Other Programs and Actions Needed to Achieve City Goals**

### **3.8.1 Ongoing Community Input**

Sanitation is committed to the successful implementation of the Exclusive Franchise system for customers in Los Angeles through an ongoing stakeholder input process. As shown in Figure 3-3 below, the Stakeholder Input and Outreach Process, which began in Franchise Policy Development phase, will continue throughout the entire Solid Waste Franchise Process. During the Policy Development phase Sanitation reached out to over 2,000 entities, held seven stakeholder meetings, met with representatives from the hospital association and studios, and toured their facilities. During the Implementation plan phase staff has met with various business groups and waste hauler associations, held an open house geared at gaining input on franchise area boundaries, and posted all versions of the Preliminary Implementation Plan on Sanitation's website.


Sanitation believes that stakeholder input and outreach is a continuous process. Sanitation will continue to reach out to stakeholder groups through their representatives including but not limited to: the City, neighborhood councils, commercial waste haulers, multifamily households, chambers of commerce, business improvement districts, hospitals, environmental groups, non-profit organizations, faith based organizations, and labor groups.

As an additional mechanism for stakeholder input, and to receive advice on matters concerning the development of the Exclusive Franchise, Sanitation will establish a Working Group that will meet on a regular schedule with varying target groups invited to address customer service and special collection needs. Sanitation has already begun to identify such needs through meetings with stakeholders, and through this process, it hopes to further enumerate and clarify special customer service and collection needs so that they are properly accounted for in the RFP. Sanitation will consult with the Working Group to ensure a smooth transition from the current open permit system to the Exclusive Franchise system, and quickly address problems that may arise.



## Solid Waste Franchise Initiative Process

Franchise Policy Development	Implementation Plan	CEQA	RFP Development	Implementation and Transition
<ul style="list-style-type: none"> <li>• Eight stakeholder meetings</li> <li>• Mailed over 1,700 stakeholder notices</li> <li>• E-mailed over 2,000 notices</li> <li>• Posted on Sanitation's web site</li> <li>• Stakeholder groups:               <ul style="list-style-type: none"> <li>• Waste Haulers</li> <li>• Recyclers</li> <li>• Waste Industry Workers</li> <li>• Environmental Organizations</li> <li>• Chambers of Commerce</li> <li>• Business Associations</li> <li>• Business Improvement Districts (BIDs)</li> <li>• Neighborhood Councils</li> <li>• Renters</li> <li>• Apartment Owners and Associations</li> <li>• Community Members</li> <li>• Labor Organizations</li> </ul> </li> <li>• Site Visits</li> </ul>	<ul style="list-style-type: none"> <li>• Meetings with business groups</li> <li>• Business groups:               <ul style="list-style-type: none"> <li>• Waste Haulers</li> <li>• Environmental Organizations</li> <li>• Chambers of Commerce</li> <li>• Business Associations</li> <li>• Business Improvement Districts (BIDs)</li> <li>• Apartment Owners and Associations</li> <li>• Community Members</li> </ul> </li> <li>• Site visits</li> <li>• Posting on Sanitation's web site</li> <li>• Open House on Zone boundaries</li> </ul>	<ul style="list-style-type: none"> <li>• Scoping Meetings</li> <li>• Post NOP Sanitation's web site</li> <li>• Review Draft EIR</li> </ul>	<ul style="list-style-type: none"> <li>• Working Group Meetings</li> <li>• Stakeholder outreach</li> <li>• Posting on Sanitation's web site</li> <li>• Site visits to various customers by business type</li> </ul>	<ul style="list-style-type: none"> <li>• Working Group Meetings</li> <li>• Public Education and Outreach</li> <li>• Notice to customers</li> <li>• Training</li> <li>• Implementation of customer service tracking system</li> <li>• Customer Care System</li> </ul>



## Stakeholder Input and Outreach Process

Figure 3-3  
Stakeholder Input and Outreach Process

### 3.8.2 Institute Comprehensive Reporting Requirements

To be able to monitor hauler compliance with the terms of the City's franchise agreement, the agreements will need to include comprehensive reporting requirements. Sanitation recommends that these reporting requirements address, at a minimum, the following general areas:

- Data on accounts served, by service level and address, and services provided to each. Depending on how frequently the City chooses to audit each hauler's billings and collections, this information could be reported monthly, quarterly, or annually;
- Data on tonnages disposed, recycled, and sent to an organics processor should be reported at least quarterly;
- Data needed for monitoring hauler performance (e.g. missed collections, repeat misses, containers not delivered on time, etc.) would need to be reported monthly;
- Data on customer call response times, wait times for incoming calls, dropped call figures, fax and email volumes and response times, and types of calls received (complaints, etc);
- Data on how many customer contacts the hauler made to assist customers with recycling program design, configuration and set up;
- Data regarding facilities receiving material collected under the Franchise.

CH2M HILL's survey of other jurisdictions indicates that those on the West Coast all require tonnage data to be reported by service type (and facilities where material was disposed, transferred or processed), most require regular reporting of number of accounts and certain other service information, all that have specific liquidated damages require regular reporting of data related to performance metrics, but few monitor hauler outreach to customers.

Sanitation also recommends that, at a minimum, periodic audits (quarterly or twice per year) of each service provider's billings to ensure that billings conform to agreement terms and that payment to the City have been computed correctly. Audits would review, as examples, the number of base service units and extra service units billed versus the services that a sample of customers actually received; determine if the service provider has been "nickel and diming" customers for extra services; and whether or not the service provider has been complying with franchise terms to fully implement diversion programs and services. These audits could be conducted by a contract auditor at the service provider's expense, or by qualified City staff.

CH2M HILL found that only two of the jurisdictions surveyed, Portland and Seattle, conduct extensive audits. Portland does so to support its rate setting process, while Seattle conducts monthly audits to ensure that its contractors are complying with the billing and collection terms of their contracts, and to ensure that the City and the contractor are receiving their proper share of rate revenues. Seattle also uses data received on accounts and services provided as inputs into its rate setting process.

### 3.8.3 Require Clean Fuel Vehicles

Sanitation recommends that, under the exclusive Franchise agreement, solid waste haulers will be required to have 100% use of low-emission, clean fuel vehicles equipped with engines that are 8 (eight) model years or newer in the City during the term of the agreement. Waste collection trucks have a direct adverse affect on air quality. Due to the necessity of waste collection in every corner of the City, the impacts are felt by all residents and businesses.

The SCAQMD adopted Fleet Rule 1193 for public and private solid waste collection fleets. This rule requires fleet operators to acquire alternative-fuel refuse collection heavy-duty vehicles when procuring these vehicles for use within the AQMD's jurisdiction. The rule applies to government agencies that operate solid waste collection fleets with 15 or more solid waste collection vehicles, and private entities that operate solid waste collection fleets with 15 or more solid waste collection

#### **Seattle's Collection Contract Specification for Clean Vehicles:**

*"All collection trucks shall use at least 20% biodiesel (B20) or operate on CNG unless otherwise authorized by the City. If the per-gallon price of B20 is more than 15% above the cost for straight diesel fuel, the Contractor shall notify the City and may reduce the percentage of biodiesel used in the fuel blend to maintain costs at the 15% cost threshold. Alternatively, the City may elect to reimburse the Contractor for the portion of fuel cost above the 15% cost threshold to maintain the use of B20."*

vehicles. SCAQMD monitors and enforces the fleet rule requirements.

Waste haulers will be required to operate 100% clean fuel vehicles within twelve (12) months of award of the franchise. Solid waste collection fleet owners and operators are required to comply with all applicable federal, state, and local regulations, including, but not limited to, the South Coast Air Quality Management District's Fleet Rule 1193 (Clean On-road Residential and Commercial Refuse Collection Vehicles) and the California Air Resources Board's Solid Waste Collection Vehicles Regulation (Diesel Particulate Matter Control Measure for On-road Heavy-duty Diesel-fueled Residential and Commercial Solid Waste Collection Vehicles; Title 13, California Code of Regulations, Sections 2020, 2021.1, 2021.1 and 2021.2).

The proposed clean fuel vehicles requirement may inhibit small waste haulers, those operating a fleet with less than 15 vehicles, from submitting a proposal. Small waste hauling companies may not have the capital to transition their fleet within the 12 month period. To ensure small haulers are not adversely impacted due to lack of capital resources, the phase in period for small haulers to operate alternative fuel vehicles can be extended. These haulers may phase in vehicles when they add or replace alternative fuel vehicles in their fleet or 100% of their fleet by 2020, in accordance with Fleet Rule 1193. To further assist smaller waste hauling companies, Sanitation will work with haulers to identify State grants designed to assist in the purchase of alternative fuel vehicles. Sanitation has received a total of \$20 million in grants to assist in converting its fleet to clean fuel, and these grants are also available to private waste haulers.

Sanitation plans to move beyond the requirements of the SCAQMD. The Exclusive Franchise haulers will be required to submit a Compliance Report to the City. The Compliance Report must include name of company, address of business, names of owner or contact (if different from owner name), electronic email addresses and phone numbers, and listing of clean vehicle fleet inventory, including vehicle identification number, vehicle manufacturer, vehicle model and model year, engine manufacturer, engine family number, engine serial number, fuel type, and address of fueling location. During the term of the agreement, the owners are required to submit to Sanitation within 7 (seven) calendar days an updated Compliance Report if any changes occur to the clean vehicle fleet inventory.

CH2M HILL was able to obtain RFPs from a few of the cities it surveyed and franchise agreements or contracts from nearly all. Four cities indicated that clean vehicles have been or will be required in RFP processes (Reno, Fresno, Phoenix and Seattle). Nearly all of agreements reviewed include language requiring the franchisee to comply with all regulations related to vehicles (some are fairly specific, like Fresno's), but only one agreement, Seattle's, was specific about what fuel/emission standards vehicles need to meet.

#### **Recommendations:**

- **Encourage proposers to exceed Rule 1193 minimum standards in their proposals.**

### **3.8.4 Ensure Safe and Healthy Working Conditions**

The exclusive franchise will be developed to address labor concerns and worker safety. The City will have extended oversight and enforcement capabilities of facilities used to handle City waste under the exclusive franchise agreements. These facilities become subcontractors under the franchise agreements and subject to City policies. Proposers will be



required to list all facilities that would be utilized under the franchise, as well as the facility processing methods to be utilized.

#### 3.8.4.1 City certification of Facilities through Franchise Agreements

The franchise agreements will contain specific language granting the City authority to inspect the waste haulers' facilities as well as certify and inspect all waste and recycling facilities utilized. These inspections will provide the opportunity to monitor and enforce terms in the franchise agreements regarding compliance with applicable laws including:

- Spread of illness or injury through contamination of air, water, and disease carrying vectors.
- Identification and proper handling of hazardous materials.
- Control of nuisances such as dust, odor, litter, noise, and visual or aesthetic degradation.
- Control of disease causing agents.
- Personnel safety and health.
- Facility emergency contingency planning, preparedness and response.
- City policy measures such as the living wage ordinance.

##### Seattle

**Requires contractor to pay prevailing wage; hourly rates are included in contracts**

##### **Contractors must provide:**

- *Medical, Dental, and Vision services*
- *Retirement benefits*
- *Eight (8) days of paid time off for specified holidays*
- *Paid vacation*
- *Paid sick leave*

**Contracts are very specific about the benefits that must be provided**

A franchise Certification and Inspection team will be established within Sanitation. Facility inspection will be conducted by trained professional staff whose training meets the requirements for technical expertise in the manner of training for the Local Enforcement Agency (LEA) in the City of Los Angeles. Inspectors should be a California certified Registered Environmental Health Specialist (REHS). Franchised waste haulers, as well as all facilities they utilize under subcontract, will be required to maintain documentation on the handling of all material collected or received and maintain inspection records from other compliance agencies, such as the Cal-OSHA. City staff will have the right to audit the records at all facilities. Repeated violations of workplace safety requirements, or failure to maintain accurate documentation, as two examples, would be enforced through liquidated damages identified in the franchise agreements, and could result in the termination of the franchise agreements. A complaint hotline will be established, and the Certification and Inspection staff will also respond to complaints, therefore time will be budgeted for the meetings, reports, and other actions needed for response. Similar to the protection provided under Labor Code section 6311, the franchisee nor its sub-contractors shall discharge or in any manner discriminate against any employee because the employee has made any oral or written complaint to the City, or other governmental agencies having statutory responsibility, with reference to employee safety or health, his or her employer, or his or her representative.

The City's LEA is the State certified Agency to permit, inspect, and regulate solid waste facilities. However, the LEA manages only those facilities that have a Solid Waste Facilities Permit issued by CalRecycle. Many of the facilities that will be utilized by the franchise haulers are not under the State compliance program, and are located outside of the City, and the City LEA's, jurisdiction. In addition, the LEA does not have the authority to inspect for City contract compliance measures such as living wage, or conducting inspections and analysis to determine a diversion rate for each facility. Having inspection staff in Sanitation will allow direct access to facilities, employees, and records to determine Certification for regulations and compliance with franchise agreements.



In other jurisdictions, franchise agreements in general do not address workplace safety requirements. Some require their franchise haulers to submit compliance and inspection reports from State regulatory agencies. San Jose, in its agreement, requires an Employee Work Environment Evaluation (Third Tier Review). This evaluation looks into a proposer's history as an employer and work condition commitments. Each proposer is required to complete an Employee Work Environment Questionnaire and return it with the proposal. If the Questionnaire is not returned, the proposal will be deemed nonresponsive. San Jose required proposers to address: employee health benefits; compensated days off; employee complaint procedures; compliance with state and federal workplace standards; and Employee Retention requirements, if applicable. It does not; however, appear to include inspections or other ongoing facility/site workplace safety evaluations.

CH2M HILL's survey of other jurisdictions found that most have specific franchise agreement or contract language regarding compliance with applicable safety regulations and laws, but, consistent with Sanitation's own research, no specific language relating to safety and health standards at facilities (subcontracted or otherwise).

#### **Recommendations:**

- **City certification and inspection of facilities.**
- **Right to inspect facilities for compliance with appropriate rules and regulation.**

### **3.8.5 Ensure Living Wages for Collection and Facility Workers**

#### **3.8.5.1 Require Adherence to the City's Living Wage Ordinance**

As the City moves to an exclusive franchise system it is incumbent on the City to ensure that workers represented by the waste haulers given the exclusive rights to operate are paid fair wages and are provided safe working conditions. The City holds an interest in the work performed by its franchised waste haulers and their subcontractors. The success of meeting the City's waste diversion and environmental goals hinge on the success of the franchised waste haulers. Inadequate compensation of these employees adversely impacts the performance by the City's franchised waste haulers and thereby does the same for the success of meeting the City's goals.

Inadequate compensation to solid waste workers tends to inhibit the quantity and quality of services rendered by such employees to the businesses they are intended to serve.

Underpaying employees in this way fosters high turnover, absenteeism, and lackluster performance. Conversely, adequate compensation promotes amelioration of these undesirable conditions. Through Living Wage requirements the City will require its franchised contractors provide a minimum level of compensation that will improve the level of services rendered to and for the City.

The inadequate compensation typically paid today also fails to provide service employees with sufficient resources to afford life in Los Angeles. It is unacceptable that contracting decisions involving the City should foster conditions placing a burden on limited social services. The City, as a principal provider of social support services, has an interest in promoting an employment environment that protects such limited resources. In requiring the payment of a higher minimum level of compensation, this interest is served.

Requiring payment of the living wage serves both proprietary and humanitarian concerns of the City. Nothing less than the living wage, in accordance with City policies, should be paid by the franchised haulers. The City does not

#### **Seattle**

**Requires contractor to pay prevailing wage; hourly rates are included in contracts**

#### **Contractors must provide:**

- *Medical, Dental, and Vision services*
- *Retirement benefits*
- *Eight (8) days of paid time off for specified holidays*
- *Paid vacation*
- *Paid sick leave*

**Contracts are very specific about the benefits that must be provided**



wish to foster an economic climate where a lesser wage is all that is offered to workers. The City's Living Wage Ordinance (LWO) contains enforcement mechanisms to ensure compliance with this important obligation. Non-complying employers face the prospect of paying civil penalties. Employees should not fear retaliation, such as by losing their jobs, simply because they claim their right to the living wage, irrespective of the accuracy of the claim.

In addition to living wage, employees will also receive compensated time and health benefits, as required by the LWO. Employers shall provide at least twelve (12) compensated days off per year for sick leave, vacation, or personal necessity at the employee's request. Employers shall also permit employees to take at least an additional ten (10) days a year of uncompensated time to be used for sick leave for the illness of the employee or a member of his or her immediate family where the employee has exhausted his or her compensated days off for that year. Health benefits would consist of a minimum hourly payment, as required by the LWO, towards the provision of health care benefits for employees and their dependents.

CH2M HILL's survey of other jurisdiction found only one, Seattle that had clear requirements for payment of living wages to all workers employed under the terms of the franchise agreement. Seattle's contract requires payment of prevailing wages and includes tables that display local prevailing wages. Seattle's contracts (Attachment 3 to its collection contracts) also require payment of benefits, including health, dental, vision, retirement, paid sick leave, and 8 specific days of paid time off. Lee County Florida has detailed language in its franchise agreements that spell out requirements to pay benefits, including health and paid vacation.

#### **Recommendations:**

- **Require compliance with Living Wage Ordinance (LWO) provisions.**

### **3.8.5.2 Require Franchise Haulers to Hire Displaced Collection and Facility Workers and Support the Development of a Skilled Local Workforce**

The City can ensure its franchised waste hauler provides a high level of customer service by providing the framework for establishing an experienced local solid waste work force. Including the Service Contract Workers Retention Ordinance (SCWRO) provisions in the franchise agreements ensures that incumbent workers with invaluable knowledge and experience with the solid waste collection and processing will continue to provide a high level service. In addition, including the requirements of the First Source Hiring Ordinance (FSHO) will help to further expand the field of competent service workers to address the problems associated with a significant local unemployed, under-employed and unskilled workforce. These provisions would be applicable to all franchised waste haulers and extend to their subcontractors.

Retaining existing service workers when a change in contractor occurs reduces the likelihood of labor disputes and disruptions. The reduction of the likelihood of labor disputes and disruptions results in the assured continuity of services to its residents and businesses who receive services provided by the City franchised waste haulers.

The SCWRO, effective May, 1996, requires a successor contractor and its subcontractors to retain for a 90-day period certain employees who worked for the terminated contractor or its subcontractors for at least 12 months. Under the SCWRO a successor contractor must: Offer employment and retain for a 90-day period the employees who worked for at least 12 months for the terminated contractor or its subcontractors; not discharge the employees retained under the SCWRO without cause during the 90-day period; perform a written performance evaluation of each employee retained under the SCWRO at the end of the 90-day period.

The FSHO helps link contractors with potential service workers. In doing so, the City is able to provide greater opportunities for employment on service contracts. Having the opportunity to work on a City contract affords workers valuable experience that can be used to garner future employment.

Under the terms of the FSHO the Contractor notifies the City Community Development Department's Workforce Development System (CDD) of any new job opportunities available as a result of the contract. Upon receipt of a contractors' job notification, CDD forward the information to selected and approved Referral Resources. In turn the Referral Resources submit a list of job candidates to CDD and then CDD to the requesting contractor.

CH2M HILL's survey of other jurisdictions found two- Fresno and Seattle- that address the issue of "hiring preference" in their franchise agreements or contracts. Fresno required its franchisees to hire City workers that were displaced by the City moving from municipal collection to franchise collection. Seattle required winning proposers in its last RFP process to give a hiring preference to workers from incumbent firms that were not successful in the RFP process. No jurisdiction surveyed included language in an RFP or in franchise agreement that addressed the local work force development issue.

#### **Recommendations:**

- **Require compliance with Service Contract Workers Retention Ordinance (SCWRO) and First Source Hiring Ordinance (FSHO).**

### **3.8.6 Siting, Zoning, Facility Needs**

There are a number of solid waste facilities in and outside the City that currently handle solid waste and recyclables collected by permitted private waste haulers. Permitted haulers have identified over 200 facilities that they deliver materials which are collected from commercial customers. Proposers will be able to identify the facilities that will be used for the management of recyclables and solid waste, and their permitting status, capacity, and location will be used in the evaluation process. The Solid Waste Integrated Resources Plan (SWIRP) process is identifying the additional facilities needed to move to a Zero Waste goal by 2025. SWIRP does not identify specific locations or identify which permitted haulers will be utilizing any potential facilities. Any new solid waste facility, or expansion of existing facility, must move through its own process for permitting and approval. Although Sanitation will consider facility utilization of proposers in the RFP evaluation process, the award of an exclusive franchise zone does not suggest any preapproval for new or expanded facilities within Los Angeles for the successful proposers.

### **3.8.7 Transition Plan**

Sanitation recommends a two year transition and implementation period for the franchise. A transition period is necessary to implement all components of the franchise agreements and to ensure customer needs are met throughout the process. The transition period will begin on the award of the franchise and service will begin within the transition period. Some transition plan elements, such as developing a customer account and billing database, will need to be developed before service can begin, while other elements such as the full roll out of recycling can be completed after the start of service. The start and end dates of the various transition plan elements will be developed as part of the transition plan included in the franchise agreements.

To meet the goals of the City, there will be many new requirements placed on the franchised waste haulers that will require the procurement of new equipment. For example, the franchise agreements will include requirements such items as clean fuel vehicles, and mandatory recycling. To meet these needs, haulers will need to procure new vehicles and new waste and recycling bins. Hundreds of refuse trucks will need to be replaced with clean fuel low emission trucks. Given the number of trucks that will be purchased, the lead time for procurement will be in excess of 12 months. Franchise waste haulers will need to replace waste bins removed by the current permitted waste haulers and will need to purchase and distribute recycling containers. The purchase of new waste or recycling bins will also have a long lead time. These large lead time items must be taken into consideration in the transition plan.

The franchise hauler will need to transition thousands of accounts from permitted waste haulers. A significant effort will be needed to orchestrate the replacement of bin and transition of service to minimize any disruptions in service. The franchise hauler will need to coordinate with the City and the permitted hauler currently serving those accounts. The franchise hauler will begin with developing a database the will capture all the information required through the franchise such as business type and recycling levels. Prior to beginning service, all account and service information will need to be established. This include billing addresses, service address, service levels, and service instructions such as where the bins are located and any special needs, such as the need for scout

vehicles. Once account information and service requirements are established the hauler will begin establishing efficient routes. When all of the account and routing work is completed the franchised hauler will begin the task of physically transitioning each business by having existing bins removed and supplying new bins as necessary.

The franchise waste haulers will also be responsible for public education, outreach and training to businesses on the transition and implementation of new recycling programs. The hauler will need develop to outreach procedures and train staff responsible for working with businesses.

In addition to the franchise wastes hauler's responsibilities, Sanitation will have many elements to address. Sanitation will need to inspect and certify all facilities utilized by the franchise hauler under their agreement. Sanitation will also need to develop and secure the resources necessary to monitor and enforce all franchise requirements.

The exclusive franchise RFP will include a comprehensive list of transition plan elements as well expected completion milestones. Proposers will be required to address how the various elements will be met in their proposal. Sanitation will develop a detailed Transition Plan and schedule that will be a component of the franchise agreements. Franchise haulers will held accountable for meeting the deadlines established in the plan.

Major Transition Plan elements will include:

- Truck Procurement
- Equipment/Bin Procurement
- Customer Database Development and Management
  - Customer database development
  - Billing procedures
  - Account Transfers (permitted hauler to franchise hauler)
- Routing / Mapping
  - Type of services needed by each customer
  - Customer mapping
  - Level of service
  - Routing
    - Route Balancing
    - Route Optimization
- Incremental Personnel Hiring and Training
- Driver Hiring and Training
- Customer Service Procedures and Tracking
- Communication Plan
  - Notice to customers
- Public Education and Outreach
- Facility Certification
  - Inspect Facility for compliance
  - Develop a diversion rate (if a processing facility)

Although the majority of the service will transition in the first twelve months, Sanitation anticipates increased customer service and technical assistance requests for an additional twelve months, see figure 3-4.

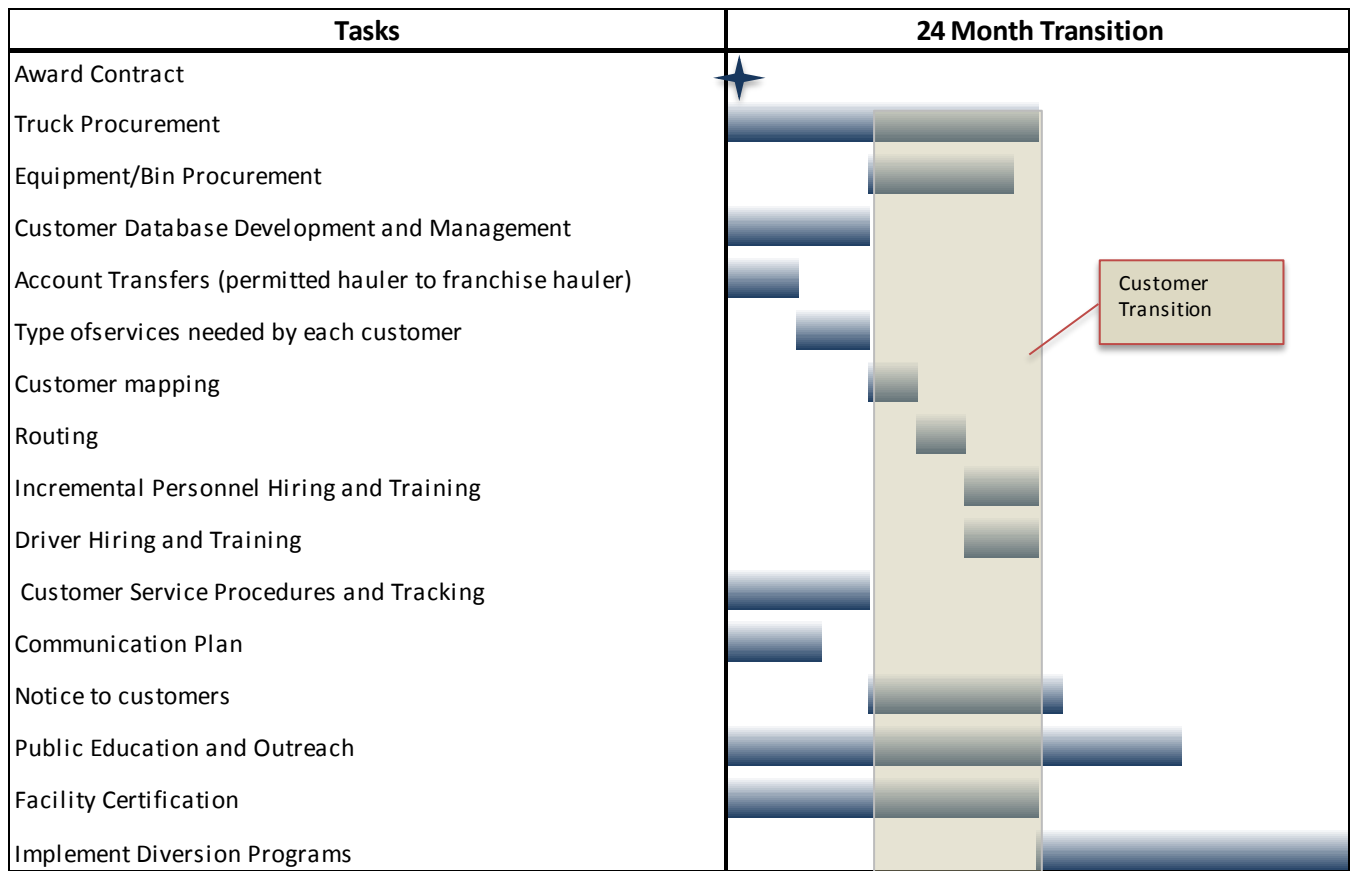


FIGURE 3-4  
Sample Transition Plan

### 3.9 Franchise Term

The term of the franchise agreement shall be ten years with two five (5) year renewal options. The successful franchisee will be required to invest substantial capital necessary to operate within a franchise area. The franchised waste hauler will need to invest in clean fuel vehicles, new waste and recycling containers, perform outreach, and hire additional employees for reporting and customer service. Franchised haulers may also need to perform facility/collection yard upgrades and invest in processing infrastructure. Waste hauling companies typically amortize their equipment over a seven year period, however facility infrastructure is typically amortized over a longer period. A ten year contract will allow franchised waste haulers to fully amortize their investment while accounting for the transition period. A less than ten year term may increase rates since waste haulers will need to amortize equipment over a shorter period.

# Implementation Process and Timeline

## 4.1 Franchise Process and Timeline

The process for the Exclusive Commercial Franchise begins with the policy decision by the Mayor and City Council to move forward in the process. In November 2012, the City Council directed Sanitation to begin the CEQA process, to return with an implementation plan for the Exclusive Franchise system, and requested the City Attorney to draft required ordinances for the project. Upon consideration of the Implementation Plan, as detailed in Section 3.8.7, Sanitation is requesting to move forward with the Request for Proposals (RFP) to meet the December 2016 timeline. Development of an RFP, negotiation and preparation of the contracts, and award of the contracts by the Mayor and City Council is anticipated to take approximately three (3) years. Upon award of contract a period of education and transition of existing hauler accounts to the Exclusive Franchise hauler for each collection zone begins. This transition period is expected to take up to two years.

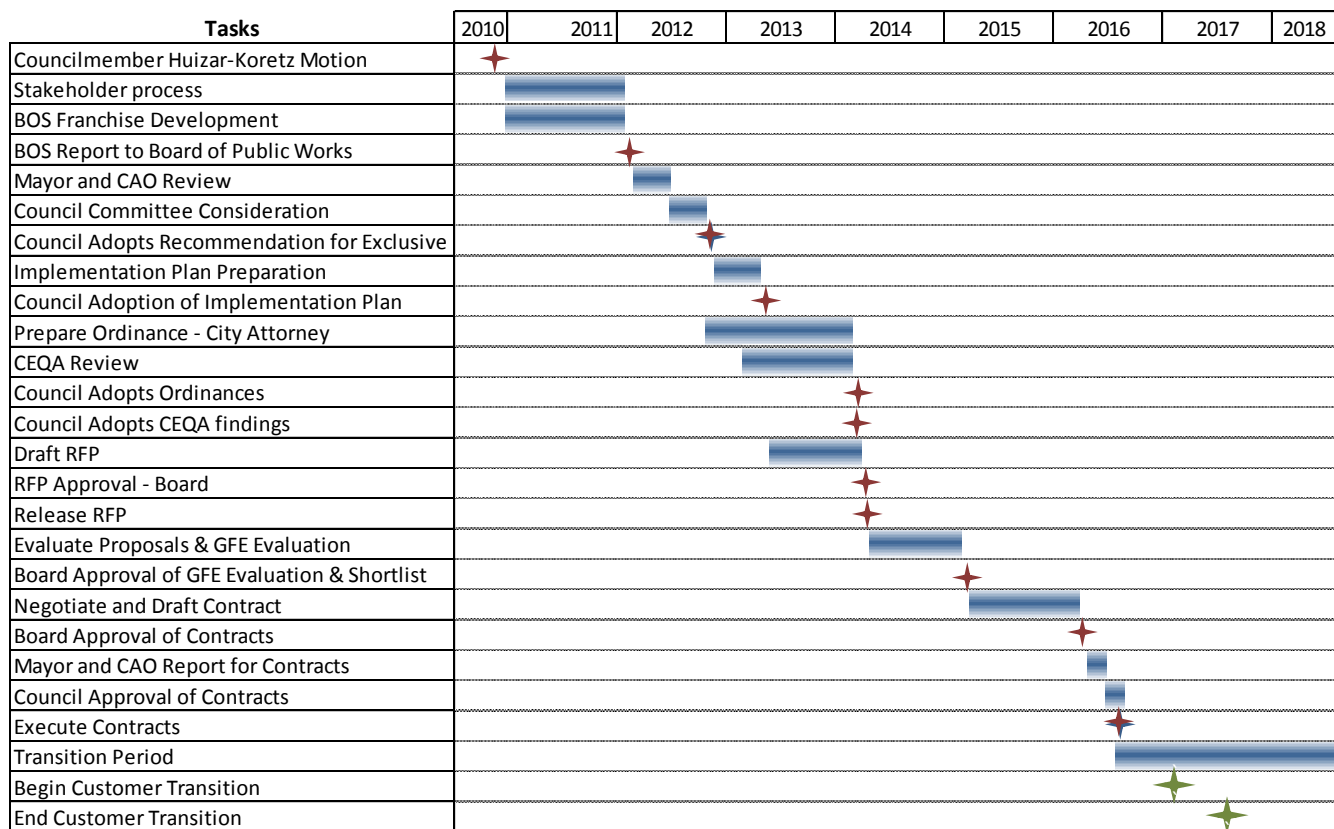


FIGURE 4-1  
Waste Hauler Franchise Initiative Timeline

### 4.1.1 CEQA Process

With the decision on the franchise process, the City Council directed Sanitation to prepare an Environmental Impact Report (EIR) to satisfy CEQA requirements examining the proposed Exclusive Commercial Franchise system, and to include in that EIR reviews of the following alternatives, 1) the status quo (No Project Alternative), 2) a non-exclusive system, 3) an exclusive system with multiple haulers per watershed, 4) City collection of all materials.

Sanitation has selected a firm to prepare the EIR. Proposals for the development of the EIR include a very detailed analysis of the potential changes in the vehicles miles traveled by the trucks collecting materials in the City as a result of changes in the solid waste management system. This requires a significant amount of time and funding to perform. The proposed steps (not all inclusive) for the EIR are as follows:

- Prepare Notice of Preparation, circulate for review, and issue for 30 days (completed in February 2013);
- Hold seven Citywide meetings to take comments from interested parties on the potential environmental impacts of the proposed system (completed in March 2013);
- Prepare a Draft EIR, circulate for review, post Notice of Completion, and circulate for public review for at least 45 days;
- Hold seven Citywide meetings to take comments from interested parties on the Draft EIR;
- Prepare a Response to Comments and circulate for review;
- Prepare a Final EIR, including Response to Comments, Findings and Statement of Overriding Considerations (if needed) and circulate for review;
- Schedule for Council consideration;
- If certified by the Mayor and City Council, file Notice of Determination.

It is anticipated that the Final EIR for the Exclusive Commercial Franchise system will be considered by the City Council along with ordinances to define the new system.

#### **4.1.2 Ordinance Development**

The City Attorney's Office was requested in the Council Action on November 14<sup>th</sup> to prepare a draft ordinance for an exclusive waste hauler franchise system for commercial and multifamily waste hauling within the City, in cooperation with, and with assistance, as necessary, from Sanitation, the City Administrative Officer (CAO), and Chief Legislative Analyst (CLA). Modifications to the existing City code regarding franchises and waste hauling in the City will clearly define the authority of the City and its Departments to implement this program. Further clarification of the Franchise program in this Implementation Plan will assist the City Attorney's Office in beginning ordinance development. It is anticipated that the ordinance(s) for the Exclusive Commercial Franchise system will be brought to the City Council for consideration with the Final EIR.

#### **4.1.3 RFP Development**

Development of a Request for Proposals (RFP) will begin upon direction by the Mayor and City Council to Sanitation to begin the process. Sanitation has selected a contractor to assist in the development of the RFP due to staffing shortages, and is seeking information on successful franchise procurements from around the United States. Approval by the Mayor and City Council on the Goals of the program, as well as the major elements, will guide Sanitation in the RFP process.

The RFP is expected to be issued in coordination with the consideration of the Exclusive Commercial Franchise EIR and accompanying ordinances, with any mitigation measures identified during the EIR process incorporated into the requirements of the RFP.

#### **4.1.4 Contract Execution**

After the Request for Proposals (RFP) is issued, Sanitation will assemble an evaluation team that will include experts on the waste industry from inside and outside of Los Angeles as well as City and consultant team members. Evaluation of the proposals will include ranking for items such as experience, work history and ability to perform the required programs, compliance with local, State and Federal laws, financial stability, and cost proposal. Recommended contract awards will include performance and customer service requirements, reporting requirements, contingency measures, and rate schedule for multifamily and commercial waste management services.

Recommendations for contract negotiation will be brought before the Board of Public Works, and recommendations for contract award and execution will move through the Board of Public Works, to the Mayor's Office and CAO, and to the City Council for consideration. Then the contracts are returned to the Board of Public Works for execution. Contract execution is anticipated to take place by July 2016.

#### **4.1.5 Transition Period**

As detailed in Section 3.8.7, the transition period for the Exclusive franchise is expected to take place over a two year period beginning at the contract execution. After the execution of the franchise contracts, the waste hauler awarded the franchise will begin, under Sanitation's assistance and direction, to educate customer in their respective areas about the transition to the exclusive franchise. As waste haulers begin to move their bins and equipment from the customer sites, it is critical to maintain waste disposal services, and Sanitation will work with the Franchise Hauler to place bins, compactors, and other equipment and begin service. Franchise Haulers will be encouraged to work with each other to minimize disruption of service.

## Appendix C

### Franchise Initiative Facility Analysis

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# Franchise Initiative Facility Analysis

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**November 4, 2013**

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## Background

The City of Los Angeles (City) initiated a long-term planning project in 2006 to identify the policies, programs and facilities that will be needed for managing discarded materials generated in the City through 2030. The policies, programs and facilities needs were evaluated for all generator sectors, including single-family residences, multi-family complexes, commercial, industrial and institutional establishments, and construction and demolition sites. The Solid Waste Integrated Resources Plan (SWIRP) documents the process for identifying these initiatives and projects the future program and infrastructure needs.

The planning process undertaken to develop SWIRP included the participation of stakeholders throughout Los Angeles. SWIRP reflects the long-term vision of the Mayor and City Council, and the goals and guiding principles of the City's residents and businesses. SWIRP identified new policies and programs to be implemented through 2030. SWIRP also projected the number of new facilities that would be needed through 2030 to manage the tons of materials estimated to be diverted through implementation of new policies and programs. These facilities include clean materials recovery facilities (Clean MRFs) for processing source-separated recyclables and organics processing facilities including both small scale and large scale processing facilities. The facility analysis took into account the existing regional capacity and identified the net new facilities needed to implement SWIRP for all generator sectors. The policies and programs associated with the City's proposed Franchise Initiative is a subset of SWIRP's overall facility analysis. This technical memo utilizes the assumptions developed through the SWIRP process to analyze the facility needs associated with the Franchise Initiative.

## Franchise Initiative

Consistent with the policies and programs identified in SWIRP, the City has evaluated programs for managing materials generated by the multi-family and commercial sectors. In 2012, the City Council indicated its intention to move from the current private waste hauler permit system to a franchise system for the collection of waste from both multi-family and commercial properties, not currently collected by the City. The franchise system is intended to help the City reach its zero waste goals, and will contain elements such as maximum disposal amounts per zone, aggressive diversion programs, outreach and education, clean fuel requirements, and worker health and safety requirements, to be administered by the Bureau of Sanitation.

The SWIRP policies and programs addressing the commercial and multi-family sectors that are anticipated to fall under the Franchise Initiative include the following:

- Multi-family recycling
- Multi-family yard trimmings
- Multi-family food scraps
- Modify multi-family and commercial collection rates
- Provide more public area recycling
- Require all commercial haulers to offer recycling services to their customers
- Request all businesses to have recycling

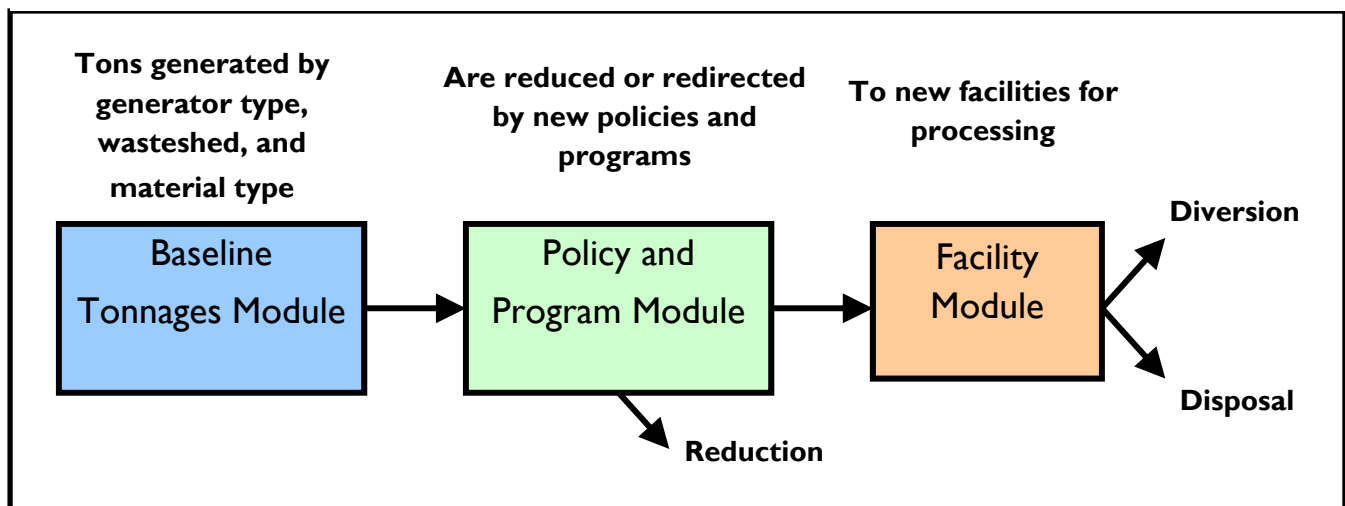
- Mandatory source separated recycling for multi-family and commercial sectors
- Mandatory organics separation for multi-family and commercial sectors
- Multi-family recycling ambassador program
- Expand commercial technical assistance
- Program reinforcement for multi-family and commercial sectors
- Large scale media campaign for multi-family and commercial sectors

## Franchise Tonnage Projections

The Los Angeles Zero Waste Planning Model, developed for SWIRP, was used to estimate the tons that would be diverted through implementation of the Franchise Initiative. This Excel-based spreadsheet was developed to evaluate the effects of different zero waste strategies on disposal and diversion throughout the City. The model includes a material flow analysis and generation projections through 2030. Population, housing, and employment figures were used to estimate the growth in disposal and recycling of discarded materials.

The model is segmented into three separate modules in order to facilitate evaluation of the materials stream at different points in the material management process. The modules include the Baseline Tonnages Module, the Policy and Program Module, and the Facility Module. Figure 1 presents an overview of the structure of the model.

**Figure 1 Structure of the Los Angeles Zero Waste Planning Model**



The Baseline Tonnages Module quantifies the amount of materials generated in the City in 2010 and projects the materials generation through 2030.

For each year, the model estimates the tons of material disposed by four different types of generators: single family, multi-family, commercial (which includes institutional and industrial generators), and construction and demolition sites. The model can be used to estimate the diversion results of specific policies and programs.

The model includes estimates of participation and efficiency rates for each policy and program. The participation rate represents the fraction of households (for residential programs) or employees (non-residential programs) expected to participate in the program. The efficiency rate represents the fraction of each material that is diverted from disposal by a program participant. The product of the participation rate and the efficiency rate results in the capture rate.

Participation and efficiency rates are specified for each material addressed by a program. The program assumptions also specify whether the material is diverted from disposal to recycling, organics, or another materials stream.

Table 1 illustrates how the assumptions were used to calculate the capture rates and estimate the resulting diversion tons.

**Table 1 Example Assumptions and Capture Rates**

Policy	Materials	Participation	Efficiency	Capture Rate	Additional Tons Diverted
Requiring all commercial haulers to provide recycling services to all of their customers	Glass containers	20%	70%	14%	70,604
	Recyclable plastics	40%	90%	36%	
	Recyclable paper and metal	20%	90%	18%	

Capture rate assumptions were developed for each of the 13 programs identified in SWIRP that were anticipated to be implemented through the Franchise Initiative. Using the generation projections included in the Los Angeles Zero Waste Model and applying the capture rate assumptions for each program, the resulting diversion tons were estimated.

Table 2 presents the diversion tonnage estimates for the programs anticipated to be implemented through the Franchise Initiative. By 2030, the Franchise Initiative is projected to divert over one million tons from landfills annually including over 253,000 tons from multi-family generators and nearly 809,000 tons from commercial generators.

**Table 2 Diversion Tonnage Estimates for Franchise Initiative Programs**

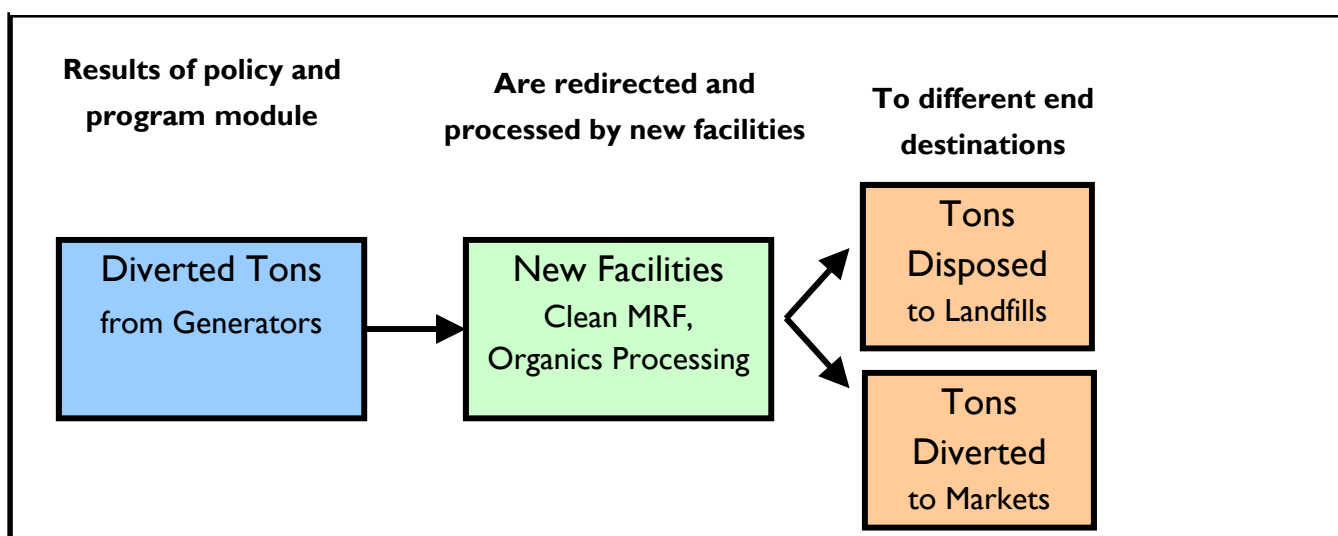
SWIRP Policies and Programs to be Implemented through the Franchise Initiative	2030 tons							
	Multi-Family				Commercial			
	Total	Recycling	Organics	Reduced/ self haul/other	Total	Recycling	Organics	Reduced/ self haul/other
<b>Programs</b>								
1. Multi-Family Recycling	48,543	48,543						
2. Multi-Family Yard Trimmings	1,725		1,725					
3. Multi-Family Food Scraps	10,649		10,649					
4. Modify Multi-Family and Commercial Collection Rates	23,592	10,043	686	12,863	253,186	109,783	64,525	78,877
5. Require All Commercial Haulers to offer Recycling Services to their Customers					70,604	70,604		
6. Require All Businesses to Have Recycling					83,646	83,646		
7. Provide More Public Area Recycling					213	213	-	
<b>Policies</b>								
8. Mandatory Source-Separated Recycling for Multi-Family and Commercial Sectors	80,009	80,009			165,854	165,854		
9. Mandatory Organics Separation for Multi-Family and Commercial Sectors	47,572		47,572		190,731		190,731	
<b>Technical Assistance</b>								
10. Multi-Family Recycling Ambassador Program	14,654	6,436	8,218					
11. Expand Commercial Technical Assistance					4,435	4,239	196	
12. Recycling Ambassador Program Reinforcement for Multi-Family and Commercial Sectors	10,000	3,619	6,284	97	21,017	6,277	14,305	435
13. Large scale media campaign	16,371	7,238	8,272	860	19,046	3,357	15,690	
<b>Total Franchise Initiative Diversion</b>	<b>253,116</b>	<b>155,890</b>	<b>83,406</b>	<b>13,820</b>	<b>808,731</b>	<b>443,972</b>	<b>285,447</b>	<b>79,312</b>

## Facility Analysis

By 2030 over one million tons annually is anticipated to be diverted from disposal through implementation of the Franchise Initiative. Of these, nearly 600,000 tons will need to be processed at recyclables processing facilities and nearly 370,000 tons will need to be processed at organics processing facilities. Therefore, some new facilities or increased facility capacity will be needed to implement the Franchise Initiative.

The Los Angeles Planning Model includes a Facility Module that projects the diversion effects that a set of facilities has on the materials stream. Figure 2 illustrates how tons flow from the Policy and Program Module to the Facility Module.

**Figure 2 Overview of the Los Angeles Zero Waste Planning Model**



Facility assumptions were developed to estimate the number of new facilities that will be needed in the future from implementation of the Franchise Initiative.

Capacity for Clean MRFs typically ranges from 50-600 tons per day (tpd) or 15,000-180,000 tons per year (tpy), with some facilities capable of handling up to 1,000 tpd (300,000 tpy). For this analysis, the assumption is that a new facility would operate at about 200,000 tpy (500 to 750 tpd based on 300 operating days per year), which represents a large-sized facility. On weekdays, one sorting line could operate for two 8-hour shifts per day, while the other sorting line would run for one 8-hour shift per day. Each sorting line would run between 25 and 30 tons per hour while in operation.

Two different sizes of organics processing facilities were also examined in this analysis. The first facility considered was a large facility capable of processing 260,000 tpy. This facility would accept an average of 1,000 tpd of materials, operate six days per week, and would be difficult to site in urban areas, due to the acreage requirements. A smaller facility, one that processes about 60,000 tpy, could be suitable for

more urban areas, particularly if designed with more emission controls and good management practices. A facility this size would accept about 200 tpd of material and would operate six days per week.

The number of facilities needed for implementation of the Franchise Initiative was estimated using the facility assumptions described above.

Table 3 lists the number of Clean MRFs and small scale organics processing facilities or large scale organics processing facilities that will be needed to implement the Franchise Initiative.

**Table 3 Franchise Initiative Facility Projections**

Facility type/size	Recyclables Processing Facilities		Organics Processing Facilities				
	Clean MRF 200,000 tons per year		Small Scale 60,000 tons per year		OR	Large Scale 260,000 tons per year	
	Calculated	Rounded	Calculated	Rounded		Calculated	Rounded
Facilities needed for implementation of Franchise Initiative	1.6	2	4.1	4		0.9	1

As shown by the calculated values, in some instances the tons to be processed may be slightly greater than the facility capacities used in the estimate. If the full amount of expected diversion is achieved, the new facilities would need to be designed for slightly higher capacities than shown, or they may be able to accommodate the difference by making operational changes, such as adding another shift or sorting line.

Some materials collected through the Franchise Initiative will be processed at existing regional facilities using excess capacity that is not currently being utilized. However, some new facilities or increased facility capacity will be needed to fully implement the Franchise Initiative. In order to identify the number of net new facilities that will be needed, the regional facility capacity analysis included in SWIRP was considered. The number of net new facilities needed for the implementation of the Franchise Initiative was calculated using a ratio based on the proportion of the regional capacity (that is available and not currently utilized) that will be needed for the Franchise Initiative compared to that which is needed to fully implement all SWIRP programs.

Table 4 lists:

1. The total number of facilities needed for full implementation of SWIRP (including the Franchise Initiative and all other SWIRP programs).
2. The existing regional capacity (that is available and not currently utilized). This number is subtracted from the total number of needed facilities (#1, above) to identify the number of net new facilities that will be needed (#3, below).
3. The net new facilities needed for full implementation of SWIRP. This is the result of subtracting the total number of facilities (#1, above) from the existing regional capacity (#2, above).

Table 4 then presents:

4. The facilities needed for implementation of the Franchise Initiative (which is a subset of the total number of facilities needed for full implementation of SWIRP).
5. Regional capacity allocated to the Franchise Initiative, based on the proportion of the regional capacity (that is available and not currently utilized) that will be needed for the Franchise Initiative compared to what will be needed to fully implement all SWIRP programs.
6. The number of net new facilities needed that is attributable to the Franchise Initiative. This number is calculated using a ratio based on the total number of facilities needed for full implementation of SWIRP (#1, above) compared to those needed for implementation of the Franchise Initiative (#4, above). This ratio is then multiplied by the number of net new facilities need for full implementation of SWIRP (#3, above) to derive the number of net new facilities needed for implementation of the Franchise Initiative (#5).



**Table 4 Franchise Initiative Net New Facility Projections**

	Recyclables Processing Facilities		Organics Processing Facilities				
Facility type/size	Clean MRF 200,000 tons per year		Small Scale 60,000 tons per year			Large Scale 260,000 tons per year	
	Calculated	Rounded	Calculated	Rounded		Calculated	Rounded
Facility Needs For Implementation of All SWIRP Programs, Including Franchise							
1. Total number of facilities needed for full implementation of SWIRP	5.2	5	9.3	9	OR	2.1	2
2. Total existing regional capacity not currently utilized	2.4	2	3	3		0.7	1
3. Net new facilities needed for full implementation of SWIRP	2.8	3	6.2	6		1.4	1
Facility Needs For Franchise Initiative Only							
4. Facilities needed for implementation of Franchise Initiative, not utilizing existing available capacity <sup>1</sup>	3	3	6.1	6	OR	1.4	1
5. Existing regional capacity not currently utilized, allocated to the Franchise Initiative <sup>2</sup>	1.4	1	2	2		0.5	0
6. Net new facilities needed for implementation of Franchise Initiative, deducting <sup>3</sup> for existing available capacity	1.6	2	4.1	4		0.9	1

Note 1: Row 4 is the total number of facilities estimated to be needed to process material as a result of the Franchise Initiative, not accounting for existing unused regional capacity.

Note 2: The regional capacity available for the Franchise was calculated using a ratio based on the proportion of the regional capacity (that is available and not currently utilized) that will be needed for the Franchise Initiative compared to what will be needed to fully implement all SWIRP programs.

Note 3: The number of new or additional facilities needed for Franchise processing, if all existing capacity (Row 5) is utilized for Facility processing. Row 6 = Row 4 - Row 5.

Based on this analysis prepared using the Los Angeles Zero Waste Planning Model, it is estimated that by 2030 two new Clean MRFs and one new large scale organics processing facility or four small organics processing facilities will need to be developed for full implementation of the Franchise Initiative.

## Appendix D

### Air Quality Emissions

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**Table 1: Summary of Project Emission Changes Compared to 2012 Baseline**

Project Emission Change from Baseline 2012

	VMT (miles/year)	Idling (hours/year)	ROG	CO	NOx	SOx	PM10	PM2.5
			ton/year	ton/year	ton/year	ton/year	ton/year	ton/year
2012	9,143,221	349,551	NA	NA	NA	NA	NA	NA
2017 No Project	9,516,780	356,653	-0.54	0.14	-36.45	0.01	0.04	0.01
2017 Proposed Project	9,334,611	408,338	-4.72	62.80	-59.10	-0.11	0.10	0.08
2017 Alternative 1	14,615,742	483,477	-4.03	86.56	-1.11	-0.07	1.10	0.69
2017 Alternative 2	14,570,010	483,477	-4.04	86.47	-1.56	-0.07	1.10	0.68
2017 Alternative 3	9,334,611	408,338	-4.72	62.80	-59.10	-0.11	0.10	0.08
2030 No Project	10,488,034	375,117	-1.04	1.37	-107.56	0.02	0.13	0.04
2030 Proposed Project	10,287,273	442,581	-4.89	68.26	-117.44	-0.10	0.19	0.10
2030 Alternative 1	16,107,380	525,046	-4.18	95.16	-89.42	-0.06	1.30	0.78
2030 Alternative 2	16,056,981	525,047	-4.18	95.04	-89.62	-0.06	1.29	0.77
2030 Alternative 3	10,287,273	442,581	-4.89	68.26	-117.44	-0.10	0.19	0.10
Thresholds			10	100	10	27	27	10
Exceed Threshold?			No	No	No	No	No	No

NA: Not applicable

**Table 2: Project Emissions - Alternative Fuel Emission Factors Derived Based on Average Emission Change Rate Compared to Diesel Vehicles**

**Vehicle Emissions - Travel**

	VMT	Vehicle Emission Factors							Emissions						
		ROG	CO	NOx	SOx	PM <sub>10</sub>	PM <sub>2.5</sub>	CO2	ROG	CO	NOx	SOx	PM <sub>10</sub>	PM <sub>2.5</sub>	CO2
	miles/year	g/mile	g/mile	g/mile	g/mile	g/mile	g/mile	g/mile	ton/year	ton/year	ton/year	ton/year	ton/year	ton/year	ton/year
2012	9,143,221	0.112	0.562	14.348	0.0169	0.0472	0.0434	1767.2	1.126	5.659	144.607	0.170	0.476	0.438	17810.5
2017 No Project	9,516,780	0.122	0.616	10.692	0.0166	0.0506	0.0466	1745.0	1.280	6.457	112.166	0.175	0.531	0.489	18306.0
2017 Proposed Project	9,334,611	0.044	1.847	8.875	0.0071	0.0506	0.0466	1559.1	0.452	19.001	91.316	0.073	0.521	0.479	16042.0
2017 Alternative 1	14,615,742	0.044	1.847	8.875	0.0071	0.0506	0.0466	1559.1	0.708	29.752	142.978	0.114	0.816	0.751	25117.9
2017 Alternative 2	14,570,010	0.044	1.847	8.875	0.0071	0.0506	0.0466	1559.1	0.705	29.659	142.531	0.114	0.813	0.748	25039.3
2017 Alternative 3	9,334,611	0.044	1.847	8.875	0.0071	0.0506	0.0466	1559.1	0.452	19.001	91.316	0.073	0.521	0.479	16042.0
2030 No Project	10,488,034	0.140	0.710	4.331	0.0163	0.0590	0.0542	1704.4	1.618	8.210	50.072	0.188	0.682	0.627	19704.9
2030 Proposed Project	10,287,273	0.050	2.130	3.595	0.0071	0.0590	0.0542	1522.8	0.571	24.158	40.764	0.080	0.669	0.615	17267.9
2030 Alternative 1	16,107,380	0.050	2.130	3.595	0.0071	0.0590	0.0542	1522.8	0.894	37.825	63.827	0.126	1.047	0.963	27037.3
2030 Alternative 2	16,056,981	0.050	2.130	3.595	0.0071	0.0590	0.0542	1522.8	0.892	37.706	63.627	0.125	1.044	0.960	26952.7
2030 Alternative 3	10,287,273	0.050	2.130	3.595	0.0071	0.0590	0.0542	1522.8	0.571	24.158	40.764	0.080	0.669	0.615	17267.9

Note:

1. Diesel vehicle travel emission factors for No Project were modeled using EMFAC2011, vehicle type: T7 SWCV (Heavy Heavy-duty Solid Waste Collection Vehicle), with aggregated fleet model years (except for PM10 and PM2.5), and at aggregated fleet vehicle speed in SCAQMD.

2. The diesel vehicle PM10 and PM2.5 emission factors were adjusted to be equal to the emission levels of model year 2007 and newer vehicles, to account for the PM emission reduction requirements applicable to 1960 through 2006 model year vehicles in the CARB's Solid Waste Collection Vehicle Rule.

	EMFAC2011 Default (g/mile)			Adjusted (g/mile)		
	2012	2017	2030	2012	2017	2030
PM10 EF:	0.0903	0.0797	0.0593	0.0472	0.0506	0.0590
PM2.5 EF	0.0830	0.0733	0.0546	0.0434	0.0466	0.0542

3. Alternative fuel vehicle emission factors were derived based on studies comparing the LNG/CNG truck emissions with similar diesel trucks. See Table 4: Summary of LNG or CNG Heavy Duty Trucks Emissions Comparing to Similar Diesel Trucks and Derived Emission Factors for the reduction/increase rate used in the calculation.

4. SO2 emissions from NG vehicles were estimated based on a sulfur content of 2000 grain per million standard cubic feet of natural gas (AP-42). Lb/MMBtu emission factor was calculated for natural gas. It was assumed that the LNG and CNG trucks would have the same sulfur emission rate per MMBtu of fuel consumption. The lb/MMBtu emission factor was converted to gram per mile using LNG truck fuel economy derived from SmartWay 2.0.11 Truck Tool – Technical Documentation, EPA, January 2012.

NG sulfur content	SO2 emission factor per MMBtu	LNG heating value	SO2 emission factor per mile	
gr/MMSCF	lb/MMBtu	Btu/gallon	g/gallon	g/mile
2000	0.00054	89647	0.0221	0.00708

LNG truck MPG: 3.12 (derived based on EPA SmartWay Truck Tool, EPA 2012)

LNG heating value is obtained from CA-GREET Model. Input Fuel Specifications. Argonne National Laboratory. Chicago, IL, 2009

#### Vehicle Emissions - Idle

	Idle time	Vehicle Emission Factors							Emissions						
		ROG	CO	NOx	SOx	PM <sub>10</sub>	PM <sub>2.5</sub>	CO2	ROG	CO	NOx	SOx	PM <sub>10</sub>	PM <sub>2.5</sub>	CO2
	hours/year	g/hour	g/hour	g/hour	g/hour	g/hour	g/hour	g/hour	ton/year	ton/year	ton/year	ton/year	ton/year	ton/year	ton/year
2012	349,551	12.566	48.936	92.233	0.0647	0.983	0.904	6785.1	4.842	18.855	35.538	0.025	0.379	0.348	2614.3
2017 No Project	356653	10.482	46.160	79.951	0.0656	0.797	0.733	6879.1	4.121	18.147	31.432	0.026	0.313	0.288	2704.4
2017 Proposed Project	408338	3.7735	138.4795	66.359	0.0279	0.797	0.733	6146.0	1.698	62.331	29.869	0.013	0.359	0.330	2766.3
2017 Alternative 1	483477	3.773	138.479	66.359	0.0279	0.797	0.733	6146.0	2.011	73.800	35.365	0.015	0.425	0.391	3275.4
2017 Alternative 2	483477	3.773	138.479	66.359	0.0279	0.797	0.733	6146.0	2.011	73.800	35.365	0.015	0.425	0.391	3275.4
2017 Alternative 3	408338	3.773	138.479	66.359	0.0279	0.797	0.733	6146.0	1.698	62.331	29.869	0.013	0.359	0.330	2766.3
2030 No Project	375,117	7.723	42.318	53.610	0.0669	0.330	0.304	7012.0	3.193	17.498	22.167	0.028	0.137	0.126	2899.4
2030 Proposed Project	442,581	2.7803	126.9545	44.496	0.0291	0.330	0.304	6264.7	1.356	61.935	21.708	0.014	0.161	0.148	3056.3
2030 Alternative 1	525,046	2.780	126.955	44.496	0.0291	0.330	0.304	6264.7	1.609	73.475	25.752	0.017	0.191	0.176	3625.7
2030 Alternative 2	525,047	2.780	126.955	44.496	0.0291	0.330	0.304	6264.7	1.609	73.476	25.752	0.017	0.191	0.176	3625.7
2030 Alternative 3	442,581	2.780	126.955	44.496	0.0291	0.330	0.304	6264.7	1.356	61.935	21.708	0.014	0.161	0.148	3056.3

Note:

1. Vehicle idling emission factors of 2012 and 2030 No Project were modeled using EMFAC2011, vehicle type: T7 SWCV (Heavy Heavy-duty Solid Waste Collection Vehicle), with aggregated fleet model years (except for PM10 and PM2.5 in 2012), at idling in SCAQMD.

2. The diesel vehicle PM10 and PM2.5 emission factors were adjusted to be equal to the emission levels of a model year 2007 or newer vehicle, to account for the PM emission reduction requirements applicable to 1960 through 2006 model year vehicles in the CARB's Solid Waste Collection Vehicle Rule

	EMFAC2011 Default (g/mile)			Adjusted (g/mile)		
	2012	2017	2030	2012	2017	2030
PM10 EF	1.880	1.253	0.332	0.983	0.797	0.330
PM2.5 EF	1.730	1.153	0.306	0.904	0.733	0.304

Adjusted emission factors are the average of the EMFAC2011 PM emission factors of MY2007 through the project analysis years.

4. Alternative fuel vehicle emission factors were derived based on studies comparing the LNG/CNG truck emissions with similar diesel trucks. See Table 4: Summary of LNG or CNG Heavy Duty Trucks Emissions Comparing to Similar Diesel Trucks and Derived Emission Factors for the reduction/increase rate used in the calculation.

#### Vehicle Emissions - Auxiliary Power System

	APS Usage	Vehicle Emission Factors							Emissions						
		ROG	CO	NOx	SOx	PM <sub>10</sub>	PM <sub>2.5</sub>	CO2	ROG	CO	NOx	SOx	PM <sub>10</sub>	PM <sub>2.5</sub>	CO2
	hours/year	g/hour	g/hour	g/hour	g/hour	g/hour	g/hour	g/hour	ton/year	ton/year	ton/year	ton/year	ton/year	ton/year	ton/year
2012	349,551	4.052	6.200	12.100	0.021	0.870	0.800	2228.0	1.561	2.389	4.662	0.008	0.335	0.308	858.5
2017 No Project	356653	4.052	6.200	12.100	0.021	0.870	0.800	2228.0	1.593	2.437	4.757	0.008	0.342	0.315	875.9
2017 Proposed Project	408338	1.459	18.600	10.043	0.009	0.870	0.800	1990.5	0.657	8.372	4.520	0.004	0.392	0.360	896.0
2017 Alternative 1	483477	1.459	18.600	10.043	0.009	0.870	0.800	1990.5	0.777	9.913	5.352	0.005	0.464	0.427	1060.8
2017 Alternative 2	483477	1.459	18.600	10.043	0.009	0.870	0.800	1990.5	0.777	9.913	5.352	0.005	0.464	0.427	1060.8
2017 Alternative 3	408338	1.459	18.600	10.043	0.009	0.870	0.800	1990.5	0.657	8.372	4.520	0.004	0.392	0.360	896.0
2030 No Project	375,117	4.052	6.200	12.100	0.021	0.870	0.800	2228.0	1.676	2.564	5.003	0.009	0.360	0.331	921.3
2030 Proposed Project	442,581	1.459	18.600	10.043	0.009	0.870	0.800	1990.5	0.712	9.074	4.900	0.005	0.424	0.390	971.1
2030 Alternative 1	525,046	1.459	18.600	10.043	0.009	0.870	0.800	1990.5	0.844	10.765	5.812	0.005	0.504	0.463	1152.0
2030 Alternative 2	525,047	1.459	18.600	10.043	0.009	0.870	0.800	1990.5	0.844	10.765	5.812	0.005	0.504	0.463	1152.0
2030 Alternative 3	442,581	1.459	18.600	10.043	0.009	0.870	0.800	1990.5	0.712	9.074	4.900	0.005	0.424	0.390	971.1

Note:

1. Vehicle emissions due to the use of auxiliary power system (APS) was used to account for the vehicle emissions due to the use of the lifting system for solid waste collection.

2. APS emission factors of 2012 and 2030 No Project were obtained from EMFAC2011 web tool, for vehicles 2007 model year or newer.

3. APS usage hours were assumed to be the same as vehicle idling hours.

4. Alternative fuel vehicle emission factors were derived based on studies comparing the LNG/CNG truck emissions with similar diesel trucks. See Table 3: Summary of LNG or CNG Heavy Duty Trucks Emissions Comparing to Similar Diesel Trucks and Derived Emission Factors

**Total Emissions (Exhaust Emissions and Brake/Tire Wear)**

	Emissions (ton/year)							Emission Changes Compared to 2012 (ton/year)							% change compared to 2012						
	ROG	CO	NOx	SOx	PM <sub>10</sub>	PM <sub>2.5</sub>	CO2	ROG	CO	NOx	SOx	PM <sub>10</sub>	PM <sub>2.5</sub>	CO2e	ROG	CO	NOx	SOx	PM <sub>10</sub>	PM <sub>2.5</sub>	CO2
2012	7.530	26.904	184.807	0.203	2.175	1.452	21283.3	NA	NA	NA	NA	NA	NA	NA	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2017 No Project	6.994	27.042	148.354	0.209	2.212	1.464	21886.4	-0.54	0.14	-36.45	0.01	0.04	0.01	603.0	-7.1%	0.5%	-19.7%	2.8%	1.7%	0.8%	2.8%
2017 Proposed Project	2.807	89.704	125.705	0.090	2.277	1.534	19704.3	-4.72	62.80	-59.10	-0.11	0.10	0.08	-1579.0	-62.7%	233.4%	-32.0%	-55.9%	4.7%	5.7%	-7.4%
2017 Alternative 1	3.496	113.464	183.695	0.134	3.279	2.139	29454.1	-4.03	86.56	-1.11	-0.07	1.10	0.69	8170.7	-53.6%	321.7%	-0.6%	-34.1%	50.8%	47.3%	38.4%
2017 Alternative 2	3.494	113.371	183.248	0.133	3.271	2.135	29375.5	-4.04	86.47	-1.56	-0.07	1.10	0.68	8092.2	-53.6%	321.4%	-0.8%	-34.3%	50.4%	47.0%	38.0%
2017 Alternative 3	2.807	89.704	125.705	0.090	2.277	1.534	19704.3	-4.72	62.80	-59.10	-0.11	0.10	0.08	-1579.0	-62.7%	233.4%	-32.0%	-55.9%	4.7%	5.7%	-7.4%
2030 No Project	6.487	28.271	77.242	0.224	2.308	1.494	23525.6	-1.04	1.37	-107.56	0.02	0.13	0.04	2242.2	-13.9%	5.1%	-58.2%	10.5%	6.1%	2.9%	10.5%
2030 Proposed Project	2.639	95.167	67.371	0.099	2.362	1.556	21295.2	-4.89	68.26	-117.44	-0.10	0.19	0.10	11.9	-64.9%	253.7%	-63.5%	-51.2%	8.6%	7.2%	0.1%
2030 Alternative 1	3.348	122.065	95.392	0.148	3.477	2.232	31815.1	-4.18	95.16	-89.42	-0.06	1.30	0.78	10531.7	-55.5%	353.7%	-48.4%	-27.1%	59.9%	53.7%	49.5%
2030 Alternative 2	3.345	121.947	95.192	0.148	3.468	2.227	31730.5	-4.18	95.04	-89.62	-0.06	1.29	0.77	10447.1	-55.6%	353.3%	-48.5%	-27.3%	59.5%	53.4%	49.1%
2030 Alternative 3	2.639	95.167	67.371	0.099	2.362	1.556	21295.2	-4.89	68.26	-117.44	-0.10	0.19	0.10	11.9	-64.9%	253.7%	-63.5%	-51.2%	8.6%	7.2%	0.1%

Note:

Total vehicle emissions include the exhaust emissions and the brake and tire wears

**Table 3: Summary of LNG or CNG Heavy Duty Trucks Emissions Comparing to Similar Diesel Trucks and Derived Emission Factors**

Pollutant	Percent Change compared to similar diesel trucks - LNG Refuse Trucks (1)	Percent Change compared to similar diesel trucks - Natural Gas Garbage Trucks (2)	Percent Change used in EPA Smartway Truck Tool (3)	Percent Change tested by SCAQMD (4)	Selected Percent Change used for the Analysis	Note:
ROG	-64%	-69% to -83%	NA	NA	-64%	Least reduction rate
CO	80%	-11% to +200%	NA	NA	200%	Highest increase rate
NOx	-32%	-32% to -85%	-17%	-50% to -73%	-17%	Least reduction rate
SOx	NA	NA	NA	NA	NA	Emission factors of alternative fuel were derived based on 2000 gr/MMSCF natural gas sulfur
PM10	-86%	-85% to -94%	-86%	NA	0%	Assumed that the alternative fuel vehicle PM emissions are similar to SWCVs that are in compliance with CARB SWCV rule.
PM2.5	-86%	-85% to -94%	-86%	NA	0%	
CO2e	NA	-21% to +5%	NA	NA	-11%	Derived from the ratio of Climate Registry default emission factor and the diesel truck emission factor from EMFAC2011.

Date Source:

1. Natural Gas Vehicles: Status, Barriers, and Opportunities, released by the Argonne National Laboratory, Table 5: Emission Reductions of NGVs Compared with Similar Models of Diesel Vehicles (percent difference)

2. Greening Garbage Trucks: New Technologies for Cleaner Air, Inform Inc, 2003

Data Sources: Kevin Chandler et al., "Waste Management's LNG Truck Fleet: Final Results," National Renewable Energy Laboratory, January 2001; Nigel Clark et al., "A Long-Term Field Emissions Study of Natural Gas Fueled Refuse Haulers in New York City," Society of Automotive Engineers technical paper 982456, presented at the International Fall Fuels and Lubricants Meeting and Exposition, San Francisco, CA, October 1998

3. SmartWay 2.0.11 Truck Tool – Technical Documentation, EPA, January 2012. Percent reduction of emissions from alternative fuel of the SmartWay Truck Tool was from .

4. SCAQMD Preliminary Key Findings In-Use NOx Emissions Compared to 2010 Exhaust Emission Standard (SCAQMD, March 2013, available at [http://www.aqmd.gov/hb/attachments/2011-2015/2013Mar/SpecMtgAttach/3\\_Testing\\_OnRoad\\_HD\\_Vehicles.pdf](http://www.aqmd.gov/hb/attachments/2011-2015/2013Mar/SpecMtgAttach/3_Testing_OnRoad_HD_Vehicles.pdf)). Data is derived from the figure for 2010 refuse trucks.

Note:

1. Although there are other types of alternative fuels used by solid waste collection trucks, it was assumed that the emissions will be similar to LNG or CNG trucks.

2. All emissions factors were derived from studies for LNG and LNG truck emissions.

3. For LNG/CNG truck emissions lower than diesel trucks, the least reduction rates were used to estimate the LNG/CNG truck emissions for those pollutants.

4. For LNG/CNG truck emissions higher than diesel trucks (such as CO), the highest increase rate were used to estimate the LNG/CNG truck emissions for those pollutants.

5. CO2 emission factor rates were derived from the Climate Registry's default LNG vehicle emission factors and the diesel CO2 emission factors.

2013 Climate Registry Default, updated April 2013

Vehicle/Fuel Type	Default CO <sub>2</sub> EF (kg/scf or kg/gal)	Converted EF (g/mile)	Default N <sub>2</sub> O EF (g/mi)	Default CH <sub>4</sub> EF (g/mi)	CO2e (g/mi)
HD LNG	4.46	1427.26	0.175	1.966	1522.8
GWP		1	310	21	

Fuel economy data used in derivation of the CO2 emission factors (Based on factors used in SmartWay 2.0.11 Truck Tool – Technical Documentation, EPA, January 2012.)

5.98 miles per gallon diesel

Class 8a (Heavy Heavy-duty)

4.75 miles per gallon gasoline

(25.9% lower than diesel vehicles)

3.12 miles per gallon LNG

(Assumed the same fuel economy as diesel vehicles, applied a factor of 1.52 to convert gasoline volume to LNG)

**Table 4: Fugitive Emissions****Vehicle Brake and tire wear emission factor**

	<b>PM10</b>	<b>PM2.5</b>
	g/mile	g/mile
Tire Ware	0.0360	0.0090
Break ware	0.0617	0.0265
Total	0.0977	0.0355

Note:

Tire wear and brake wear emission factors were obtained from EMFAC2011.

**Vehicle Brake and tire wear emissions**

	<b>VMT (miles/year)</b>	<b>PM10 Fugitive</b>	<b>PM2.5 Fugitive</b>
		ton/year	ton/year
2012	9,143,221	0.99	0.36
2017 No Project	9,516,780	1.03	0.37
2017 Proposed Project	9,334,611	1.01	0.36
2017 Alternative 1	14,615,742	1.57	0.57
2017 Alternative 2	14,570,010	1.57	0.57
2017 Alternative 3	9,334,611	1.01	0.36
2030 No Project	10,488,034	1.13	0.41
2030 Proposed Project	10,287,273	1.11	0.40
2030 Alternative 1	16,107,380	1.74	0.63
2030 Alternative 2	16,056,981	1.73	0.63
2030 Alternative 3	10,287,273	1.11	0.40



**Table 5: Summary of GHG Emissions Compared to 2012 Baseline****Direct Project Emissions**

Project Emission Change from Baseline 2012

	CO2e emissions		CO2e Emission Change from 2012
	ton/year	metric ton/year	metric ton/year
2012	21,283.3	19,308	NA
2017 No Project	21,886.4	19,855	5.47E+02
2017 Proposed Project	19,704.3	17,876	-1.43E+03
2017 Alternative 1	29,454.1	26,721	7.41E+03
2017 Alternative 2	29,375.5	26,649	7.34E+03
2017 Alternative 3	19,704.3	17,876	-1.43E+03
2030 No Project	23,525.6	21,342	2.03E+03
2030 Proposed Project	21,295.2	19,319	1.08E+01
2030 Alternative 1	31,815.1	28,862	9.55E+03
2030 Alternative 2	31,730.5	28,786	9.48E+03
2030 Alternative 3	21,295.2	19,319	1.08E+01
California GHG Inventory 2011			4.48E+08
State GHG Goal 2020 (Assembly 32)			4.27E+08

Note:

NA: Not applicable

California GHG Inventory 2011 is from [http://www.arb.ca.gov/cc/inventory/data/tables/ghg\\_inventory\\_scopingplan\\_00-11\\_2013-08-01.pdf](http://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_scopingplan_00-11_2013-08-01.pdf), access September 7, 2013

State GHG Goal in 2020: Assembly Bill 32

**Life Cycle Project Emissions**

Project Emission Change from Baseline 2012

	Well to Pump Emissions	Direct Vehicle Emissions	Life Cycle Well to Wheel Emissions	CO2e Emission Change from 2012
	metric tons/year	metric tons/year	metric tons/year	metric tons/year
2012	4,093	19,308	23,401	NA
2017 No Project	4,246	19,855	24,101	700
2017 Proposed Project	4,661	17,876	22,537	-864
2017 Alternative 1	7,058	26,721	33,778	10,377
2017 Alternative 2	7,038	26,649	33,687	10,286
2017 Alternative 3	4,661	17,876	22,537	-864
2030 No Project	4,324	21,342	25,666	2,265
2030 Proposed Project	5,126	19,319	24,445	1,043
2030 Alternative 1	7,766	28,862	36,628	13,227
2030 Alternative 2	7,744	28,786	36,530	13,129
2030 Alternative 3	5,126	19,319	24,445	1,043

Note:

Well to Pump emissions were estimated using the emission factors derived from CA-GREET v1.8b (<http://www.arb.ca.gov/fuels/lcfs/lcfs-background.htm>).

**Table 6: Well to Pump GHG Emissions**

Well To Pump Emissions Calculations

Project Year	Vehicle Fuel Type	VMT miles/year	Vehicle Idle Time hours/year	Fuel Consumption		Total Fuel Consumption MMBtu/year	Well to Pump EF g/MMBtu	Well to Pump Emissions metric tons/year
				Travel MMBtu/year	Idling MMBtu/year			
2012	Diesel	9,143,221	349,551	209,468	43,830	253,298	16,159	4,093
2017 No Project	Diesel	9,516,780	356,653	218,027	44,720	262,747	16,159	4,246
2017 Proposed Project	Alternative Fuel	9,334,611	408,338	267,794	41,955	309,748	15,049	4,661
2017 Alternative 1	Alternative Fuel	14,615,742	483,477	419,300	49,675	468,975	15,049	7,058
2017 Alternative 2	Alternative Fuel	14,570,010	483,477	417,988	49,675	467,663	15,049	7,038
2017 Alternative 3	Alternative Fuel	9,334,611	408,338	267,794	41,955	309,748	15,049	4,661
2030 No Project	Diesel	10,488,034	375,117	240,278	47,036	287,313	15,049	4,324
2030 Proposed Project	Alternative Fuel	10,287,273	442,581	295,124	45,473	340,597	15,049	5,126
2030 Alternative 1	Alternative Fuel	16,107,380	525,046	462,092	53,946	516,038	15,049	7,766
2030 Alternative 2	Alternative Fuel	16,056,981	525,047	460,647	53,946	514,592	15,049	7,744
2030 Alternative 3	Alternative Fuel	10,287,273	442,581	295,124	45,473	340,597	15,049	5,126

Note:

1. Fuel consumption for vehicle travel were derived based on the fuel economy of diesel vehicles and LNG vehicles as shown in the following table:

	Fuel Heat Value	Fuel Economy	Fuel Consumption
	MMBtu/gal	miles/gallons	MMBtu/mile
Diesel Vehicle	0.137	5.98	0.0229
NG Vehicle (LNG)	0.0896	3.12	0.0287

2. Diesel fuel consumption rate during vehicle idling were derived based on the average fuel consumption rate of waste collection trucks from the TABLE 2: Fuel Used by Commercial Trucks Idling on the Job by Selected Body Type and Miles Driven Category in the Estimation of Fuel Use by Idling Commercial Trucks (Center for Transportation Research, Argonne National Laboratory, 2006, <http://www.transportation.anl.gov/pdfs/TA/373.pdf>). Alternative fuel consumption rate during vehicle idling were estimated by scaling the diesel fuel consumption rate, assuming the energy consumption ratio of natural gas and diesel during idling would be the same as during vehicle travel.

	Fuel Heat Value	Idling Fuel Consumption	
	MMBtu/gal	gallons/hr	MMBtu/hr
Diesel Vehicle	0.137	0.915	0.125
NG Vehicle (LNG)	0.090	1.146	0.103

3. The Well to Pump GHG emission factors were derived by using the CA-GREET v1.8b (<http://www.arb.ca.gov/fuels/lcfs/lcfs-background.htm>)

Natural gas Well to Pump emission factor is the average of CNG and LNG emission factors.

Well To Pump Emission Rate from CA-GREET

	Diesel	CNG	LNG
	g/MMBtu	g/MMBtu	g/MMBtu
GHGs as CO <sub>2</sub> e	16,159	12,272	17,827

**Table 7: CA-GREET Model Assumptions**

10/11/2013

**Region of Analysis:**

CA Average CA Average electricity mix and CA average petroleum production

**Petroleum Based Fuels Assumptions:**

All GREET default values for recovery including:

Recovery % values &amp; use of NG for oil sands recovery

**Diesel Options**

All GREET default values including:

100% LSD by volume

Fuel Specifications and Refining Efficiencies - Fuel for CA use

**Natural Gas Based Fuels**

All GREET default values including:

CNG, NG-based LNG, and LNG as a transportation fuel have feedstock fuels from North American NG sources. Do not select the option for LFG to be the source for CNG.

Distribution of Petroleum and NG for production of LPG: 60% NG, 40% Petroleum

**Boil-Off Effect of LNG**

Assume the revised CA specific assumptions that have replaced the original GREET national assumptions in the revised model for boil off and recovery rates

Duration of storage days and transit days remain the same as the original GREET default values

**Electricity Generation Mix**

Assume a CA mix for both transportation and stationary sources

Electricity displace co-products from NG-based plants were NGCC electricity, which is the default GREET value

**Well to Pump Activities**

Assumed default values for steam boiler efficiency (80%), NG recovery and processing efficiencies, NG compression and liquefaction efficiencies, and NG to LPG production efficiency (96.5%)

**Transportation Assumptions and Distances**CA ULSD

CA Refineries	100%
Default from Refineries to Bulk terminals	(80% pipeline (50 miles), 20% HHDT (50 miles))
Default HHDDT truck to pump stations	50 miles

LNG from NA NG as a Transportation Fuel

No bulk terminal

Revised Default HHDT plant to pumping station	Revised from default of 50 miles to 120 miles based on Boron
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CNG from NA NG

NA NG Field to refueling station for CNG production	100% pipeline (750 miles)
---	---------------------------

**Table 8: CA-GREET CA Feedstock and Fuel Results**

10/11/2013

**5.1) Energy Use and Total Emissions**

Well to Pump

	CA Petroleum		CA Average
	Feedstocks		Fuel
	Crude for Use in U.S. Refineries	Crude for Use in CA Refineries	LS Diesel Fuel
Loss factor			1.000
Total energy	60,497	47,147	144,962
Fossil fuels	59,917	45,772	142,521
Coal	1,589	2,794	20,087
Natural gas	48,692	35,168	50,483
Petroleum	9,635	7,810	71,950
VOC	3.937	3.874	4.158
CO	9.504	9.209	6.178
NOx	32.834	35.270	11.685
PM10	1.468	1.991	5.716
PM2.5	1.047	1.302	2.254
SOx	4.117	4.818	8.274
CH4	92.569	76.494	9.049
N2O	0.069	0.065	0.095
CO2	4,873	3,759	10,164

Total Well to Pump

	Well to Pump Values		
	ULSD	NG or LFG to CNG	NG to LNG (as a transportation fuel)
Total energy	192112	132596	211456
Fossil fuels	188295	120353	210840
Coal	22881	17712	1111
Natural gas	85653	97677	194761
Petroleum	79761	4965	14969
VOC	8.0	6.8	7.1
CO	15.4	14.7	16.5
NOx	47.0	27.6	40.8
PM10	7.7	3.7	1.1
PM2.5	3.6	1.3	0.9
SOx	13.1	11.3	12.5
CH4	85.5	135.5	159.8
N2O	0.2	0.1	0.3
CO2	13924	8802	13701

CA Average

**4.1) Energy Use and Total Emissions (Btu or Grams per MMBtu of Fuel)**

	Natural Gas as Stationary Fuels	Natural Gas for Electricity generation	LFG to CNG		Dairy Biogas to CNG		NG or LFG to Compressed Natural Gas		Natural Gas to Liquefied Natural Gas (as a transportation fuel)		LFG to LNG		Dairy Biogas to LNG		Flare gas to Liquefied Natural Gas (as a transportation fuel)		Liquefied Natural Gas: Combined (as a transportation fuel)	
			Feedstock	Fuel	Feedstock	Fuel	Feedstock	Fuel	Feedstock	Fuel	Feedstock	Fuel	Feedstock	Fuel	Feedstock	Fuel	Feedstock	Fuel
Loss factor				1.001		1.001		1.000		1.008		1.008		0.000		1.008		1.008
Total energy	69,207	67,807	10,764	-776,918	25,811	-774,757	72,007	60,589	64,116	146,818	12,133	-703,964	27,192	-701,793	43,175	-972,620	64,116	146,818
Fossil fuels	68,565	67,198	8,715	-817,987	20,898	184,563	71,299	49,055	63,595	146,728	10,068	-733,530	22,261	273,844	40,682	-975,014	63,595	146,728
Coal	997	949	2,953	59,174	7,080	59,767	1,092	16,620	824	281	2,974	42,752	7,105	43,347	3,597	3,593	824	281
Natural gas	63,444	62,132	5,615	-880,130	13,466	125,835	66,067	31,609	58,675	135,608	6,945	-789,232	14,801	221,575	36,605	-989,160	58,675	135,608
Petroleum	4,125	4,118	147	2,969	352	2,999	4,139	826	4,096	10,839	150	12,950	355	12,980	481	10,552	4,096	10,839
VOC	6.187	6.077	0.072	-0.625	0.172	-0.530	6.409	0.403	5.785	1.221	0.116	-0.479	0.216	-0.384	4.692	-1.434	5.785	1.221
CO	11.365	11.104	0.508	-14.609	1.218	-15.596	11.888	2.859	10.416	5.970	0.613	-13.158	1.324	-14.150	2.535	-23.977	10.416	5.970
NOx	21.590	20.919	0.827	-19.215	1.983	-33.910	22.931	4.655	19.160	21.491	1.096	-6.538	2.253	-21.304	4.581	-29.556	19.160	21.491
PM10	0.580	0.557	0.546	7.246	1.310	7.371	0.625	3.076	0.498	0.597	0.556	4.651	1.321	4.776	0.785	-3.047	0.498	0.597
PM2.5	0.425	0.408	0.156	-0.574	0.375	-0.527	0.457	0.880	0.366	0.542	0.163	-1.017	0.382	-0.970	0.299	-3.539	0.366	0.542
SOx	10.823	10.809	0.082	1.112	0.196	1.128	10.852	0.460	10.763	1.605	0.087	2.174	0.202	2.190	10.485	1.793	10.763	1.605
CH4	128.809	128.464	1.063	-12.107	2.549	-32.436	129.500	5.982	127.478	31.315	1.202	-20.216	2.689	-23.010	51.654	-45.905	127.478	31.315
N2O	0.065	0.063	0.010	-0.821	0.025	-0.989	0.070	0.058	0.056	0.219	0.011	-0.680	0.026	-0.849	0.038	-0.985	0.056	0.219
CO2	5,089	5,006	630	-45,058	1,512	-44,930	5,253	3,548	4,788	8,874	664	-40,463	1,546	-40,335	3,676	-56,146	4,788	8,874

## Appendix E

### Traffic Analysis

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# City of Los Angeles Bureau of Sanitation Traffic Analysis

PREPARED FOR: City of Los Angeles,  
Bureau of Sanitation

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DATE: August 26, 2013

PROJECT NUMBER: 470884.03.31.60.02

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# 1. Introduction

This memorandum supports the assessment of traffic impacts of Alternatives considered in the Environmental Impact Report (EIR) for the City of Los Angeles Franchise Implementation Plan. The EIR Alternatives are as follows.

- **No Project:** Status quo
- **Proposed Project:** Exclusive system with a single hauler per wasteshed
- **Alternative 1:** Non-exclusive system
- **Alternative 2:** Exclusive system with multiple haulers per wasteshed
- **Alternative 3:** City collection of all materials

This memorandum updates and supersedes another technical memorandum prepared by CH2M HILL for the Bureau of Sanitation titled Traffic Analysis Existing Conditions, August 2, 2013. The analysis in the first four sections of that memorandum (and the appendix) has been included in this memorandum.

This traffic analysis includes estimates of truck travel for trips by private collection firms (haulers) to transport municipal solid waste (including commingled recyclables and organic waste) from multi-family and commercial customer locations in the City of Los Angeles (City), to waste disposal and processing facilities. Truck travel is estimated with vehicle miles of travel (VMT) and vehicle hours of travel (VHT) for each alternative. Unless otherwise stated, all collection services analyzed in this memorandum are for multi-family and commercial collection.



In accordance with CEQA, a significant traffic impact would occur if the project would cause a substantial increase in traffic, exceed an established level of service (LOS) standard, result in a change in air traffic patterns, substantially increase hazards due to a design feature, result in inadequate emergency access or parking capacity, or conflict with adopted policies, plans, or programs supporting alternative transportation. The potential change in VMT and VHT as a result of project implementation will be evaluated against the CEQA thresholds.

The following sections of this memorandum include a summary of results, a discussion of the existing collection system and proposed franchise zone, the approach to estimating VMT and VHT, the methods and results for estimating 2012 VMT and VHT, a presentation of 2030 material forecasts, and the methods and results for 2030 VMT and VHT estimates for the alternatives.

## 2. Summary Results

This section provides a summary of the existing conditions and forecast material quantities for the alternatives, followed by projected VMT and VHT for each alternative.

### 2.1 Material Quantities

A forecast of materials collected for the Existing Conditions (2012) and in 2030 for the No Project and Proposed Project alternatives is shown in Table 2-1 and Figure 2-1. The forecast is prepared for material currently collected from multi-family and commercial customers by private haulers that would be subject to the franchise system of the proposed project. It does not include materials self-hauled by institutions, or materials from single-family residents.

TABLE 2-1

**Material Quantities for Existing Conditions, No Project, and Proposed Project Alternatives**

	2030		Annual Growth Rate		Percent of Total		2030 No Project	2030 Proposed Project
	2012	No Project	Proposed Project	No Project	Proposed Project	2012		
<b>Total Commercial + MF</b>								
<b>Generation</b>	<b>1,644,255</b>	<b>1,799,184</b>	<b>1,799,184</b>	<b>0.5%</b>	<b>0.5%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Commingled Recycling Diversion</b>	<b>48,307</b>	<b>55,265</b>	<b>655,127</b>	<b>0.8%</b>	<b>15.6%</b>	<b>3%</b>	<b>3%</b>	<b>36%</b>
Baseline	48,307	55,265	55,265					
New Programs	0	0	599,862					
<b>Organics Diversion</b>	<b>126,159</b>	<b>145,889</b>	<b>514,742</b>	<b>0.8%</b>	<b>8.1%</b>	<b>8%</b>	<b>8%</b>	<b>29%</b>
Baseline	126,159	145,889	145,889					
New Programs	0	0	368,853					
<b>MSW</b>	<b>1,469,789</b>	<b>1,598,030</b>	<b>629,315</b>	<b>0.5%</b>	<b>-4.6%</b>	<b>89%</b>	<b>89%</b>	<b>35%</b>

Source: 2012 actuals from hauler facility reports. 2030 growth rates for baseline and new programs from Solid Waste Integrated Resources Plan Facilities Plan Environmental Impact Report. 2013.

The forecast as it applies to the alternatives is shown in Table 2-2. In all alternatives, the City would have the capability of mandating recycling and mandating provision of recycling to all commercial and multi-family customers. In Alternative 3, it is relatively likely that diversion of commingled recycling and organics would occur similar to that of the proposed project. In Alternatives 1 and 2, it is likely that diversion would occur more slowly because haulers would still be competing for customers daily, and they would have less certainty about long-term market share and likely be more cautious about developing new processing capacity. While it is possible that less diversion would be in place by 2030, for the purposes of this analysis it is assumed that diversion similar to the proposed project could be achieved by 2030 for these alternatives as well.

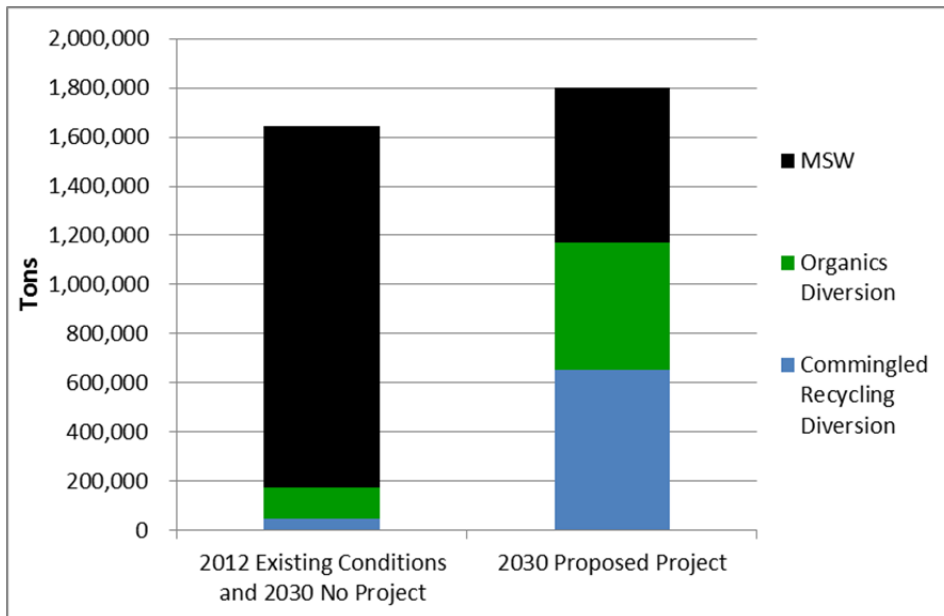


FIGURE 2-1  
Material Forecast, No Project and Proposed Project

TABLE 2-2  
Material Forecast Applicable to Alternatives

Alternative	Applicable Material Forecast
No Project	No Project
Proposed Project	Proposed Project
Alternative 1: Non-Exclusive System	Proposed Project
Alternative 2: Exclusive System With Multiple Haulers	Proposed Project
Alternative 3: City Collection	Proposed Project

## 2.2 VMT and VHT for Alternatives

Forecast VMT and VHT in for the existing conditions (2012) and the 2030 alternatives are shown in Table 2-3 and Figures 2-2 and 2-3. As shown, it is projected that the proposed project and Alternative 3 would result in a 13 percent increase in VMT and a 26 percent increase in VHT compared to existing conditions. Alternatives 1 and 2 would result in sizable increases in both VMT and VHT compared to existing conditions.

Compared to the no project alternative, the proposed project would result in a small reduction in VMT (2 percent) and a larger increase in VHT (10 percent).

TABLE 2-3  
Forecast 2030 VMT and VHT

Alternatives	2030 VMT	% Change	2030 VHT	% Change
2012 Existing Conditions	9,143,221		853,608	
2030 Alternatives				
No Project	10,488,034	15%	992,597	16%
Proposed Project	10,287,273	13%	1,073,843	26%
Alt 1. Non-Exclusive	16,107,380	76%	1,587,034	86%
Alt 2. Exclusive, Multiple Haulers	16,056,981	76%	1,582,618	85%
Alt 3. City Collection	10,287,273	13%	1,073,843	26%

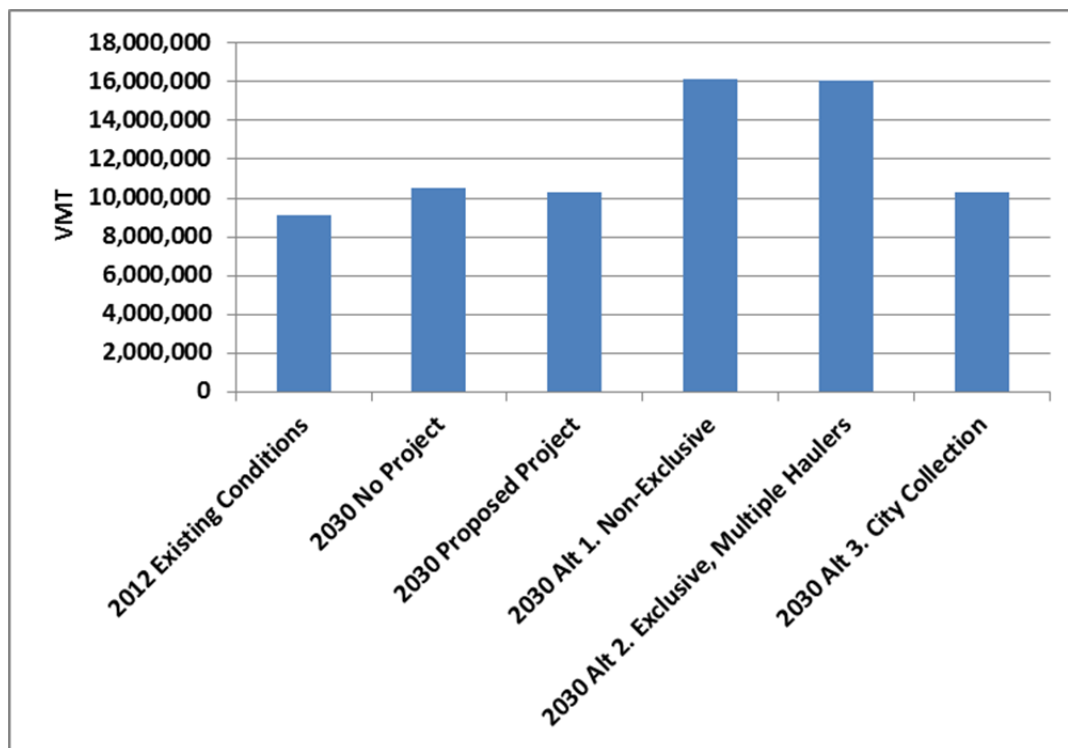


FIGURE 2-2  
VMT by Alternative

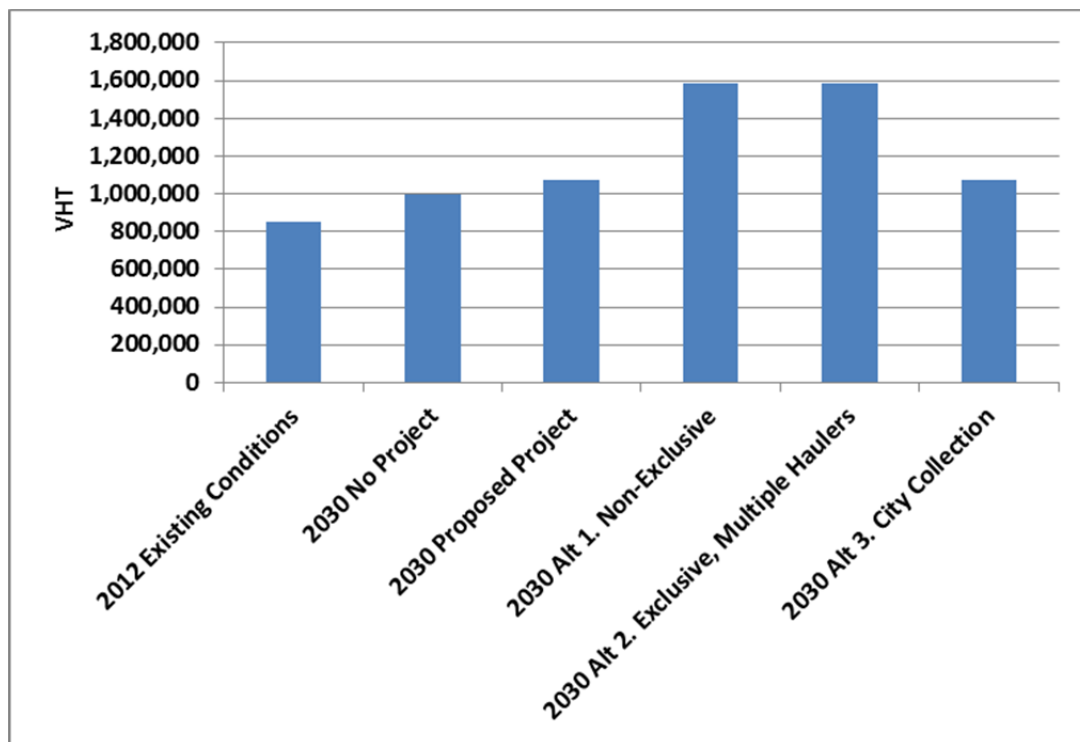


FIGURE 2-3  
VHT by Alternative

There are a series of factors that result in the changes in VMT and VHT between the alternatives compared to existing conditions:

- Historically, congestion has increased gradually through time and this trend is projected to continue in the future.
- The added diversion resulting from the proposed project (and Alternatives 1-3) requires more stops at customer premises for collection, and all things equal, more miles would be required to collect material compared to the existing conditions and the no project alternative.
- Under the proposed project, there would be a substantial reduction in the distance and time traveled between customer stops compared to existing conditions and the no project alternative, because only one hauler would operate in each franchise area. To a lesser extent this would also occur for the other alternatives.
- VHT increases more than VMT because VHT includes time spent collecting material at customer premises and unloading at disposal and processing facilities. While the driving distance and time would decrease in the proposed project and alternatives with fewer haulers collecting, the time spent at each premises collecting is unchanged. Thus, reducing the number of haulers would reduce miles traveled more than it would reduce time spent on collection routes.

Additional detail about the material collected by alternative, and VMT and VHT by material type is shown in Table 2-4.

TABLE 2-4  
**Tons of Materials, VMT, and VHT by Material Type and Alternative**

	MSW	Com-mingled Recycling	Organics (Food and Green Waste)	Total	MSW	Com-mingled Recycling	Organics (Food and Green Waste)	
	<b>2012 Existing Conditions</b>				<b>2030 No Project</b>			
Annual Tons	1,470,000	48,000	126,000	1,644,000	629,000	655,000	515,000	1,799,000
Annual VMT	7,784,000	530,000	830,000	9,143,000	8,790,000	659,000	1,039,000	10,488,000
Annual VHT	737,000	52,000	65,000	854,000	847,000	64,000	81,000	993,000
	<b>2030 Proposed Project</b>				<b>2030 Alt 1. Non-Exclusive System</b>			
Annual Tons	629,000	655,000	515,000	1,799,000	629,000	655,000	515,000	1,799,000
Annual VMT	3,007,000	4,755,000	2,526,000	10,287,000	3,621,000	8,533,000	3,953,000	16,107,000
Annual VHT	313,000	539,000	222,000	1,074,000	344,000	906,000	337,000	1,587,000
	<b>2030 Alt. 2 Exclusive System, Multiple Haulers</b>				<b>2030 Alt. 3, City Collection of All Materials</b>			
Annual Tons	629,000	655,000	515,000	1,799,000	629,000	655,000	515,000	1,799,000
Annual VMT	3,590,000	8,520,000	3,946,000	16,057,000	3,007,000	4,755,000	2,526,000	10,287,000
Annual VHT	343,000	904,000	336,000	1,583,000	313,000	539,000	222,000	1,074,000

### 3. Existing Material Collection System and Proposed Franchise Zones

#### 3.1 Collection Practices

Currently, solid waste and recyclables collection services in the City are handled both by Bureau of Sanitation (Sanitation) crews and by various permitted private solid waste collection companies, often referred to as haulers. The City provides solid waste collection, recycling, and green waste collection services primarily to single family properties and multi-family properties with four units or less. Some larger multi-family dwellings (five units or more) were “grandfathered” into public collection and will continue to receive City services under the proposed exclusive franchise system.

Private solid waste haulers currently collect materials from all large multifamily dwelling and commercial sites not collected by the City, based on an open permit system. At any given time, there are between 500 and 750 permitted private waste haulers providing some kind of waste hauling. Most of these permitted haulers are construction-related contractors who have permits to haul construction and demolition debris. Of the haulers operating in the City, approximately 140 are traditional haulers where waste transportation, or hauling, is their primary business. These permitted private haulers provide solid waste collection and disposal services to approximately 75,000 accounts, including large multi-family dwellings, office buildings, commercial buildings, stores and shops, shopping malls, hotels, institutions (such as hospitals and schools), sports and entertainment venues, and TV/movie studios.

The largest 15 haulers collect 97 percent of the solid waste, with the largest four haulers collecting 85 percent of the solid waste. Under the existing permit system, no single hauler has more than 40 percent of the waste hauling market share in the City.

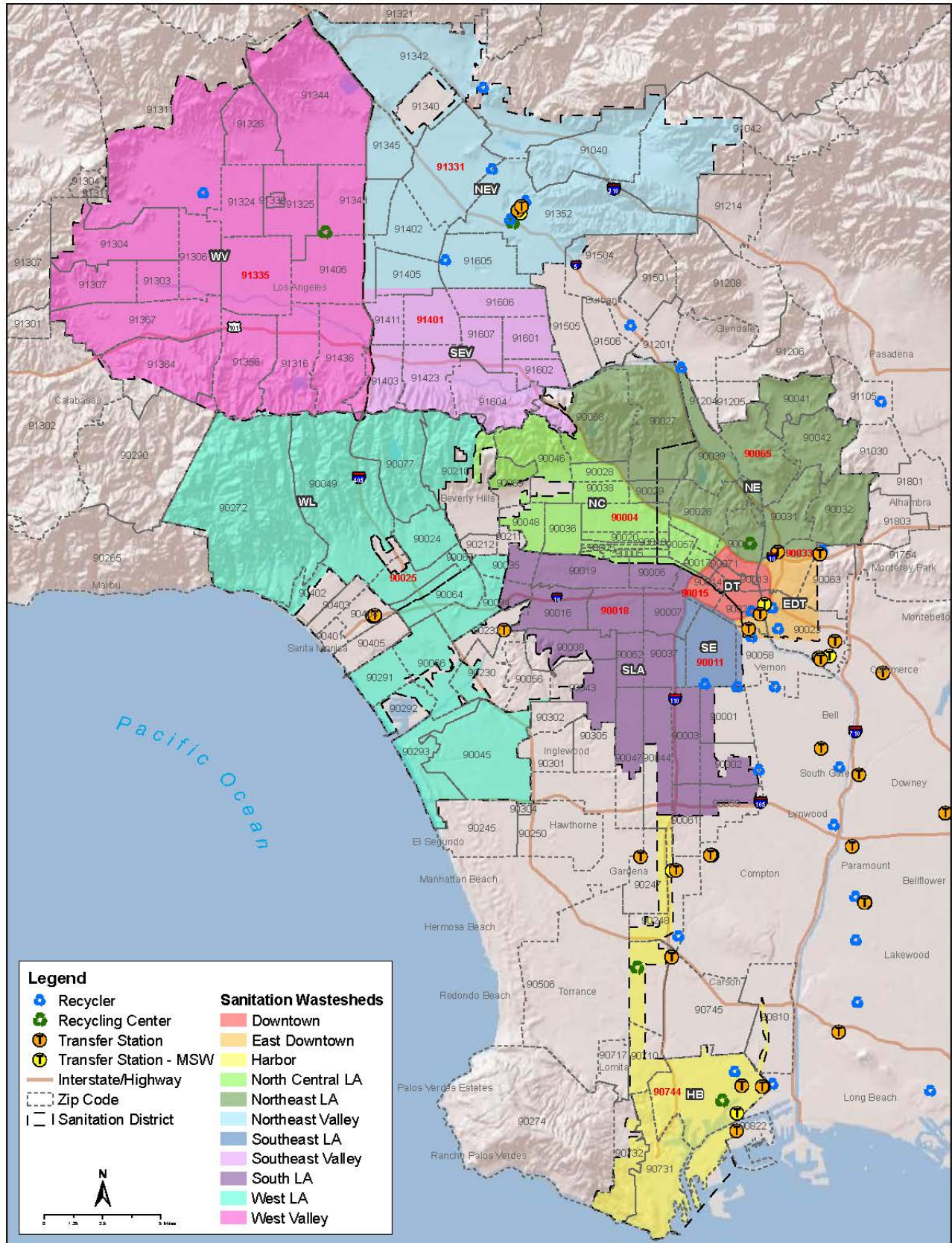
### 3.2 Proposed Franchise Zones

The proposed Project includes establishing eleven exclusive franchise zones within the City. The City is over 460 square miles in area and Sanitation estimates that there are about 75,000 existing commercial service locations (accounts) within the City. Sanitation developed 11 zones that range from 1,000 to nearly 13,000 accounts, utilizing existing Sanitation wasteshed boundaries, and using major geographical features to delineate boundaries. For example, the Santa Monica range that establishes the Valley area is used as the southern boundary of two of Sanitation's existing wastesheds. The San Pedro wasteshed was established considering the geographic nature of its location. Interstate 405 (I-405), the dividing line between the east and west Valley, divides the Valley into two sections. The current boundary between two of Sanitation's wastesheds closely tracks the I-405 freeway.

The franchise zones were developed to enable the City to meet its waste diversion goals, promote competition, help promote the City's goal of having uniform rates for each service level throughout the City, and allow for competition from smaller waste haulers, while balancing the cost of administering multiple contracts. A general description of the proposed franchise zones is provided in Table 3-1. A map with the proposed franchise zones is provided in Figure 3-1.

TABLE 3-1  
**Proposed Franchise Zones**

Proposed Franchise Zone		Primary Communities	Major Roadways
1	West Valley (WV)	Porter Ranch, Chatsworth, Granada Hills, Northridge, North Hills, Canoga Park, Reseda, Woodland Hills, Tarzana, Encino	SR 118, SR 27 (Topanga Canyon Road), I-405, U.S. 101
2	Northeast Valley (NEV)	Mission Hills, Sylmar, San Fernando, Pacoima, Panorama City, Sun Valley, Shadow Hills, Sunland, Tujunga	I-210, I-5, SR 170
3	Southeast Valley (SEV)	Van Nuys, North Hollywood, Studio City	SR 170, SR 134
4	West LA (WL)	Pacific Palisades, Brentwood, Westwood, Bel Air	I-405, I-10, SR 1, SR 2 (Santa Monica Blvd.), SR 90, SR 42
5	North Central LA (NC)	West Hollywood, Los Angeles	U.S. 101, SR 2 (Santa Monica Blvd.)
6	Northeast LA (NE)	Los Angeles	I-5, I-110, U.S. 101, SR 134
7	South LA (SLA)	Los Angeles	I-110, I-10, I-105
8	Harbor (HB)	Harbor City, San Pedro	I-110, I-405, SR 91, SR 47, SR 103, SR 213 (S. Western Ave.), SR 1
9	Downtown (DT)	Los Angeles	I-110, U.S. 101, I-10, I-5
10	East Downtown (EDT)	Los Angeles	SR 60, I-5, U.S. 101
11	Southeast LA (SE)	Los Angeles	SR 110, I-10



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FIGURE 3-1  
Proposed Franchise Zones with Zip Code Centroids



The City's proposed waste franchise system would exclude a number of materials. Current plans are that the following material types would be exempt or specifically excluded from the system:

- Medical waste.
- Hazardous waste (including electronic, or E-waste).
- Radioactive waste.
- Pharmaceutical waste.
- Construction and Demolition Debris.
- Recyclables that have value to the generator, and are sold or donated.
- Green waste removed from a site as incidental to a landscaping business, provided that the landscaping business documents the locations where green waste is recycled.
- Other specialty waste as designated by the Bureau of Sanitation (e.g., biosolids, fats, oils, and grease, etc.).

Typically, these materials are not included or are specifically excluded by regulation from MSW delivered to disposal facilities as MSW, and therefore, are not included in the VMT and VHT estimates in this evaluation.

### 3.3 Hauler Yards and Disposal Facilities, and Franchise Zone Centroids

A basic understanding of hauler route characteristics is important for estimating VMT and VHT. Haulers seek to provide efficient service by establishing routes that each collection vehicle follows on a particular day of the week. As shown in Figure 3-2, a typical route begins at a base yard (where the vehicle is parked overnight), includes a series of stops at multi-family or commercial customers, one or more trips to a disposal facility to unload, then concludes back at the base yard. Figure 3-2 shows a typical route truck day where a hauler takes two loads to a disposal facility (collected in areas R1a and R1b).

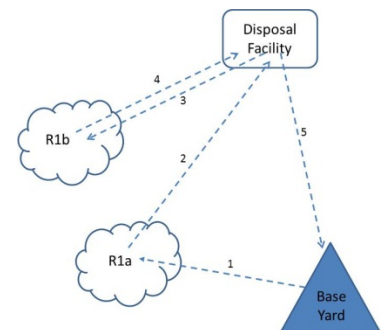


FIGURE 3-2  
Route Schematic

The location of the base yards and disposal facilities used by haulers is an important consideration for preparing the VMT and VHT estimates. Another important consideration is the location of service provided throughout the City. One zip code within each franchise zone was selected to represent the "centroid" of collection for that zone. The zip codes selected as centroids for each franchise zone are denoted in red in Figure 3-1.

### 3.4 Regional Road Network

Within the City limits, there are approximately 6,500 miles of dedicated public streets, approximately 180 miles of freeway, and roughly 4,400 signalized intersections. The major freeway routes through Los Angeles providing interstate and regional connections are I-5 (north to Sacramento and south to San Diego), I-405 (south to Orange County), US Highway 101 (north to Santa Barbara), I-710 (south to Long Beach), I and SR-110 (south to the Los Angeles Harbor and north to Pasadena), I-210 (through the northeast section of the Valley) SR-118 (from I-5 in the north Valley west to Simi Valley), and I-10 (west to Santa Monica and east to San Bernardino and beyond).

In addition to the freeways above, the following freeways traverse the region:

- SR 2 (Glendale Freeway)
- SR 14 (Antelope Valley Freeway)
- SR 47 (Seaside Freeway)
- SR 60 (Pomona Freeway)
- SR 90 (Marina Freeway)
- SR 91 (Gardena Freeway)
- US Highway 101 (north to Santa Barbara)

- SR 170 (Hollywood Freeway)
- SR 134 (Ventura Freeway)
- SR 103 (Terminal Island Freeway)
- I-105 (Century Freeway)

Other state highways of Los Angeles include:

- SR 1 (Pacific Coast Highway/Lincoln Boulevard)
- SR 2 (Santa Monica Boulevard)
- SR 23 (Decker Canyon Road)
- SR 27 (Topanga Canyon Boulevard)
- SR 47 (Alameda Street)
- SR 90 (Slauson Avenue)
- SR 170 (Highland Avenue)
- SR 187 (Venice Boulevard)

The City has an extensive street grid. Arterial streets connect freeways with smaller neighborhood streets and are often used to bypass congested freeway routes.

## 4. Approach for Existing Conditions VMT and VHT Estimates

This section provides an overview of the approach used to prepare VMT and VHT estimates for the existing conditions.

### 4.1 Data Sources

The following information served as the basic data for estimating VMT and VHT:

- 2012 MSW disposal (in tons) by facility for each hauler. This information is reported to the state by haulers upon delivery at facilities, and compiled and organized by Sanitation staff.
- 2012 service levels (in cubic yards (cy)/week) by address, as reported by haulers to the City. Service levels were then aggregated to each of the 11 franchise zones by summing service by zip code and using the area of each zip code within each franchise zone provided by Sanitation staff to aggregate service levels by zip code into franchise zones.
- The results of a hauler questionnaire that was sent to the ten largest haulers that provided 2011 service level information (the initial work on preparing VMT and VHT estimates was begun prior to receiving 2012 data). Results were received from a mix of relatively large and small haulers in the City: the haulers that responded collect 76 percent of the MSW collected in the City. The information used includes average tons per load, average trips to disposal facility per day, average number of days per week collection, and the number of vehicles typically dispatched from each base yard used to provide service to customers in the City.
- The results of a truck survey conducted in June 2013 that consisted of a two-person crew following a route collection vehicle from the start of the route to the end of the route. Six survey days were used to follow trucks from a relatively large hauler (three each day from two base yards), and two days each were used to follow trucks from relatively smaller haulers. The survey results include on-route and off-route distances and times, number of stops per route, and distances and times between on-route stops. On-route means travel between collection stops and time spent at a location servicing a customer. Off-route means travel where one end or both ends of a trip is a base yard or disposal facility.
- Off-peak and peak distances and travel times among franchise zone centroids, hauler base yards and disposal facilities used by those haulers (for the ten largest haulers that provided 2011 service level information) were calculated using Google Earth and Google Maps. Google Earth was used for off-peak period distance and travel time between an origin and destination pair. Google Maps was used to develop current condition (peak) estimates of travel times for a sample of origin and destination pairs.



## 4.2 Route Trucks and Rolloffs

Estimates of VMT and VHT were developed separately for two types of trucks used to collect MSW: route trucks and rolloff trucks.

- Route trucks (Figure 4-1) are typically front loading vehicles that collect materials from many one- to eight-cubic yard containers along a defined route. Route trucks typically unload at a disposal facility one to three times per day.
- Rolloff trucks (Figure 4-2) collect larger containers (eight to 50 cubic yards) by providing a customer with a new empty container, then taking the full container to a disposal facility. These trucks typically unload at a disposal facility four to eight times per day.



FIGURE 4-1  
**Example Route Truck (Front-End Load)**



FIGURE 4-2  
**Example Rolloff Truck**

As shown in Figure 3-2, a typical route with two unloading stops will include five “off-route” segments and two “on-route” segments. In this analysis, VMT and VHT are estimated separately for off-route and on-route segments. Rolloff trucks will typically stop at four to eight customer locations daily, and the bin is unloaded after each stop. Thus, there is no “on route” segment for a rolloff truck, just multiple segments between franchise zones and disposal facilities, an initial segment from the base yard to the first customer, and a segment from a disposal facility back to the base yard at the end of the day.

## 4.3 Geographic Boundaries

Currently, there are no geographic boundaries that determine where haulers can or cannot provide service, and all haulers that serve customers in the City also have customers located outside the City limits. Haulers establish routes to minimize the cost of service to customers in a cost-effective manner in competition with other haulers. Thus, not only do hauler vehicles serve customers both inside and outside the City limits, a single collection route (route truck or rolloff) may have customers both inside and outside the City limits. For example, in Figure 3-2, routes R1a and R1b could include customers both inside and outside the City limits, and the base yard and/or disposal facility could be inside or outside the City limits. Because of these complications, some allocation method is needed to estimate VMT and VHT associated with collecting material within the City that will be part of the new franchise system.

Another factor that should be considered is that vehicles dispatched from the base yards of larger haulers tend to serve a higher proportion of City customers than do those of the smaller haulers. Questionnaire responses and MSW disposal data indicate that larger haulers use in the range of 60 to 70 percent of vehicle collection capacity for customers within the City versus customers outside the City. In comparison, some of the smaller haulers use an estimated 15 to 25 percent of vehicle collection capacity to collect from customers within the City. These distinctions among different haulers are incorporated in the methodology.

## 4.4 Approach to Estimating VMT and VHT

### 4.4.1 On-Route VMT and VHT

For the purposes of this analysis, on-route VMT and VHT were estimated using the results of the truck survey (see Section 5.3).

### 4.4.2 Off-Route VMT and VHT

Off-route VMT was estimated in five main steps:

1. The total number of trucks required to collect material from a hauler's customers within a City franchise zone each week was calculated by using that hauler's total annual MSW disposal, and information from the hauler questionnaire about its number of route trucks and rollofs, the number of tons per trip, number of trips per day to disposal facility, and days of week collection. This resulted in an estimated number of route trucks and rollofs required to collect MSW in the City daily.
2. The breakdown between route trucks and rollofs was calculated using information about the number of each type of truck at a hauler's base yard(s) and other statistics from the hauler questionnaire.
3. The geographic locations of the route segments (R1a and R1b in Figure 3-2) were determined on the basis of hauler-reported service levels within each franchise zone. The off-route VMT for a particular route is the sum of the five segments shown in Figure 3-2. The model allows for "partial loads" from zones with fewer than one load per day and the total miles of the five segments is reduced accordingly (i.e., if the model estimates half a load per day, only half the miles of the five segments are counted). This approach allows for an approximate match between the geographic spread of hauler accounts and flows of material between franchise zones and disposal facilities.

As an example of this approach, assume a hauler dispatches six trucks each day of the week to four franchise zones with service level proportions of 10%, 20%, 20%, and 50%. The number of trips per day to each franchise zone is then six times those proportions (0.6, 1.2, 1.2, and 3.0), and these load estimates are multiplied by the appropriate mileages for the five segments of Figure 3-2.

4. The specific segments traveled to serve a hauler's franchise zones were determined using a linear optimization algorithm so that the specific segments to and from base yards, franchise zones, and disposal facilities are allocated in a manner that minimizes total VHT (i.e., using travel time rather than distance). In other words this approach ensures that off-route trips are sent between franchise zone centroids and disposal facilities in a manner that minimizes travel time, which is a key efficiency objective for waste haulers.

The resulting off-route VMT is effectively a VHT-optimized weighted average of the service provided by haulers in each franchise zone. This approach was used for the eight haulers that responded to the questionnaire. Those results were used to estimate VMT and VHT for other haulers by using VMT per ton for haulers of similar size.

5. Two adjustments were made to the modeled results to improve accuracy:
  - a. The modeled VMT estimates are substantially greater than the off-route VMT results from the truck survey. Accordingly, model results were adjusted downward to account for various factors that may result in modeled estimates being greater than what haulers actually experience. See Section 5.4.2 for further discussion about the basis for and the mechanics of this adjustment.
  - b. The model results indicate that larger haulers typically require more than one route truck per day to serve accounts within the boundaries of a proposed franchise zone, whereas many smaller haulers require less than one route truck per day in many zones. As noted in 3. above, the model counts "partial VMT/VHT" for partial loads. In many cases this is a reasonable approximation because haulers will organize routes throughout the week to accommodate differing collection frequencies (e.g., M,T,W or M,F) and will collect from multiple zones when needed to minimize trips to a disposal facility. However, there are many small haulers (including many haulers smaller than those that responded to the questionnaire) that collect less than a full load of material in the City over the course of a collection week. This will result in routes

combined with customers outside the City and/or partial loads to disposal facilities. Thus, a “small hauler adjustment” was made to the modeled results. See Section 5.4.3 for more discussion about this adjustment.

Off-route VHT was estimated by multiplying VMT times the reciprocal of the average off-route travel speed calculated from the truck survey.

## 5. 2012 VMT and VHT Methods and Results

As described in Section 3, VMT and VHT are estimated separately for on-route trips and off-route trips. Estimates are first prepared for MSW. The resulting VMT per ton and VHT per ton estimates are used to estimate results for recycling and organics. Two main methods were used to estimate VMT and VHT: the model, developed in Microsoft Excel, and the results of the truck survey.

A detailed description of the methodology used to estimate off-route and on-route VMT and VHT for collecting MSW follows. It is described in the following sections:

- Estimating number of route trucks and rollofs required for MSW collection
- Modeled off-route VMT and VHT estimates
- Truck survey results: off-route and on-route VMT and VHT estimates
- Comparison of the modeled results and the truck survey results
- Method used to estimate VMT and VHT

The estimates are first prepared for MSW using 2012 data, and those results are used to estimate VMT and VHT for commingled recyclables and organics. The 2012 results are extrapolated to the first year of the proposed Project (2017).

### 5.1 Estimated Number of Route and Rolloff Trucks for MSW Collection

A central aspect of the methodology is estimating the number of route trucks and rolloff trucks needed to collect multi-family/commercial MSW in the City on a typical collection day. The calculations used to estimate the number of trucks are described for the example hauler in Table 5-1.

TABLE 5-1

**Calculation of Number of Trucks Required to Collect MSW for Example Hauler**

1	Reported tons per year	157,000
2	Reported service (cubic yards (cy) per week)	60,400
3	Calculated pounds (lbs) per cy container space	100
4	Collection days per week	6.0
5	Reported route truck data	
6	Average payload (tons per truck per load)	10.0
7	Average trips to disposal facility per truck per day	2.0
8	Tons collected daily	20.0
9	Estimated rolloff data	
10	Average payload (tons per truck per load)	4.0
11	Average trips to disposal facility per truck per day	6.0
12	Tons collected daily	24.0
13	Reported trucks used on a typical day	
14	MSW route	38
15	MSW rolloff	5
16	C&D	23
17	Recycling	2
18	Organics	3
19	Calculated MSW route truck collection	
20	% of total	86%
21	MSW collected daily (tons)	433
22	Daily trucks	21.7
23	Calculated MSW rolloff truck collection	
24	% of total	14%

TABLE 5-1

**Calculation of Number of Trucks Required to Collect MSW for Example Hauler**

25	MSW collected daily (tons)	68.4
26	No. of trucks daily	2.9
27	Calculated total trucks per day MSW for City	24.5
28	City percent of total MSW trucks	57%

The data sources and calculations shown in Table 5-1 are:

- **Annual Tons.** Line 1 is an example of 2012 tons of MSW as reported from disposal facility records.
- **Weekly Service Level (cy/wk).** Line 2 is an example of 2012 weekly service volumes as reported by haulers as part of their permit applications.
- **Lbs/cy Container Space.** Line 3 is calculated as Line 1 \* 2000 / Line 2 and represents the pounds (lbs) per cy of container space.
- **Collection Days/Week, route truck average payload and trips per day to disposal facility per truck.** Lines 4-7 are an example of information reported in the hauler questionnaire.
- **Tons per Route Truck per day.** Line 8 is the average daily weight collected by a route truck for each firm, in tons, calculated as Line 6 \* Line 7.
- **Rolloff average payload and trips per day to disposal facility per truck.** Lines 10-11 are estimates of hauler average payloads (net weights per delivery), and the average number of trips to a disposal facility by rolloff trucks. This information was not requested from haulers. A 10-day sample of MSW rollofs delivered to the Central Los Angeles Recycling and Transfer Station (CLARTS) resulted in an average payload of 4.2 tons. One hauler reported that its rollofs typically make 4 to 8 trips to disposal per day. Considering most haulers reported that their routes are 10 to 11 hours per day, and the amount of time typically needed to go back and forth to disposal facilities, 6 rolloff trips per collection day was used as the assumed average.
- **Tons per Route Truck per Day.** Line 12 is Line 10 \* Line 11.
- **Trucks Dispatched Daily.** Lines 13 to 18 are the number of trucks dispatched daily by this hauler. These trucks serve customers both inside the City and outside the City of Los Angeles.
- **Route Trucks Percent of Total MSW Trucks.** Line 20 calculates the percent of MSW trucks that are route trucks (versus rollofs). It uses the hauler reported mix of route trucks versus rollofs and the calculated MSW per truck type per day, as follows:
  - $(\text{Line 14} * \text{Line 8}) / ((\text{Line 14} * \text{Line 8}) + (\text{Line 15} * \text{Line 12}))$
- **Daily City of LA MSW collected by route trucks.** Line 21 is Line 20 \* Line 1 / (365/7 weeks \* Line 4)
- **No. of MSW Route Trucks per Day.** Line 22 is Line 21 / Line 8
- **Rolloff Trucks Percent of Total MSW Trucks.** Line 24 is 1 – Line 20
- **Daily City of LA MSW collected by rolloff trucks** Line 25 is Line 24 \* Line 1 / (365/7 weeks \* Line 4)
- **No. of MSW Rolloff Trucks per Day** Line 26 is Line 25 / Line 12
- **Total MSW Trucks Used to Collect City of LA MSW Daily.** Line 27 is Line 22 + Line 26
- **City of LA MSW Trucks as Percent of Total Trucks Dispatched.** Line 28 is Line 27 / (Line 14 + Line 15)

Note that the number of route trucks and rolloff trucks are shown as decimals. The number of trucks is used in subsequent calculations in a “non-rounded” form to more accurately represent mileages traveled over the course of a year to reflect differences in customer service levels throughout a week (e.g., once per week, twice a week, daily) and routes that go inside and outside the City limits.

## 5.2 Modeled Off-Route VMT and VHT Estimates

This section illustrates the model methodology used to estimate off-route VMT and VHT estimates for MSW by showing how those estimates were calculated for an “example hauler” using actual facility locations and example cubic yards, tons, and collection metrics.

### Allocating Trucks to Franchise Zones

After calculating the number of rolloff and route trucks needed daily and weekly, those trucks are allocated to franchise zones on the basis of the weekly number of services in each zone. This allocation is shown for the example hauler in Table 5-2. The service per week is self-reported by haulers. The split of service volume into route trucks and rollofs and the conversion from weekly service volumes to daily service is calculated as described above in Table 5-1.

TABLE 5-2

**Allocation of Trucks to Franchise Zones for Example Hauler**

Franchise Zones	Service cy/wk	cy per day	Route Truck Cy/day	Rolloff CY/day	Route Trucks per Day	MSW Rolloff Trucks per Day
DT	25	4	4	1	0.0	0.0
EDT	0	0	0	0	0.0	0.0
HB	5	1	1	0	0.0	0.0
NC	700	117	101	16	0.3	0.0
NE	500	83	72	11	0.2	0.0
NEV	31,000	5,167	4,462	705	11.2	1.5
SE	0	0	0	0	0.0	0.0
SEV	14,100	2,350	2,030	320	5.1	0.7
SLA	70	12	10	2	0.0	0.0
WL	1,500	250	216	34	0.5	0.1
WV	12,500	2,083	1,799	284	4.5	0.6
Total	60,400	10,067	8,694	1,373	21.7	2.9
Collection Days per week					6.0	6.0
Trips to Disposal Facility Daily					2.0	6.0

### 5.2.2 Distance and Travel Time Estimates for Origin and Destination Pairs

Off-peak and peak distances and travel times were developed for the following origin and destination pairs for the 10 largest haulers that provided 2011 service level information:

- Collection firm base yards to franchise zone centroids
- Franchise zone centroids to franchise zone centroids
- Franchise zone centroids to disposal facilities
- Disposal facilities to collection firm base yards

These origin/destination pairs represent the main off-route trips taken by haulers during the course of a typical collection day (plus centroid to centroid travel which was obtained as a cross-check for on-route distance and time estimates). The resulting off-peak travel distance and travel time estimates are shown in Appendix Tables A-6 to A-9.

Travel distances and times between these origin and destination pairs were estimated using Google Earth and Google Maps. Google Earth provided the off-peak period distance and travel time between an origin and destination pair. Google Maps provided off-peak and current condition (peak) estimate of distance and travel time for a sample of origin and destination pairs. The sample results were used to estimate a travel time adjustment factor that was applied to the off-peak travel times to account for congestion during the course of the day for all origin and destination pairs. Specifics on the technical details for the distance and travel time estimates are provided in Sections 5.2.2.1 to 5.2.2.2.

### 5.2.2.1 Off-Peak Distance and Travel Estimation

Google Earth was used to obtain the off-peak distances and travel times among the franchise zone centroids, collection firm base yards and disposal facilities. Google Earth “Get Direction” tool is used to obtain the distance and travel time between an origin and destination pair. Addresses are entered in Google Earth interface and Google Earth returns the off-peak (free flow) distance and travel times as shown in Figure 5-1.

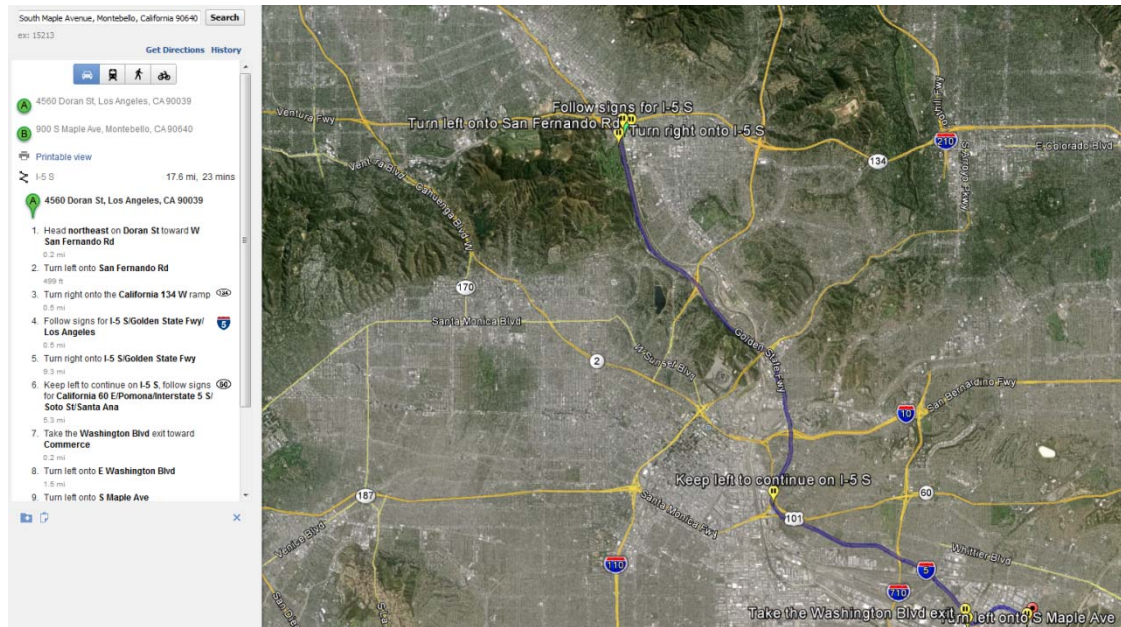


FIGURE 5-1  
Google Earth Interface

The results of that analysis was a series of matrixes showing distances and off-peak travel times for the four sets of origin-destination pairs listed above for the ten haulers.

### 5.2.2.2 Peak (Congested) Distance and Travel Estimation

Google Maps was used to obtain peak (congested) travel times, by entering the addresses of origins and destinations into the Google Maps interface. Google Maps returns the off-peak and current condition distance and travel times as shown in Figure 5-2.

To assess the average difference in off-peak and peak travel time between origins and destinations, 150 origin and destination pairs were randomly selected from the following:

- Franchise zone centroids to collection firm base yards
- Franchise zone centroids to franchise zone centroids
- Franchise zone centroids to disposal facilities
- Disposal facilities to collection firm base yards

To ensure the peak (congested) travel times are truly represented, travel times were collected between 8 and 9 AM to represent the AM peak, and between 4 and 5 PM to represent the PM peak for all 150 origin-destination pairs. The relationship between the peak and off-peak travel times is estimated using the following equation:

$$\text{Peak (Congested) Travel Time} = M * \text{Off-peak (Free Flow) Travel Times}$$

The coefficient “M” provides the factor to convert off-peak peak travel time to peak travel time. The LINEST function of Microsoft Excel<sup>1</sup> is used to estimate the factor M. The analysis was performed for AM, PM and

<sup>1</sup> This function uses ordinary least squares regression to estimate the parameters of a line that best fits a set of data.



combined AM /PM data sets. A scatter plot comparison of off-peak and peak travel times at different speeds is shown for the AM peak in Figure 5-3, and for the PM peak in Figure 5-4.

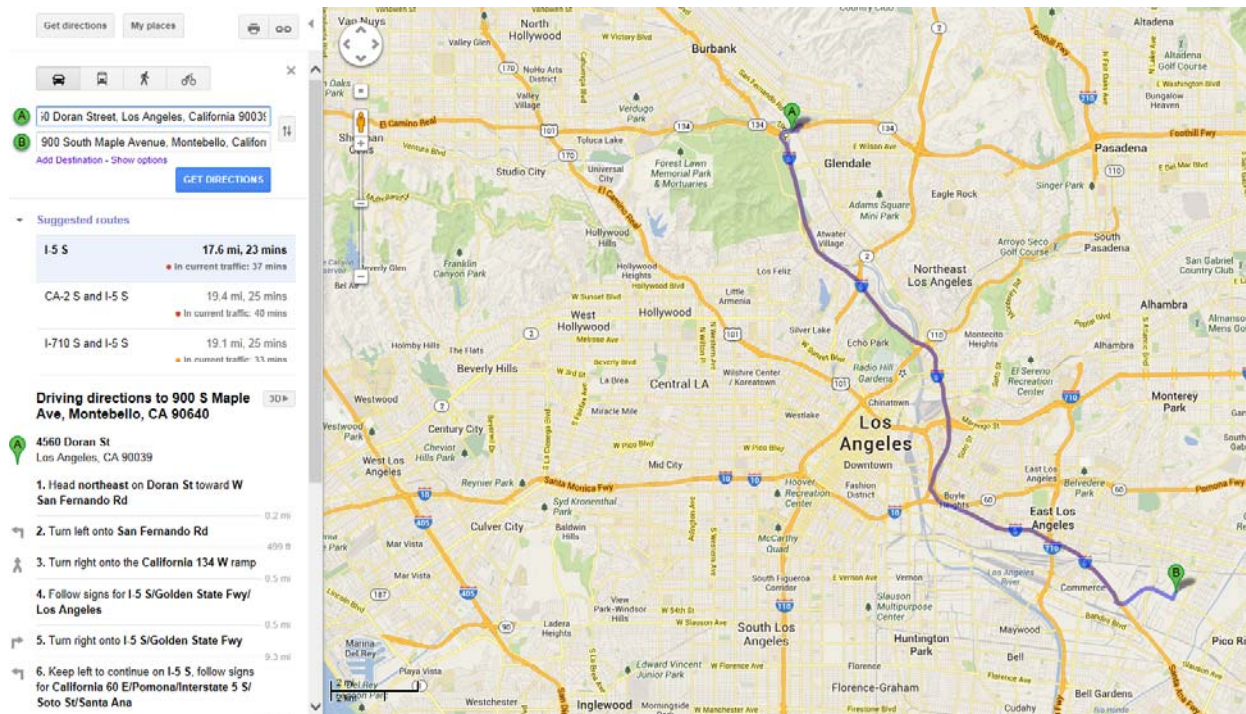


FIGURE 5-2  
Google Maps Interface

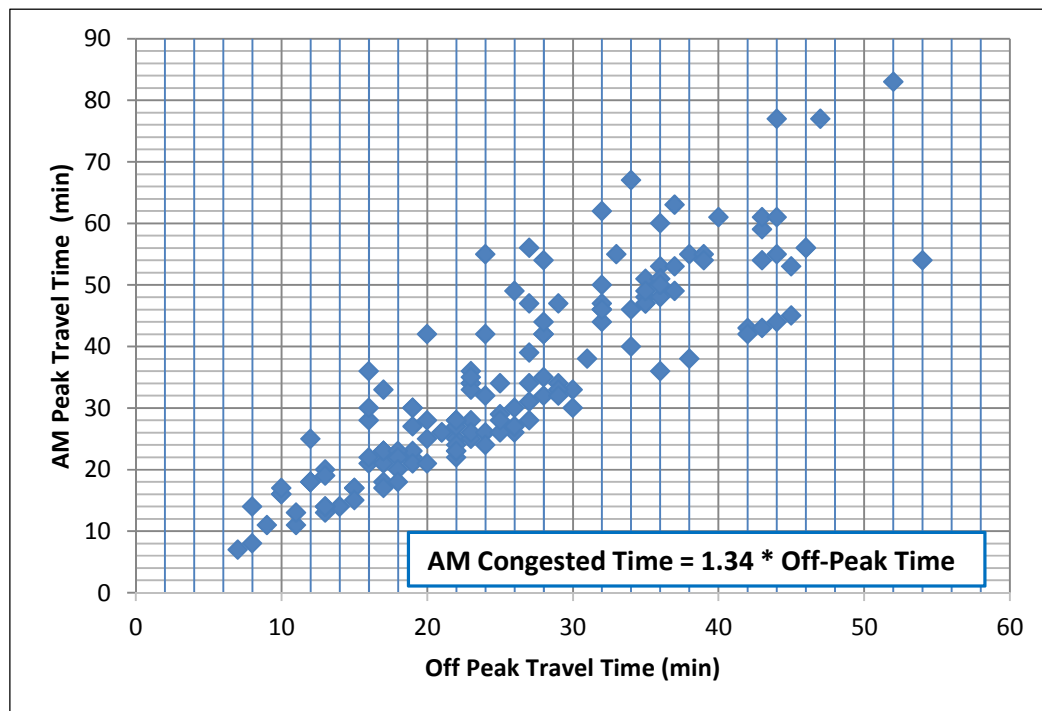


FIGURE 5-3  
Off-Peak vs. AM Peak Travel Times

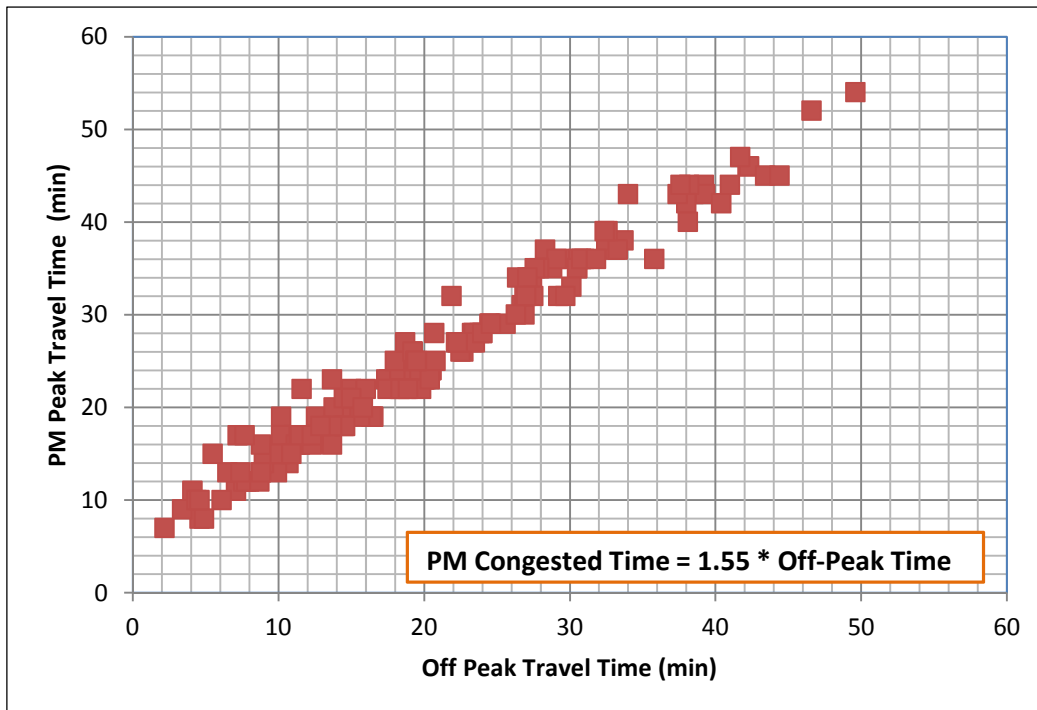


FIGURE 5-4  
Off-Peak vs. PM Peak Travel Times

#### 5.2.2.3 Travel Time Adjustment Factor

Travel time matrices were developed for the relevant off-route origins and destinations of the 10 haulers. The travel times in those matrices are off-peak estimates for the complete set of origin-destination data, and a sample (150 data points) was used to determine the ratio of peak period to off-peak travel times. These data were also obtained using Google Map estimates, but they were only calculated for the AM and PM peak hours. Many of the off-route trips taken by haulers occur during the true off-peak periods (e.g., 2 AM), when true off-peak travel conditions typically occur. A few trips occur during the AM or PM peak hours, when the peak adjustment factors described above (1.34 and 1.55) should be applied. However, some trips occur during the "shoulder" hours (near the peak hours), when neither the off-peak (1.0) nor peak factors are appropriate.

To develop a more accurate estimate of the travel time adjustment factors, the actual times of off-route trips taken during the 10-day truck surveys were used to develop a travel time adjustment factor that is applied to all off-route travel times. In Table 5-3, shoulder hour adjustment factors were estimated for individual trips (e.g., 2:30 PM) by interpolating between the off-peak and peak factors. Then, the average of the factors was calculated, considering the range of times for hauler trips in the table. The resulting average (1.17) was multiplied by all of the off-route, non-peak travel times in the travel time matrixes. The resulting times, referred to as adjusted travel times, were used in all VHT calculations, and in the off-route optimization algorithm (see Section 5.2.3.7). Adjusted travel times are provided in Tables A-10 and A-11.

#### 5.2.2.4 Centroid Adjustment Factor

One additional adjustment was applied to the off-route distance and time matrixes for franchise zones. The VMT and VHT calculations assume that off-route trips in franchise zones go to and from the geographical center of a "centroid" zip code. However, haulers seeking to minimize off-route travel will try to create routes that start near the location they come from and end near the destination they are traveling to (such as a disposal facility). Thus, using centroids will tend to overstate distances and times.



TABLE 5-3

**Travel Time Adjustment Factor**

Time	Description	TT Factor
2:00 AM	Off-peak	1
2:00 AM	Off-peak	1
4:00 AM	Off-peak	1
4:00 AM	Off-peak	1
5:00 AM	Off-peak	1
5:00 AM	Off-peak	1
5:00 AM	Off-peak	1
5:00 AM	Off-peak	1
5:30 AM	Off-peak	1
5:30 AM	Off-peak	1
5:30 AM	Off-peak	1
7:00 AM	AM Peak Shoulder	1.2
7:30 AM	AM Peak	1.34
9:00 AM	AM Peak Shoulder	1.2
10:00 AM	Mid-day	1.1
10:30 AM	Mid-day	1.1
10:30 AM	Mid-day	1.1
10:30 AM	Mid-day	1.1
10:30 AM	Mid-day	1.1
11:30 AM	Mid-day	1.1
12:00 PM	Mid-day	1.1
1:30 PM	Mid-day	1.1
1:30 PM	Mid-day	1.1
2:30 PM	PM Peak Shoulder	1.3
2:30 PM	PM Peak Shoulder	1.3
3:45 PM	PM Peak	1.55
4:00 PM	PM Peak	1.55
4:00 PM	PM Peak	1.55
4:30 PM	PM Peak	1.55
5:30 PM	PM Peak	1.55
Average (Travel Time Adjustment Factor)		1.17

In response, the distance and time from relevant borders of each centroid were estimated using ArcGIS. An adjustment factor was developed for each franchise zone, calculated as 75 percent of the average distance from centroid to its borders. The information used to calculate the adjustment factor for travel distance is shown in Table 5-4. A similar factor was prepared for travel time. This adjustment factor was deducted from each trip made to or from a centroid.

### 5.2.3 Modeled Off-Route VMT for MSW Route Trucks and Rolloffs by Hauler

#### 5.2.3.1 Modeled Route Truck and Rolloff Trips Per Week

Table 5-5 shows the weekly number of route truck and rolloff trips from each franchise zone to a disposal facility for the example hauler. Weekly trips are calculated by multiplying the number of route trucks and rollofts required each collection day in each franchise zone (Table 5-2) by the number of collection days per week and the number of trips per day to a disposal facility for each type of truck using information sources and methods as documented in Section 5.1.

TABLE 5-4  
**Centroid Adjustment Factor**

Franchise Zone	Zip Code	Miles from Centroid to Franchise Zone Boundary					Adjustment Factor
		North	South <sup>a</sup>	West <sup>a</sup>	East	Average	
DT	90015	0.7	0.5	n.a.	1.2	0.8	0.6
EDT	90033	1.3	1.4	n.a.	0.9	1.2	0.9
HB	90744	2.0	n.a.	n.a.	2.8	2.4	1.8
NC	90004	0.6	0.6	n.a.	1.3	0.8	0.6
NE	90065	2.2	2.3	n.a.	1.0	1.8	1.4
NEV	91331	2.9	2.8	n.a.	2.3	2.7	2.0
SE	90011	2.0	1.5	n.a.	1.0	1.5	1.1
SEV	91401	1.3	1.2	n.a.	1.2	1.2	0.9
SLA	90018	1.0	1.0	n.a.	1.2	1.1	0.8
WL	90025	1.0	0.9	n.a.	2.2	1.4	1.0
WV	91335	1.7	1.7	1.5	1.5	1.6	1.2
Percent Adjustment							75%

<sup>a</sup>n.a. (not applicable) is designated when haulers are likely to make relatively few trips to or from disposal facilities or hauler base yards located in that direction from a franchise zone.

TABLE 5-5  
**Modeled Route Truck and Rolloff Trips per Week for Example Hauler**

Franchise Zone	Route Trucks per Day	Rolloff Trucks per Day	Route Trips per Week to Disposal Facility	Rolloff Trips per Week to Disposal Facility
DT	0.0	0.0	0.1	0.0
EDT	0.0	0.0	0.0	0.0
HB	0.0	0.0	0.0	0.0
NC	0.3	0.0	3.0	1.2
NE	0.2	0.0	2.2	0.9
NEV	11.2	1.5	133.8	52.8
SE	0.0	0.0	0.0	0.0
SEV	5.1	0.7	60.9	24.0
SLA	0.0	0.0	0.3	0.1
WL	0.5	0.1	6.5	2.6
WV	4.5	0.6	54.0	21.3
Total	21.7	2.9	260.8	102.9

### 5.2.3.2 Calculation of Route Truck Trips Per Week From Franchise Zones to Disposal Facilities

Table 5-6 shows estimated route truck trips per week from franchise zones to specific disposal facilities. As shown in Table 5-1, the example hauler delivered 157,000 tons per year of MSW for disposal. In the example, the MSW was delivered to three facilities as follows: 2,000 tons to Facility A, 45,000 tons to Facility B, and 110,000 tons to Facility C. The total number of trips to each disposal facility is assigned to franchise zones using a linear optimization algorithm (described in Section 5.2.3.7) in which tons are distributed from franchise zones to disposal facilities in a manner that minimizes total travel time.

As shown in Table 5-1, each route truck for the example hauler makes two off-route trips from franchise zones to a disposal facility to unload material.

TABLE 5-6  
**Route Truck Trips per Week to Disposal Facilities for  
 Example Hauler**

Franchise Zone	Disposal Facility A	Disposal Facility B	Disposal Facility C	Total Route Truck Trips per Week
DT	0.0	0.0	0.1	0.1
EDT	0.0	0.0	0.0	0.0
HB	0.0	0.0	0.0	0.0
NC	0.0	0.0	3.0	3.0
NE	0.0	0.0	2.2	2.2
NEV	0.0	17.6	116.2	133.8
SE	0.0	0.0	0.0	0.0
SEV	0.0	0.0	60.9	60.9
SLA	0.0	0.0	0.3	0.3
WL	0.0	6.5	0.0	6.5
WV	3.3	50.6	0.0	54.0
Total	3.3	74.7	182.7	260.8

### 5.2.3.3 Modeled Route Truck Trips Per Week From Disposal Facilities to Franchise Zones

With two route truck trips daily to unload at a disposal facility, there will be one trip back to a franchise zone to resume the collection route. After the second trip, the truck returns to the base yard at the end of the day. Thus, the number of route truck trips per week from disposal facilities to franchise zones is one half of number of trips shown in Table 5-6.

### 5.2.3.4 Modeled Route Truck Trips Per Week To and From Base Yards

As shown in Table 5-5, the example hauler makes 260.8 total route truck trips per week from franchise zones to disposal facilities. At the start of each collection day, it is assumed that those trucks travel from the base yard to those franchise zones. For example, there will be 54.0 trips per week from the base yard to franchise zone WV.

At the end of the day, the route trucks return from the disposal facilities to the base yard. As shown in Table 5-5, there will be 3.3 trips from Disposal Facility A, 74.7 trips from Disposal Facility B, and 182.7 trips from Disposal Facility C.

### 5.2.3.5 Calculation of Rolloff Truck Trips per Week

Table 5-7 shows estimated route truck trips per week from franchise zones to specific disposal facilities. Total rolloff truck trips per week for the example hauler are as shown in Table 5-5. As described in Section 5.1, it is assumed that each rolloff truck makes six trips to a disposal facility daily. Thus, each rolloff truck returns from disposal facility to a franchise zone five times per day, and the sixth trip is made from the disposal facility to the base yard. Thus, 5/6 of the trips shown in Table 5-7 are added to represent trips back to franchise zones.

One-sixth of the total trips to each disposal facility shown in Table 5-7 are added to account for trips from the disposal facility totals back to the base yard.

One-sixth of the number of trips shown in Table 5-7 from each franchise zone are added to account from trips from the base yard to each franchise zone at the start of each day.

TABLE 5-7  
**Modeled Rolloff Truck Trips per Week to Disposal Facilities  
for Example Hauler**

Franchise Zone	Disposal Facility A	Disposal Facility B	Disposal Facility C	Total Rolloff Truck Trips per Week
DT	0.0	0.0	0.0	0.0
EDT	0.0	0.0	0.0	0.0
HB	0.0	0.0	0.0	0.0
NC	0.0	0.0	1.2	1.2
NE	0.0	0.0	0.9	0.9
NEV	0.0	7.0	45.9	52.8
SE	0.0	0.0	0.0	0.0
SEV	0.0	0.0	24.0	24.0
SLA	0.0	0.0	0.1	0.1
WL	0.0	2.6	0.0	2.6
WV	1.3	20.0	0.0	21.3
Total	1.3	29.5	72.1	102.9

### 5.2.3.6 Lookup Tables Used To Associate Distances and Times With Each Trip

Lookup tables that query the travel time and distance matrixes described in Section 5.2.2.1 and 5.2.2.2 are used to associate the relevant time and distance with the location of each origin and destination. The travel distances used for the example hauler are shown in Table 5-8.

TABLE 5-8  
**Relevant Travel Distances for Example Hauler  
(one-way miles)**

Franchise zone	Disposal Facility A	Disposal Facility B	Disposal Facility C	Base Yard
DT	38	44	25	19
EDT	36	42	23	17
HB	52	61	44	37
NC	35	41	26	15
NE	34	38	18	14
NEV	28	23	11	21
SE	42	48	28	32
SEV	22	30	20	29
SLA	36	46	29	22
WL	27	37	28	23
WV	18	34	26	33
Base Yard	32	24	0	n.a.

The results shown in Table 5-8 are for trips to and from route centroids. In practice, haulers optimize routes to minimize off-route time (for example, they'll try to leave the "edge" of a franchise zone rather than the center when going to a disposal facility located outside that zone). As discussed above in Table 5-4, to help adjust for these effects a GIS analysis was conducted to estimate the average number of miles from route centroids to relevant zone borders (three or four depending on geography), and 75 percent of the average of this trip length was subtracted from all mileages in the model which averaged about one mile per trip length from a franchise zone.

### 5.2.3.7 Modeled Trips from Franchise Zones to Disposal Facilities

There are multiple possible disposal facilities that could serve as the destination for a trip that originates from a particular franchise zone. The disposal facilities used by each hauler are known (as shown in Table A-1). Once a set

of disposal facilities is defined, it was assumed that trips would flow from franchise zones to disposal facilities in a manner that minimizes overall travel time. However, with multiple trips from multiple franchise zones to multiple facilities minimizing travel time is complex.

As noted in Section 5.2.3.2, a linear optimization algorithm was used to minimize travel time. This was accomplished using the simplex linear programming option in Microsoft Excel's Solver add-in. Solver was set up to distribute trips from franchise zones to disposal facilities in a manner that minimizes total ton minutes (tons x minutes). The solver requires establishing an objective, a set of variables, and a set of constraints. For this problem, they were defined as follows:

- **Objective:** Minimize total ton-minutes. Total ton-minutes are the weekly tons transported from each franchise zone to one or more facilities times the one-way minutes from that zone to each disposal facility, summed over all franchise zones.
- **Variables:** A matrix of weekly tons from the 11 franchise zones to the disposal facilities used by a particular hauler. These cells are varied by the Solver add-in using the optimization algorithm to achieve the objective subject to the set of constraints.
- **Constraints:** A series of formulas was established to ensure the variable matrix of tons results in the total appropriate number of trips from each franchise zone, and the appropriate number of tons to each disposal facility.

The resulting optimization is used to assign tons from each franchise zone to each disposal facility, as shown in Table 5-9. These percentages are also used as the basis for assigning truck trips to each disposal facility from the franchise zones where they originate.

TABLE 5-9  
**Assignment of Truck Trips and Tons from Franchise Zones to Disposal Facilities for Example Hauler**

Franchise Zone	Disposal Facility A	Disposal Facility B	Disposal Facility C
DT	0.0%	0.0%	0.1%
EDT	0.0%	0.0%	0.0%
HB	0.0%	0.0%	0.0%
NC	0.0%	0.0%	1.7%
NE	0.0%	0.0%	1.2%
NEV	0.0%	23.6%	63.6%
SE	0.0%	0.0%	0.0%
SEV	0.0%	0.0%	33.3%
SLA	0.0%	0.0%	0.2%
WL	0.0%	8.7%	0.0%
WV	100.0%	67.8%	0.0%
Total	100.0%	100.0%	100.0%

#### 5.2.3.8 Modeled Total Annual Off-Route VMT and VHT

Total annual VMT for the example hauler is calculated in the model by multiplying weekly route truck and rolloff trips (described in Sections 4.1.4.2 to 4.1.4.5) by the relevant travel distances shown in Table 5-8, multiplied by 365/7 weeks per year. Total annual VMT resulting from the model for the example hauler (without any adjustments) is shown in Table 5-10.

A similar approach can be used for estimating VHT, with the lookup tables shown in Table 5-8 referencing matrixes of travel times rather than distances.

The methods shown in this section were used for the eight haulers that responded to the questionnaire. Off-route VMT and VHT for the other haulers was estimated by applying average VMT/ton and VHT/ton for a group of haulers of similar size (measured in tons) times the tons of material collected by those haulers.

TABLE 5-10

**Modeled Off-Route VMT for the Example Hauler**

	Route Trucks	Rolloffs
Weekly Off-Route Miles		
Trips from Base Yard(s) to Zones	3,295	434
Trips from Zones to Disposal Facilities	5,052	1,994
Trips from Disposal Facilities to Zones	2,526	1,662
Trips from Disposal Facilities to Base Yard	950	125
Total Off-Route Weekly Miles	11,823	4,215
Total Off Route Annual Miles	614,810	219,162

### 5.3 Truck Survey Results: Off-route and On-route VMT and VHT Estimates

A truck survey was conducted which consisted of a team of two staff following a truck and recording mileages and times between and at stops throughout the day. During ten days, a single truck was followed from three haulers (one larger hauler for six days, two smaller haulers for two days each, for a total of ten trucks and ten routes) were surveyed in June, 2013. The results of the survey are shown in Tables 5-11 and 5-12. The field data recorded each day is shown in Appendix Tables A-12 – A-21.

Definitions for key terms in Tables 5-11 and 5-12 include the following:

- On-route = distance and time spent going stop to stop and at a customer location
- Off-route = distance and time spent traveling to and from base yard, route start/end, disposal facility, or time spent on a break
- On-route stops = number of locations where MSW is collected on a particular day
- Min. on Breaks = time during lunches or breaks.
- Min. per stop vs. Min. per stop business = a distinction was made because one route in particular collected from a number of schools. A school may include collecting from multiple bins in one “stop”.
- Min. per Disp. Facility Stop = time spent from entering gate of a disposal facility to leaving gate of disposal facility (including any queuing, unloading, break)

Some key results of the survey follow.

- The smaller haulers spent proportionally more time on-route than off-route compared to the larger hauler (80/20 vs. 68/32).
- The small haulers drove proportionally greater distances on-route (“collecting”) than off-route compared to the larger hauler (45/55 vs. 28/72). In other words, the larger hauler routes were more “dense” or “efficient” than were the smaller hauler routes.

TABLE 5-11  
Truck Survey Results

	Miles			Percent of Miles		Min. On-Route			Min. Off-Route			Percent of Time	
	On-Route	Off-Route	Total	On-Route	Off-Route	Travel Between Stops	Stops	Total	Travel Between Stops	At Disp. Fac.	Total	On-Route	Off-Route
Large Hauler, Yard A, June 6, 2013	18	61	79	23%	77%	116	318	434	144	125	269	62%	38%
Large Hauler, Yard A, June 7, 2013	30	53	83	36%	64%	174	137	311	124	117	241	56%	44%
Large Hauler, Yard A, June 10, 2013	20	70	90	22%	78%	107	255	362	154	84	238	60%	40%
Large Hauler, Yard B, June 11, 2013	23	44	67	34%	66%	197	338	535	82	30	112	83%	17%
Large Hauler, Yard B, June 12, 2013	14	44	58	24%	76%	170	282	452	130	41	171	73%	27%
Large Hauler, Yard B, June 13, 2013	21	34	55	38%	62%	172	218	390	69	33	102	79%	21%
Smaller Hauler A, June 24, 2013	20	39	59	34%	66%	124	307	431	81	32	113	79%	21%
Smaller Hauler A, June 25, 2013	30	30	60	50%	50%	152	214	366	78	46	124	75%	25%
Smaller Hauler B, June 26, 2013	28	57	85	33%	67%	213	266	479	105	37	142	77%	23%
Smaller Hauler B, June 27, 2013	25	45	70	36%	64%	156	275	431	77	32	109	80%	20%
Average, Large Hauler Yard A	23	61	84	27%	73%	132	237	369	141	109	249	60%	40%
Average, Large Hauler Yard B	19	41	60	32%	68%	180	279	459	94	35	128	78%	22%
Average, Large Hauler	21	51	72	29%	71%	156	258	414	117	72	189	69%	31%
Average, Smaller Hauler A	25	35	60	42%	58%	138	261	399	80	39	119	77%	23%
Average, Smaller Hauler B	27	51	78	34%	66%	185	271	455	91	35	126	78%	22%
Average, Smaller Haulers A and B	26	43	69	38%	62%	161	266	427	85	37	122	78%	22%
Average of all 10 days	23	48	71	32%	68%	158	261	419	104	58	162	72%	28%

TABLE 5-12  
Other Truck Survey Results

	Min. on Breaks	No. of On- Route Stops	Min. per Stop, On- Route	Min. per Stop, Business	No. of Disposal Facility Stops	Adjusted No. of Disposal Facility Stops	Min. per Disp. Facility Stop	Total Hrs.
Large Hauler, Yard A, June 6, 2013	47	45	7.1	4.5	3	2.5	41.7	12.5
Large Hauler, Yard A, June 7, 2013	30	67	2.0	1.9	2	2	58.5	9.7
Large Hauler, Yard A, June 10, 2013	50	49	5.2	3.7	3	2	28.0	10.8
Large Hauler, Yard B, June 11, 2013	53	117	2.9	2.4	2	2	15.0	11.7
Large Hauler, Yard B, June 12, 2013	64	72	3.9	4.2	2	2	20.5	11.5
Large Hauler, Yard B, June 13, 2013	83	65	3.4	3.1	1	1	33.0	9.6
Smaller Hauler A, June 24, 2013	44	69	4.4	4.5	2	2	16.0	9.8
Smaller Hauler A, June 25, 2013	62	66	3.2	3.0	3	3	15.3	9.2
Smaller Hauler B, June 26, 2013	49	94	2.8	2.4	1	1	12.3	11.2
Smaller Hauler B, June 27, 2013	65	74	3.7	4.4	1	1	32.0	10.1
Average, Large Hauler Yard A	42	54	4.8	3.4	2.7	2.2	42.7	11.0
Average, Large Hauler Yard B	67	85	3.4	3.3	1.7	1.7	22.8	10.9
Average, Large Hauler	55	69	4.1	3.3	2.2	1.9	32.8	11.0
Average, Smaller Hauler A	53	68	3.8	3.7	2.5	2.5	15.7	9.5
Average, Smaller Hauler B	57	84	3.3	3.4	1.0	1.0	22.2	10.6
Average, Smaller Haulers A and B	55	76	3.6	3.5	1.8	1.8	18.9	10.1
Average of all 10 route-days	55	72	3.9	3.4	2.0	1.9	27.2	10.6

- Note that Hauler B made one trip to the disposal facility each day. Thus, its trucks drove a relatively high number of miles per ton delivered. This may not be typical: this hauler's questionnaire response indicated that two stops per at a disposal facility is typical.
- On average, the smaller haulers' routes resulted in fewer miles and less time spent driving from route-ends to disposal facilities than did the larger hauler's routes. One possible reason for this is that larger haulers are more likely to own transfer stations and landfills and have financial incentives to dispose at facilities they own, which for them can counteract the added cost of off-route travel time. One way to test this further is to explore off-route distances for each hauler resulting from the VMT/VHT model. The results of that test, shown in Table 5-13, show no obvious correlation between hauler size (in tons collected) and modeled off-route distance per route truck meaning there are many other factors that determine off-route distances traveled for different haulers.
- Smaller haulers made about 10 percent more stops per route than the larger hauler, 76 vs. 69. This is related to the proportionally higher time spent on-route. There could also be some random fluctuation involved.
- The smaller haulers spent less time per stop at disposal facilities than did the larger hauler.



TABLE 5-13  
**Comparison of Off-Route Route Truck  
 Mileage and Annual Tons**

	<b>Modeled Off- Route Miles per Route Truck per Day</b>	<b>2011 Tons</b>
Hauler A	75.6	25,120
Hauler B	73.4	6,890
Hauler C	113.5	364,063
Hauler D	83.4	508,568
Hauler E	79.0	159,650
Hauler F	109.5	42,097
Hauler H	119.1	2,029
Hauler G	68.6	7,606

As shown in Table 5-11, most of the trucks surveyed made two trips to a disposal facility to unload: some made three and some made one. Also, the number of hours each truck was on the road varied from a low of 9.2 hours to a high of 12.5 hours per day. Thus, it is also of interest to view the results on a per-load and per-collection hour basis, as shown in Table 5-14. In preparing this estimate each day's results were evaluated to more precisely define the number of trips to a disposal facility during the course of a collection day. For instance, collection trucks at times park fully loaded and then go to a disposal facility first thing in the morning. To get a more refined estimate of distance and time per load, the two days where the larger hauler made three trips to the disposal facility were adjusted to 2.5 and 2 trips to the disposal facility to account for going to a disposal facility first thing or very shortly into a collection day. All survey days ended with a trip to the disposal facility, so no adjustments were made for a full truck at the end of a day.

The results shown in Table 5-14 suggest the following:

- On a per-load basis, there is no substantial change in the relationships between the Larger Hauler and Smaller Hauler A because they both averaged very close to two trips to disposal facility per day. On a per-load basis, Smaller Hauler B's trucks used relatively more distance and time for collection because they went to a disposal facility only one time each survey day.
- On a per-collection hour basis, note that Smaller Hauler A's trucks were collecting 1-1.5 fewer hours per day than those of the other two haulers. Thus, their miles, time, and stops per hour are higher compared to the other haulers than on a per-load or aggregate basis.

The results shown in Table 5-14 can be used to estimate VMT and VHT for MSW by multiplying on-route and off-route distance and travel times by the modeled total number of trucks required to collect 2012 MSW disposed by haulers.

TABLE 5-14

**Comparison of Survey Results, per Collection Day, Per Load, and Per Hour**

	Miles			Percent of Miles		Min. On-Route			Min. Off-Route		Percent of Time		
	On-Route	Off-Route	Total	On-Route	Off-Route	Travel Between Stops	Stops	Total	Travel Between Stops	At Disp. Fac.	Total	On-Route	Off-Route
Summary Results per Collection Day													
Average, Large Hauler	21	51	72	29%	71%	156	258	414	117	72	189	69%	31%
Average, Smaller Hauler A	25	35	60	42%	58%	138	261	399	80	39	119	77%	23%
Average, Smaller Hauler B	27	51	78	34%	66%	185	271	455	91	35	126	78%	22%
Average, All Surveys	23	48	71	32%	68%	158	261	419	104	58	162	72%	28%
Summary Results on Per Load Basis <sup>a</sup>													
Average, Large Hauler	12	27	39	30%	70%	90	142	232	62	37	98	70%	30%
Average, Smaller Hauler A	10	15	25	40%	60%	55	104	159	32	16	47	77%	23%
Average, Smaller Hauler B	27	51	78	34%	66%	185	271	455	91	35	126	78%	22%
Average, All Surveys	14	30	44	33%	67%	102	162	264	62	32	94	74%	26%
Summary Results on Per Collection-Hour Basis <sup>b</sup>													
Average, Large Hauler	2.0	4.7	6.6	30%	70%	14	23	38	11	7	17	69%	31%
Average, Smaller Hauler A	2.7	3.6	6.3	42%	58%	15	27	42	8	4	13	77%	23%
Average, Smaller Hauler B	2.5	4.8	7.3	34%	66%	17	26	43	9	3	12	78%	22%
Average, All Surveys	2.2	4.5	6.7	33%	67%	15	25	40	10	5	15	72%	28%

<sup>a</sup>Loads per day exclude loads taken directly to disposal facility at start of the collection day.<sup>b</sup>Total minutes sum to less than 60 because breaks and lunch are excluded.

## 5.4 Adjustments Based on Differences Between Modeled Results and the Truck Survey Results

### 5.4.1 Off-Route VMT Comparison

Table 5-15 compares off-route miles per truck per day results from the model and the truck survey. Note that the truck survey results for the larger hauler are a trip-weighted average of the two facilities trucks were dispatched from.

TABLE 5-15

**Comparison of Off-Route Miles Per Truck Per Day Estimates**

	Truck Survey <sup>a</sup>	Model	Model Increase Above Survey
Large Hauler	50	83	68%
Smaller Hauler A	35	76	120%
Smaller Hauler B	76	109	45%
Smaller Hauler Average	55	92	68%
Average of All Routes	55	88	60%

<sup>a</sup>Off-route miles adjusted to be two loads per day (which is what was modeled for these three haulers). Results differ from those in Table 5-11, which report actual survey results where hauler trips to disposal facilities varied from one to three per day.

As shown, the modeled results are substantially higher than the results from the survey. There are a few possible reasons for this:

- Successful collection companies focus intently on route optimization. A high-level desktop model cannot account for the optimization haulers conduct to maximize time collecting material and minimizing unproductive time driving to and from customers and facilities.
- The survey results are from 10 survey days from three haulers. The routes were selected by the haulers, and the routes chosen may not be representative of all routes by all haulers.

### 5.4.2 Off-Route Mileage Adjustment

As shown in Table 5-15, the model results in significantly greater off-route miles than the results of the truck survey. To explore this further, a more in-depth analysis of results was conducted in which the model results were calculated for the specific franchise zones where the hauler routes were conducted during the survey. This allows a comparison of modeled results for a specific hauler in a specific zone against the survey results for that zone. It provides a test of the extent to which the routes surveyed are representative of all routes in the City i.e., if they are representative, the difference between the survey results and the modeled results should be the same as those shown in Table 5-15.

A summary of the results of this test is shown in Table 5-16, and the “representativeness” of the surveyed routes can be seen by comparing the percentages in the last column of Table 5-16 to those in the last column of Table 5-15. For the larger hauler, the difference between the modeled results from specific zones and the surveyed results (93%) is greater than the same comparison using the total modeled results from Table 5-15 (68%). Thus, the modeled VMT in franchise zones where the surveyed routes were located are somewhat greater than that of a City average route. Or in other words, the routes surveyed are likely to include somewhat more off-route miles than the average modeled route in the City for that hauler.

For the two smaller haulers, the opposite is true: the difference between the modeled results from specific zones and the surveyed results (27%) is less than the same comparison using the total modeled results (68%). Thus, the franchise zones where the surveyed routes were located were associated with somewhat more off-route miles than the modeled average route. The routes surveyed are likely to include somewhat fewer off-route miles than the average modeled route in the City for those haulers.

TABLE 5-16  
Comparison of Off-Route Miles To/From Specific Franchise Zones  
from Model and Truck Survey

	Off-Route Miles		Model % Above Survey
	Truck Survey <sup>a</sup>	Modeled by Zone <sup>b</sup>	
<b>Route Trucks</b>			
Average, Larger Hauler (6 days)	50	96	93%
Average, Smaller Haulers (4 days)	55	70	27%
<b>Rolloffs</b>			
Average, Larger Hauler (6 days)	109	221	103%
Average, Smaller Haulers (4 days)	119	167	41%

<sup>a</sup>Adjusted so that all days have two trips to disposal facility each day

<sup>b</sup>For Zones where Truck Survey occurred. Assumes two trips to disposal facility each day.

In considering the results shown in Tables 5-15 and 5-16 and the associated discussion, it is likely that the truck survey are likely to understate off-route miles and the modeled results are likely to overstate off-route miles. In response an adjustment was made to the off-route miles to improve the accuracy of the results. The adjustment, shown in Table 5-17, subtracts half the difference between the modeled results by zone and the survey results from the modeled results as follows:

$$\text{Revised Miles} = \text{Miles from Base Model} - (50\% \times (\text{Miles Modeled by Zone} - \text{Miles from Truck Survey}))$$

TABLE 5-17  
Revised Miles per Truck per Collection Day

	Miles per Truck per Collection Day					Revised
	Truck Survey <sup>a</sup>	Base Model	Modeled by Zone <sup>b</sup>	50% x (Modeled by Zone - Truck Survey)	% Reduc- tion to Modeled VMT	
<b>Route Trucks</b>						
Average, Larger Hauler	50	83	96	23	28%	60
Average, Smaller Haulers	55	92	70	7	8%	85
<b>Rolloffs</b>						
Average, Larger Hauler	109	174	221	56	32%	118
Average, Smaller Haulers	119	266	167	24	9%	242

<sup>a</sup>Adjusted so that all days have two trips to disposal facility each day.

<sup>b</sup>For Zones where Truck Survey occurred. Assumes two trips to disposal facility each day.

When calculating total VMT by hauler, the total annual modeled VMT of larger and smaller hauler route trucks will be reduced by 28 percent and eight percent, respectively. A similar revision will be applied to rollofts.

#### 5.4.3 Small Hauler Adjustment

As discussed in Section 4.4, an analysis of hauler account data, shown in Table 5-18, confirms that some smaller haulers collect less than full routes in the City on some days. The data shown are from haulers other than the largest eight haulers, which collect from 94 percent of the accounts in the City. Thus, the data in Table 5-18 are represent six percent of the total multi-family and commercial accounts in the City.

TABLE 5-18

**Smaller Hauler Service Frequency and Calculation of Less than Full Loads Weekly**

		Number of stops per week for accounts with service on a given number of days per week							Total Number of Accounts	Total Stops per Week	Trucks per Week (2 loads/ day) <sup>a</sup>	Min Trips to DF	Min Times into City Each Week	Less than Full Loads Per Week
		1	2	3	4	5	6	7						
Smaller Hauler	1	219	82	39	20	15	54	0	290	429	6.0	11.9	6	0
Smaller Hauler	2	205	70	60	36	25	6	0	275	402	5.6	11.2	6	0
Smaller Hauler	3	168	50	18	4	20	0	0	204	260	3.6	7.2	5	0
Smaller Hauler	4	122	68	78	12	30	30	7	197	347	4.8	9.6	7	0
Smaller Hauler	5	53	74	78	36	15	42	0	135	298	4.1	8.3	6	0
Smaller Hauler	6	62	72	63	16	10	30	14	132	267	3.7	7.4	7	0
Smaller Hauler	7	59	40	87	40	40	24	0	130	290	4.0	8.1	6	0
Smaller Hauler	8	70	34	24	8	10	0	0	99	146	2.0	4.1	5	1
Smaller Hauler	9	77	28	9	16	0	0	0	98	130	1.8	3.6	4	0
Smaller Hauler	10	18	88	54	28	0	30	0	92	218	3.0	6.1	5	0
Smaller Hauler	11	42	30	9	0	10	0	0	62	91	1.3	2.5	4	1
Smaller Hauler	12	18	48	36	20	10	0	0	61	132	1.8	3.7	5	1
Smaller Hauler	13	17	26	24	4	15	54	0	51	140	1.9	3.9	6	2
Smaller Hauler	14	46	8	3	0	0	0	0	51	57	0.8	1.6	3	1
Smaller Hauler	15	17	8	30	4	15	30	0	40	104	1.4	2.9	6	3
Smaller Hauler	16	24	14	12	8	0	6	0	38	64	0.9	1.8	5	3
Smaller Hauler	17	19	12	6	8	5	0	0	30	50	0.7	1.4	5	4
Smaller Hauler	18	18	14	6	4	0	6	0	29	48	0.7	1.3	5	4
Smaller Hauler	19	22	6	6	0	0	0	0	27	34	0.5	0.9	3	2
Smaller Hauler	20	13	8	18	8	5	6	0	27	58	0.8	1.6	6	4
Smaller Hauler	21	20	0	0	0	0	0	0	20	20	0.3	0.6	1	0
Smaller Hauler	22	4	22	6	0	10	0	0	19	42	0.6	1.2	4	3
Smaller Hauler	23	13	6	0	0	0	0	0	16	19	0.3	0.5	2	1
Smaller Hauler	24	3	4	6	4	15	12	0	13	44	0.6	1.2	6	5
Smaller Hauler	25	2	2	18	0	5	0	0	10	27	0.4	0.8	4	3
Smaller Hauler	26	7	2	3	0	0	0	0	9	12	0.2	0.3	3	3
Smaller Hauler	27	6	2	0	4	0	0	0	8	12	0.2	0.3	3	3
Smaller Hauler	28	1	4	3	8	0	0	7	7	23	0.3	0.6	5	4
Total									2,170	3,765	52.3	104.6	133	50

Source: City of Los Angeles Hauler Account Data as Reported by Haulers, 2013.

Totals may not add because of rounding.

<sup>a</sup>Assumes 36 stops per trip to a disposal facility, which is the average from the Truck Survey, times two trips to a disposal facility daily.

The columns in Table 5-18 include the following information:

- Columns labeled 1-7 are the number of days per week a bin is collected from a customer. Thus, in the first row, Smaller Hauler 1 collects from 39 customers three days per week and 20 customers four days per week.
- The total number of accounts is the sum of the 7 days per week.
- The total stops per week is the summation of the days per week of service times the number of bins collected on that frequency.
- The trucks per week is calculated as the total number of stops per week divided by 72 stops per day (from Table 5-11) times 6 days per week.
- The minimum number of trips to a disposal facility is the number of trucks times 2 stops at a disposal facility daily.
- The days into the City each week is the count of the number of days per week bins are collected from customers.

- The Less than full loads per week is the days into the City each week minus the minimum number of trips to a disposal facility.

The estimates shown in Table 5-18 indicate that there are 50 less than full loads per week collected by small haulers in the City. This estimate of less than full loads is a minimum – it assumes haulers are perfectly efficient in combining customers with different numbers of days per week of service. In reality, there will probably be more of the less than full loads than estimated in Table 5-18. On the other hand, some of these services may be rollofs, but we're assuming all are route trucks – thus the effect of less than full loads will be overstated somewhat. Finally, it is likely that haulers will pick up some customers from outside the City on some routes, and not all routes go to or from the base yard. So, we should not assume that all partial loads would require all the miles of a complete route originating and ending at a base yard.

These factors are considered when estimating the total miles associated with less than full loads in Table 5-19. This table reports the on route miles per load per day for smaller haulers (Table 5-11) and revised off-route miles per load per day for smaller haulers (Table 5-17). The table includes an assumption that these partial loads travel only one-half the distance of a full load in the City. The result is an estimate of approximately 73,000 annual VMT resulting from the partial loads of small haulers. These miles will be added to the estimated VMT of the collection system.

TABLE 5-19  
**Calculation of Annual VMT Addition from Smaller Hauler Partial Loads**

Average Miles per Load from Truck Survey	Miles per Load <sup>a</sup>	Miles per Partial Load	Weekly	Annually
On route	13.0	50%	326	17,003
Off-route	42.5	50%	1,067	55,623
Total	55.5		1,393	72,626

<sup>a</sup>On-route miles per load from Table 5-11, and a breakdown of off-route miles for smaller haulers from Table 5-17.

## 5.5 Methods Used to Estimate VMT and VHT

### 5.5.1 Off-Route Travel Speeds

Off-route travel speeds from the model and truck surveys are shown in Table 5-20. The modeled results were prepared using the methods described in Section 5.2.3. The truck survey average is the average travel speed for all off-route trips taken during the 10 survey days. As shown, the modeled miles per gallon are significantly higher than the results from the truck survey.

The survey results are used for estimating total VHT. The survey results should be a more accurate representation of the actual travel speeds of trucks in the field, because it reflects time spent at slow speeds entering and exiting facilities, and the size of heavy vehicles that cause them at times to travel more slowly than free flow speeds.

TABLE 5-20  
**Off-Route Travel Speeds from Model and Truck Survey**

<b>Modeled Results</b>	
Miles per route truck per day	88
Minutes per route truck per day	92
Average miles per hour	57.3
<b>Truck Survey Average</b>	
Miles per route truck per day	48
Minutes per route truck per day	104
Average miles per hour	27.4

## 5.5.2 2012 MSW Estimates

In Table 5-21, the methods described in Section 5.1 are used to divide the total tons of MSW collected into route trucks and rollofs. Also shown is the estimated number of trucks per day required to collect that material.

TABLE 5-21

**Route Truck and Rolloff MSW (tons) and Number of Trucks, 2012**

	<b>Total Eight Haulers</b>	<b>Other Haulers</b>	<b>Total</b>
<b>Tons per Year</b>			
Route Trucks	879,549	288,640	1,168,189
Rolloffs	236,475	65,205	301,680
<b>Total</b>	<b>1,116,024</b>	<b>353,845</b>	<b>1,469,869</b>
<b>Trucks per Day</b>			
Route Trucks	147.1	52.1	199.2
Rolloffs	31.7	13.1	44.8
<b>Total</b>	<b>178.8</b>	<b>65.2</b>	<b>244.1</b>

A more detailed breakdown of the calculation of tons, trucks, and collection days by hauler is shown in Table 5-22. Modeled, unadjusted off-route VMT for route trucks and rollofs by hauler is shown in Table 5-23.

Final Off-Route VMT estimates adjusted to account for differences between the model and truck survey and the small hauler partial load adjustment is shown in Table 5-24.

TABLE 5-22

**Tons, Trucks and Collection Days per Year**

	Hauler A	Hauler B	Hauler C	Hauler D	Hauler E	Hauler F	Hauler G	Hauler H	Total Eight Haulers	Other Haulers	Total
<b>Tons per Year</b>	25,120	6,890	364,063	508,568	159,650	42,097	2,029	7,606	1,116,024	353,845	1,469,869
Route Trucks	16,747	3,001	305,813	369,980	147,392	30,394	956	5,265	879,549	288,640	1,168,189
Rolloffs	8,373	3,889	58,250	138,588	12,259	11,703	1,073	2,340	236,475	65,205	301,680
<b>Tons per Day</b>											
Route Trucks	54	10	977	1,183	471	106	3	20	2,824	926	3,750
Rolloffs	27	12	186	443	39	41	3	9	761	210	970
<b>Trucks per Day</b>											
Route Trucks	3.3	0.5	46.5	68.6	20.7	6.2	0.1	1.1	147.1	52.1	199.2
Rolloffs	1.1	0.5	7.8	18.5	1.6	1.7	0.1	0.4	31.7	13.1	44.8
<b>Collection Days per Year</b>											
Route Trucks	313	313	313	313	313	287	313	261	312	312	312
Rolloffs	313	313	313	313	313	287	313	261	311	311	311



TABLE 5-23

**Modeled Off-Route Miles for MSW Route Trucks and Rolloffs (Unadjusted)**

	Hauler A	Hauler B	Hauler C	Hauler D	Hauler E	Hauler F	Hauler G	Hauler H	All Other Haulers	Total
<b>Weekly Off-Route Miles - MSW Route Trucks</b>										
Trips from Base Yard(s) to Zones	284	27	4,990	8,002	3,130	507	21	71	n.a.	n.a.
Trips from Zones to Disposal Facilities	648	102	14,986	14,423	4,430	1,880	51	196	n.a.	n.a.
Trips from Disposal Facilities to Zones	324	51	7,493	7,211	2,215	940	25	98	n.a.	n.a.
Trips from Disposal Facilities to Base Yard	267	48	4,326	4,684	40	416	5	21	n.a.	n.a.
Total Off-Route Weekly Miles	1,523	229	31,795	34,320	9,815	3,742	102	386	n.a.	n.a.
<b>Weekly Off-Route Miles - MSW Rolloffs</b>										
Trips from Base Yard(s) to Zones	95	27	832	1,486	247	140	1	24	n.a.	n.a.
Trips from Zones to Disposal Facilities	648	305	3,313	7,711	1,048	1,532	24	196	n.a.	n.a.
Trips from Disposal Facilities to Zones	540	255	2,761	9,253	873	1,277	20	140	n.a.	n.a.
Trips from Disposal Facilities to Base Yard	89	48	852	835	3	116	5	7	n.a.	n.a.
Total Off-Route Weekly Miles	1,371	636	7,758	19,285	2,171	3,065	50	366	n.a.	n.a.
<b>Annual Off-Route Miles</b>										
Route Trucks	79,391	11,922	1,657,908	1,789,542	511,785	195,125	5,340	20,111	1,186,619	5,457,743
Rolloffs	71,508	33,160	404,530	1,005,584	113,214	159,816	2,582	19,089	308,493	2,117,976
Total	150,899	45,082	2,062,438	2,795,126	624,999	354,941	7,923	39,200	1,495,111	7,575,719

TABLE 5-24  
**Adjusted Annual Off-Route VMT**

	Hauler A	Hauler B	Hauler C	Hauler D	Hauler E	Hauler F	Hauler G	Hauler H	All Other Haulers	Total
<b>Modeled Annual Off-Route Miles (Unadjusted, Table 5-23)</b>										
Route Trucks	79,391	11,922	1,657,908	1,789,542	511,785	195,125	5,340	20,111	1,186,619	5,457,743
Rolloffs	71,508	33,160	404,530	1,005,584	113,214	159,816	2,582	19,089	308,493	2,117,976
Total	150,899	45,082	2,062,438	2,795,126	624,999	354,941	7,923	39,200	1,495,111	7,575,719
<b>Miles Per Collection Day Per Route Truck</b>										
Trucks per Day	3.3	0.5	46.5	68.6	20.7	6.2	0.1	1.1	52.1	199.2
Collection Days per Year	312.9	312.9	312.9	312.9	312.9	286.8	312.9	260.7	311.6	311.5
Off-Route Miles per Truck per Day	75.9	73.6	113.8	83.4	79.1	109.1	119.4	68.7	73.1	87.9
<b>Miles Per Collection Day per Rolloff</b>										
Trucks per Day	1.1	0.5	7.8	18.5	1.6	1.7	0.1	0.4	13.1	44.8
Collection Days per Year	312.9	312.9	312.9	312.9	312.9	286.8	312.9	260.7	311.6	311.5
Off-Route Miles per Truck per Day	205.0	204.6	166.7	174.1	221.6	327.8	57.7	195.8	75.3	151.6
<b>Mileage Adjustment Factor (Table 5-17)</b>										
Route Truck	8%	8%	28%	28%	28%	8%	8%	8%	16%	16%
Rolloff	9%	9%	32%	32%	32%	9%	9%	9%	15%	17%
<b>Adjusted Miles Per Collection Day</b>										
Route Truck	69.8	67.7	82.2	60.3	57.1	100.4	109.8	63.2	61.1	74.2
Rolloff	186.5	186.2	112.9	118.0	150.2	298.2	52.5	178.1	64.3	125.4
<b>Small Hauler Partial Load Adjustment (Table 5-19)</b>										72,626
<b>Adjusted Annual Off-Route Miles</b>										
Route Trucks	73,007	10,964	1,197,604	1,292,691	369,693	179,435	4,911	18,494	990,892	4,530,226
Rolloffs	65,055	30,167	274,135	681,448	76,721	145,393	2,349	17,366	263,538	1,751,636
Total	138,062	41,131	1,471,740	1,974,139	446,413	324,827	7,260	35,860	1,254,430	6,281,863

### 5.5.3 2012 Recycling and Organics

A summary of the annual tons of material that would be subject to the franchise system is shown in Table 5-25.

TABLE 5-25

**Material That Would be Part of Franchise System  
(2012 tons)**

MSW	1,469,869
Commingled Recycling	48,307
Organics	
Food	57,657
Green Waste	68,502
<b>Total</b>	<b>1,644,335</b>

Total VMT and VHT for commingled recycling and organics was estimated by adjusting MSW statistics by estimated differences in payloads and average routes per day from various data sources. More information about the specific methods are shown in Section 6.

### 5.6 2012 VMT and VHT Estimates

Estimated 2012 VMT and VHT resulting from the collection of materials that would be part of the franchise system are shown in Table 5-26. A description of the sources and methods used for the estimates follows.

- Line 2 is 2012 material quantities from Table 5-25.
- Lines 3 and 4 show the breakdown of material collected in route trucks and rollofs from Table 5-22.
- Line 5 is the number of collection days per year from Table 5-22.
- Line 8 is the estimated pounds collected per stop for route trucks. MSW is calculated as Line 3 / (Line 5 + Route trucks per day (Table 5-22)). Commingled recycling is assumed to be 60 percent of the weight per stop of MSW, and organics is assumed to be 50 percent more than the weight per stop of MSW. These assumptions are based on typical densities of the different material types and after the results of other variables such as the average tons per load of each truck type, stops per day, and other factors discussed below.
- Line 6 is the sum of the travel time between stops (Line 12) plus the time at each stop (Line 13) times the number of stops per day (Line 14).
- Lines 10 and 11 are applied to some of the alternatives in 2030 and do not apply to 2012.
- Line 12 is on-route travel time between stops. MSW is from the truck survey (detailed calculation not yet reported). Recycling and organics were calculated using the goal seek function in Microsoft Excel. The travel time per stop is what is necessary to ensure that the stops per day (Line 14) times the time per stop (Line 12 + Line 13) plus the calculated off-route time per day (Line 18) equals the total collection time per day shown in Line 19.
- Line 13 is an assumed time per stop that is held fixed for all materials. It is somewhat less than what was recorded in the survey (Table 5-12) in order to ensure that the tons per truck per day (Line 8 \* Line 14) matches what is shown in Line 22.
- Line 14 is the stops per truck per day calculated as Line 8 / (Line 12 + Line 13).
- Line 16 and Line 17 are applied to some of the alternatives in 2030 and do not apply to 2012.
- Line 18 is the off-route driving time between facilities plus the time spent at disposal facilities. MSW is from Table 5-11. Recycling and organics are calculated by multiplying the loads per day to processing facilities (Line 29) times MSW minutes per load (Line 18 / Line 20).

- Line 19 is the sum of Line 9 and Line 18, which is equal to the average time for a collection route from the truck survey (less breaks) from Table 5-11.
- Line 20 is the loads per day to disposal or processing facilities. MSW is from Table 5-12. Recycling is taken from responses to the hauler questionnaire which ranged from one to two per firm, and from general knowledge of industry practices. Organics was set equal to MSW because of the high density of organic material and road weight limitations.
- Line 21 is the tons per truck per trip (payload) to a disposal/processing facility. MSW is calculated from the tons per year, trucks per day, and collection days per year reported in Table 5-22. Recycling on the average payload of commingled recycling truck deliveries to the CLARTS station provided by Sanitation staff (5.0 tons), and discussions with local haulers that indicate that commercial loads are somewhat heavier than residential loads. Recycling loads typically weigh less than MSW or organics loads because of its relatively low density and because materials are often not compacted as densely as MSW to minimize glass breakage. Organics loads are highly dense and payloads are typically limited by road weight restrictions, thus payloads are assumed to equal those of MSW.
- Line 22 is Line 20 times Line 21.
- Line 23 and Line 24 are from Table 5-22.
- Line 24 is from Table 5-22.
- Line 25 is the sum of Line 23 and Line 24.
- Lines 27 and 28 are applied to some of the alternatives in 2030 and do not apply to 2012.
- Line 30 and Line 31 are off-route VMT per truck. MSW is calculated from Table 5-24. Recycling and organics are adjusted proportional to the time driving between facilities shown in Line 18.
- Line 32 is on-route VMT per truck. MSW is from Table 5-11. Recycling and organics are adjusted proportional to the time driving between stops shown in Line 12.
- Lines 35 to 39 shows a breakdown of VMT per truck per day into driving time and time mostly at idle. Route truck driving time is Line 14 times Line 12, and route truck time mostly at idle is Line 13 times Line 14. Rolloffs assume six loads per day at 20 minutes per stop. Rolloffs travel between stops is total time per day less time at stops, at disposal facilities, and breaks taken from the route truck estimates.
- Lines 41 to 43 summarize VMT for route trucks and rollofts by multiplying the number of trucks per day by the number of days per year and the number of miles per day (Line 30 + Line 32).
- Lines 46 to 54 summarize VHT for route trucks and rollofts by multiplying the number of trucks per day by the number of days per year and the number of hours per day (Lines 35 to 39).

TABLE 5-26  
2012 VMT and VHT Estimates

Line No.		MSW	Com- mingled Recycling	Organics (Food and Green Waste)	Total
1	<b>Annual Tons</b>				
2	Total	1,469,869	48,307	126,159	1,644,335
3	Route Truck	1,168,189	48,307	126,159	1,342,655
4	Rolloff	301,680	0	0	301,680
5	<b>Collection Days per Year</b>	312	312	312	
6	<b>Trucks per Collection Day -</b>				
7	Route Trucks				
8	Pounds per stop	479	288	719	
9	On-route time per day (minutes)	419	460	419	
10	Reduced time per stop from fewer haulers (%)	0%	0%	0%	
11	Increased congestion (%)	0%	0%	0%	
12	Travel time between stops (minutes)	2.3	4.3	5.0	
13	Time at stops (minutes)	3.0	3.0	3.0	
14	Stops per day	78.5	62.6	52.3	
15	Off-route time per day				
16	Increased congestion (%)	0%	0%	0%	
17	Reduced time, competitive procurement (%)	0%	0%	0%	
18	Time driving between facilities (minutes)	162	122	162	
19	Total time per route less breaks (minutes)	581	581	581	
20	Loads per day (to disposal/processing)	2.0	1.5	2.0	
21	Tons per truck per load	9.4	6.0	9.4	
22	Tons per truck per day	18.8	9.0	18.8	
23	<b>Route Trucks per day</b>	<b>199</b>	<b>17</b>	<b>22</b>	<b>238</b>
24	<b>Rolloff Trucks per day</b>	<b>45</b>	<b>0</b>	<b>0</b>	<b>45</b>
25	<b>Total Trucks per day</b>	<b>244</b>	<b>17</b>	<b>22</b>	<b>283</b>
26	<b>VMT per Truck per Collection Day</b>				
27	Reduced miles from competitive procurement (%)				
28	Small Hauler Reduction (miles/route truck/day)				
29	Off-Route				
30	Route Truck	74.2	55.6	74.2	
31	Rolloff	125	0	0	
32	On-Route, Route Trucks	23.0	43.0	49.7	
33	<b>Minutes per Truck per Collection Day</b>				
34	Route Truck				
35	Driving	343	391	422	
36	Mostly at Idle	238	190	159	
37	Rolloff				
38	Driving	288	0	0	
39	Mostly at Idle	293	0	0	
40	<b>Annual VMT</b>				
41	Route Truck	6,031,871	529,586	830,127	7,391,584
42	Rolloff	1,751,636	0	0	1,751,636
43	<b>Total</b>	<b>7,783,508</b>	<b>529,586</b>	<b>830,127</b>	<b>9,143,221</b>
44	<b>Annual VHT</b>				
45	Route Truck				
46	Driving	354,770	35,001	47,189	436,959
47	Mostly at Idle	246,547	16,992	17,750	281,289
48	Rolloff				
49	Driving	67,098	0	0	67,098
50	Mostly at Idle	68,262	0	0	68,262
51	Total				
52	Driving	421,867	35,001	47,189	504,057
53	Mostly at Idle	314,809	16,992	17,750	349,551
54	<b>Total</b>	<b>736,676</b>	<b>51,993</b>	<b>64,939</b>	<b>853,608</b>

## 6. 2030 Material Forecast

A forecast of materials collected in 2030 for the No Project and Proposed Project alternatives is shown in Table 6-1 and Figure 6-1. The forecast is prepared for material currently collected from multi-family and commercial customers by private haulers that would be subject to the franchise system of the proposed project. It does not include materials self-hauled by institutions, or materials from single-family residents.

TABLE 6-1

**Material Forecast for No Project and Proposed Project Alternatives**

	2012	2030		Annual Growth Rate		Percent of Total		
		No Project	Proposed Project	No Project	Proposed Project	2012	2030 No Project	2030 Proposed Project
<b>Total Commercial + MF</b>								
<b>Generation</b>	<b>1,644,255</b>	<b>1,799,184</b>	<b>1,799,184</b>	<b>0.5%</b>	<b>0.5%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Commingled Recycling Diversion</b>	<b>48,307</b>	<b>55,265</b>	<b>655,127</b>	<b>0.8%</b>	<b>15.6%</b>	<b>3%</b>	<b>3%</b>	<b>36%</b>
Baseline	48,307	55,265	55,265					
New Programs	0	0	599,862					
<b>Organics Diversion</b>	<b>126,159</b>	<b>145,889</b>	<b>514,742</b>	<b>0.8%</b>	<b>8.1%</b>	<b>8%</b>	<b>8%</b>	<b>29%</b>
Baseline	126,159	145,889	145,889					
New Programs	0	0	368,853					
<b>MSW</b>	<b>1,469,789</b>	<b>1,598,030</b>	<b>629,315</b>	<b>0.5%</b>	<b>-4.6%</b>	<b>89%</b>	<b>89%</b>	<b>35%</b>

Source: 2012 actuals from hauler facility reports. 2030 growth rates for baseline and new programs from Solid Waste Integrated Resources Plan Facilities Plan Environmental Impact Report. 2013.

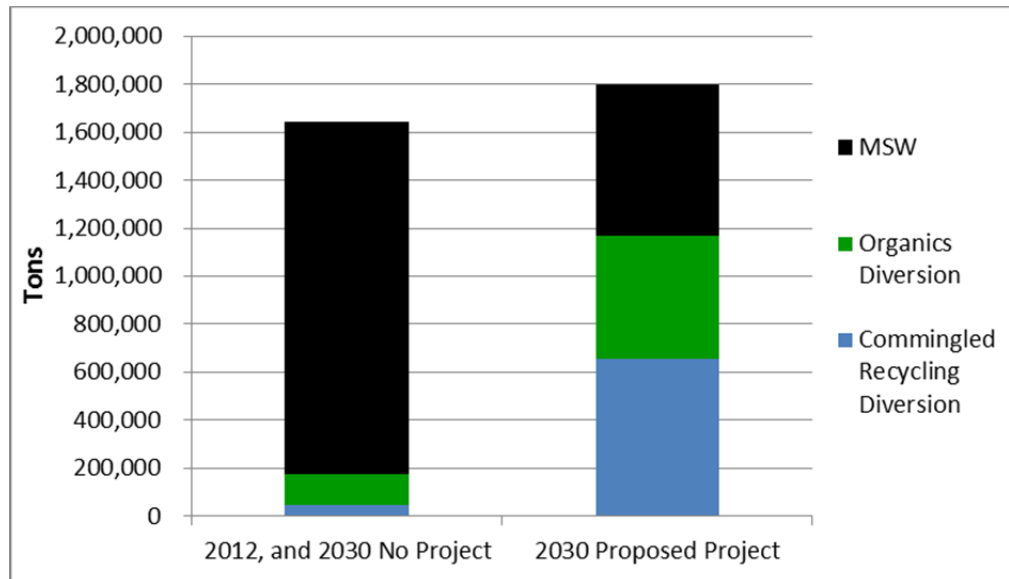


FIGURE 6-1  
Material Forecast, No Project and Proposed Project

The forecast as it applies to the alternatives is shown in Table 6-2. In all alternatives, the City would have the capability of mandating recycling and mandating provision of recycling to all commercial and multi-family customers. In Alternative 3, it is relatively likely that diversion of commingled recycling and organics would occur similar to that of the proposed project. In Alternatives 1 and 2, it is likely that diversion would occur more slowly because haulers would have still be competing for customers daily, and they would have less certainty about long-term market share and likely be more cautious about developing new processing capacity. While it is possible that less diversion would be in place by 2030, for the purposes of this analysis it is assumed that diversion similar to the proposed project could be achieved by 2030 for these alternatives as well.

TABLE 6-2

**Material Forecast Applicable to Alternatives**

<b>Alternative</b>	<b>Applicable Material Forecast</b>
No Project	No Project
Proposed Project	Proposed Project
Alternative 1: Non-Exclusive System	Proposed Project
Alternative 2: Exclusive System With Multiple Haulers	Proposed Project
Alternative 3: City Collection	Proposed Project

## 7. VMT and VHT for Alternatives

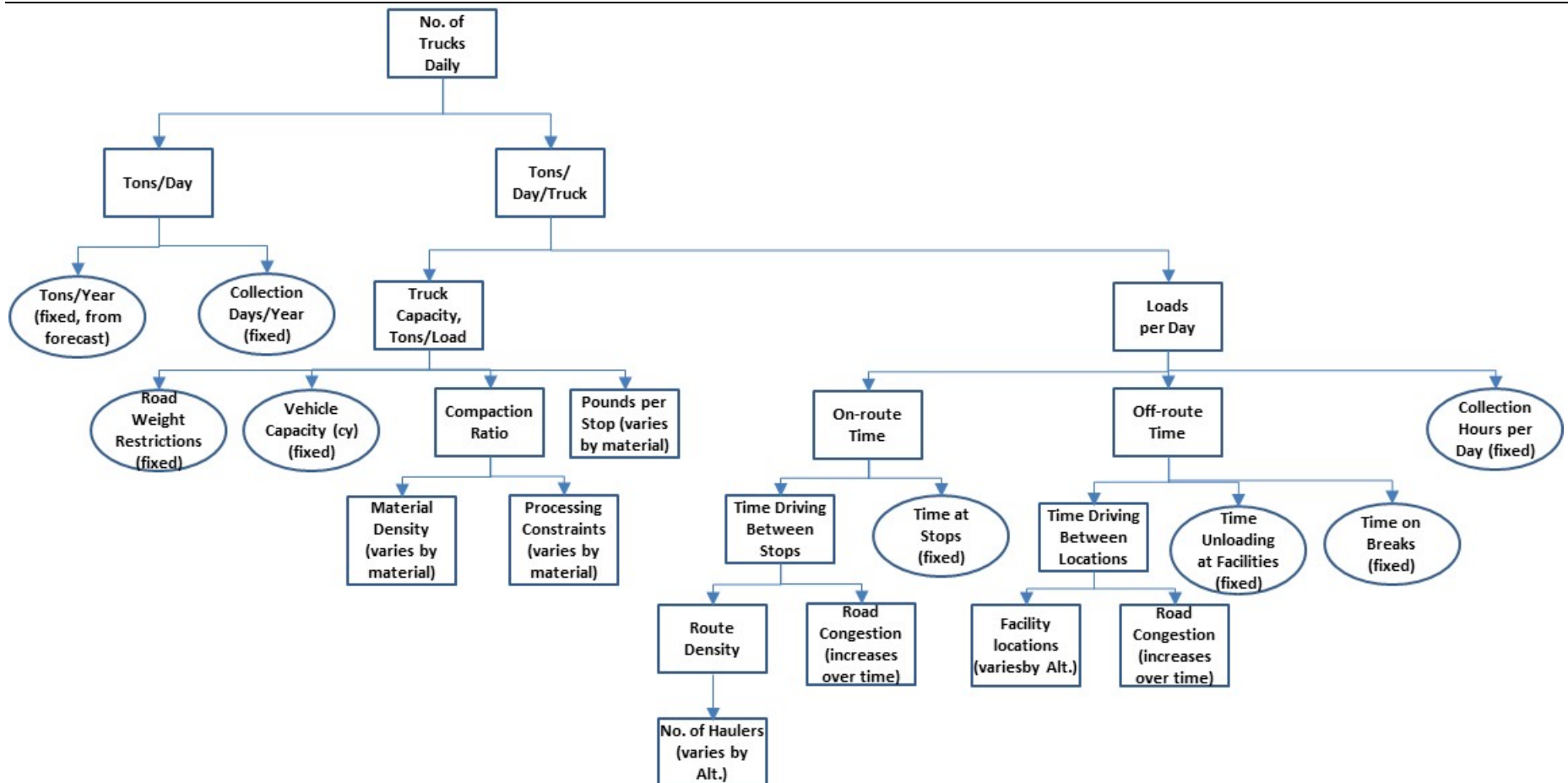
This section provides estimated VMT and VHT for the alternatives included in the EIR, which are as follows:

- **No Project:** Status quo
- **Proposed Project:** Exclusive system with a single hauler per wasteshed
- **Alternative 1:** Non-exclusive system
- **Alternative 2:** Exclusive system with multiple haulers per wasteshed
- **Alternative 3:** City collection of all materials

All VMT and VHT estimates are prepared for 2030, the end of the planning period covered in the EIR.

The approach used to estimate VMT and VHT for the alternatives focused on estimating the number of trucks that would be needed to estimate the 2030 quantities of MSW, commingled recyclables, and organics. To estimate the number of trucks, there are a series of variables and relationships that are relevant. A diagram showing relevant factors that determine the number of trucks required to collect materials is provided in Figure 7-1. In that diagrams, ovals represent factors that are considered fixed for the purposes of this analysis and rectangles represent factors that are variable.

The calculations made to estimate VMT and VHT for the alternatives are shown in Tables 7-1 and 7-2. Note that the line numbers for the tables are the same as those shown in Table 5-1. The discussion that follows addresses key assumptions relevant to forecasting VMT and VHT for the alternatives that were not discussed in Section 5.



Legend



Variable quantity



Fixed for the purposes of this analysis

FIGURE 7-1

**Factors that Determine the Number of Trucks  
Required to Collect Material**



TABLE 7-1  
Forecast VMT and VHT

Line No.		2012				2030 No Project				2030 Proposed Project			
		MSW	Com-mingled Recycling	Organics (Food and Green Waste)	Total	MSW	Com-mingled Recycling	Organics (Food and Green Waste)	Total	MSW	Com-mingled Recycling	Organics (Food and Green Waste)	Total
1	<b>Annual Tons</b>												
2	Total	1,469,869	48,307	126,159	1,644,335	1,598,000	55,300	145,900	1,799,200	629,300	655,100	514,700	1,799,200
3	Route Truck	1,168,189	48,307	126,159	1,342,655	1,268,000	55,300	145,900	1,469,200	299,300	655,100	514,700	1,469,200
4	Rolloff	301,680	0	0	301,680	330,000	0	0	330,000	330,000	0	0	330,000
5	<b>Collection Days per Year</b>	312	312	312		312	312	312		312	312	312	
6	<b>Trucks per Collection Day -</b>												
7	Route Trucks												
8	Pounds per stop	479	288	719		479	288	719		384	288	719	
9	On-route time per day (minutes)	419	460	419		412	422	414		440	422	387	
10	Reduced time per stop (%)	0%	0%	0%		0%	0%	0%		17.5%	17.5%	17.5%	
11	Increased congestion (%)	0%	0%	0%		11.4%	11.4%	11.4%		11.4%	11.4%	11.4%	
12	Travel between stops (min.)	2.3	4.3	5.0		2.6	4.8	5.5		2.1	2.1	3.2	
13	Time at stops (minutes)	3.0	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0	
14	Stops per day	78.5	62.6	52.3		73.6	53.9	48.3		85.4	81.9	62.4	
15	Off-route time per day												
16	Increased congestion (%)	0%	0%	0%		11.4%	11.4%	11.4%		11.4%	11.4%	11.4%	
17	Reduced time, RFP process (%)	0%	0%	0%		0%	0%	0%		10%	10%	10%	
18	Time between facilities (min.)	162	122	162		169	117	167		141	159	194	
19	Time per route less breaks (min.)	581	581	581		581	539	581		581	581	581	
20	Goal Seek Cells	2.0	1.5	2.0		1.9	1.3	1.8		1.7	2.0	2.4	
21	Loads per day (to disp./proc.)	9.4	6.0	9.4		9.4	6.0	9.4		9.4	6.0	9.4	
22	Tons per truck per load	18.8	9.0	18.8		17.6	7.8	17.4		16.4	11.8	22.4	
23	Tons per truck per day	199	17	22	238	231	23	27	281	59	179	74	311
24	Route Trucks per day	45	0	0	45	50	0	0	50	45	0	0	45
25	Rolloff Trucks per day	244	17	22	283	281	23	27	330	104	179	74	356
26	<b>VMT per Truck per Collection Day</b>												
27	Reduced miles from RFP process (%)					0%	0%	0%		10%	10%	10%	
28	Small Hauler Reduction (miles/day)									1.2	1.2	1.2	
29	Off-Route												
30	Route Truck	74.2	55.6	74.2		69.5	47.9	68.5		56.9	64.3	78.4	
31	Rolloff	125	0	0		125	0	0		113	0	0	
32	On-Route, Route Trucks	23.0	43.0	49.7		25.6	47.9	55.3		21.1	21.1	31.7	
33	<b>Minutes per Truck per Collection Day</b>												
34	Route Truck												
35	Driving	343	391	422		358	405	434		322	333	392	
36	Mostly at Idle	238	190	159		223	176	147		259	249	189	
37	Rolloff												
38	Driving	288	0	0		321	0	0		321	0	0	
39	Mostly at Idle	293	0	0		260	0	0		260	0	0	

TABLE 7-1  
Forecast VMT and VHT

Line No.		2012				2030 No Project				2030 Proposed Project			
		MSW	Com-mingled Recycling	Organics (Food and Green Waste)	Total	MSW	Com-mingled Recycling	Organics (Food and Green Waste)	Total	MSW	Com-mingled Recycling	Organics (Food and Green Waste)	Total
40	<b>Annual VMT</b>												
41	Route Truck	6,031,871	529,586	830,127	7,391,584	6,839,187	658,855	1,039,215	8,537,257	1,426,550	4,754,600	2,525,994	8,707,144
42	Rolloff	1,751,636	0	0	1,751,636	1,950,777	0	0	1,950,777	1,580,129	0	0	1,580,129
43	Total	7,783,508	529,586	830,127	9,143,221	8,789,964	658,855	1,039,215	10,488,034	3,006,679	4,754,600	2,525,994	10,287,273
44	<b>Annual VHT</b>												
45	Route Truck												
46	Driving	354,770	35,001	47,189	436,959	428,859	44,623	60,777	534,259	98,111	308,464	149,788	556,363
47	Mostly at Idle	246,547	16,992	17,750	281,289	267,610	19,452	20,528	307,589	78,959	230,430	72,418	381,807
48	Rolloff												
49	Driving	67,098	0	0	67,098	83,221	0	0	83,221	74,899	0	0	74,899
50	Mostly at Idle	68,262	0	0	68,262	67,527	0	0	67,527	60,774	0	0	60,774
51	Total												
52	Driving	421,867	35,001	47,189	504,057	512,080	44,623	60,777	617,480	173,010	308,464	149,788	631,262
53	Mostly at Idle	314,809	16,992	17,750	349,551	335,137	19,452	20,528	375,117	139,733	230,430	72,418	442,581
54	Total	736,676	51,993	64,939	853,608	847,217	64,074	81,305	992,597	312,743	538,894	222,206	1,073,843

TABLE 7-2  
Forecast VMT and VHT

Line No.		2030 Alt 1. Non-Exclusive System				2030 Alt. 2 Exclusive System, Multiple Haulers				2030, Alt. 3, City Collection of All Materials			
		MSW	Com-mingled Recycling	Organics (Food and Green Waste)	Total	MSW	Com-mingled Recycling	Organics (Food and Green Waste)	Total	MSW	Com-mingled Recycling	Organics (Food and Green Waste)	Total
1	<b>Annual Tons</b>												
2	Total	629,300	655,100	514,700	1,799,200	629,300	655,100	514,700	1,799,200	629,300	655,100	514,700	1,799,200
3	Route Truck	299,300	655,100	514,700	1,469,200	299,300	655,100	514,700	1,469,200	299,300	655,100	514,700	1,469,200
4	Rolloff	330,000	0	0	330,000	330,000	0	0	330,000	330,000	0	0	330,000
5	<b>Collection Days per Year</b>	312	312	312		312	312	312		312	312	312	
6	<b>Trucks per Collection Day -</b>												
7	Route Trucks												
8	Pounds per stop	384	230	575		384	230	575		384	288	719	
9	On-route time per day (minutes)	439	477	441		440	478	442		440	422	387	
10	Reduced time per stop (%)	1.8%	1.8%	1.8%		4.4%	4.4%	4.4%		17.5%	17.5%	17.5%	
11	Increased congestion (%)	11.4%	11.4%	11.4%		11.4%	11.4%	11.4%		11.4%	11.4%	11.4%	
12	Travel between stops (min.)	2.6	4.8	5.5		2.6	4.8	5.5		2.1	2.1	3.2	
13	Time at stops (minutes)	3.0	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0	
14	Stops per day	78.3	60.9	51.4		78.6	61.0	51.6		85.4	81.9	62.4	
15	Off-route time per day												
16	Increased congestion (%)	11.4%	11.4%	11.4%		11.4%	11.4%	11.4%		11.4%	11.4%	11.4%	
17	Reduced time, RFP process (%)	1.0%	1.0%	1.0%		2.5%	2.5%	2.5%		10%	10%	10%	
18	Time between facilities (min.)	143	104	140		141	103	139		141	159	194	
19	Time per route less breaks (min.)	581	581	581		581	581	581		581	581	581	
20	Loads per day (to disp./proc.)	1.6	1.2	1.6		1.6	1.2	1.6		1.7	2.0	2.4	
21	Tons per truck per load	9.4	6.0	9.4		9.4	6.0	9.4		9.4	6.0	9.4	
22	Tons per truck per day	15.0	7.0	14.8		15.1	7.0	14.8		16.4	11.8	22.4	
23	Route Trucks per day	64	300	112	476	64	299	111	474	59	179	74	311
24	Rolloff Trucks per day	50	0	0	50	50	0	0	50	45	0	0	45
25	Total Trucks per day	114	300	112	526	114	299	111	524	104	179	74	356
26	<b>VMT per Truck per Collection Day</b>												
27	Reduced miles from RFP process (%)	1.0%	1.0%	1.0%		2.5%	2.5%	2.5%		10%	10%	10%	
28	Small Hauler Reduction (miles/day)									1.2	1.2	1.2	
29	Off-Route												
30	Route Truck	59.2	43.3	58.3		59.4	43.4	58.5		56.9	64.3	78.4	
31	Rolloff	124	0	0		122	0	0		113	0	0	
32	On-Route, Route Trucks	25.6	47.9	55.3		25.6	47.9	55.3		21.1	21.1	31.7	
33	<b>Minutes per Truck per Collection Day</b>												
34	Route Truck												
35	Driving	343	396	425		343	396	425		322	333	392	
36	Mostly at Idle	238	185	156		239	185	157		259	249	189	
37	Rolloff												
38	Driving	321	0	0		321	0	0		321	0	0	
39	Mostly at Idle	260	0	0		260	0	0		260	0	0	

TABLE 7-2  
Forecast VMT and VHT

Line No.		2030 Alt 1. Non-Exclusive System				2030 Alt. 2 Exclusive System, Multiple Haulers				2030, Alt. 3, City Collection of All Materials			
		MSW	Com-mingled Recycling	Organics (Food and Green Waste)	Total	MSW	Com-mingled Recycling	Organics (Food and Green Waste)	Total	MSW	Com-mingled Recycling	Organics (Food and Green Waste)	Total
40	<b>Annual VMT</b>												
41	Route Truck	1,690,107	8,532,674	3,953,330	14,176,111	1,688,209	8,520,482	3,946,282	14,154,973	1,426,550	4,754,600	2,525,994	8,707,144
42	Rolloff	1,931,269	0	0	1,931,269	1,902,008	0	0	1,902,008	1,580,129	0	0	1,580,129
43	Total	3,621,376	8,532,674	3,953,330	16,107,380	3,590,216	8,520,482	3,946,282	16,056,981	3,006,679	4,754,600	2,525,994	10,287,273
44	<b>Annual VHT</b>												
45	Route Truck												
46	Driving	114,093	618,061	246,613	978,767	113,376	615,597	245,378	974,351	98,111	308,464	149,788	556,363
47	Mostly at Idle	78,959	288,038	90,522	457,519	78,959	288,038	90,522	457,519	78,959	230,430	72,418	381,807
48	Rolloff												
49	Driving	83,221	0	0	83,221	83,221	0	0	83,221	74,899	0	0	74,899
50	Mostly at Idle	67,527	0	0	67,527	67,527	0	0	67,527	60,774	0	0	60,774
51	Total												
52	Driving	197,315	618,061	246,613	1,061,988	196,597	615,597	245,378	1,057,572	173,010	308,464	149,788	631,262
53	Mostly at Idle	146,486	288,038	90,522	525,046	146,486	288,038	90,522	525,046	139,733	230,430	72,418	442,581
54	Total	343,800	906,098	337,135	1,587,034	343,083	903,635	335,901	1,582,618	312,743	538,894	222,206	1,073,843

## 7.1 No Project and Proposed Project Alternatives

As shown in Table 7-1, compared to the no project alternative, the proposed project is projected to result in a small decrease in 2030 VMT (10.5 million vs. 10.3 million) and a small increase in 2030 VHT (753,000 to 809,000). Compared to the no project alternative, there are two main factors that result in estimated changes in VMT and VHT under the proposed project alternative.

1. **Reduced distances and times between stops and perhaps to and from facilities.** In the proposed project alternative there would be only one company's trucks collecting throughout a franchise zone compared to the existing system and the no project alternative in which trucks from multiple firms collect material on the same streets throughout franchise zones. Thus, trucks will travel less time and distance between multi-family complexes and business locations on collection routes. Further, the competitive nature of the proposal process and the guaranteed additional business from having all customers in one or more zones may result in companies locating base yards closer to franchise zones. Haulers may also commit to building transfer stations or reload facilities closer to franchise zones in an attempt to lower costs.
2. **More trucks will be required to collect materials more frequently from customer locations.** A key goal of the proposed project is increasing diversion of material currently sent to landfills: as more customers set out bins for three different types of material compared to only one or perhaps two, additional trucks will be required to service the additional bins. When the diversion programs are implemented, the relative number of trucks required to collect MSW, recyclables, and organics will change as the quantities of recyclables and organics increase and the quantity of MSW declines.

These factors are incorporated in the calculations shown in Table 7-1 that document the basis for estimating VMT and VHT for the no project and the proposed project alternatives: it also shows 2012 VMT and VHT estimates for comparison purposes.

Another consideration is the possible effects of increased traffic congestion through time. A discussion of this issue and a discussion of how other key assumptions used to develop VMT and VHT estimates for the no project and proposed project alternatives follows.

### 7.1.1 Proposed Project Reduction in Distance and Time Between On-Route Stops

In Table 7-1, Line 10 references an estimated 17.5 percent reduction in on-route driving time between stops that would result under the proposed project.

Implementing the proposed project will result in less distance and time required to collect MSW, recyclables, and organics than exists today. VMT and VHT reductions can occur both on-route (travel between customer stops) and off-route (travel between base yards, disposal facilities and route start and end points). The basis for estimating this reduction follows.

#### Estimates from Other Jurisdictions

In North America, there are few examples of jurisdictions that have established a franchise system from a competitive market for commercial collection. Known examples were surveyed and reported on in the City's Franchise Implementation Plan<sup>2</sup>. The City of Portland was the only jurisdiction that attempted to estimate the reduction in travel distance that might result from changing from an open collection system to an exclusive franchise. The result of a modeling exercise the City conducted resulted in a 30 percent reduction in VMT by switching from Portland's competitive market to an exclusive franchise system, but the City representative contacted felt that haulers work hard to keep routes efficient and that a 15-20 percent reduction might be a more reasonable estimate<sup>3</sup>.

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<sup>2</sup> City of Los Angeles. *Final Implementation Plan for Exclusive Commercial and Multifamily Franchise Hauling System*. April 2013.

<sup>3</sup> Personal communication with Bruce Walker, City of Portland. January 2013.

## Estimated On-Route Travel Reductions

In order to estimate the potential travel savings that may result from the proposed project, a simple example street grid with a series of stops was created in order to test various collection patterns. The street grid and stops are shown in Figure 7-2 to Figure 7-5. The figures show a simple example street grid, divided into example blocks, with a series of 24 stops represented as dots. The different colors represent stops made by different haulers. Table 7-3 provides estimates of the number of blocks haulers would travel to collect from all stops with different numbers of haulers (existing conditions) compared to the number of blocks a single hauler would travel under the proposed project.

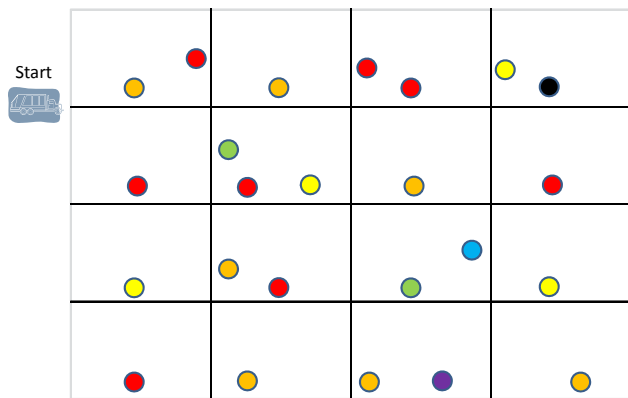
Figures 7-2 and 7-3 is an example intended to approximate the current mix of haulers in the City. Currently, there are seven haulers that provide 94 percent of the service (cubic yard per week) in the City. Multiplied by 24 stops the relative service proportions of those haulers are as follows: 8,7,4,2,1,1,1. Figure 7-2 represents how the stops from seven such haulers might be distributed in a relatively random pattern, and Figure 7-2 represents how those stops might be distributed in a more compact pattern. Various paths through the grid were investigated and a minimum number of blocks traveled was estimated for stops assuming each hauler started at the same location. The number of stops was also estimated under the assumption that all stops would be collected by a single hauler as would be the case in the proposed project.

The results of those estimates are shown in Table 7-3. With a relatively random pattern of accounts the franchise system would result in a 55 percent reduction in on-route blocks traveled compared to existing conditions. With a more compact pattern of accounts, the franchise system would result in a 39 percent reduction in on-route blocks traveled.

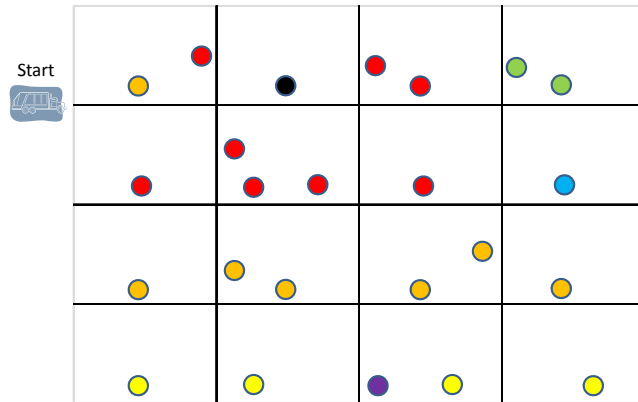
Reasoning that in many areas of the City there will be some grouping of accounts in an attempt to lower on-route travel times and the associated costs, Figures 7-3 and 7-4 show a similar example where all collection is performed by three haulers. As shown in Table 7-3, with a relatively random pattern of accounts the franchise system would result in a 39 percent reduction in on-route blocks traveled compared to existing conditions. With a more compact pattern of accounts, the franchise system would result in a 19 percent reduction in blocks traveled.

These simple examples illustrate how the franchise system can result in less travel (and travel time) compared to the existing system. Note that the examples provide no indication of the number of haulers likely to collect from the other stops within the grid. Even in the larger hauler example, multiple firms are likely to collect from some of the stops not collected by the larger hauler substantially increasing blocks per stop for the remaining 16 stops not collected by the larger hauler. Thus, the overall reduction in miles will be greater than that shown in the examples.

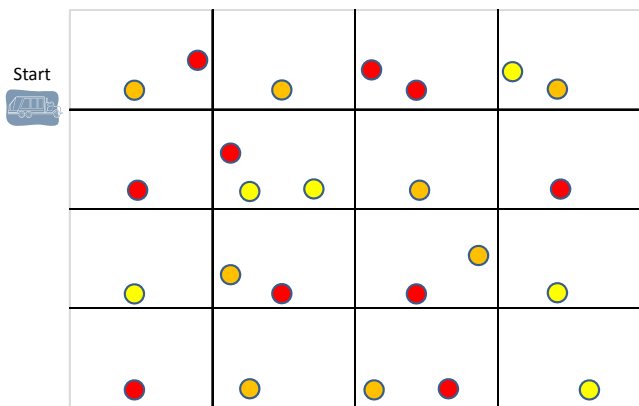
The examples also illustrate how the travel reduction resulting from the franchise zone will vary depending on the extent to which hauler accounts are currently spread throughout franchise zones, or grouped together in “pockets” of customers within a zone. It should be noted that in today’s system, haulers are competing with each other on the basis of price and have an incentive to group routes in a concentrated manner. A hauler can offer a lower price to a customer located close to a series of existing customers than it can to a customer located distant from any other customer.



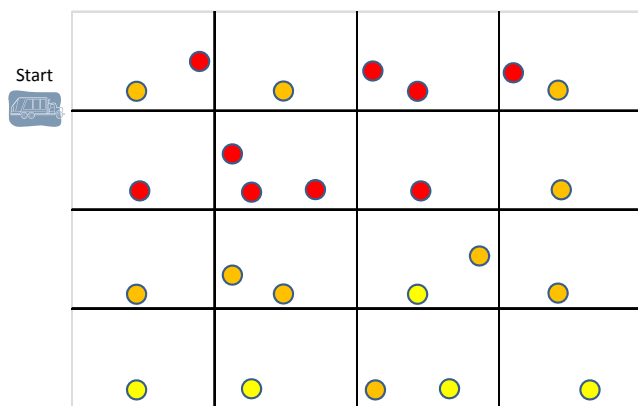
**FIGURE 7-2**  
**Truck Routing Example, Existing Hauler**  
**Mix with Random Stops**



**FIGURE 7-3**  
**Truck Routing Example, Existing Hauler**  
**Mix with Compact Stops**



**FIGURE 7-4**  
**Truck Routing Example, Three Haulers with Random Stops**



**FIGURE 7-5**  
**Truck Routing Example, Three Haulers with Compact Stops**

**TABLE 7-3**  
**Example Distance Changes From Proposed Project Under Varying Circumstances**

	Stops	Blocks	Blocks per Stop	% Change
<b>Example of Existing Hauler Mix</b>				
Random Existing Stops				
Existing Hauler Mix	24	66	2.75	
Franchise Hauler	24	30	1.25	-55%
Compact Existing Stops				
Existing Hauler Mix	24	49	2.04	
Franchise Hauler	24	30	1.25	-39%
<b>Three Hauler Example</b>				
Random Existing Stops				
Three Haulers	24	49	2.04	
Franchise Hauler	24	30	1.25	-39%
Compact Existing Stops				
Three Haulers	24	37	1.54	
Franchise Hauler	24	30	1.25	-19%

The potential for reduced on-route travel distance under the proposed project must be viewed within the context of how trucks operate in the field. Reducing on-route distances will result in reduced on-route time per stop and result in less time required for trucks to reach capacity (assuming for now, no change in waste composition or density). The implications of the reduced on-route travel distance and time on the amount of waste that can be collected by a truck each day are explored in Table 7-4.

TABLE 7-4

**Estimated Increase in Tons per Truck per Collection Day for Proposed Project**

Line No.	Estimated trucks per day and payload			
1	Route trucks daily	199.2		
2	Tons per truck per day	18.8		
3	Tons per trip to disposal facility	9.4		
4	Estimate Route Data from Truck Survey	479.5		
5	Off-route time per-load to/at/from disposal facility (min.)	81		
6	No. of on-route stops per collection day	79		
7	Minutes per stop	3.0		
8	Travel time between stops (minutes)			
9	Per collection day	181		
10	Per stop	2.3		
11	Pounds per stop (VMT Model and Truck Survey)			
12	Proposed project			
13	Assumed reduction in travel time per stop	30%	40%	50%
14	Reduction in driving time per stop (minutes)	0.7	0.9	1.2
15	Driving time per stop	1.6	1.4	1.2
16	Extra time available per collection day (minutes)	54	72	90
17	Extra stops per day	12	16	22
18	Added tons per truck per day	2.8	3.9	5.2
19	% Increase in tons per truck per day	15%	21%	28%

The information and calculations in Table 7-4 are as follows.

- Lines 1 through 11 are from Table 5-1.
- Line 13 represent an estimated range in reductions in travel time per stop based on the analysis presented above.
- Line 14 = Line 13 x Line 10.
- Line 15 = Line 10 – Line 14.
- Line 16 = Line 6 x Line 14.
- Line 17 = Line 16 / (Line 15 + Line 7).
- Line 18 = Line 17 \* (Line 11 / 2,000).
- Line 19 = Line 20 / Line 2.

The results show an estimated 2.8 to 5.2 ton increase in the quantity of MSW that could be collected by a truck each day under the proposed project. This represents an increase of 15 to 28 percent above existing conditions. There are two additional factors that should be considered when estimating the potential reduction in on-route VMT and VHT from the proposed project.

1. These results rely on data from a sample of haulers from the truck survey: there are also smaller haulers currently serving customers that would have routes with longer distances between stops. Thus, the results shown in Table 7-4 could be viewed as a lower bound.
2. Increases in material collected per truck per day may not necessarily translate directly into VMT and VHT savings. Haulers are constrained by vehicle capacities and the need to travel to disposal facilities to unload.



As shown on line 6, it is estimated that route trucks average 81 minutes to travel to a disposal facility, unload, and then return to the route. During the truck surveys, it was observed that on some days haulers had parked trucks at the end of the day with partial loads remaining in the truck and would make a trip to the disposal facility after collecting from very few stops. Some days they would make two trips to a disposal facility, some days three and some days one. In order to take advantage of the ability to collect more material each day, haulers must either increase the number of trips to the disposal facility or end the day with partial load.

On the basis of the analysis presented in this section, it is estimated that the proposed project will result in a 15 to 20 percent reduction in on-route VMT and VHT to collect the existing mix of materials compared to existing conditions: for the analysis of alternatives, it is estimated that a 17.5 percent reduction in on-route VMT and VHT would result from changing from the current open system to an exclusive franchise.

### 7.1.2 Estimated Off-Route Travel Reductions

In Table 7-1, Line 17 and 27 reference the potential for reduced off-route travel time and distance that may result under the proposed project from the City's competitive procurement of exclusive franchises. The current collection market is competitive: haulers compete for business. Customers choose haulers on the basis of many factors such as the services offered, customer service, personal relationships and price. In the procurement process the City will use to choose haulers for franchise zones, the biggest selection factor the hauler controls will be the price offered to the City for the service. The contracts will represent sizable long-term revenue potential for haulers and it is anticipated they will compete fiercely and take every step possible to offer a low price to the City.

One way haulers can lower the collection prices offered to the City is by minimizing off-route travel time and the associated cost of labor, fuel, and maintenance. They can accomplish this by basing the collection fleet close to the franchise zone, and by selecting disposal or processing facilities, or potentially building a transfer station or reload facility close to the franchise zone. Thus, it is anticipated that the winning proposals for each zone are likely to have lower average off-route travel time and distances than exists currently.

The extent to which off-route time and distance savings may result is uncertain, but for the purposes of this analysis it is assumed that the proposed project will result in a 10 percent savings in off-route time and distance to collect existing materials compared to existing conditions.

### 7.1.3 Increases in Traffic Congestion

Lines 11 and 16 reference estimated increases in on-route and off-route travel time compared to today's conditions that may occur because of congestion. On the basis of historical trends published in the Texas A&M Transportation Institute's *2012 Annual Urban Mobility Report*, it is estimated that peak period VHT/mile will increase by a projected 1.27 percent per year.

Table 5-3 provides the time of day for the off-route trips made by haulers during the truck survey. As shown, most of the trips are made outside of the AM Peak or PM Peak. Thus, for the purposes of this analysis, it is assumed that annual VHT/mile will increase by 0.6 percent per year or 11.4 percent from 2012 to 2030.

### 7.1.4 Other Key Assumptions

The no project alternative results in a distribution of MSW, recycling, and organics VMT and VHT similar to that of the existing conditions (2012). As shown in Lines 12, 14, and 20 of Table 5-1, the no project alternative shows higher travel time between stops, fewer stops per day, and fewer loads per day to disposal/processing facilities than existing conditions because congestion results in overall lower travel speeds.

The basic calculations used to prepare Table 5-1 are described in Section 5.6, but the proposed project shows a series of differences compared to the no project alternative mainly because of the changing material mix (less MSW, more recycling and organics) and the efficiencies resulting from having one hauler serve each franchise zone. Some notable changes and assumptions made for the proposed project compared to the no project alternative include the following:

- In Line 8, the pounds of MSW per stop is assumed to decline by 20 percent from the no project alternative. This is mainly because many loads will have organics removed from the MSW. There is not a corresponding increase in organics pounds per stop reasoning that the amount of organics per stop will be similar to that experienced today, but there will be more stops than under the no project alternative.
- In Line 9, the on-route times per day increase for MSW and recycling, and decrease for organics. This results from assumptions about the number of stops per day (Line 14) and the travel time between stops (Line 12), discussed below.
- In Line 12, the time spent traveling between stops for MSW is reduced by the 6.1 percent, which is the net change from Line 10 – Line 11. It is assumed that distance and time between recycling stops will be the same as that of MSW, but that the distance between organics stops will be 50 percent greater.
- Line 28 shows a reduction in miles per route truck per day that estimated to result from eliminating haulers collecting partial loads in the City. The basis for this estimate is described in Section 5.4.3.

The remaining calculations are as described in Section 5.6 with the adjustments described in Sections 7.2-7.4.

## 7.2 2030 VMT and VHT for Alternatives 1-3

As shown in Table 7-2, Alternative 1, the non-exclusive system and Alternative 2, the exclusive system with multiple haulers have virtually identical projected 2030 VMT (14.18 million versus 14.15 million), and equivalent VHT. Alternative 3, city collection has the same VMT and VHT as the proposed project (10.3 million VMT and 809,000 VHT).

The basis for these findings and some key assumptions are as follows.

- As noted in Section 6, it is anticipated that Alternatives 1-3 would all eventually reach similar levels of diversion as the proposed project, and for the purposes of this analysis, it is assumed that the mix of materials would be the same for all four of these alternatives.
- In Line 10, Alternatives 1 and 2 would be likely to result in some routing efficiencies. In Alternative 1, even though the system would be non-exclusive, it's likely that fewer haulers would be willing and able to provide three different material services (MSW, recycling, organics) with the resulting transfer and processing requirements. It was assumed that the reduced on-route travel time would be 10 percent of that assumed for the proposed project. In Alternative 2 there would be fewer haulers still. For this alternative, it was assumed that the reduced on-route travel time would be 25 percent of that assumed for the proposed project.
- Similarly in Lines 17 and 27, it is assumed that Alternative 1 would result in a one percent reduction in off-route travel time and distance resulting from having fewer haulers in the system. For Alternative 2, it is assumed that a 2.5 percent reduction in off-route travel time and distance would result.

## Appendix Supporting Tables

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**Table A-1 - 2012 Multi-Family and Commercial MSW Disposal by Private Haulers**

Hauler Name	Total	ACTIVE RECYCLING - W_ SLAUSON AVE_	AMERICAN WASTE TRANSFER STATION- GARDENA	ATHENS SERVICES - MSW	AZUSA LAND RECLAMATION CO_ LANDFILL	BEL-ART TRANSFER STATION	BRADLEY LANDFILL	C R Transfer (CRT)	CALABASAS SANITARY LANDFILL	CARSON TRANSFER STATION & MRF	CENTRAL LA RECYCLING & TRANSFER STATION
Total	1,469,789	1	160,500	174,492	6,422	4,631	3,982	572	18,026	46,759	74,175
A & B Disposal Service	3,802										225
A&A Waste & Rolloff Services, Inc	29										
AAA Rubbish, Inc	25,120										1,527
Active Recycling Co., Inc.	425		425								
American Reclamation, Inc.	6,890								21		644
Apex Waste Systems, Inc.	20								7		
Arakelian Enterprises, Inc.	364,063			174,492					8,826		49,392
Benny's Disposal Service Inc.	70										
Burrtec Waste Services, LLC	7										
CalMet Services, Inc.	3,597									224	
City Rent A Bin	2,240										
Commercial Waste Services	644										
Consolidated Disposal Service, LLC	508,568		159,163			4,358			961		17,986
CONTRACTOR - A1 All American Roofing Company, Inc.	118										
CONTRACTOR - Amato Construction Corp.	30										
CONTRACTOR - General Construction Clean Up, Inc	21										
CONTRACTOR - Golden West Demolition, Inc	0										
CONTRACTOR - GWG Construction	2										
CONTRACTOR - H.A.S. Construction	2										
CONTRACTOR - KCD Hillside Contractors	102										
CONTRACTOR - LJ Roofing Inc.	42										
CONTRACTOR - Mark Gaillard Construction	1	1									
CONTRACTOR - SUNWEST ROOFING INC.	15										
CONTRACTOR - Troy Construction & Roofing	8										
Cordova Construction Services, Inc.	6,758								398		
CR & R Inc	609							572			
Crown Disposal Co. Inc	159,650								149		
D and J Hauling	151								148		
Direct Disposal	3,014								184		
Easy Roll Off Services	10					10					
EDCO Waste Services LLC	3,473		5			263					
El Gavilan Rolloffs	317								317		
Ezequiel's Hauling Services	5										
Franks Disposal Co	35										
Golden State Recycling & Disposal, Inc	250										
Goodwill Disposal Co	270				120						
Haul-Away-Rubbish Service, Inc.	9,290									59	3,382
Heritage Disposal, Inc.	122										122

**Table A-1 - 2012 Multi-Family and Commercial MSW Disposal by Private Haulers**

Hauler Name	Total	ACTIVE RECYCLING - W_ SLAUSON AVE_	AMERICAN WASTE TRANSFER STATION- GARDENA	ATHENS SERVICES - MSW	AZUSA LAND RECLAMATION CO_ LANDFILL	BEL-ART TRANSFER STATION	BRADLEY LANDFILL	C R Transfer (CRT)	CALABASAS SANITARY LANDFILL	CARSON TRANSFER STATION & MRF	CENTRAL LA RECYCLING & TRANSFER STATION
Jimenez Services	81								81		
JR Roll Off Service	275								275		
Larry The Rubbish Man	110										
Leiva's Rolloff Disposal Co	50										
Melva Disposal & Recycling Co.	170										
Murk Disposal, Inc	161										
NASA Services, Inc.	42,097		5						768		183
One Stop Leasing, Inc.	675										
Quality Waste Services Inc.	22										22
R Big Continental Disposal Services	118								118		
Red Horse Waste Management Inc.	990										
Reel Waste & Recycling, LLC	531								10		
Rolo's Disposal Services	2,997		107								
Roscoe Roll Off, Inc.	103										103
S & H Disposal Co. and Recycling Services	435										
SoCal Waste, Inc.	572								572		
Southern California Disposal Co., Inc.	9,484										
Southland Disposal Company	16,593										
Speedy Dumpsters, Inc.	647								647		
Super Box Roll Off Services	324								324		
United Pacific Waste	6,357										
Universal Waste Systems, Inc	68,368		795				3,982				
USA Waste of California (SV)	207,908				6,302				4,219	46,477	
Valley Vista Services	2,029										588
Van Disposal Service, Inc.	225										
Ware Disposal, Inc.	251										
Waste & Recycling Services, Inc.	842										
Waste Resources Inc.	7,606										

**Table A-1 - 2012 Multi-Family and Commercial MSW Disposal by Private Haulers (continued)**

Hauler Name	Total	CHIQUITA CANYON LANDFILL	CITY TERRACE RECYCLING - C&D (NOT CERTIFIED)	COASTAL MRF & TRANSFER STATION (SI-NOR)	COMMERCE REFUSE TO ENERGY	COMM. RECYCLING - MSW	Compton Transfer Station (CDS, BFI, Allied Waste)	Construction and Demolition Recycling	CVT RECYCLING	DOWNEY AREA RECYCLING & TRANSFER STATION	EAST L_A_ RECYCLING & TRANSFER STATION
Total	1,469,789	120,187	1,045	9,851	7,263	160,282	8,359	8	102	68	49,117
A & B Disposal Service	3,802										
A&A Waste & Rolloff Services, Inc	29						29				
AAA Rubbish, Inc	25,120				47					23	
Active Recycling Co., Inc.	425										
American Reclamation, Inc.	6,890										
Apex Waste Systems, Inc.	20										
Arakelian Enterprises, Inc.	364,063	87,804			4,188						
Benny's Disposal Service Inc.	70										
Burrtec Waste Services, LLC	7										
CalMet Services, Inc.	3,597										
City Rent A Bin	2,240										
Commercial Waste Services	644										
Consolidated Disposal Service, LLC	508,568	1,312		9,851	116		8,209				49,117
CONTRACTOR - A1 All American Roofing Company, Inc.	118						112				
CONTRACTOR - Amato Construction Corp.	30									30	
CONTRACTOR - General Construction Clean Up, Inc	21					16					
CONTRACTOR - Golden West Demolition, Inc	0										
CONTRACTOR - GWG Construction	2						2				
CONTRACTOR - H.A.S. Construction	2										
CONTRACTOR - KCD Hillside Contractors	102								102		
CONTRACTOR - LJ Roofing Inc.	42										
CONTRACTOR - Mark Gaillard Construction	1										
CONTRACTOR - SUNWEST ROOFING INC.	15										
CONTRACTOR - Troy Construction & Roofing	8							8			
Cordova Construction Services, Inc.	6,758										
CR & R Inc	609										
Crown Disposal Co. Inc	159,650	1,941				157,560					
D and J Hauling	151					2					
Direct Disposal	3,014										
Easy Roll Off Services	10										
EDCO Waste Services LLC	3,473										
El Gavilan Rolloffs	317										
Ezequiel's Hauling Services	5										
Franks Disposal Co	35					35					
Golden State Recycling & Disposal, Inc	250					250					
Goodwill Disposal Co	270										
Haul-Away-Rubbish Service, Inc.	9,290		1,045		322						
Heritage Disposal, Inc.	122										

**Table A-1 - 2012 Multi-Family and Commercial MSW Disposal by Private Haulers (continued)**

Hauler Name	Total	CHIUQUITA CANYON LANDFILL	CITY TERRACE RECYCLING - C&D (NOT CERTIFIED)	COASTAL MRF & TRANSFER STATION (SI-NOR)	COMMERCE REFUSE TO ENERGY	COMM. RECYCLING - MSW	Compton Transfer Station (CDS, BFI, Allied Waste)	Construction and Demolition Recycling	CVT RECYCLING	DOWNEY AREA RECYCLING & TRANSFER STATION	EAST L_A_ RECYCLING & TRANSFER STATION
Jimenez Services	81										
JR Roll Off Service	275										
Larry The Rubbish Man	110					100					
Leiva's Rolloff Disposal Co	50										
Melva Disposal & Recycling Co.	170										
Murk Disposal, Inc	161										
NASA Services, Inc.	42,097										
One Stop Leasing, Inc.	675										
Quality Waste Services Inc.	22										
R Big Continental Disposal Services	118										
Red Horse Waste Management Inc.	990					990					
Reel Waste & Recycling, LLC	531										
Rolo's Disposal Services	2,997										
Roscoe Roll Off, Inc.	103										
S & H Disposal Co. and Recycling Services	435										
SoCal Waste, Inc.	572										
Southern California Disposal Co., Inc.	9,484										
Southland Disposal Company	16,593										
Speedy Dumpsters, Inc.	647										
Super Box Roll Off Services	324										
United Pacific Waste	6,357										
Universal Waste Systems, Inc	68,368	28,982			2,578						
USA Waste of California (SV)	207,908	148			2						
Valley Vista Services	2,029										
Van Disposal Service, Inc.	225				10					15	
Ware Disposal, Inc.	251										
Waste & Recycling Services, Inc.	842										
Waste Resources Inc.	7,606					1,329	7				

**Table A-1 - 2012 Multi-Family and Commercial MSW Disposal by Private Haulers (continued)**

Hauler Name	Total	FALCON TRANSFER CENTER - WILMINGTON	GRAND CENTRAL RECYCLING & TRANSFER	INNOVATIVE WASTE CONTROL	Long Beach (SERRF) Southeast Resource Recovery Facility	MADISON MATERIALS - MSW (NOT CERTIFIED)	Misc_ Place Holders	MISSION ROAD TRANSFER STATION & RECYCLING CENTER	NU-WAY LIVE OAK Reclamatio n- LIVE OAK LANE	Paramount Resource Recycling	PUENTE HILLS LANDFILL	SCHOLL CANYON LANDFILL
Total	1,469,789	7,145	6,103	80,127	11,872	251	94,179	35,586	1	2,050	98,767	219
A & B Disposal Service	3,802										3,577	
A&A Waste & Rolloff Services, Inc	29											
AAA Rubbish, Inc	25,120		4,568		1,987				1		7	
Active Recycling Co., Inc.	425											
American Reclamation, Inc.	6,890			4,312							22	7
Apex Waste Systems, Inc.	20										3	
Arakelian Enterprises, Inc.	364,063				4,388						33,861	174
Benny's Disposal Service Inc.	70										70	
Burrtec Waste Services, LLC	7											
CalMet Services, Inc.	3,597			33	1,169					1,600		
City Rent A Bin	2,240				101		110				2,029	
Commercial Waste Services	644										644	
Consolidated Disposal Service, LLC	508,568	6,161		75,742	255						104	
CONTRACTOR - A1 All American Roofing Company, Inc.	118	6										
CONTRACTOR - Amato Construction Corp.	30											
CONTRACTOR - General Construction Clean Up, Inc	21											
CONTRACTOR - Golden West Demolition, Inc	0											
CONTRACTOR - GWG Construction	2											
CONTRACTOR - H.A.S. Construction	2											
CONTRACTOR - KCD Hillside Contractors	102											
CONTRACTOR - LJ Roofing Inc.	42											
CONTRACTOR - Mark Gaillard Construction	1											
CONTRACTOR - SUNWEST ROOFING INC.	15									15		
CONTRACTOR - Troy Construction & Roofing	8											
Cordova Construction Services, Inc.	6,758											
CR & R Inc	609										36	
Crown Disposal Co. Inc	159,650											
D and J Hauling	151											
Direct Disposal	3,014							530			2,300	
Easy Roll Off Services	10											
EDCO Waste Services LLC	3,473	977			43		2,148					
El Gavilan Rolloffs	317											
Ezequiel's Hauling Services	5											
Franks Disposal Co	35											
Golden State Recycling & Disposal, Inc	250											
Goodwill Disposal Co	270			40							80	
Haul-Away-Rubbish Service, Inc.	9,290		94		6			327			3,662	



**Table A-1 - 2012 Multi-Family and Commercial MSW Disposal by Private Haulers (continued)**

Hauler Name	Total	FALCON TRANSFER CENTER - WILMINGTON	GRAND CENTRAL RECYCLING & TRANSFER	INNOVATIVE WASTE CONTROL	Long Beach (SERRF) Southeast Resource Recovery Facility	MADISON MATERIALS - MSW (NOT CERTIFIED)	Misc_ Place Holders	MISSION ROAD TRANSFER STATION & RECYCLING CENTER	NU-WAY LIVE OAK Reclamation- LIVE OAK LANE	Paramount Resource Recycling	PUENTE HILLS LANDFILL	SCHOLL CANYON LANDFILL
Heritage Disposal, Inc.	122											
Jimenez Services	81											
JR Roll Off Service	275											
Larry The Rubbish Man	110											10
Leiva's Rolloff Disposal Co	50										50	
Melva Disposal & Recycling Co.	170										170	
Murk Disposal, Inc	161										151	
NASA Services, Inc.	42,097										39,376	
One Stop Leasing, Inc.	675										675	
Quality Waste Services Inc.	22											
R Big Continental Disposal Services	118											
Red Horse Waste Management Inc.	990											
Reel Waste & Recycling, LLC	531				484							
Rolo's Disposal Services	2,997										2,890	
Roscoe Roll Off, Inc.	103											
S & H Disposal Co. and Recycling Services	435									435		
SoCal Waste, Inc.	572											
Southern California Disposal Co., Inc.	9,484											
Southland Disposal Company	16,593											
Speedy Dumpsters, Inc.	647											
Super Box Roll Off Services	324											
United Pacific Waste	6,357										6,357	
Universal Waste Systems, Inc	68,368						25,207				1,415	28
USA Waste of California (SV)	207,908				3,438		66,715	34,730				
Valley Vista Services	2,029		1,441									
Van Disposal Service, Inc.	225										200	
Ware Disposal, Inc.	251					251						
Waste & Recycling Services, Inc.	842										842	
Waste Resources Inc.	7,606										246	

**Table A-1 - 2012 Multi-Family and Commercial MSW Disposal by Private Haulers (continued)**

Hauler Name	Total	Simi Valley Landfill and Recycling Center (Certified Processor)	SOUTH GATE TRANSFER STATION - COUNTY	Southern California Disposal Co_ Recycling & Transfer Station	SUNSHINE CANYON LANDFILL	US Ecology	WASTE MANAGEMENT RECYCLING & DISPOSAL SERVICES	WASTE MANAGEMENT SOUTH GATE TRANSFER ST	WASTE RECOVERY & RECYCLING (SOUTH GATE)	Waste Resources Recovery	WHITTIER FERTILIZER	Whittier Savage Canyon Landfill
Total	1,469,789	36,378	9,352	29,021	128,098	106	6,393	2,042	976	6,024	47	47
A & B Disposal Service	3,802											
A&A Waste & Rolloff Services, Inc	29											
AAA Rubbish, Inc	25,120		272									
Active Recycling Co., Inc.	425											
American Reclamation, Inc.	6,890				1,885							
Apex Waste Systems, Inc.	20		10									
Arakelian Enterprises, Inc.	364,063				4				934			
Benny's Disposal Service Inc.	70											
Burrtec Waste Services, LLC	7				7							
CalMet Services, Inc.	3,597							570				
City Rent A Bin	2,240											
Commercial Waste Services	644											
Consolidated Disposal Service, LLC	508,568			19,535	118,678						47	47
CONTRACTOR - A1 All American Roofing Company, Inc.	118											
CONTRACTOR - Amato Construction Corp.	30											
CONTRACTOR - General Construction Clean Up, Inc	21	5										
CONTRACTOR - Golden West Demolition, Inc	0											
CONTRACTOR - GWG Construction	2											
CONTRACTOR - H.A.S. Construction	2			2								
CONTRACTOR - KCD Hillside Contractors	102											
CONTRACTOR - LJ Roofing Inc.	42								42			
CONTRACTOR - Mark Gaillard Construction	1											
CONTRACTOR - SUNWEST ROOFING INC.	15											
CONTRACTOR - Troy Construction & Roofing	8											
Cordova Construction Services, Inc.	6,758						6,360					
CR & R Inc	609											
Crown Disposal Co. Inc	159,650											
D and J Hauling	151											
Direct Disposal	3,014											
Easy Roll Off Services	10											
EDCO Waste Services LLC	3,473							37				
El Gavilan Rolloffs	317											
Ezequiel's Hauling Services	5		5									
Franks Disposal Co	35											

**Table A-1 - 2012 Multi-Family and Commercial MSW Disposal by Private Haulers (continued)**

Hauler Name	Total	Simi Valley Landfill and Recycling Center (Certified Processor)	SOUTH GATE TRANSFER STATION - COUNTY	Southern California Disposal Co_ Recycling & Transfer Station	SUNSHINE CANYON LANDFILL	US Ecology	WASTE MANAGEMENT RECYCLING & DISPOSAL SERVICES	WASTE MANAGEMENT SOUTH GATE TRANSFER ST	WASTE RECOVERY & RECYCLING (SOUTH GATE)	Waste Resources Recovery	WHITTIER FERTILIZER	Whittier Savage Canyon Landfill
Golden State Recycling & Disposal, Inc.	250											
Goodwill Disposal Co	270							30				
Haul-Away-Rubbish Service, Inc.	9,290						33	1,406				
Heritage Disposal, Inc.	122											
Jimenez Services	81											
JR Roll Off Service	275											
Larry The Rubbish Man	110											
Leiva's Rolloff Disposal Co	50											
Melva Disposal & Recycling Co.	170											
Murk Disposal, Inc	161		10									
NASA Services, Inc.	42,097				1,764							
One Stop Leasing, Inc.	675											
Quality Waste Services Inc.	22											
R Big Continental Disposal Services	118											
Red Horse Waste Management Inc.	990											
Reel Waste & Recycling, LLC	531		37									
Rolo's Disposal Services	2,997											
Roscoe Roll Off, Inc.	103											
S & H Disposal Co. and Recycling Services	435											
SoCal Waste, Inc.	572											
Southern California Disposal Co., Inc.	9,484			9,484								
Southland Disposal Company	16,593											
Speedy Dumpsters, Inc.	647											
Super Box Roll Off Services	324											
United Pacific Waste	6,357											
Universal Waste Systems, Inc	68,368				5,381							
USA Waste of California (SV)	207,908	36,373	9,019		379	106						
Valley Vista Services	2,029											
Van Disposal Service, Inc.	225											
Ware Disposal, Inc.	251											
Waste & Recycling Services, Inc.	842											
Waste Resources Inc.	7,606									6,024		

**Table A-2 - Distance from Franchise Zone to Disposal Facility (one-way, minutes)**

	DT	EDT	HB	NC	NE	NEV	SE	SEV	SLA	WL	WV
Disposal Facility	90015	90033	90744	90004	90065	91331	90011	91401	90018	90025	91335
AMERICAN WASTE TRANSFER STATION- GARDENA	15	19	15	25	23	36	16	35	18	20	39
ATHENS SERVICES - MSW	22	19	34	29	25	39	23	41	26	32	47
AZUSA LAND RECLAMATION CO_ LANDFILL	30	26	43	36	26	37	31	39	34	40	45
BEL-ART TRANSFER STATION	23	21	17	30	27	40	24	42	27	28	48
Compton Recycling & Transfer Station	18	22	17	28	26	38	19	37	21	22	41
CALABASAS SANITARY LANDFILL	38	36	52	35	34	28	42	22	36	27	18
CARSON TRANSFER STATION & MRF	19	22	10	29	26	39	19	37	22	22	41
CENTRAL LA RECYCLING & TRANSFER STATION	6	8	26	17	14	27	7	29	10	16	35
CHIUQUITA CANYON LANDFILL	44	42	61	41	38	23	48	30	46	37	34
CITY TERRACE RECYCLING - C&D	12	9	32	17	13	27	13	29	16	23	35
COMMERCE REFUSE TO ENERGY	13	11	26	20	17	30	14	32	17	23	38
COMMUNITY RECYCLING - MSW	25	23	44	26	18	11	28	20	29	28	26
EAST L_A_ RECYCLING & TRANSFER STATION	11	6	31	16	12	26	12	28	15	21	34
FALCON TRANSFER CENTER - WILMINGTON	27	26	7	35	32	45	27	43	15	29	48
GRAND CENTRAL RECYCLING & TRANSFER	26	24	39	34	31	44	27	46	30	37	52
INNOVATIVE WASTE CONTROL	12	11	24	20	16	30	11	31	16	22	37
Long Beach (SERRF) Southeast Resource Recovery Facility	28	27	6	37	33	47	28	45	31	31	49
PUEENTE HILLS LANDFILL	19	17	32	27	23	37	20	38	23	29	44
Simi Valley Landfill and Recycling Center (Certified Processor)	45	43	61	42	39	24	48	30	45	36	30
SOUTH GATE TRANSFER STATION -COUNTY	18	16	23	26	22	36	18	37	22	28	43
Southern California Disposal Co_ Recycling & Transfer Station	15	20	29	20	23	25	19	20	13	6	24
SUNSHINE CANYON LANDFILL	32	30	49	29	26	11	35	18	33	24	22
WASTE MANAGEMENT RECYCLING & DISPOSAL SERVICES	8	6	28	15	14	26	9	26	12	19	32
Waste Resources Recovery	15	19	13	25	23	36	16	35	18	20	39

**Table A-3 - Distance from Base Yard to Disposal Facility (one-way, miles)**

Base Yard Location	American Waste Transfer Station- Gardena	Athens Services - MSW	Azusa Land Reclamation Co_ Landfill	Bel-Art Transfer Station	Compton Recycling & Transfer Station	Carson Transfer Station & MRF	Calabasas Sanitary Landfill	Central LA Recycling & Transfer Station	Chiquita Canyon Landfill	City Terrace Recycling – C&D	Commerce Refuse to Energy	Community Recycling - MSW
6920 Foster Bridge Blvd - Bell Gardens	14	14	22	10	11	42	17	9	49	12	3	26
4560 Doran Street - Los Angeles	21	23	22	25	22	27	24	12	32	11	15	9
15045 Salt Lake Avenue - Industry	26	2	8	20	24	49	28	17	56	15	15	34
11266 Peoria St. - Sun Valley	29	31	31	33	30	31	32	20	25	19	23	0
14905 S San Pedro St. - Gardena	2	26	34	8	1	42	4	14	51	18	16	29
9200 Glenoaks Blvd - Sun Valley	28	31	30	33	29	31	31	19	24	18	22	0
2531 E. 67th St. - Long Beach	10	19	27	0	7	49	9	15	56	19	13	34
9189 De Garmo Ave. - Sun Valley	29	31	31	33	29	30	32	20	24	19	23	0
1701 Gage Road - Montebello	18	14	22	11	16	41	20	9	48	12	2	26
4320 San Gabriel River Pkwy - Pico Rivera	20	7	15	14	18	46	22	14	53	12	11	31
9081 Tujunga Ave - Sun Valley	29	31	31	33	30	30	32	20	24	19	23	1
407 E. El Segundo Blvd - Compton	6	21	28	6	3	43	9	7	53	18	11	30
1970 E. 213th St. - Long Beach	6	27	34	9	5	44	2	20	54	24	17	33
766 S. Ayon - Azusa	32	8	0	25	29	49	34	22	54	18	22	31
17445 E Railroad St - Industry	30	5	9	23	27	53	32	20	60	19	18	37
850 E. 111th Place - Los Angeles	5	23	31	10	3	41	8	7	51	15	13	27

**Table A-3 - Distance from Base Yard to Disposal Facility (one-way, miles) (cont.)**

Base Yard Location	East L_A_ Recycling & Transfer Station	Falcon Transfer Center - Wilmington	Grand Central Recycling & Transfer	Innovative Waste Control	Long Beach (SERRF) Southeast Resource Recovery Facility	Puente Hills Landfill	Simi Valley Landfill and Recycling Center (Certified Processor)	South Gate Transfer Station - County	Southern California Disposal Co_ Recycling & Transfer Station	Sunshine Canyon Landfill	Waste Management Recycling & Disposal Services	Waste Resources Recovery
6920 Foster Bridge Blvd - Bell Gardens	11	16	18	5	18	11	52	4	23	35	8	14
4560 Doran Street - Los Angeles	10	31	29	15	34	23	34	19	23	18	11	21
15045 Salt Lake Avenue - Industry	15	28	4	16	30	4	59	20	30	43	16	26
11266 Peoria St. - Sun Valley	18	39	37	23	42	31	28	27	27	12	19	29
14905 S San Pedro St. - Gardena	17	13	30	16	14	24	53	12	19	37	15	0
9200 Glenoaks Blvd - Sun Valley	18	39	36	23	41	30	27	27	27	11	18	28
2531 E. 67th St. - Long Beach	19	9	23	12	12	16	59	9	26	43	16	9
9189 De Garmo Ave. - Sun Valley	18	39	37	23	42	30	27	27	26	11	18	29
1701 Gage Road - Montebello	11	20	18	4	22	11	51	5	22	35	8	18
4320 San Gabriel River Pkwy - Pico Rivera	12	20	11	13	24	3	56	16	27	40	13	20
9081 Tujunga Ave - Sun Valley	18	39	37	23	42	30	27	27	27	11	19	29
407 E. El Segundo Blvd - Compton	17	10	24	10	11	18	54	4	20	40	14	4
1970 E. 213th St. - Long Beach	23	7	30	17	7	24	55	13	21	41	20	5
766 S. Ayon - Azusa	18	33	8	21	35	11	57	25	36	41	21	32
17445 E Railroad St - Industry	18	31	0	19	33	7	62	23	33	46	19	30
850 E. 111th Place - Los Angeles	15	16	27	12	18	20	53	9	18	38	16	4

**Table A-4 - Distance from Base Yard to Franchise Zone Centroid (one-way, miles)**

Base Yard Location	DT	EDT	HB	NC	NE	SE	NEV	SEV	SLA	WL	WV
6920 Foster Bridge Blvd - Bell Gardens	11	9	19	16	16	11	30	27	14	22	32
4560 Doran Street - Los Angeles	11	9	29	8	6	13	13	12	14	20	17
15045 Salt Lake Avenue - Industry	18	16	30	23	23	18	38	34	22	29	40
11266 Peoria St. - Sun Valley	19	17	37	16	14	21	3	12	22	24	13
14905 S San Pedro St. - Gardena	12	15	10	15	19	10	29	26	14	18	31
9200 Glenoaks Blvd - Sun Valley	19	17	37	15	14	21	36	33	21	24	39
2531 E. 67th St. - Long Beach	18	16	12	23	23	18	4	7	22	29	11
9189 De Garmo Ave. - Sun Valley	19	17	37	15	14	21	32	29	22	23	33
1701 Gage Road - Montebello	10	8	22	15	15	10	6	8	14	21	15
4320 San Gabriel River Pkwy - Pico Rivera	15	13	24	24	20	15	31	28	19	26	32
9081 Tujunga Ave - Sun Valley	19	17	37	15	14	21	14	16	22	23	5
407 E. El Segundo Blvd - Compton	12	15	11	16	20	7	38	34	14	19	40
1970 E. 213th St. - Long Beach	16	19	3	19	23	14	5	8	18	20	15
766 S. Ayon - Azusa	24	20	36	26	22	24	30	26	27	35	32
17445 E Railroad St - Industry	22	20	33	26	26	22	30	27	25	33	32
850 E. 111th Place - Los Angeles	9	13	13	12	16	4	29	28	11	17	32

**Table A-5 - Distance from Franchise Zone to Franchise Zone (one-way, miles)**

Franchise Zone	DT	EDT	HB	NC	NE	NEV	SE	SEV	SLA	WL	WV
DT	0	5	20	4	9	22	4	19	4	12	24
EDT	5	0	23	8	7	22	4	19	8	15	24
HB	20	24	0	23	28	41	18	36	22	25	39
NC	4	7	24	0	8	17	8	14	3	11	19
NE	9	7	27	7	0	19	11	18	11	19	24
NEV	24	23	42	18	20	0	28	11	28	20	11
SE	3	5	18	8	12	26	0	22	7	14	28
SEV	19	19	36	14	18	6	22	0	20	12	6
SLA	5	9	23	3	12	25	7	19	0	8	23
WL	12	16	25	11	19	19	14	12	9	0	15
WV	25	24	39	19	23	11	27	6	24	15	0



**Table A-6 - Travel Time Franchise Zone to Disposal Facility (one-way, minutes)**

	DT	EDT	HB	NC	NE	NEV	SE	SEV	SLA	WL	WV
<b>Disposal Facility</b>											
AMERICAN WASTE TRANSFER STATION- GARDENA	12	15	10	15	19	32	10	29	14	18	32
ATHENS SERVICES - MSW (Arkelian Corp.)	18	16	30	22	22	36	18	33	22	29	39
AZUSA LAND RECLAMATION CO_ LANDFILL	26	23	38	29	22	35	26	34	29	37	40
BEL-ART TRANSFER STATION	19	17	12	24	24	38	19	35	23	26	40
Compton Recycling & Transfer Station	12	16	11	16	20	33	10	30	15	19	33
CALABASAS SANITARY LANDFILL	34	34	49	29	33	26	37	19	33	25	14
CARSON TRANSFER STATION & MRF	15	18	6	18	22	35	13	31	17	19	34
CENTRAL LA RECYCLING & TRANSFER STATION	3	3	22	7	10	24	3	21	6	14	27
CHIUQUITA CANYON LANDFILL	41	40	59	36	38	20	45	26	43	35	26
City Terrace Recycling-MSW	8	3	27	10	9	24	8	21	11	19	27
COMMERCE REFUSE TO ENERGY	9	7	19	14	14	28	9	25	12	20	31
COMMUNITY RECYCLING - MSW	19	17	38	16	15	6	22	8	22	24	15
EAST L_A_ RECYCLING & TRANSFER STATION	8	4	26	10	9	23	7	21	11	18	26
FALCON TRANSFER CENTER - WILMINGTON	23	22	3	29	29	44	21	39	11	28	42
GRAND CENTRAL RECYCLING & TRANSFER	23	20	34	27	27	42	22	38	26	33	44
INNOVATIVE WASTE CONTROL	6	4	21	13	14	28	4	25	9	16	30
Long Beach (SERRF) Southeast Resource Recovery Facility	25	24	3	31	31	46	23	41	27	30	44
PUENTE HILLS LANDFILL	17	15	27	21	21	36	17	33	20	28	38
Simi Valley Landfill and Recycling Center	43	43	60	38	40	23	42	27	44	36	20
SOUTH GATE TRANSFER STATION -COUNTY	13	10	17	17	17	32	7	28	16	23	34
Southern California Disposal Co_ Recycling	13	17	26	12	20	23	15	15	10	4	18
SUNSHINE CANYON LANDFILL	28	27	45	22	24	7	31	12	30	21	13
WASTE MANAGEMENT RECYCLING & DISPOSAL SE	5	2	23	8	10	23	4	19	8	15	25
Waste Resources Recovery	12	15	9	15	19	32	10	29	14	18	33

**Table A-7 - Travel Time Base Yard to Disposal Facility (one-way, minutes)**

Base Yard Location	American Waste Transfer Station- Gardena	Athens Services - MSW	Azusa Land Reclamation Co_ Landfill	Bel-Art Transfer Station	Compton Recycling & Transfer Station	Carson Transfer Station & MRF	Calabasas Sanitary Landfill	Central LA Recycling & Transfer Station	Chiquita Canyon Landfill	City Terrace Recycling – C&D	Commerce Refuse to Energy	Community Recycling - MSW
6920 Foster Bridge Blvd - Bell Gardens	21	22	29	16	21	48	22	15	51	18	8	33
4560 Doran Street - Los Angeles	27	27	25	29	29	30	29	16	32	14	21	14
15045 Salt Lake Avenue - Industry	31	5	22	23	29	54	32	20	57	23	20	38
11266 Peoria St. - Sun Valley	36	37	35	38	38	36	39	25	27	24	30	2
14905 S San Pedro St. - Gardena	7	31	39	12	3	47	11	20	54	24	23	37
9200 Glenoaks Blvd - Sun Valley	35	36	34	37	37	35	38	24	26	23	29	1
2531 E. 67th St. - Long Beach	14	22	30	2	14	54	13	21	57	24	16	39
9189 De Garmo Ave. - Sun Valley	36	37	35	38	38	36	39	25	27	24	30	0
1701 Gage Road - Montebello	23	18	25	15	21	47	24	13	50	16	7	31
4320 San Gabriel River Pkwy - Pico Rivera	25	12	20	17	23	52	26	18	55	21	15	36
9081 Tujunga Ave - Sun Valley	36	36	35	38	37	35	38	24	27	23	29	3
407 E. El Segundo Blvd - Compton	13	26	34	13	7	48	15	19	55	24	18	38
1970 E. 213th St. - Long Beach	9	29	36	10	14	47	5	23	54	26	20	39
766 S. Ayon - Azusa	38	15	3	31	37	53	39	28	54	28	28	37
17445 E Railroad St - Industry	35	12	21	27	33	58	36	24	1	27	24	42
850 E. 111th Place - Los Angeles	12	28	35	14	9	47	14	20	54	24	19	37

**Table A-7 - Travel Time Base Yard to Disposal Facility (one-way, minutes) (cont.)**

Base Yard Location	East L_A_ Recycling & Transfer Station	Falcon Transfer Center - Wilmington	Grand Central Recycling & Transfer	Innovative Waste Control	Long Beach (SERRF) Southeast Resource Recovery Facility	Puente Hills Landfill	Simi Valley Landfill and Recycling Center (Certified Processor)	South Gate Transfer Station - County	Southern California Disposal Co_ Recycling & Transfer Station	Sunshine Canyon Landfill	Waste Management Recycling & Disposal Services
6920 Foster Bridge Blvd - Bell Gardens	16	21	26	12	25	19	53	12	29	39	14
4560 Doran Street - Los Angeles	13	35	33	20	37	27	34	26	28	20	15
15045 Salt Lake Avenue - Industry	22	31	10	20	35	7	59	25	34	44	22
11266 Peoria St. - Sun Valley	22	44	42	29	46	36	29	35	33	15	24
14905 S San Pedro St. - Gardena	23	18	36	20	17	28	55	19	24	42	22
9200 Glenoaks Blvd - Sun Valley	21	43	41	28	45	35	28	34	32	14	23
2531 E. 67th St. - Long Beach	22	13	27	15	17	19	59	14	31	45	19
9189 De Garmo Ave. - Sun Valley	22	44	42	29	46	36	29	35	33	15	25
1701 Gage Road - Montebello	15	23	22	10	27	15	52	15	27	37	12
4320 San Gabriel River Pkwy - Pico Rivera	20	23	16	18	29	7	57	21	33	43	20
9081 Tujunga Ave - Sun Valley	22	43	41	29	46	36	29	34	32	14	24
407 E. El Segundo Blvd - Compton	22	19	31	16	22	23	56	14	25	43	20
1970 E. 213th St. - Long Beach	24	9	33	18	12	26	55	16	24	41	22
766 S. Ayon - Azusa	26	38	20	27	42	16	57	33	42	43	28
17445 E Railroad St - Industry	25	35	53	23	39	11	68	29	38	48	26
850 E. 111th Place - Los Angeles	22	20	32	17	22	25	55	15	24	42	21

**Table A-8 - Travel Time from Base Yard to Franchise Zone Centroid (one-way, minutes)**

	DT	EDT	HB	NC	NE	NEV	SE	SEV	SLA	WL	WV
Base Yard Location	90015	90033	90744	90004	90065	91331	90011	91401	90018	90025	91335
6920 Foster Bridge Blvd - Bell Gardens	17	15	26	24	21	35	18	36	21	27	42
4560 Doran Street - Los Angeles	16	13	35	21	9	15	18	18	20	23	24
15045 Salt Lake Avenue - Industry	22	20	35	30	26	40	23	42	26	32	47
11266 Peoria St. - Sun Valley	25	23	44	26	18	11	28	21	29	29	25
14905 S San Pedro St. - Gardena	17	21	15	27	25	34	18	35	20	22	41
9200 Glenoaks Blvd - Sun Valley	24	22	43	25	17	39	27	41	28	28	47
2531 E. 67th St. - Long Beach	22	20	17	30	27	11	24	20	27	28	28
9189 De Garmo Ave. - Sun Valley	25	23	44	26	18	37	28	37	29	28	41
1701 Gage Road - Montebello	15	13	27	23	19	10	16	20	19	25	25
4320 San Gabriel River Pkwy - Pico Rivera	20	18	29	28	24	36	21	35	24	30	39
9081 Tujunga Ave - Sun Valley	25	22	44	25	18	19	27	25	28	28	14
407 E. El Segundo Blvd - Compton	18	21	21	28	26	40	19	42	21	23	48
1970 E. 213th St. - Long Beach	19	22	10	29	27	11	20	20	22	21	26
766 S. Ayon - Azusa	30	25	42	35	27	33	30	34	33	40	40
17445 E Railroad St - Industry	26	24	39	34	30	36	27	38	30	36	44
850 E. 111th Place - Los Angeles	17	20	20	27	25	37	14	36	20	22	40

**Table A-9 - Adjusted Travel Time Franchise Zone to Disposal Facility (one-way, minutes)**  
**Off-Route Travel Time Factor: 1.17**

	DT	EDT	HB	NC	NE	NEV	SE	SEV	SLA	WL	WV
Disposal Facility	90015	90033	90744	90004	90065	91331	90011	91401	90018	90025	91335
AMERICAN WASTE TRANSFER STATION- GARDENA	14.0	17.5	11.7	17.5	22.2	37.3	11.7	33.8	16.3	21.0	37.3
ATHENS SERVICES - MSW (Arkelian Corp.)	21.0	18.7	35.0	25.7	25.7	42.0	21.0	38.5	25.7	33.8	45.5
AZUSA LAND RECLAMATION CO_ LANDFILL	30.3	26.8	44.3	33.8	25.7	40.8	30.3	39.7	33.8	43.2	46.7
BEL-ART TRANSFER STATION	22.2	19.8	14.0	28.0	28.0	44.3	22.2	40.8	26.8	30.3	46.7
Compton Recycling & Transfer Station	14.0	18.7	12.8	18.7	23.3	38.5	11.7	35.0	17.5	22.2	38.5
CALABASAS SANITARY LANDFILL	39.7	39.7	57.2	33.8	38.5	30.3	43.2	22.2	38.5	29.2	16.3
CARSON TRANSFER STATION & MRF	17.5	21.0	7.0	21.0	25.7	40.8	15.2	36.2	19.8	22.2	39.7
CENTRAL LA RECYCLING & TRANSFER STATION	3.5	3.5	25.7	8.2	11.7	28.0	3.5	24.5	7.0	16.3	31.5
CHIUQUITA CANYON LANDFILL	47.8	46.7	68.8	42.0	44.3	23.3	52.5	30.3	50.2	40.8	30.3
City Terrace Recycling-MSW	9.3	3.5	31.5	11.7	10.5	28.0	9.3	24.5	12.8	22.2	31.5
COMMERCE REFUSE TO ENERGY	10.5	8.2	22.2	16.3	16.3	32.7	10.5	29.2	14.0	23.3	36.2
COMMUNITY RECYCLING - MSW	22.2	19.8	44.3	18.7	17.5	7.0	25.7	9.3	25.7	28.0	17.5
EAST L_A_ RECYCLING & TRANSFER STATION	9.3	4.7	30.3	11.7	10.5	26.8	8.2	24.5	12.8	21.0	30.3
FALCON TRANSFER CENTER - WILMINGTON	26.8	25.7	3.5	33.8	33.8	51.3	24.5	45.5	12.8	32.7	49.0
GRAND CENTRAL RECYCLING & TRANSFER	26.8	23.3	39.7	31.5	31.5	49.0	25.7	44.3	30.3	38.5	51.3
INNOVATIVE WASTE CONTROL	7.0	4.7	24.5	15.2	16.3	32.7	4.7	29.2	10.5	18.7	35.0
Long Beach (SERRF) Southeast Resource Recovery Facility	29.2	28.0	3.5	36.2	36.2	53.7	26.8	47.8	31.5	35.0	51.3
PUENTE HILLS LANDFILL	19.8	17.5	31.5	24.5	24.5	42.0	19.8	38.5	23.3	32.7	44.3
Simi Valley Landfill and Recycling Center	50.2	50.2	70.0	44.3	46.7	26.8	49.0	31.5	51.3	42.0	23.3
SOUTH GATE TRANSFER STATION -COUNTY	15.2	11.7	19.8	19.8	19.8	37.3	8.2	32.7	18.7	26.8	39.7
Southern California Disposal Co_ Recycling	15.2	19.8	30.3	14.0	23.3	26.8	17.5	17.5	11.7	4.7	21.0
SUNSHINE CANYON LANDFILL	32.7	31.5	52.5	25.7	28.0	8.2	36.2	14.0	35.0	24.5	15.2
WASTE MANAGEMENT RECYCLING & DISPOSAL SE	5.8	2.3	26.8	9.3	11.7	26.8	4.7	22.2	9.3	17.5	29.2
Waste Resources Recovery	14.0	17.5	10.5	17.5	22.2	37.3	11.7	33.8	16.3	21.0	38.5

**Table A-10 - Adjusted Travel Time Base Yard to Disposal Facility (one-way, minutes)****Off-Route Travel Time Factor: 1.17**

Base Yard Location	American Waste Transfer Station- Gardena	Athens Services - MSW	Azusa Land Reclamation Co_ Landfill	Bel-Art Transfer Station	Compton Recycling & Transfer Station	Carson Transfer Station & MRF	Calabasas Sanitary Landfill	Central LA Recycling & Transfer Station	Chiquita Canyon Landfill	City Terrace Recycling – C&D	Commerce Refuse to Energy	Community Recycling - MSW
6920 Foster Bridge Blvd - Bell Gardens	24.5	25.7	33.8	18.7	24.5	56.0	25.7	17.5	59.5	21.0	9.3	38.5
4560 Doran Street - Los Angeles	31.5	31.5	29.2	33.8	33.8	35.0	33.8	18.7	37.3	16.3	24.5	16.3
15045 Salt Lake Avenue - Industry	36.2	5.8	25.7	26.8	33.8	63.0	37.3	23.3	66.5	26.8	23.3	44.3
11266 Peoria St. - Sun Valley	42.0	43.2	40.8	44.3	44.3	42.0	45.5	29.2	31.5	28.0	35.0	2.3
14905 S San Pedro St. - Gardena	8.2	36.2	45.5	14.0	3.5	54.8	12.8	23.3	63.0	28.0	26.8	43.2
9200 Glenoaks Blvd - Sun Valley	40.8	42.0	39.7	43.2	43.2	40.8	44.3	28.0	30.3	26.8	33.8	1.2
2531 E. 67th St. - Long Beach	16.3	25.7	35.0	2.3	16.3	63.0	15.2	24.5	66.5	28.0	18.7	45.5
9189 De Garmo Ave. - Sun Valley	42.0	43.2	40.8	44.3	44.3	42.0	45.5	29.2	31.5	28.0	35.0	0.0
1701 Gage Road - Montebello	26.8	21.0	29.2	17.5	24.5	54.8	28.0	15.2	58.3	18.7	8.2	36.2
4320 San Gabriel River Pkwy - Pico Rivera	29.2	14.0	23.3	19.8	26.8	60.6	30.3	21.0	64.1	24.5	17.5	42.0
9081 Tujunga Ave - Sun Valley	42.0	42.0	40.8	44.3	43.2	40.8	44.3	28.0	31.5	26.8	33.8	3.5
407 E. El Segundo Blvd - Compton	15.2	30.3	39.7	15.2	8.2	56.0	17.5	22.2	64.1	28.0	21.0	44.3
1970 E. 213th St. - Long Beach	10.5	33.8	42.0	11.7	16.3	54.8	5.8	26.8	63.0	30.3	23.3	45.5
766 S. Ayon - Azusa	44.3	17.5	3.5	36.2	43.2	61.8	45.5	32.7	63.0	32.7	32.7	43.2
17445 E Railroad St - Industry	40.8	14.0	24.5	31.5	38.5	67.6	42.0	28.0	1.2	31.5	28.0	49.0
850 E. 111th Place - Los Angeles	14.0	32.7	40.8	16.3	10.5	54.8	16.3	23.3	63.0	28.0	22.2	43.2

**Table A-10 - Adjusted Travel Time Base Yard to Disposal Facility (one-way, minutes) (cont.)**  
**Off-Route Travel Time Factor: 1.17**

Base Yard Location	East L_A_ Recycling & Transfer Station	Falcon Transfer Center - Wilmington	Grand Central Recycling & Transfer	Innovative Waste Control	Long Beach (SERRF) Southeast Resource Recovery Facility	Puente Hills Landfill	Simi Valley Landfill and Recycling Center (Certified Processor)	South Gate Transfer Station - County	Southern California Disposal Co_ Recycling & Transfer Station	Sunshine Canyon Landfill	Waste Management Recycling & Disposal Services
6920 Foster Bridge Blvd - Bell Gardens	18.7	24.5	30.3	14.0	29.2	22.2	61.8	14.0	33.8	45.5	16.3
4560 Doran Street - Los Angeles	15.2	40.8	38.5	23.3	43.2	31.5	39.7	30.3	32.7	23.3	17.5
15045 Salt Lake Avenue - Industry	25.7	36.2	11.7	23.3	40.8	8.2	68.8	29.2	39.7	51.3	25.7
11266 Peoria St. - Sun Valley	25.7	51.3	49.0	33.8	53.7	42.0	33.8	40.8	38.5	17.5	28.0
14905 S San Pedro St. - Gardena	26.8	21.0	42.0	23.3	19.8	32.7	64.1	22.2	28.0	49.0	25.7
9200 Glenoaks Blvd - Sun Valley	24.5	50.2	47.8	32.7	52.5	40.8	32.7	39.7	37.3	16.3	26.8
2531 E. 67th St. - Long Beach	25.7	15.2	31.5	17.5	19.8	22.2	68.8	16.3	36.2	52.5	22.2
9189 De Garmo Ave. - Sun Valley	25.7	51.3	49.0	33.8	53.7	42.0	33.8	40.8	38.5	17.5	29.2
1701 Gage Road - Montebello	17.5	26.8	25.7	11.7	31.5	17.5	60.6	17.5	31.5	43.2	14.0
4320 San Gabriel River Pkwy - Pico Rivera	23.3	26.8	18.7	21.0	33.8	8.2	66.5	24.5	38.5	50.2	23.3
9081 Tujunga Ave - Sun Valley	25.7	50.2	47.8	33.8	53.7	42.0	33.8	39.7	37.3	16.3	28.0
407 E. El Segundo Blvd - Compton	25.7	22.2	36.2	18.7	25.7	26.8	65.3	16.3	29.2	50.2	23.3
1970 E. 213th St. - Long Beach	28.0	10.5	38.5	21.0	14.0	30.3	64.1	18.7	28.0	47.8	25.7
766 S. Ayon - Azusa	30.3	44.3	23.3	31.5	49.0	18.7	66.5	38.5	49.0	50.2	32.7
17445 E Railroad St - Industry	29.2	40.8	61.8	26.8	45.5	12.8	79.3	33.8	44.3	56.0	30.3
850 E. 111th Place - Los Angeles	25.7	23.3	37.3	19.8	25.7	29.2	64.1	17.5	28.0	49.0	24.5

**Table A-11 - Adjusted Travel Time from Base Yard to Franchise Zone Centroid (one-way, minutes)**  
**Off-Route Travel Time Factor: 1.17**

Base Yard Location	DT	EDT	HB	NC	NE	SE	NEV	SEV	SLA	WL	WV
6920 Foster Bridge Blvd - Bell Gardens	19.8	17.5	30.3	28.0	24.5	40.8	21.0	42.0	24.5	31.5	49.0
4560 Doran Street - Los Angeles	18.7	15.2	40.8	24.5	10.5	17.5	21.0	21.0	23.3	26.8	28.0
15045 Salt Lake Avenue - Industry	25.7	23.3	40.8	35.0	30.3	46.7	26.8	49.0	30.3	37.3	54.8
11266 Peoria St. - Sun Valley	29.2	26.8	51.3	30.3	21.0	12.8	32.7	24.5	33.8	33.8	29.2
14905 S San Pedro St. - Gardena	19.8	24.5	17.5	31.5	29.2	39.7	21.0	40.8	23.3	25.7	47.8
9200 Glenoaks Blvd - Sun Valley	28.0	25.7	50.2	29.2	19.8	45.5	31.5	47.8	32.7	32.7	54.8
2531 E. 67th St. - Long Beach	25.7	23.3	19.8	35.0	31.5	12.8	28.0	23.3	31.5	32.7	32.7
9189 De Garmo Ave. - Sun Valley	29.2	26.8	51.3	30.3	21.0	43.2	32.7	43.2	33.8	32.7	47.8
1701 Gage Road - Montebello	17.5	15.2	31.5	26.8	22.2	11.7	18.7	23.3	22.2	29.2	29.2
4320 San Gabriel River Pkwy - Pico Rivera	23.3	21.0	33.8	32.7	28.0	42.0	24.5	40.8	28.0	35.0	45.5
9081 Tujunga Ave - Sun Valley	29.2	25.7	51.3	29.2	21.0	22.2	31.5	29.2	32.7	32.7	16.3
407 E. El Segundo Blvd - Compton	21.0	24.5	24.5	32.7	30.3	46.7	22.2	49.0	24.5	26.8	56.0
1970 E. 213th St. - Long Beach	22.2	25.7	11.7	33.8	31.5	12.8	23.3	23.3	25.7	24.5	30.3
766 S. Ayon - Azusa	35.0	29.2	49.0	40.8	31.5	38.5	35.0	39.7	38.5	46.7	46.7
17445 E Railroad St - Industry	30.3	28.0	45.5	39.7	35.0	42.0	31.5	44.3	35.0	42.0	51.3
850 E. 111th Place - Los Angeles	19.8	23.3	23.3	31.5	29.2	43.2	16.3	42.0	23.3	25.7	46.7



TABLE A-12

**City of Los Angeles Truck Survey 1**

**Date:**

**THURSDAY, JUNE 6, 2013**

**Company:**

**Large Hauler, Yard A**

	Odometer (Miles)	Arrival Time	Departure Time	Reason for Stop (check one)					Notes (Disposal facility name, unusual delay)
				Base Yard	MF	Business	Disposal Facility		
1	038		5:30 AM	X					
2	042	5:45 AM	5:56 AM						SCHOOL
3	043	6:02 AM	6:24 AM						SCHOOL
4	045	6:32 AM	6:50 AM		X				
5	045	6:53 AM	7:05 AM		X				
6	054	7:29 AM	8:25 AM				X		
7	061	8:38 AM	8:53 AM						SCHOOL
8	062	8:57 AM	9:06 AM						SCHOOL
9	063	9:11 AM	9:36 AM						SCHOOL
10	063	9:40 AM	9:42 AM		X				
11	064	9:44 AM	9:52 AM			X			
12	065	9:56 AM	9:57 AM			X			
13	065	9:58 AM	10:04 AM			X			
14	065	10:04 AM	10:40 AM						LUNCH
15	065	10:49 AM	10:59 AM						SCHOOL
16	067	11:03 AM	11:05 AM			X			
17	067	11:06 AM	11:07 AM		X				
18	076	11:27 AM	12:01 PM				X		
19	087	12:23 PM	12:29 PM			X			
20	087	12:33 PM	12:35 PM			X			
21	087	12:35 PM	12:36 PM			X			
22	087	12:37 PM	12:37 PM			X			
23	087	12:38 PM	12:38 PM			X			
24	088	12:41 PM	12:52 PM						SCHOOL
25	089	1:01 PM	1:03 PM			X			
26	089	1:08 PM	1:21 PM			X			
27	089	1:21 PM	1:21 PM			X			
28	090	1:25 PM	1:36 PM			X			
29	090	1:39 PM	1:43 PM			X			
30	090	1:44 PM	1:54 PM			X			
31	091	1:59 PM	2:03 PM			X			
32	091	2:06 PM	2:08 PM		X				
33	092	2:15 PM	2:18 PM		X				WAITED FOR DRIVER TO TAKE CANS OUT
34	092	2:18 PM	2:35 PM						WAITED FOR DRIVER TO TAKE CANS OUT
35	092	2:35 PM	2:46 PM						BREAK
36	093	2:46 PM	2:58 PM						WAITED FOR DRIVER TO TAKE CANS OUT
37	093	2:58 PM	3:04 PM		X				
38	093	3:04 PM	3:05 PM		X				
39	093	3:05 PM	3:05 PM		X				

TABLE A-12

**City of Los Angeles Truck Survey 1****Date:****THURSDAY, JUNE 6, 2013****Company:****Large Hauler, Yard A**

	Odometer (Miles)	Arrival Time	Departure Time	Reason for Stop (check one)				
				Base Yard	MF	Business	Disposal Facility	Notes (Disposal facility name, unusual delay)
40	093	3:06 PM	3:06 PM		X			
41	093	3:07 PM	3:07 PM		X			
42	093	3:08 PM	3:10 PM		X			
43	093	3:10 PM	3:15 PM		X			
44	093	3:15 PM	3:20 PM		X			
45	094	3:24 PM	3:28 PM		X			
46	094	3:28 PM	3:37 PM		X			
47	094	3:38 PM	3:48 PM		X			
48	094	3:48 PM	3:50 PM		X			
49	094	3:52 PM	3:58 PM			X		
50	095	4:02 PM	4:15 PM		X			
51	095	4:19 PM	4:24 PM		X			
52	096	4:25 PM	4:35 PM		X			
53	097	4:57 PM	5:32 PM				X	
54	117	6:00 PM		X				

TABLE A-13

**City of Los Angeles Truck Survey 2**

**Date:**

**FRIDAY, JUNE 7, 2013**

**Company:**

**Large Hauler, Yard A**

	Odometer (Miles)	Arrival Time	Departure Time	Reason for Stop (check one)					Notes (Disposal facility name, unusual delay)
				Base Yard	MF	Business	Disposal Facility		
1	994	5:30 AM	6:00 AM	X					
2	1001	6:19 AM	6:20 AM			X			
3	1002	6:21 AM	6:23 AM			X			
4	1002	6:23 AM	6:23 AM			X			
5	1002	6:28 AM	6:35 AM			X			
6	1002	6:37 AM	6:40 AM			X			
7	1002	6:43 AM	6:44 AM			X			
8	1003	6:44 AM	6:45 AM			X			
9	1003	6:47 AM	6:49 AM			X			
10	1004	6:53 AM	6:56 AM			X			
11	1004	7:00 AM	7:02 AM			X			
12	1004	7:05 AM	7:06 AM			X			
13	1008	7:16 AM	7:17 AM		X				
14	1008	7:17 AM	7:21 AM			X			
15	1008	7:23 AM	7:25 AM			X			
16	1009	7:30 AM	7:31 AM			X			
17	1009	7:34 AM	7:36 AM			X			
18	1009	7:36 AM	7:36 AM			X			
19	1010	7:40 AM	7:42 AM			X			
20	1010	7:43 AM	7:44 AM			X			
21	1010	7:44 AM	7:45 AM			X			
22	1010	7:48 AM	7:49 AM			X			
23	1010	7:50 AM	7:50 AM			X			
24	1010	7:53 AM	7:55 AM			X			
25	1011	8:00 AM	8:03 AM		X				
26	1012	8:06 AM	8:09 AM			X			
27	1012	8:09 AM	8:13 AM			X			
28	1012	8:16 AM	8:21 AM			X			
29	1012	8:23 AM	8:24 AM			X			
30	1013	8:26 AM	8:28 AM			X			
31	1014	8:32 AM	8:35 AM			X			
32	1014	8:35 AM	8:37 AM		X				
33	1014	8:37 AM	8:40 AM			X			
34	1014	8:40 AM	8:45 AM			X			
35	1015	8:49 AM	8:51 AM		X				
36	1016	8:55 AM	8:56 AM			X			
37	1016	8:59 AM	9:02 AM			X			
38	1016	9:04 AM	9:07 AM			X			
39	1016	9:15 AM	9:18 AM			X			

TABLE A-13

**City of Los Angeles Truck Survey 2****Date:****FRIDAY, JUNE 7, 2013****Company:****Large Hauler, Yard A**

	Odometer (Miles)	Arrival Time	Departure Time	Reason for Stop (check one)				Notes (Disposal facility name, unusual delay)
				Base Yard	MF	Business	Disposal Facility	
40	1016	9:19 AM	9:19 AM			X		
41	1017	9:23 AM	9:26 AM			X		
42	1017	9:33 AM	9:35 AM			X		
43	1017	9:36 AM	10:06 AM					LUNCH
44	1017	10:07 AM	10:09 AM			X		
45	1030	10:36 AM	11:31 AM				X	FIRST DISPOSAL
46	1040	11:59 AM	12:03 PM		X			
47	1040	12:03 PM	12:03 PM			X		
48	1040	12:07 PM	12:09 PM			X		
49	1040	12:13 PM	12:17 PM		X			
50	1040	12:17 PM	12:18 PM		X			
51	1042	12:22 PM	12:25 PM		X			
52	1044	12:33 PM	12:35 PM		X			
53	1044	12:37 PM	12:38 PM			X		
54	1045	12:42 PM	12:43 PM		X			
55	1045	12:45 PM	12:48 PM		X			
56	1045	12:48 PM	12:52 PM		X			
57	1046	12:56 PM	12:57 PM		X			
58	1046	12:58 PM	1:02 PM		X			
59	1047	1:03 PM	1:04 PM			X		
60	1047	1:04 PM	1:05 PM			X		
61	1047	1:05 PM	1:08 PM		X			
62	1047	1:10 PM	1:13 PM			X		
63	1048	1:14 PM	1:14 PM			X		
64	1048	1:18 PM	1:18 PM			X		
65	1049	1:22 PM	1:27 PM		X			
66	1051	1:32 PM	1:33 PM			X		
67	1054	1:45 PM	1:46 PM		X			
68	1054	1:46 PM	1:46 PM		X			
69	1054	1:49 PM	1:50 PM		X			
70	1054	1:50 PM	1:51 PM			X		TRASH CONTAINER EMPTY
71	1065	2:17 PM	3:19 PM				X	LAST DISPOSAL
72	1077	3:42 PM		X				

TABLE A-14

**City of Los Angeles Truck Survey 3**

**Date:**

**MONDAY, JUNE 10, 2013**

**Company:**

**Large Hauler, Yard A**

	Odometer (Miles)	Arrival Time	Departure Time	Reason for Stop (check one)				Notes (Disposal facility name, unusual delay)
				Base Yard	MF	Business	Disposal Facility	
1	112	5:00 AM	5:20 AM	X				
2	112	5:25 AM	5:35 AM				X	FIRST DISPOSAL
3	121	6:00 AM	6:02 AM		X			
4	122	6:04 AM	6:08 AM			X		
5	122	6:10 AM	6:14 AM			X		
6	122	6:15 AM	6:21 AM			X		
7	123	6:21 AM	6:22 AM			X		
8	123	6:24 AM	6:27 AM			X		
9	123	6:28 AM	6:37 AM			X		
10	123	6:41 AM	6:43 AM			X		
11	123	6:45 AM	6:49 AM		X			
12	124	6:52 AM	6:56 AM					SCHOOL
13	124	6:56 AM	7:30 AM					SCHOOL
14	124	7:30 AM	7:37 AM					SCHOOL
15	125	7:42 AM	7:46 AM					SCHOOL
16	125	7:46 AM	7:53 AM					SCHOOL
17	127	8:00 AM	8:03 AM			X		
18	127	8:05 AM	8:10 AM			X		
19	140	8:38 AM	9:16 AM				X	SECOND DISPOSAL
20	153	9:41 AM	9:45 AM		X			
21	153	9:45 AM	9:49 AM			X		
22	154	9:51 AM	9:58 AM			X		
23	154	9:59 AM	10:04 AM			X		
24	154	10:04 AM	10:08 AM			X		
25	154	10:10 AM	10:13 AM		X			
26	154	10:16 AM	10:18 AM			X		
27	155	10:20 AM	11:00 AM					LUNCH
28	155	11:05 AM	11:08 AM		X			
29	155	11:08 AM	11:12 AM		X			
30	156	11:16 AM	11:23 AM		X			
31	156	11:23 AM	11:35 AM		X			
32	157	11:36 AM	11:36 AM		X			
33	157	11:42 AM	11:45 AM			X		
34	157	11:46 AM	11:49 AM			X		
35	158	11:50 AM	11:54 AM			X		
36	159	12:02 PM	12:05 PM		X			
37	159	12:07 PM	12:10 PM			X		
38	159	12:12 PM	12:13 PM		X			
39	160	12:18 PM	12:34 PM		X			

TABLE A-14

**City of Los Angeles Truck Survey 3****Date:****MONDAY, JUNE 10, 2013****Company:****Large Hauler, Yard A**

	Odometer (Miles)	Arrival Time	Departure Time	Reason for Stop (check one)				Notes (Disposal facility name, unusual delay)
				Base Yard	MF	Business	Disposal Facility	
40	160	12:37 PM	12:45 PM					BREAK
41	161	12:45 PM	12:51 PM					SCHOOL
42	162	12:57 PM	1:00 PM		X			
43	162	1:02 PM	1:05 PM			X		
44	163	1:09 PM	1:17 PM					SCHOOL
45	174	1:49 PM	2:25 PM				X	THIRD DISPOSAL
46	184	2:47 PM	2:49 PM			X		
47	185	2:54 PM	2:55 PM			X		
48	185	2:57 PM	3:17 PM					SCHOOL
49	188	3:28 PM	3:31 PM			X		
50	188	3:32 PM	3:35 PM			X		
51	188	3:36 PM	3:38 PM			X		
52	188	3:38 PM	3:40 PM			X		
53	188	3:40 PM	3:47 PM			X		
54	188	3:48 PM	3:49 PM			X		
55	188	3:49 PM	3:56 PM			X		
56	202	4:10 PM		X				

TABLE A-15

**City of Los Angeles Truck Survey 4**

**Date:**

**TUESDAY, JUNE 11, 2013**

**Company:**

**Large Hauler, Yard B**

	Odometer (Miles)	Arrival Time	Departure Time	Reason for Stop (check one)					Notes (Disposal facility name, unusual delay)
				Base Yard	MF	Business	Disposal Facility		
1	279	4:30 AM	4:55 AM	X					
2	291	5:14 AM	5:17 AM				X		
3	291	5:17 AM	5:24 AM						SCHOOL
4	291	5:27 AM	5:30 AM		X				
5	291	5:30 AM	5:32 AM		X				
6	291	5:33 AM	5:36 AM				X		
7	291	5:37 AM	5:41 AM				X		
8	292	5:43 AM	5:45 AM		X		X		
9	292	5:46 AM	5:48 AM				X		
10	292	5:50 AM	6:13 AM						BREAK
11	292	6:14 AM	6:15 AM		X				DID NOT SERVICE LOCATION - GATE BROKEN
12	292	6:16 AM	6:18 AM				X		
13	293	6:19 AM	6:20 AM		X				
14	293	6:21 AM	6:21 AM		X				
15	293	6:23 AM	6:25 AM		X				
16	293	6:25 AM	6:27 AM		X				
17	293	6:29 AM	6:31 AM				X		
18	293	6:32 AM	6:36 AM		X				
19	294	6:37 AM	6:39 AM				X		
20	294	6:40 AM	6:44 AM				X		
21	294	6:47 AM	6:50 AM		X				
22	294	6:50 AM	6:54 AM		X				
23	294	6:55 AM	6:59 AM		X				
24	294	6:59 AM	7:02 AM		X				
25	294	7:04 AM	7:06 AM		X				
26	294	7:09 AM	7:10 AM				X		
27	295	7:12 AM	7:15 AM				X		
28	295	7:16 AM	7:18 AM		X				
29	295	7:18 AM	7:21 AM		X				
30	295	7:23 AM	7:26 AM		X				
31	295	7:27 AM	7:29 AM		X				
32	295	7:30 AM	7:33 AM		X				
33	295	7:34 AM	7:38 AM						SCHOOL
34	296	7:39 AM	7:41 AM				X		
35	296	7:44 AM	7:48 AM		X				
36	296	7:50 AM	7:52 AM		X				
37	296	7:54 AM	7:57 AM				X		
38	296	7:58 AM	7:59 AM				X		
39	297	7:59 AM	8:04 AM				X		
40	297	8:06 AM	8:09 AM				X		

TABLE A-15

**City of Los Angeles Truck Survey 4****Date:****TUESDAY, JUNE 11, 2013****Company:****Large Hauler, Yard B**

	Odometer (Miles)	Arrival Time	Departure Time	Reason for Stop (check one)					Notes (Disposal facility name, unusual delay)
				Base Yard	MF	Business	Disposal Facility		
41	297	8:11 AM	8:14 AM			X			
42	298	8:16 AM	8:18 AM			X			
43	298	8:22 AM	8:25 AM		X				
44	299	8:26 AM	8:28 AM			X			
45	299	8:30 AM	8:31 AM			X			
46	299	8:31 AM	8:32 AM			X			
47	299	8:33 AM	8:35 AM			X			
48	299	8:40 AM	8:41 AM			X			
49	299	8:41 AM	8:44 AM			X			
50	299	8:46 AM	8:48 AM			X			
51	299	8:48 AM	8:50 AM			X			
52	299	8:50 AM	8:51 AM		X				
53	299	8:52 AM	8:54 AM		X				
54	299	8:54 AM	8:57 AM		X				
55	300	8:58 AM	9:00 AM		X				
56	300	9:03 AM	9:04 AM		X				
57	300	9:05 AM	9:07 AM		X				
58	300	9:10 AM	9:12 AM			X			
59	301	9:15 AM	9:18 AM		X				
60	301	9:19 AM	9:21 AM			X			
61	301	9:23 AM	9:25 AM		X				
62	301	9:25 AM	9:29 AM		X				
63	301	9:30 AM	9:33 AM		X				
64	301	9:33 AM	9:36 AM		X				
65	301	9:43 AM	9:45 AM		X				
66	311	10:04 AM	10:17 AM				X	FIRST DISPOSAL	
67	311	10:17 AM	10:55 AM	X				BACK TO BASE YARD FOR LUNCH	
68	315	11:00 AM	11:30 AM					LUNCH	
69	322	11:31 AM	11:33 AM			X			
70	322	11:34 AM	11:36 AM			X			
71	322	11:37 AM	11:40 AM		X				
72	322	11:43 AM	11:48 AM			X			
73	323	11:49 AM	11:51 AM			X			
74	323	11:53 AM	11:56 AM			X			
75	323	11:58 AM	11:59 AM			X			
76	323	11:59 AM	12:01 PM			X			
77	323	12:03 PM	12:10 PM		X				
78	324	12:14 PM	12:14 PM			X			
79	324	12:17 PM	12:19 PM		X				
80	324	12:21 PM	12:24 PM		X				



TABLE A-15

**City of Los Angeles Truck Survey 4**

**Date:**

**TUESDAY, JUNE 11, 2013**

**Company:**

**Large Hauler, Yard B**

	Odometer (Miles)	Arrival Time	Departure Time	Reason for Stop (check one)				
				Base Yard	MF	Business	Disposal Facility	Notes (Disposal facility name, unusual delay)
81	325	12:26 PM	12:28 PM				X	
82	325	12:28 PM	12:29 PM				X	
83	325	12:29 PM	12:30 PM				X	
84	325	12:31 PM	12:34 PM				X	
85	325	12:36 PM	12:39 PM				X	
86	325	12:40 PM	12:42 PM				X	
87	325	12:43 PM	12:45 PM				X	
88	325	12:49 PM	12:57 PM		X			
89	326	1:01 PM	1:03 PM				X	
90	327	1:05 PM	1:07 PM				X	
91	327	1:08 PM	1:11 PM				X	
92	327	1:13 PM	1:14 PM				X	
93	327	1:18 PM	1:20 PM				X	
94	327	1:21 PM	1:22 PM				X	
95	327	1:23 PM	1:25 PM				X	
96	328	1:26 PM	1:30 PM		X			
97	328	1:30 PM	1:33 PM		X			
98	328	1:34 PM	1:37 PM				X	
99	329	1:42 PM	1:44 PM				X	
100	329	1:44 PM	1:46 PM		X			
101	329	1:49 PM	1:54 PM				X	
102	329	1:57 PM	2:02 PM				X	
103	329	2:04 PM	2:14 PM				X	
104	329	2:14 PM	2:16 PM		X			
105	329	2:16 PM	2:19 PM		X			
106	329	2:22 PM	2:24 PM					SCHOOL
107	330	2:26 PM	2:32 PM				X	
108	330	2:35 PM	2:38 PM				X	
109	331	2:41 PM	2:43 PM				X	
110	331	2:43 PM	2:45 PM				X	
111	331	2:47 PM	2:49 PM					SCHOOL
112	332	2:56 PM	3:00 PM				X	
113	332	3:03 PM	3:05 PM		X			
114	332	3:10 PM	3:12 PM					REDO LOCATION NO. 38 - WAS BLOCKED
115	332	3:14 PM	3:16 PM				X	
116	333	3:22 PM	3:24 PM				X	
117	333	3:27 PM	3:29 PM				X	
118	334	3:31 PM	3:33 PM				X	
119	334	3:39 PM	3:40 PM				X	
120	334	3:40 PM	3:41 PM				X	

TABLE A-15

**City of Los Angeles Truck Survey 4****Date:****TUESDAY, JUNE 11, 2013****Company:****Large Hauler, Yard B**

	Odometer (Miles)	Arrival Time	Departure Time	Reason for Stop (check one)				
				Base Yard	MF	Business	Disposal Facility	Notes (Disposal facility name, unusual delay)
121	335	3:45 PM	3:47 PM		X			EXTRA STOP - NOT ON ROUTE
122	346	4:18 PM	4:35 PM				X	LAST DISPOSAL

TABLE A-16

**City of Los Angeles Truck Survey 5****Date:****WEDNESDAY, JUNE 12, 2013****Company:****Large Hauler, Yard B**

	Odometer (Miles)	Arrival Time	Departure Time	Reason for Stop (check one)					Notes (Disposal facility name, unusual delay)
				Base Yard	MF	Business	Disposal Facility		
1	415	4:30 AM	5:00 AM	X					
2	427	5:26 AM	5:31 AM						BREAK
3	428	5:39 AM	5:57 AM			X			
4	428	5:58 AM	6:03 AM			X			
5	429	6:04 AM	6:17 AM			X			MOVED CAR BLOCKING BIN
6	429	6:19 AM	6:44 AM		X				
7	429	6:44 AM	6:47 AM		X				
8	430	6:47 AM	6:49 AM		X				
9	430	6:50 AM	6:52 AM		X				
10	430	6:53 AM	6:54 AM			X			
11	430	6:54 AM	6:56 AM			X			
12	430	6:59 AM	7:04 AM			X			
13	430	7:05 AM	7:07 AM		X	X			
14	430	7:09 AM	7:20 AM		X				
15	431	7:23 AM	7:27 AM		X				
16	431	7:29 AM	7:36 AM		X				
17	431	7:37 AM	7:39 AM		X				
18	431	7:41 AM	7:44 AM		X				
19	431	7:46 AM	7:48 AM		X				
20	431	7:51 AM	7:53 AM		X				
21	431	7:54 AM	7:57 AM			X			
22	432	7:59 AM	8:03 AM			X			
23	432	8:06 AM	8:08 AM			X			
24	432	8:10 AM	8:11 AM			X			
25	432	8:11 AM	8:16 AM		X				
26	432	8:18 AM	8:20 AM		X				FROM ROUTE 2020 (6/11/13)'s LISTING
27	432	8:20 AM	8:23 AM		X				
28	432	8:24 AM	8:31 AM			X			
29	432	8:35 AM	8:39 AM		X				
30	433	8:42 AM	8:48 AM		X				

TABLE A-16

## City of Los Angeles Truck Survey 5

Date:

WEDNESDAY, JUNE 12, 2013

Company:

Large Hauler, Yard B

	Odometer (Miles)	Arrival Time	Departure Time	Reason for Stop (check one)					Notes (Disposal facility name, unusual delay)
				Base Yard	MF	Business	Disposal Facility		
31	433	8:54 AM	8:59 AM			X			
32	434	9:03 AM	9:06 AM		X				
33	434	9:08 AM	9:10 AM			X			
34	434	9:13 AM	9:16 AM		X				
35	435	9:20 AM	9:30 AM			X			
36	436	9:32 AM	9:35 AM		X				
37	436	9:36 AM	9:40 AM		X				
38	436	9:42 AM	9:44 AM			X			
39	436	9:46 AM	9:49 AM		X				
40	436	9:53 AM	9:56 AM		X				
41	445	10:30 AM	10:54 AM				X	FIRST DISPOSAL	
42	445	10:55 AM	11:00 AM					HEADING OUT TO LUNCH	
43	446	11:00 AM	11:30 AM					LUNCH	
44	446	11:30 AM	11:44 AM					HEADING BACK FROM LUNCH	
45	454	12:06 PM	12:10 PM		X				
46	455	12:12 PM	12:15 PM			X			
47	456	12:21 PM	12:23 PM			X			
48	456	12:23 PM	12:24 PM			X			
49	456	12:26 PM	12:29 PM		X				
50	456	12:30 PM	12:31 PM			X			
51	456	12:34 PM	12:36 PM			X			
52	456	12:36 PM	12:39 PM			X			
53	456	12:42 PM	12:44 PM		X				
54	456	12:44 PM	12:46 PM		X				
55	456	12:46 PM	12:49 PM		X				
56	456	12:55 PM	12:57 PM		X				
57	456	12:58 PM	1:00 PM		X				
58	456	1:02 PM	1:05 PM		X				
59	457	1:07 PM	1:11 PM		X				
60	457	1:12 PM	1:15 PM			X			
61	457	1:17 PM	1:20 PM		X				
62	457	1:22 PM	1:24 PM		X				
63	457	1:25 PM	1:26 PM		X				
64	457	1:28 PM	1:30 PM		X				
65	457	1:31 PM	1:41 PM		X			ACCIDENT - WAITED FOR SUPERVISOR	
66	457	1:41 PM	1:43 PM		X				
67	457	2:13 PM	2:19 PM					SCHOOL - NOT ON ROUTE LISTING	
68	458	2:19 PM	2:21 PM					SCHOOL - NOT ON ROUTE LISTING	
69	458	2:25 PM	2:31 PM		X			REDO - NO. 51 (ACCIDENT LOCATION)	

TABLE A-16

## City of Los Angeles Truck Survey 5

Date:

WEDNESDAY, JUNE 12, 2013

Company:

Large Hauler, Yard B

	Odometer (Miles)	Arrival Time	Departure Time	Reason for Stop (check one)				
				Base Yard	MF	Business	Disposal Facility	Notes (Disposal facility name, unusual delay)
70	458	2:33 PM	2:35 PM		X			
71	458	2:36 PM	2:39 PM		X			
72	458	2:40 PM	2:42 PM		X			
73	458	2:42 PM	2:45 PM		X			
74	458	2:47 PM	2:48 PM		X			
75	458	2:52 PM	2:53 PM		X			
76	459	2:56 PM	3:00 PM		X			
77	459	3:04 PM	3:07 PM		X			
78	460	3:15 PM	3:30 PM					BREAK
79	473	4:10 PM	4:27 PM				X	LAST DISPOSAL

TABLE A-17

## City of Los Angeles Truck Survey 6

Date:

THURSDAY, JUNE 13, 2013

Company:

Large Hauler, Yard B

	Odometer (Miles)	Arrival Time	Departure Time	Reason for Stop (check one)					Notes (Disposal facility name, unusual delay)
				Base Yard	MF	Business	Disposal Facility		
1	540	4:30 AM	5:00 AM	X					
2	557	5:28 AM	5:34 AM			X			
3	557	5:35 AM	5:36 AM			X			
4	557	5:37 AM	5:40 AM			X			
5	557	5:44 AM	5:46 AM		X				
6	558	5:46 AM	5:49 AM		X				
7	558	5:52 AM	5:55 AM		X				
8	558	5:56 AM	6:00 AM		X				
9	558	6:06 AM	6:08 AM		X				
10	559	6:10 AM	6:13 AM		X				
11	559	6:17 AM	6:19 AM			X			
12	560	6:21 AM	6:24 AM		X				
13	560	6:26 AM	6:28 AM		X				
14	560	6:30 AM	6:31 AM		X				
15	560	6:32 AM	6:36 AM			X			
16	560	6:38 AM	6:41 AM			X			
17	561	6:47 AM	7:18 AM					BREAK	
18	563	7:22 AM	7:24 AM			X			
19	563	7:25 AM	7:29 AM		X				
20	564	7:32 AM	7:38 AM			X			
21	564	7:41 AM	7:48 AM			X			

TABLE A-17

**City of Los Angeles Truck Survey 6**

**Date:**

**THURSDAY, JUNE 13, 2013**

**Company:**

**Large Hauler, Yard B**

	Odometer (Miles)	Arrival Time	Departure Time	Reason for Stop (check one)					Notes (Disposal facility name, unusual delay)
				Base Yard	MF	Business	Disposal Facility		
22	564	7:49 AM	7:51 AM			X			
23	564	7:52 AM	7:54 AM			X			
24	564	7:54 AM	7:56 AM			X			
25	564	8:00 AM	8:05 AM		X				
26	565	8:11 AM	8:17 AM		X				
27	566	8:18 AM	8:20 AM		X				
28	566	8:21 AM	8:25 AM		X				
29	566	8:26 AM	8:29 AM			X			
30	566	8:30 AM	8:32 AM			X			
31	566	8:35 AM	8:38 AM		X				
32	566	8:39 AM	8:41 AM		X				
33	567	8:42 AM	8:43 AM		X				
34	567	8:45 AM	8:48 AM			X			
35	567	8:49 AM	8:51 AM			X			
36	567	8:53 AM	8:57 AM			X			
37	567	9:00 AM	9:02 AM			X			
38	568	9:04 AM	9:06 AM			X			
39	568	9:08 AM	9:10 AM			X			
40	568	9:14 AM	9:19 AM		X				
41	569	9:21 AM	9:25 AM		X				
42	569	9:26 AM	9:31 AM		X				
43	569	9:35 AM	9:37 AM			X			
44	569	9:37 AM	9:38 AM			X			
45	570	9:40 AM	9:41 AM		X			BIN WAS EMPTY	
46	570	9:42 AM	9:48 AM			X			
47	570	9:51 AM	9:55 AM		X				
48	570	9:58 AM	9:58 AM		X			BIN WAS EMPTY	
49	570	9:58 AM	10:02 AM		X				
50	571	10:06 AM	10:10 AM		X				
51	571	10:13 AM	10:17 AM			X			
52	572	10:19 AM	10:22 AM			X			
53	572	10:25 AM	10:26 AM		X				
54	572	10:26 AM	10:27 AM		X				
55	572	10:28 AM	10:33 AM		X				
56	572	10:40 AM	11:10 AM					LUNCH	
57	575	11:26 AM	11:33 AM			X			
58	575	11:35 AM	11:39 AM		X				
59	575	11:41 AM	11:45 AM		X				
60	576	11:48 AM	11:53 AM		X				

TABLE A-17

**City of Los Angeles Truck Survey 6****Date:****THURSDAY, JUNE 13, 2013****Company:****Large Hauler, Yard B**

	Odometer (Miles)	Arrival Time	Departure Time	Reason for Stop (check one)					Notes (Disposal facility name, unusual delay)
				Base Yard	MF	Business	Disposal Facility		
61	576	11:54 AM	11:57 AM		X				
62	576	12:02 PM	12:04 PM		X				
63	577	12:07 PM	12:09 PM			X			
64	577	12:42 PM	12:51 PM		X				WAITED FOR SCOUT
65	577	12:52 PM	12:55 PM		X				
66	577	12:57 PM	1:01 PM		X				
67	578	1:04 PM	1:14 PM		X				
68	578	1:16 PM	1:21 PM		X				
69	578	1:21 PM	1:30 PM						CLEANED TRUCK BEFORE GOING TO DF
70	595	2:11 PM	2:35 PM				X		DISPOSAL

TABLE A-18

**City of Los Angeles Truck Survey 7**

**Date:**

**MONDAY, JUNE 24, 2013**

**Company:**

**Small Hauler A**

	Odometer (Miles)	Arrival Time	Departure Time	Reason for Stop (check one)					Notes (Disposal facility name, unusual delay)
				Base Yard	MF	Business	Disposal Facility		
1	114	1:40 AM	2:14 AM	x					
2	125	2:31 AM	2:33 AM			X			
3	126	2:35 AM	2:36 AM			X			
4	126	2:36 AM	2:38 AM			X			
5	126	2:39 AM	2:43 AM			X			
6	126	2:43 AM	2:45 AM			X			
7	126	2:45 AM	2:47 AM			X			
8	126	2:49 AM	3:00 AM			X			
9	127	3:03 AM	3:06 AM			X			
10	127	3:06 AM	3:11 AM			X			
11	127	3:12 AM	3:14 AM			X			
12	128	3:17 AM	3:19 AM			X			
13	128	3:21 AM	3:32 AM			X			
14	128	3:34 AM	3:39 AM			X			
15	128	3:41 AM	3:45 AM			X			
16	128	3:46 AM	3:50 AM			X			
17	128	3:51 AM	3:55 AM			X			
18	128	3:57 AM	3:59 AM			X			
19	129	4:00 AM	4:03 AM		X				
20	129	4:06 AM	4:10 AM			X			
21	129	4:10 AM	4:16 AM		X				
22	129	4:19 AM	4:24 AM			X			
23	129	4:25 AM	4:26 AM			X			
24	129	4:26 AM	4:30 AM			X			
25	129	4:31 AM	4:36 AM			X			
26	130	4:39 AM	4:43 AM			X			
27	130	4:43 AM	4:50 AM			X			
28	130	4:51 AM	4:57 AM			X			
29	130	5:01 AM	5:08 AM			X			
30	131	5:09 AM	5:12 AM			X			
31	131	5:12 AM	5:22 AM			X			
32	131	5:22 AM	5:34 AM			X			
33	131	5:34 AM	5:35 AM			X			
34	131	5:36 AM	5:37 AM		X				
35	131	5:38 AM	5:39 AM			X			
36	131	5:39 AM	5:40 AM			X			
37	131	5:40 AM	5:44 AM			X			
38	131	5:46 AM	5:56 AM			X			
39	132	5:56 AM	6:00 AM		X				

TABLE A-18

**City of Los Angeles Truck Survey 7****Date:****MONDAY, JUNE 24, 2013****Company:****Small Hauler A**

	Odometer (Miles)	Arrival Time	Departure Time	Reason for Stop (check one)				
				Base Yard	MF	Business	Disposal Facility	Notes (Disposal facility name, unusual delay)
40	132	6:03 AM	6:04 AM			X		
41	132	6:04 AM	6:11 AM			X		
42	140	6:28 AM	6:45 AM					BREAK
43	140	6:46 AM	7:00 AM				X	CITY TERRACE RECYCLING
44	144	7:14 AM	7:22 AM		X			
45	145	7:24 AM	7:26 AM			X		
46	145	7:29 AM	7:35 AM			X		
47	145	7:36 AM	7:39 AM		X			
48	146	7:43 AM	7:47 AM			X		
49	146	7:49 AM	7:54 AM		X			
50	146	7:55 AM	7:59 AM		X			
51	146	8:02 AM	8:10 AM			X		
52	147	8:18 AM	8:19 AM			X		
53	147	8:20 AM	8:24 AM			X		
54	147	8:27 AM	8:31 AM			X		
55	148	8:33 AM	8:40 AM			X		
56	148	8:46 AM	8:50 AM			X		
57	149	8:51 AM	8:56 AM			X		
58	149	8:58 AM	9:05 AM			X		
59	150	9:07 AM	9:11 AM			X		
60	150	9:12 AM	9:14 AM			X		
61	150	9:14 AM	9:18 AM			X		
62	150	9:22 AM	9:25 AM			X		
63	150	9:28 AM	9:33 AM			X		
64	152	9:35 AM	9:39 AM			X		
65	152	9:43 AM	9:48 AM			X		
66	152	9:48 AM	9:50 AM			X		
67	152	9:50 AM	10:01 AM			X		
68	153	10:03 AM	10:06 AM			X		
69	154	10:12 AM	10:16 AM			X		
70	155	10:24 AM	10:29 AM			X		
71	156	10:29 AM	10:33 AM			X		
72	157	10:39 AM	10:45 AM			X		
73	162	10:55 AM	11:13 AM				X	CITY TERRACE RECYCLING
74	162	11:13 AM	11:40 AM					LUNCH
75	173	12:02 PM	12:02 PM	X				HEADED BACK TO BASE YARD



TABLE A-19

**City of Los Angeles Truck Survey 8**

**Date:**

**TUESDAY, JUNE 25, 2013**

**Company:**

**Small Hauler A**

	Odometer (Miles)	Arrival Time	Departure Time	Reason for Stop (check one)					Notes (Disposal facility name, unusual delay)
				Base Yard	MF	Business	Disposal Facility		
1	268	1:45 AM	2:00 AM	X					
2	277	2:21 AM	2:22 AM			X			
3	277	2:25 AM	2:34 AM						SCHOOL
4	278	2:38 AM	2:42 AM		X				
5	279	2:44 AM	2:46 AM			X			
6	279	2:48 AM	2:54 AM		X				
7	280	2:56 AM	2:59 AM		X				
8	280	2:59 AM	3:02 AM		X				
9	280	3:05 AM	3:08 AM						SCHOOL
10	281	3:09 AM	3:11 AM			X			
11	282	3:17 AM	3:20 AM			X			
12	282	3:21 AM	3:22 AM			X			
13	282	3:22 AM	3:25 AM			X			
14	283	3:29 AM	3:33 AM			X			
15	283	3:34 AM	3:40 AM			X			
16	283	3:41 AM	3:45 AM			X			
17	284	3:45 AM	3:49 AM			X			
18	285	3:52 AM	3:58 AM						SCHOOL
19	285	3:59 AM	4:02 AM			X			
20	285	4:04 AM	4:06 AM		X				
21	285	4:06 AM	4:11 AM			X			
22	286	4:13 AM	4:17 AM			X			
23	286	4:19 AM	4:22 AM		X				
24	286	4:25 AM	4:29 AM			X			
25	286	4:30 AM	4:33 AM			X			
26	287	4:34 AM	4:41 AM			X			
27	287	4:41 AM	4:45 AM			X			
28	287	4:47 AM	4:47 AM			X			
29	292	5:07 AM	5:15 AM				X		CENTRAL L.A. RECYCLING & TRANSFER STATION
30	296	5:28 AM	5:57 AM			X			
31	297	6:00 AM	6:03 AM			X			
32	297	6:04 AM	6:06 AM			X			
33	297	6:11 AM	6:15 AM			X			
34	298	6:23 AM	6:26 AM		X				
35	299	6:28 AM	6:31 AM			X			
36	299	6:35 AM	6:38 AM			X			
37	299	6:39 AM	6:43 AM			X			
38	300	6:46 AM	6:51 AM						SCHOOL
39	300	6:54 AM	6:55 AM			X			

TABLE A-19

**City of Los Angeles Truck Survey 8****Date:****TUESDAY, JUNE 25, 2013****Company:****Small Hauler A**

	Odometer (Miles)	Arrival Time	Departure Time	Reason for Stop (check one)					Notes (Disposal facility name, unusual delay)
				Base Yard	MF	Business	Disposal Facility		
40	301	6:57 AM	7:00 AM			X			
41	301	7:01 AM	7:02 AM			X			
42	301	7:02 AM	7:04 AM			X			
43	301	7:08 AM	7:09 AM			X			
44	301	7:09 AM	7:14 AM			X			
45	301	7:14 AM	7:18 AM			X			
46	301	7:23 AM	7:25 AM			X			
47	303	7:26 AM	7:29 AM		X				
48	303	7:35 AM	7:41 AM			X			
49	305	7:45 AM	7:48 AM			X			
50	306	7:51 AM	7:54 AM			X			
51	306	7:55 AM	8:00 AM		X				
52	306	8:01 AM	8:03 AM			X			
53	307	8:08 AM	8:12 AM			X			
54	307	8:13 AM	8:14 AM			X			
55	307	8:15 AM	8:57 AM					LUNCH	
56	308	8:58 AM	9:02 AM			X			
57	309	9:09 AM	9:12 AM			X			
58	309	9:13 AM	9:15 AM			X			
59	310	9:17 AM	9:20 AM			X			
60	310	9:21 AM	9:23 AM			X			
61	311	9:29 AM	9:34 AM			X			
62	312	9:35 AM	9:38 AM			X			
63	312	9:41 AM	9:43 AM			X			
64	312	9:43 AM	9:46 AM			X			
65	314	9:54 AM	9:56 AM			X			
66	314	9:57 AM	10:02 AM			X			
67	315	10:05 AM	10:08 AM			X			
68	316	10:13 AM	10:15 AM			X			
69	316	10:16 AM	10:17 AM			X			
70	316	10:18 AM	10:20 AM			X			
71	316	10:20 AM	10:40 AM					BREAK	
72	317	10:43 AM	10:52 AM				X	CITY TERRACE RECYCLING	
73	328	11:12 AM	11:12 AM	X					

TABLE A-20

**City of Los Angeles Truck Survey 9**

**Date:**

**WEDNESDAY, JUNE 26, 2013**

**Company:**

**Small Hauler B**

	Odometer (Miles)	Arrival Time	Departure Time	Reason for Stop (check one)					Notes (Disposal facility name, unusual delay)
				Base Yard	MF	Business	Disposal Facility		
1	408	3:45 AM	4:30 AM	X					
2	424	4:55 AM	4:58 AM		X				
3	424	5:00 AM	5:02 AM		X				
4	425	5:07 AM	5:14 AM			X			
5	426	5:17 AM	5:19 AM			X			
6	426	5:21 AM	5:24 AM			X			
7	426	5:25 AM	5:26 AM		X				
8	427	5:30 AM	5:32 AM			X			
9	427	5:33 AM	5:35 AM		X				
10	428	5:38 AM	5:43 AM		X				
11	428	5:48 AM	6:02 AM		X				
12	431	6:10 AM	6:12 AM		X				
13	431	6:14 AM	6:18 AM		X				
14	431	6:21 AM	6:23 AM			X			
15	431	6:23 AM	6:25 AM			X			
16	431	6:26 AM	6:28 AM		X				
17	432	6:28 AM	6:31 AM		X				
18	432	6:34 AM	6:37 AM			X			
19	432	6:39 AM	6:44 AM		X				
20	433	6:44 AM	6:49 AM		X				
21	433	6:53 AM	6:55 AM			X			
22	433	6:58 AM	7:00 AM			X			
23	434	7:01 AM	7:03 AM		X				
24	434	7:05 AM	7:08 AM		X				
25	435	7:13 AM	7:15 AM		X				
26	436	7:19 AM	7:21 AM			X			
27	436	7:21 AM	7:23 AM			X			
28	436	7:25 AM	7:28 AM		X				
29	436	7:31 AM	7:32 AM		X				
30	437	7:37 AM	7:38 AM		X				
31	437	7:39 AM	7:40 AM		X				
32	437	7:42 AM	7:44 AM		X				
33	438	7:48 AM	7:51 AM		X				
34	438	7:52 AM	7:56 AM		X				
35	439	7:57 AM	7:58 AM		X				
36	439	7:59 AM	8:03 AM		X				
37	439	8:06 AM	8:07 AM		X				
38	439	8:09 AM	8:10 AM			X			
39	439	8:13 AM	8:14 AM		X				

TABLE A-20

## City of Los Angeles Truck Survey 9

Date:

WEDNESDAY, JUNE 26, 2013

Company:

Small Hauler B

	Odometer (Miles)	Arrival Time	Departure Time	Reason for Stop (check one)					Notes (Disposal facility name, unusual delay)
				Base Yard	MF	Business	Disposal Facility		
40	440	8:17 AM	8:19 AM		X				
41	440	8:21 AM	8:23 AM		X				
42	440	8:23 AM	8:27 AM		X				
43	440	8:28 AM	8:31 AM		X				
44	440	8:32 AM	8:35 AM		X				
45	441	8:40 AM	8:41 AM		X				
46	441	8:46 AM	8:51 AM		X				
47	441	8:53 AM	8:56 AM		X				
48	441	8:58 AM	9:01 AM		X				
49	442	9:04 AM	9:07 AM		X				
50	442	9:09 AM	9:11 AM		X				
51	442	9:13 AM	9:15 AM		X				
52	443	9:17 AM	9:19 AM		X				
53	443	9:22 AM	9:24 AM		X				
54	443	9:26 AM	9:28 AM			X			
55	444	9:34 AM	9:36 AM		X				
56	444	9:39 AM	9:42 AM		X				
57	444	9:47 AM	9:48 AM			X			
58	445	9:52 AM	9:55 AM		X				
59	445	9:55 AM	9:58 AM		X				
60	445	10:00 AM	10:30 AM					LUNCH	
61	445	10:40 AM	10:50 AM		X				
62	446	10:57 AM	11:03 AM		X				
63	446	11:03 AM	11:05 AM		X				
64	447	11:07 AM	11:10 AM		X				
65	447	11:11 AM	11:13 AM		X				
66	447	11:14 AM	11:15 AM		X				
67	447	11:17 AM	11:20 AM		X				
68	447	11:24 AM	11:27 AM		X				
69	447	11:28 AM	11:30 AM		X				
70	447	11:30 AM	11:31 AM		X				
71	448	11:35 AM	11:38 AM		X				
72	448	11:39 AM	11:41 AM		X				
73	448	11:41 AM	11:44 AM		X				
74	448	11:47 AM	11:49 AM		X				
75	449	11:52 AM	11:55 AM		X				
76	449	11:55 AM	11:57 AM		X				
77	449	11:59 AM	12:02 PM		X				
78	449	12:06 PM	12:08 PM		X				

TABLE A-20

**City of Los Angeles Truck Survey 9**

**Date:**

**WEDNESDAY, JUNE 26, 2013**

**Company:**

**Small Hauler B**

	Odometer (Miles)	Arrival Time	Departure Time	Reason for Stop (check one)					Notes (Disposal facility name, unusual delay)
				Base Yard	MF	Business	Disposal Facility		
79	449	12:08 PM	12:12 PM		X				
80	450	12:16 PM	12:20 PM		X				
81	450	12:24 PM	12:28 PM		X				
82	450	12:32 PM	12:38 PM		X				
83	451	12:39 PM	12:40 PM		X				
84	451	12:41 PM	12:42 PM		X				
85	451	12:43 PM	12:46 PM		X				
86	451	12:46 PM	12:49 PM		X				
87	451	12:51 PM	1:02 PM		X				
88	451	1:03 PM	1:06 PM		X				
89	451	1:08 PM	1:11 PM		X				
90	452	1:13 PM	1:15 PM		X				
91	452	1:18 PM	1:19 PM		X				
92	452	1:21 PM	1:24 PM		X				
93	452	1:26 PM	1:31 PM		X				
94	452	1:31 PM	1:34 PM		X				
95	452	1:34 PM	1:36 PM		X				
96	452	1:40 PM	1:43 PM		X				
97	482	2:37 PM	2:44 PM				X		PUENTE HILLS LANDFILL
98	482	2:44 PM	3:08 PM				X		WAITED FOR DRIVER
99	493	3:31 PM	3:37 PM						GOT GAS - CAT SCALE
100	493	3:40 PM		X					

TABLE A-21

## City of Los Angeles Truck Survey 10

Date:

THURSDAY, JUNE 27, 2013

Company:

Small Hauler B

	Odometer (Miles)	Arrival Time	Departure Time	Reason for Stop (check one)					Notes (Disposal facility name, unusual delay)
				Base Yard	MF	Business	Disposal Facility		
1	593	3:30 AM	3:50 AM	X					
2	607	4:14 AM	4:16 AM				X		
3	607	4:20 AM	4:23 AM				X		
4	608	4:29 AM	4:32 AM				X		
5	609	4:33 AM	4:39 AM				X		
6	609	4:42 AM	4:46 AM				X		
7	611	4:51 AM	4:55 AM				X		
8	611	4:57 AM	5:00 AM				X		
9	611	5:00 AM	5:05 AM				X		
10	612	5:05 AM	5:08 AM				X		
11	612	5:08 AM	5:12 AM				X		
12	612	5:15 AM	5:17 AM				X		
13	613	5:19 AM	5:23 AM				X		
14	613	5:25 AM	5:34 AM				X		
15	614	5:40 AM	5:42 AM				X		
16	614	5:43 AM	5:50 AM				X		
17	614	5:53 AM	5:55 AM				X		
18	614	5:56 AM	6:03 AM		X				
19	614	6:03 AM	6:07 AM				X		
20	614	6:08 AM	6:10 AM		X				
21	615	6:14 AM	6:18 AM		X				
22	616	6:20 AM	6:26 AM		X				
23	616	6:30 AM	6:33 AM		X				
24	617	6:36 AM	6:38 AM		X				
25	617	6:38 AM	6:44 AM		X				
26	618	6:49 AM	6:52 AM		X				
27	618	6:53 AM	6:56 AM		X				
28	618	6:57 AM	6:59 AM		X				
29	618	7:01 AM	7:02 AM		X				BIN WAS EMPTY
30	618	7:03 AM	7:05 AM		X				
31	618	7:08 AM	7:11 AM		X				
32	619	7:13 AM	7:17 AM		X				
33	619	7:19 AM	7:23 AM		X				
34	619	7:27 AM	7:28 AM		X				
35	619	7:28 AM	7:31 AM		X				
36	620	7:34 AM	7:36 AM		X				
37	621	7:39 AM	7:50 AM				X		
38	621	7:55 AM	7:58 AM		X				
39	621	8:00 AM	8:04 AM		X				
40	621	8:04 AM	8:11 AM		X				
41	622	8:11 AM	8:15 AM		X				
42	622	8:18 AM	8:23 AM		X				

TABLE A-21

City of Los Angeles Truck Survey 10

Date:

THURSDAY, JUNE 27, 2013

Company:

Small Hauler B

	Odometer (Miles)	Arrival Time	Departure Time	Reason for Stop (check one)					Notes (Disposal facility name, unusual delay)
				Base Yard	MF	Business	Disposal Facility		
43	622	8:25 AM	8:26 AM		X				
44	622	8:26 AM	8:28 AM		X				
45	622	8:28 AM	8:30 AM		X				
46	622	8:34 AM	8:37 AM		X				
47	624	8:43 AM	8:47 AM		X				
48	624	8:49 AM	8:49 AM		X				
49	624	8:50 AM	8:54 AM		X				
50	624	8:55 AM	9:08 AM		X				BIN BLOCKED
51	625	9:10 AM	9:13 AM		X				
52	625	9:19 AM	9:21 AM		X				
53	626	9:30 AM	10:05 AM						BREAK
54	627	10:06 AM	10:08 AM			X			
55	627	10:10 AM	10:15 AM			X			
56	627	10:18 AM	10:19 AM			X			
57	627	10:20 AM	10:22 AM			X			
58	628	10:26 AM	10:27 AM			X			
59	628	10:28 AM	10:30 AM			X			
60	628	10:31 AM	10:37 AM			X			
61	628	10:38 AM	10:42 AM			X			
62	628	10:43 AM	10:45 AM			X			
63	629	10:46 AM	10:54 AM			X			
64	629	10:57 AM	11:00 AM			X			
65	629	11:02 AM	11:06 AM			X			
66	629	11:07 AM	11:12 AM			X			
67	630	11:15 AM	11:19 AM			X			
68	631	11:21 AM	11:24 AM			X			
69	631	11:27 AM	11:30 AM			X			
70	631	11:31 AM	11:34 AM			X			
71	632	11:38 AM	11:43 AM			X			
72	632	11:44 AM	11:51 AM			X			
73	632	11:53 AM	11:59 AM			X			
74	633	12:00 PM	12:04 PM			X			
75	633	12:05 PM	12:06 PM			X			
76	633	12:09 PM	12:10 PM			X			
77	653	12:54 PM	1:26 PM				X		PUENTE HILLS LANDFILL
78							X		BREAK, WAITED FOR DRIVER
79	663	1:35 PM	1:52 PM						GET GAS - SCALE
80	663	1:55 PM		X					

Appendix F  
Special-Status Plant / Wildlife Species Tables

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## Special-Status Plant Species Known to Occur in the City of Los Angeles

Species	Status		
	USFWS	CDFG	CNPS
<i>Aphanisma blitoides</i> Aphanisma	—	—	List 1B
<i>Aster greatae</i> Greata's aster	—	—	List 1B
<i>Astragalus brauntonii</i> Braunton's milk-vetch	FE	—	List 1B
<i>Astragalus pycnostachyus</i> var. <i>lanosissimus</i> Ventura marsh milk-vetch	FE	SE	List 1B
<i>Astragalus tener</i> var. <i>titi</i> coastal dunes milk-vetch	FE	SE	List 1B
<i>Atriplex pacifica</i> south coast saltscale	—	—	List 1B
<i>Atriplex parishii</i> Parish's brittlescale	—	—	List 1B
<i>Atriplex serenana</i> var. <i>davidsonii</i> Davidson's saltscale	—	—	List 1B
<i>Berberis nevinii</i> Nevin's barberry	FE	SE	List 1B
<i>Calochortus clavatus</i> var. <i>gracilis</i> slender mariposa lily	—	—	List 1B
<i>Calochortus plummerae</i> Plummer's mariposa lily	—	—	List 1B
<i>Calystegia sepium</i> ssp. <i>binghamiae</i> Santa Barbara morning glory	—	—	List 1A
<i>Centromadia parryi</i> ssp. <i>australis</i> southern tarplant	—	—	List 1B
<i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i> Orcutt's pincushion	—	—	List 1B
<i>Chorizanthe parryi</i> var. <i>Fernandina</i> San Fernando Valley spineflower	FC	SE	List 1B
<i>Cordylanthus maritimus</i> ssp. <i>maritimus</i> salt marsh bird's beak	FE	SE	List 1B
<i>Crossosoma californicum</i> Catalina crossosoma	—	—	List 1B
<i>Deinandra</i> [ <i>Hemizonia</i> ] <i>minthornii</i> Santa Susana tarplant	—	SR	List 1B
<i>Dithyrea maritima</i> Beach spectaclepod	—	ST	List 1B

## Special-Status Plant Species Known to Occur in the City of Los Angeles

Species	Status		
	USFWS	CDFG	CNPS
<i>Dodecahema leptoceras</i> slender-horned spineflower	FE	SE	List 1B
<i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i> Blochman's dudleya	—	—	List 1B
<i>Dudleya cymosa</i> ssp. <i>ovatifolia</i> Santa Monica Mountains dudleya	FT	—	List 1B
<i>Dudleya multicaulis</i> many-stemmed dudleya	—	—	List 1B
<i>Dudleya virens</i> ssp. <i>insularis</i> island green dudleya	—	—	List 1B
<i>Fremontodendron mexicanum</i> Mexican flannelbush	FE	SR	List 1B
<i>Helianthus nuttallii</i> ssp. <i>parishii</i> Los Angeles sunflower	—	—	List 1A
<i>Horkelia cuneata</i> ssp. <i>puberula</i> mesa horkelia	—	—	List 1B
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i> Coulter's goldfields	—	—	List 1B
<i>Linanthus orcuttii</i> Orcutt's linanthus	—	—	List 1B
<i>Lycium brevipes</i> var. <i>hassei</i> Santa Catalina Island desert thorn	—	—	List 1B
<i>Malacothamnus davidsonii</i> Davidson's bush mallow	—	—	List 1B
<i>Nama stenocarpum</i> mud nama	—	—	List 2
<i>Navarretia fossalis</i> spreading navarretia	FT	—	List 1B
<i>Navarretia prostrata</i> prostrate navarretia	—	—	List 1B
<i>Nemacaulis denudata</i> var. <i>denudata</i> coast woolly heads	—	—	List 1B
<i>Orcuttia californica</i> California Orcutt grass	FE	SE	List 1B
<i>Pentachaeta lyonii</i> Lyon's pentachaeta	FE	SE	List 1B
<i>Phacelia stellaris</i> Brand's phacelia	—	—	List 1B
<i>Potentilla multijuga</i> ballona cinquefoil	—	—	List 1A

## Special-Status Plant Species Known to Occur in the City of Los Angeles

Species	Status		
	USFWS	CDFG	CNPS
<i>Ribes divaricatum</i> var. <i>parishii</i> Parish's gooseberry	—	—	List 1B
<i>Rorippa gambelii</i> Gambel's watercress	FE	ST	List 1B
<i>Sidalcea neomexicana</i> salt spring checkerbloom	—	—	List 2
<i>Suaeda esteroa</i> estuary seablite	—	—	List 1B

**Notes:**

USFWS: United States Fish and Wildlife Service

CDFG: California Department of Fish and Game

CNPS: California Native Plant Society

— No status designation for this species by the applicable agency

**Status Definitions**

**USFWS**

FE Federally Listed As Endangered

FT Federally Listed As Threatened

FC Candidate Species for Federal Listing As Threatened or Endangered

**CDFG**

SR State-Listed As Rare

ST State-Listed As Threatened

SE State-Listed As Endangered

**CNPS**

List 1A Plants Presumed Extinct in California

List 1B Plants Rare, Threatened, or Endangered in California and Elsewhere

List 2 Plants Rare, Threatened, or Endangered in California But More Common Elsewhere

List 3 Plants About Which More Information is Needed – A Review List

List 4 Plants of Limited Distribution – A Watch List

Source:

CNPS, 2004

CDFG, 2005

## Special-Status Wildlife Species Known to Occur in the City of Los Angeles

Species	Status	
	USFWS	CDFG
<i>Tryonia imitator</i> mimic tryonia [California brackish water snail]	—	SA
<i>Neduba longipennis</i> Santa Monica shieldback katydid	—	SA
<i>Cicindela hirticollis gravida</i> sandy beach tiger beetle	—	SA
<i>Cicindela senilis frosti</i> tiger beetle	—	SA
<i>Coelus globosus</i> Globose dune beetle	—	SA
<i>Onychobaris langei</i> Lange's El Segundo dune weevil	—	SA
<i>Trigonoscuta dorothea dorothea</i> Dorothy's El Segundo dune weevil	—	SA
<i>Brennania belkini</i> Belkin's dune tabanid fly	—	SA
<i>Eucosma hennei</i> Henne's eucosman moth	—	SA
<i>Danaus plexippus</i> monarch butterfly	—	SA
<i>Euphilotes battoides allyni</i> El Segundo blue butterfly	FE	SA
<i>Glaucopsyche lygdamus palosverdesensis</i> Palos Verdes blue butterfly	FE	SA
<i>Panoquina errans</i> wandering [saltmarsh] skipper	—	SA
<i>Oncorhynchus mykiss irideus</i> southern steelhead – southern California ESU	FE	SSC
<i>Gila bicolor mojaviensis</i> Mojave tui chub	FE	SE, FP
<i>Gila orcutti</i> arroyo chub	—	SSC
<i>Rhinichthys osculus ssp. 3</i> Santa Ana speckled dace	—	SSC
<i>Catostomus santaanae</i> Santa Ana sucker	FT	SSC
<i>Spea [Scaphiopus] hammondi</i> western spadefoot	—	SSC

## Special-Status Wildlife Species Known to Occur in the City of Los Angeles

Species	Status	
	USFWS	CDFG
<i>Bufo [microscaphus] californicus</i> arroyo [southwestern] toad	FE	SSC
<i>Rana muscosa</i> mountain yellow-legged frog	FE <sup>1</sup>	SSC
<i>Emys [Clemmys] marmorata pallida</i> Southwestern pond turtle	—	SSC
<i>Phrynosoma coronatum [blainvillii]</i> coast [San Diego] horned lizard	—	SSC
<i>Aspidoscelis [Cnemidophorus] hyperythra</i> orange-throated whiptail	—	SSC
<i>Aspidoscelis [Cnemidophorus] tigris stejnegeri [multiscutalus]</i> coastal western whiptail	—	SA
<i>Anniella pulchra pulchra</i> silvery legless lizard	—	SSC
<i>Lampropeltis zonata pulchra</i> San Diego mountain kingsnake	—	SSC
<i>Pelecanus occidentalis californicus</i> California brown pelican	FE	SE
<i>Phalacrocorax auritus</i> double-crested cormorant	—	SSC
<i>Ixobrychus exilis</i> least bittern	—	SSC
<i>Plegadis chihi</i> white-faced ibis	—	SSC
<i>Accipiter cooperii</i> Cooper's hawk	—	SSC
<i>Accipiter striatus</i> sharp-shinned hawk	—	SSC
<i>Buteo regalis</i> ferruginous hawk	—	SSC
<i>Buteo swainsoni</i> Swainson's hawk	—	ST
<i>Circus cyaneus</i> northern harrier	—	SSC
<i>Pandion haliaetus</i> osprey	—	SSC
<i>Falco columbarius</i> merlin	—	SSC
<i>Falco mexicanus</i> prairie falcon	—	SSC

## Special-Status Wildlife Species Known to Occur in the City of Los Angeles

Species	Status	
	USFWS	CDFG
<i>Falco peregrinus anatum</i> American peregrine falcon	Delisted	SE
<i>Laterallus jamaicensis coturniculus</i> California black rail	—	ST, FP
<i>Charadrius alexandrinus nivosus</i> western snowy plover	FT	SSC
<i>Sterna antillarum browni</i> California least tern	FE	SE, FP
<i>Sterna elegans</i> elegant tern	—	SSC
<i>Coccyzus americanus occidentalis</i> western yellow-billed cuckoo	FC	SE
<i>Asio flammeus</i> short-eared owl	—	SSC
<i>Athene cunicularia</i> burrowing owl	—	SSC
<i>Empidonax traillii extimus</i> southwestern willow flycatcher	FE	SE
<i>Lanius ludovicianus</i> loggerhead shrike	—	SSC
<i>Vireo bellii pusillus</i> least Bell's vireo	FE	SE
<i>Eremophila alpestris actia</i> California horned lark	—	SSC
<i>Polioptila californica californica</i> coastal California gnatcatcher	FT	SSC
<i>Dendroica petechia brewsteri</i> yellow warbler	—	SSC
<i>Icteria virens</i> yellow-breasted chat	—	SSC
<i>Passerculus sandwichensis beldingi</i> Belding's savannah sparrow	FE	—
<i>Passerculus sandwichensis rostratus</i> large-billed savannah sparrow	—	SSC
<i>Agelaius tricolor</i> tricolored blackbird	—	SSC
<i>Lepus californicus bennettii</i> San Diego black-tailed jackrabbit	—	SSC
<i>Perognathus longimembris pacificus</i> Pacific pocket mouse	FE	SSC

## Special-Status Wildlife Species Known to Occur in the City of Los Angeles

Species	Status	
	USFWS	CDFG
<i>Neotoma lepida intermedia</i> San Diego desert woodrat	—	SSC

**Notes:**

USFWS: United States Fish and Wildlife Service

CDFG: California Department of Fish and Game

— No status designation for this species by the applicable agency

**Status Definitions**

**USFWS**

FE Federally Listed as Endangered

FT Federally Listed as Threatened

FC Candidate Species for Federal Listing as Threatened or Endangered

**CDFG**

SE State-Listed as Endangered

ST State-Listed as Threatened

FP Fully Protected

P Protected

SA Special Animal

SSC Species of Special Concern

<sup>1</sup> Refers to populations in the San Gabriel, San Jacinto, and San Bernardino Mountains only.

Source:

CDFG, 2004.