SECTION 11.0
PROJECT ALTERNATIVES

11.0 PROJECT ALTERNATIVES

11.1 INTRODUCTION

Section 15126.6 of the California Environmental Quality Act (CEQA) Guidelines requires that an EIR describe a range of reasonable alternatives to the proposed project[1] that could feasibly attain most of the basic project objectives and are capable of avoiding or substantially lessening any of the significant effects of the proposed project. "Feasible" is defined as capable of being accomplished in a successful manner within a reasonable period of time taking into consideration economic, environmental, social and technological factors.

This section of the Draft Environmental Impact Report (DEIR) describes the universe of potential alternatives for meeting project objectives, and not exclusively those alternatives that might lessen the environmental impacts of the proposed project. The feasibility of these alternatives was then evaluated and the three feasible alternatives were ranked. Two alternatives ranked equally and are described as Variation 1 and Variation 2 of the proposed project. The impacts of Variations 1 and 2 are described in detail in Section 6. The third feasible alternative (the Maximum Vertical and Horizontal Expansion Alternative) was lower ranked and discarded. However, for information purposes, the impacts of the third alternative are addressed in this section. There were no feasible alternatives that would avoid or substantially lessen any of the significant effects of the proposed project.

Section 15126.6 of the CEQA Guidelines requires that a No Project Alternative be evaluated along with its impacts. Such impacts are described in this section and based on the environmental consequences if the proposed project is not implemented.

The project objectives were identified in Section 4.0 (Project Description) and are to:

- Continue to provide a waste disposal option that has been proven to be environmentally sound and cost-effective at the currently permitted rate of 3,400 tons per day (TPD).
- Continue waste diversion programs that are critically important for landfill users to achieve state-mandated diversion requirements.
- Allow the City to maximize the use of a local resource for waste disposal, thus minimizing hauling distances and related environmental impacts.
- Allow for further development of disposal and diversion options, such as alternative technologies, for landfill users.

The following is a brief description of the proposed project:

1. As discussed in Section 4.0 (Project Description), Variation 1 of the proposed project would include a vertical expansion. The currently permitted tonnage of 3,400 TPD of municipal solid waste (MSW) would not change, and the current programs and operational practices described in Section 3.0 (Existing Facilities and Operations) would continue including incremental construction to expand the landfill gas control system, stormwater drainage system, and irrigation system. Variation 1 would increase the permitted capacity by approximately 11.5 million cubic yards (or 5.5 million tons), which would extend the landfill's life by approximately 13 years (assuming a waste disposal rate of 1,400 TPD). The height of the SCLF would be increased from its current permitted elevation of 1,525 feet AMSL to about 1,705 feet AMSL. Variation 1 also includes upgrading the existing debris basin north of the fill area. Specifically, the debris basin berm would be reconstructed as an

[1] Proposed project refers to both variations (Variation 1 and Variation 2).

engineered fill, the eastern face of the berm would receive armoring for erosion control, and the outlet structure would be replaced with a permanent structure.

2. As discussed in Section 4.0 (Project Description), Variation 2 of the proposed project would include a vertical and horizontal expansion. The currently permitted tonnage of 3,400 TPD of MSW would not change, and the current programs and operational practices described in Section 3.0 (Existing Facilities and Operations) would continue including incremental construction to expand the landfill gas control system, stormwater drainage system, and irrigation system. Variation 2 would increase the permitted capacity by approximately 16.5 million cubic yards (or 8.0 million tons), which would extend the landfill's life by approximately 19 years (assuming a waste disposal rate of 1,400 TPD). The height of the SCLF would be increased from its current permitted elevation of 1,525 feet AMSL to about 1,705 feet AMSL. The horizontal expansion would add 13 acres to the existing refuse footprint. This area would require the installation of a liner system and a liquids collection system to comply with regulations. Expansion of the refuse footprint would be contained within the existing permitted area of the landfill. Excavation of the hillside north of the proposed horizontal expansion area would be required to provide space for the expansion and rerouted drainage flow line. The existing debris basin north of the fill area would be deepened to provide adequate slope for the rerouted drainage flow line and would be upgraded similar to Variation 1.

11.2 DESCRIPTION OF ALTERNATIVES TO THE PROPOSED PROJECT

This section describes the various project alternatives that were considered in addition to the proposed project as ways to meet project objectives. These alternatives include the No Project Alternative, the Maximum Vertical and Horizontal Expansion Alternative, conventional Waste-to-Energy technology, as well as other waste management technologies (commonly referred to as conversion technologies) such as thermal gasification, pyrolysis, thermal and catalytic depolymerization, anaerobic digestion, and hydrolysis.

11.2.1 NO PROJECT ALTERNATIVE (USE OF EXISTING REGIONAL AND DISTANT LANDFILLS)

The State CEQA Guidelines require an EIR to include a description and environmental analysis of the No Project Alternative. The purpose of describing and analyzing a No Project Alternative is to allow decision-makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. Potential environmental impacts associated with the No Project Alternative are discussed in this section for the same environmental parameters addressed for the proposed project.

The No Project Alternative is defined as not approving an expansion of the SCLF. Under the No Project Alternative, SCLF would continue operating under the existing permits. The remaining permitted capacity would be exhausted in 2021 (assuming waste disposal at 1,400 TPD). At that time, the landfill site would reach the end of its permitted life, would no longer accept waste, and would undergo formal closure.

After closure, waste would continue to be generated. The City of Glendale and other landfill users would have to identify another location or locations for disposal of waste and processing of diversion materials. Unless new facilities are sited and constructed, waste would need to be hauled via truck and/or train to more distant existing disposal facilities in Los Angeles and other counties. This alternative would require longer waste hauls, which would result in higher costs for current users of the SCLF and increased traffic, noise, and air quality impacts. Table 11-1 below shows various facilities and their distances from SCLF.

TABLE 11-1. LANDFILLS IN THE GREATER LOS ANGELES REGION

Facility	Location	Approximate Roadway Distance from SCLF (miles)
Sunshine Canyon	Sylmar	24
Chiquita Canyon	Castaic	38
Olinda-Alpha	Brea	40
El Sobrante	Corona	58
Antelope Valley	Palmdale	60
Lancaster	Lancaster	75
Mesquite Regional	Imperial County	223

Source: Sanitation Districts of Los Angeles County.

11.2.2 MAXIMUM VERTICAL AND HORIZONTAL EXPANSION ALTERNATIVE

This alternative would include a vertical expansion and larger horizontal expansion than Variations 1 and 2. The currently permitted tonnage of 3,400 TPD of MSW would not change, and the current programs and operational practices described in Section 3.0 (Existing Facilities and Operations) would continue including incremental construction to expand the landfill gas control system, stormwater drainage system, and irrigation system. The Maximum Vertical and Horizontal Expansion Alternative would increase the permitted capacity by approximately 33.0 million cubic yards (or 16 million tons), which would extend the landfill's life by approximately 37 years (assuming a waste disposal rate of 1,400 TPD). The height of the SCLF would be increased from its current permitted elevation of 1,525 feet AMSL to about 1,705 feet AMSL. To maximize the volume of the expansion, this alternative would fill the gap between the existing north facing landfill slopes and the south facing native slopes to the north including removal of the hillside mentioned for Variation 2. Such filling would require flows in the existing northern flow line to be diverted in a proposed tunnel through the ridgeline, down an improved surface channel, and into an enlarged Linda Vista Debris Basin north of the site. In preliminary discussions, Los Angeles County Department of Public Works (DPW), the agency with jurisdiction over the existing debris basins, was positive about such diversion of flows and expansion of the Linda Vista Debris Basin. The lateral expansion area would require a liner and liquids collection system to comply with regulations. Expansion of the refuse footprint would be contained within the existing permitted area of the landfill.

11.2.3 CONVENTIONAL WASTE-TO-ENERGY TECHNOLOGY ALTERNATIVE

This alternative would establish and/or utilize one or more conventional waste-to-energy (direct combustion) facilities to significantly reduce the volume of the waste ultimately requiring disposal and generate electricity. This is a rapid process, reducing waste to residual in a matter of minutes or seconds, rather than years in a landfill. Impacts due to haul distance could be minimized depending upon the location of the facility. Conventional waste-to-energy (WTE) produces less operational emissions compared to landfills due to less operation of mobile equipment. This technology has the longest commercially-proven record and is still allowed in California. However, there are currently only three facilities in the state and none have been built in the last 25 years.

11.2.4 THERMAL GASIFICATION (INCLUDING PLASMA ARC GASIFICATION) ALTERNATIVE

Thermal processes include gasification, pyrolysis, plasma arc, and various combinations of these technologies. These processes tend to be more expensive and complex than conventional WTE or anaerobic digestion processes. Select feedstock (more homogeneous than MSW) is usually required for optimal operation of these technologies, thereby necessitating significant pre-processing at new or

existing materials recovery facilities (MRFs). The primary difference between thermal conversion and conventional WTE technology is that thermal decomposition of the waste occurs with either no air or insufficient air for complete combustion, which results in cleaner air emissions. Thermal processes produce intermediate products which can either be burned as fuels or used to create fuels that are used elsewhere. Thermal processes are all rapid, reducing waste to residual in a matter of minutes or seconds, rather than years in a landfill. These technologies produce less operational emissions compared to landfills due to less operation of mobile equipment.

Gasification is the thermal processing of waste (feedstock) using heat, pressure, and/or steam to convert materials directly into a gas. This alternative requires a relatively consistent influent feedstock material (mainly organic materials), thereby necessitating significant pre-processing at a MRF. There is limited operational history and success. There is currently no commercially operating facility in the U.S. using MSW as feedstock; however, Japan uses this technology with a feedstock comprised of MSW and auto shredder waste. Residual materials such as char and tar, and slag need to be disposed. The residual slag may be used as road base or construction aggregate.

11.2.5 PYROLYSIS ALTERNATIVE

Pyrolysis is the thermal processing of waste using indirect heat in the absence of oxygen. The same general comments about thermal processes made in Section 11.2.4 apply to pyrolysis. This process can be used with a wide mix of organic materials (e.g. coal, wood, and organics). However, waste degradation is not as effective as with thermal oxidation which results in some inorganic waste not being decomposed. There is a limited operational history and success using pyrolysis with mixed organics. There is also a limited history of treating the resulting syngas for use in energy conversion equipment. Residual char and liquids need to be disposed or further refined. It is not clear if this process is economical or if capacity can be met. A 150-TPD plant is being built in Green Bay, Wisconsin. At 150 TPD, 23 plants would be required to accommodate the permitted 3,400 TPD.

11.2.6 THERMAL AND CATALYTIC DEPOLYMERIZATION ALTERNATIVE

Thermal and catalytic (T&C) depolymerization converts polymers in plastics and synthetic compounds into diesel and gasoline. The catalytic process uses lower temperatures (270°- 400° C) and pressures than the thermal process (>400° C). This technology is in the development stage and has not yet been used with MSW as feedstock. The cost, capacity and residual byproducts are all key unknowns at this time.

11.2.7 ANAEROBIC DIGESTION ALTERNATIVE

Anaerobic digestion (AD) is the bacterial breakdown of organic materials in the absence of oxygen. Organisms gradually break down complex organic molecules into methane, carbon dioxide, hydrogen sulfide, and gaseous and solid residuals. This technology is predominantly applied to organic wastes (alone or with composting to biostabilize the process residue). Pre-processing of the feedstock at a MRF is needed to remove inorganic materials. Potential feedstocks are MSW-derived organic materials, wastewater treatment biosolids, manure, and food waste. Self-contained systems can achieve complete decomposition in a matter of days. The residuals from this process include inorganics, non-degradable organics, and biomass. These residuals (which can reach 25% or higher) require disposal, typically at a landfill. The methane produced during the process can be burned, compressed, or liquefied for fuel. While some medium-sized facilities exist in Europe, it is not clear if such technology can be economical in Southern California. AD is less efficient at reducing organic materials than thermal processes. AD does not destroy plastic, and has limited efficiency in destroying chemical compounds in woody material.

11.2.8 CHEMICAL/ACID HYDROLYSIS ALTERNATIVE

Acid hydrolysis is the chemical decomposition of waste using acid and water to split chemical bonds. This process applies to organic wastes (alone or in combination with composting to biostabilize the process residue) and would require pre-processing of the feedstock at a MRF to remove inorganic materials. This process is well-established for some organic feedstocks such as conversion of wood into pulp. Although, there have been limited laboratory- or pilot-scale projects using MSW-organics, this technology has not yet been proven to be economical, or large enough to accommodate the capacity needed for this project.

11.3 FEASIBILITY AND RANKING OF ALTERNATIVES

As shown in Table 11-2 below, each alternative was evaluated for its ability to meet the four project objectives. Alternatives meeting most of the project objectives are deemed feasible for this project. In addition, alternatives were scored in three criteria: technological feasibility, potential to reduce environmental impacts relative to Variation 1 and costs relative to Variation 1. These three criteria were used to rank feasible alternatives.

TABLE 11-2. FEASIBILITY OF ALTERNATIVES

	Ability to Meet Objectives				**Ability to Meet Other Criteria**		
	Scoring 1= poor; 2= fair; 3= good				***Scoring 1= poor; 2= fair; 3= good***		
	No. 1	**No. 2**	**No. 3**	**No. 4**	**Technological Feasibility**	**Relative Environmental Impacts**	**Relative Costs**
Proposed Project							
Variation 1 (Vertical Expansion)	3	3	3	3	Proven technology. **Score=3**	Low impacts. No native vegetation disturbance and minimized refuse haul distance. **Score=3**	Low cost. No implementation cost and minimized refuse haul cost. **Score=3**
Variation 2 (Vertical & Horizontal Expansion)	3	3	3	3	Same technology as Variation 1. **Score=3**	Impacts comparable to Variation 1. **Score=3**	Costs comparable to Variation 1. **Score=3**
Alternatives							
No Project (Use of Existing Regional & Distant Landfills)	2	2	2	2	Same technology as Variation 1. **Score=3**	Long-term impacts are higher than Variations 1 and 2 due to longer haul distances. May need to build transfer facilities. **Score=2**	Long-term costs are higher than Variations 1 and 2 due to longer hauling and cost to develop new transfer facilities. **Score=2**
Maximum Vertical & Horizontal Expansion	3	3	3	3	Same technology as Variation 1. **Score=3**	Impacts comparable to or greater than Variation 1. **Score=2**	Higher costs associated with construction of drainage line. **Score=2**
Conventional WTE Technology	2	2	2	2	Proven technology. **Score=3**	Greater construction impacts but less operational impacts than Variation 1. **Score=3**	Higher costs associated with permitting and constructing a new WTE facility. **Score=1**

TABLE 11-2. FEASIBILITY OF ALTERNATIVES

	Ability to Meet Objectives				**Ability to Meet Other Criteria**		
	Scoring 1= poor; 2= fair; 3= good				***Scoring 1= poor; 2= fair; 3= good***		
	No. 1	**No. 2**	**No. 3**	**No. 4**	**Technological Feasibility**	**Relative Environmental Impacts**	**Relative Costs**
Thermal Gasification	1	2	2	2	Newer, unproven technology. **Score=1**	Greater construction impacts but less operational impacts than Variation 1. **Score=3**	Higher costs associated with permitting and constructing a new Thermal Gasification facility. **Score=1**
Pyrolysis	1	2	2	2	Newer, unproven technology. **Score=1**	Greater construction impacts but less operational impacts than Variation 1. **Score=3**	Higher costs associated with permitting and constructing a new Pyrolysis facility. **Score=1**
Thermal & Catalytic Depolymerization	1	2	2	2	Newer, unproven technology. **Score=1**	Greater construction impacts but less operational impacts than Variation 1. **Score=3**	Higher costs associated with permitting and constructing a new T&C Depolymerization facility. **Score=1**
Anaerobic Digestion	2	2	2	2	Proven technology in wastewater; less so with municipal solid waste. **Score=2**	Greater construction impacts but less operational impacts than Variation 1. **Score=3**	Higher costs associated with constructing and operating the AD cells. **Score=2**
Chemical/Acid Hydrolysis	1	2	2	2	Newer unproven technology. **Score=1**	Greater construction impacts but less operational impacts than Variation 1. **Score=3**	Higher costs associated with permitting and constructing a new Chemical Hydrolysis facility. **Score=1**

Source: Sanitation Districts of Los Angeles County.

11.3.1 ABILITY TO MEET PROJECT OBJECTIVE 1

Although the No Project Alternative would continue to provide environmentally sound and cost-effective disposal at the SCLF for a period of time, this alternative would require an alternative disposal location in the near future. This alternate location is likely to be more costly either due to longer haul costs or the cost to develop a new facility. Thus, the No Project Alternative received a fair rating. The Maximum Vertical and Horizontal Expansion Alternative received a good rating for this objective because it uses a waste disposal option that is proven to be environmentally sound and cost effective. Use of conventional WTE is a more costly technology and consequently received a fair rating. AD is a somewhat proven technology with relatively high costs and also received a fair rating. The remaining alternatives are not proven and the limited cost information suggests very high costs relative to other options. Thus, these alternatives received a poor rating.

11.3.2 ABILITY TO MEET PROJECT OBJECTIVE 2

All alternatives received at least a fair rating for this objective because waste diversion programs could at least be operated in conjunction with the particular disposal alternative. The Maximum Vertical and Horizontal Expansion Alternative received a good rating because the City of Glendale would have greater control over the diversion programs that are provided and such programs could be provided at an existing facility. While the City of Glendale would retain control of diversion programs under the No Project Alternative as long as SCLF remains open, by not carrying out the project, the City would lose this control much earlier in time, thereby justifying a fair rating.

11.3.3 ABILITY TO MEET PROJECT OBJECTIVE 3

The No Project Alternative received a fair rating for this objective as this alternative would require an alternative disposal option in the near future and not make full use of the SCLF as a local resource. Once the SCLF closes, this option would increase haul distances and result in increased traffic, noise and air quality impacts. The Maximum Vertical and Horizontal Expansion Alternative received a good rating because it allows the use of an existing local resource.

Conventional WTE, thermal gasification, pyrolysis, thermal and catalytic depolymerization, anaerobic digestion, and hydrolysis would require construction of at least one new facility and potentially several depending on the capacity each site could process. Such facilities could be sited near the area of waste generation to minimize haul distance; however, multiple new facilities within the region would be required. Consequently, these alternatives received a fair rating.

11.3.4 ABILITY TO MEET PROJECT OBJECTIVE 4

All alternatives received at least a fair rating for this objective because they all would allow for further development of disposal and diversion options, such as conversion technologies. Some options like The Maximum Vertical and Horizontal Expansion Alternative might work in conjunction with a future technology by providing a disposal option for residues and non-select waste. The No Project Alternative and the Maximum Vertical and Horizontal Expansion Alternative received good ratings because these would provide waste disposal at the least up-front cost which would keep options open for utilization of other technologies as they mature. In contrast, going forward with a conversion technology would require such a steep initial cost that changing to some other technology that has proven itself in five or ten years would likely not be economically feasible.

11.3.5 ALTERNATIVE RATINGS

The No Project Alternative received a good rating for one objective and fair rating for three because this option does not provide a long term solution to meeting three of the project objectives. This alternative received a score of 7, making it clearly lower-ranked than Variations 1 and 2, which each received a score of 9. The environmental impacts of the No Project Alternative are described below as required by CEQA.

The Maximum Vertical and Horizontal Expansion Alternative received a good rating for its ability to meet the four project objectives and is therefore deemed feasible. While the Maximum Vertical and Horizontal Expansion Alternative would provide even more years of landfill life than Variations 1 and 2, the cost and complications of altering one of the site's major drainage paths makes this alternative less desirable. More specifically, tunneling though the ridge would be very expensive and there are additional risks due to uncertain geology. The debris basin and downstream drainage system that runoff would be

rerouted to under the Maximum Vertical and Horizontal Expansion Alternative are not sized for the flow, which would add to development costs. Last, the additional capacity provided by the Maximum Vertical and Horizontal Expansion Alternative would not be needed for approximately 30 years, assuming the baseline tonnage of 1,400 TPD. The Maximum Vertical and Horizontal Expansion Alternative received a score of 7, making it clearly lower ranked than Variations 1 and 2, which each received a score of 9. The environmental impacts of the Maximum Vertical and Horizontal Expansion Alternative are described below.

Conventional WTE Technology received fair ratings in all four objectives. The two existing WTE facilities within the Los Angeles region have insufficient capacity to handle 3,400 TPD; thus, this alternative would necessitate construction of a new facility. The feasibility of siting such a facility is highly uncertain as only three such facilities have been completed in California and none in the last 25 years. Consequently, this alternative is deemed infeasible for this project and is not further evaluated.

Thermal Gasification, Plasma Arc Gasification, Pyrolysis, T&C Depolymerization, and Chemical Hydrolysis all received a poor rating for Objective 1 and fair rating for Objectives 2, 3, and 4. Biological/ Biochemical AD received a fair rating for all objectives. Consequently, these alternatives are deemed infeasible for this project and are not further evaluated.

11.3.5.1 Alternative Ratings Summary

In summary, eight project alternatives were evaluated for their ability to meet the four project objectives and were scored in three other criteria. One alternative to the proposed project was deemed feasible: the Maximum Vertical and Horizontal Expansion Alternative. The impacts of the Maximum Vertical and Horizontal Expansion Alternative are assessed below along with the impacts of the No Project Alternative as required by CEQA.

11.4 ALTERNATIVES TO LESSEN THE ENVIRONMENTAL IMPACTS OF THE PROPOSED PROJECT

The only significant unavoidable impacts from the proposed project were related to air quality and are driven by the amount of equipment needed to landfill 3,400 TPD. The only potential alternative to reduce such impacts is to reduce the tonnage accepted by the site on a daily basis. This reduced tonnage alternative was evaluated for its feasibility relative to the project objectives. The alternative is infeasible because it would not meet the first objective of providing a waste disposal option for 3,400 TPD. Consequently, there are no feasible alternatives that would avoid or substantially lessen any of the significant effects of the proposed project.

11.5 ENVIRONMENTAL IMPACTS OF NO PROJECT ALTERNATIVE

Initially, the No Project Alternative would be a continuation of existing operations at the SCLF. Consistent with other project alternatives, the No Project Alternative is based on 3,400 TPD of waste disposal. In the longer term, the No Project Alternative would require waste disposal at another facility sooner than Variation 1 and Variation 2 of the proposed project since the landfill capacity would not be expanded as it would under Variations 1 and 2. In the following analysis, the impacts of the No Project Alternative are compared to the impacts of Variations 1 and 2.

11.5.1 AESTHETICS

In the No Project Alternative, the permitted height of 1,525 feet above mean sea level (AMSL) would not change as it would under Variation 1 and 2 (1,705 feet AMSL) resulting in fewer changes to the aesthetic quality of views in the vicinity of the SCLF than Variations 1 and 2. Landfill practices under this Alternative would be similar to Variations 1 and 2 and therefore impacts regarding scenic vistas and light and glare would be similar. Therefore, aesthetic impacts associated with the No Project Alternative would be less than compared to Variation 1 and 2.

11.5.2 AIR QUALITY

In the short term, the No Project Alternative would result in the same operational emissions of criteria pollutants as Variations 1 and 2 since those emissions are driven by the amount of waste accepted per day and each alternative would handle the same amount of waste. The No Project Alternative would avoid the construction emissions associated with the Variation 2 horizontal expansion. Since operational emissions are the primary source of emissions, the No Project Alternative would result in similar air quality impacts in the short term and would not avoid a significant unavoidable impact. In the long term, the No Project Alternative would result in greater emissions of criteria pollutants than Variations 1 and 2 since the SCLF would close sooner thereby resulting in waste being hauled longer distances to other disposal facilities.

11.5.3 BIOLOGICAL RESOURCES

The No Project Alternative would not disturb any land that has not been previously disturbed. Thus, the impacts would be the same as Variation 1 and less than Variation 2 which would require disturbance of native land for horizontal expansion.

11.5.4 CULTURAL RESOURCES

The No Project Alternative would not disturb any land that has not been previously disturbed. As such, there would be no potential to encounter archaeological resources or human remains during ground disturbing activities. Thus, the potential for cultural impacts would be the same as for Variation 1 and less than Variation 2, which would require disturbance of native land for horizontal expansion.

11.5.5 GEOLOGY, SOILS AND HYDROGEOLOGY

Under the No Project Alternative, there is less potential for impacts related to foundation and slope stability relative to Variations 1 and 2 because the permitted landfill height would not be increased and there would be no horizontal expansion as under Variation 2. The Sanitation Districts would continue to design, construct, and operate adequate stormwater run-off control measures to minimize erosion; however, fewer measures would be needed under the No Project Alternative because the permitted landfill height would not change.

11.5.6 GREENHOUSE GAS EMISSIONS

In the short term, the No Project Alternative would result in the same operational greenhouse gas emissions as Variations 1 and 2 since those emissions are driven by the amount of waste accepted per day and each alternative would handle the same amount of waste. The No Project Alternative would avoid the construction emissions associated with the Variation 2 horizontal expansion. Since operational emissions are the primary source of emissions, the No Project Alternative would result in similar

greenhouse gas emissions in the short term. In the long term, the No Project Alternative would result in greater greenhouse gas emissions than Variations 1 and 2 since the SCLF would close sooner thereby resulting in waste being hauled longer distances to other disposal facilities.

11.5.7 HAZARDS AND HAZARDOUS MATERIALS

The risk of wildfire under the No Project Alternative would be similar to Variations 1 and 2. The potential for receiving a combustible load would be the same as Variations 1 and 2 since all alternatives would handle the same amount of waste. Therefore, the No Project alternative would result in similar hazards and hazardous materials impacts as Variations 1 and 2.

11.5.8 SURFACE WATER HYDROLOGY

The Sanitation Districts would continue to design, construct, and operate adequate stormwater run-off control measures to minimize erosion; however, fewer measures would be needed under the No Project Alternative because the permitted landfill height would not change as it would under Variations 1 and 2. The No Project Alternative would result in the same waste footprint and amount of impermeable surfaces as Variation 1 and surface water impacts would be similar. Relative to Variation 2, the No Project Alternative would not result in undisturbed, permeable surfaces being converted to impermeable surfaces, thereby increasing surface runoff. Thus, the No Project Alternative would result in less surface water impacts than Variation 2. However, it should be noted that the No Project Alternative would not result in rerouting of more flows into Basin #1, which was determined to be a beneficial impact related to water quality and peak flow under Variations 1 and 2.

11.5.9 WATER QUALITY

The No Project Alternative would not increase the life of the landfill and, relative to Variations 1 and 2, would lead to less total construction activity at the SCLF that could result in equipment leaks or soil erosion/sedimentation. In addition, because the capacity of the landfill would not be increased, less refuse, which could generate liquids and landfill gas, would be placed at the SCLF. Therefore, the No Project Alternative would result in less potential for water quality impacts than Variations 1 and 2.

11.5.10 NOISE

In the short term, the No Project Alternative would result in the same operational noise as Variations 1 and 2 since noise is driven by the amount of waste accepted per day and each alternative would handle the same amount of waste. The No Project Alternative would avoid the construction noise associated with the Variation 2 horizontal expansion. Since operational noise is the primary source of noise, the No Project Alternative would result in similar noise impacts in the short term. In the long term, the No Project Alternative would result in greater noise than Variations 1 and 2 since the SCLF would close sooner thereby resulting in waste being hauled longer distances to other disposal facilities.

11.5.11 TRANSPORTATION AND TRAFFIC

In the short term, the No Project Alternative would result in the same traffic as Variations 1 and 2 since traffic is driven by the amount of waste accepted per day and each alternative would handle the same amount of waste. The No Project Alternative would avoid the construction traffic associated with the Variation 2 horizontal expansion. Since operational traffic is the primary source of traffic, the No Project Alternative would result in similar traffic impacts in the short term. In the long term, the No Project

Alternative would result in greater traffic than Variations 1 and 2 since the SCLF would close sooner thereby resulting in waste being hauled longer distances to other disposal facilities.

11.6 ENVIRONMENTAL IMPACTS OF FEASIBLE ALTERNATIVES

As noted in Section 11.3.5.1, the Maximum Vertical and Horizontal Expansion Alternative was the only feasible alternative to the proposed project and its impacts are described below, even though near term impacts would be greater than the proposed project. Also, as noted in Section 11.4, there are no feasible alternatives that would lessen the impacts of the proposed project.

11.6.1 VARIATION 1 AND VARIATION 2 OF THE PROPOSED PROJECT

Potential environmental impacts associated with implementation of Variation 1 and Variation 2 of the proposed project are described in Section 6.0 (Resource Specific Analysis) of the DEIR.

11.6.2 MAXIMUM VERTICAL AND HORIZONTAL EXPANSION ALTERNATIVE

The Maximum Vertical and Horizontal Expansion Alternative would extend the life of the landfill relative to Variations 1 and 2. This extended life would extend the duration of operational impacts at SCLF like air quality, greenhouse gas emissions, noise and traffic but would defer the time when waste would need to be disposed at a different facility. Disposal at a different facility is likely to require longer haul distances resulting in greater overall operational impacts for air quality, greenhouse gases, noise, and traffic. However, the additional capacity provided by this alternative would not be needed for approximately 30 years assuming the baseline tonnage of 1,400 TPD. Because the extended duration of impacts and the benefits of deferring hauling to another facility would occur so far in the future, these factors were considered to offset each other in the following analysis.

11.6.2.1 Aesthetics

The Maximum Vertical and Horizontal Expansion Alternative would increase the permitted height of the landfill the same amount as for Variations 1 and 2. The horizontal expansion under this alternative would occupy a greater footprint than under Variation 2. However, the location of the footprint increase is not visible to most viewpoints. Thus, this alternative would result in slightly greater impacts to the aesthetic quality of views in the vicinity of SCLF. Landfill practices under this alternative would be similar to Variations 1 and 2 and therefore impacts regarding scenic vistas and light and glare would be similar.

11.6.2.2 Air Quality

The Maximum Vertical and Horizontal Expansion Alternative would result in the same operational emissions of criteria pollutants as Variations 1 and 2 since those emissions are driven by the amount of waste accepted per day and each alternative would handle the same amount of waste. This alternative would involve more construction than Variations 1 and 2, thereby resulting in greater construction emissions. Although operational emissions are the primary source of criteria pollutant emissions, in this case, the emissions from excavation, liner construction, tunneling and off site drainage facility improvements are expected to be noteworthy. Thus, this alternative would result in greater air quality impacts than Variations 1 and 2.

11.6.2.3 Biological Resources

Relative to Variations 1 and 2, the horizontal expansion under the Maximum Vertical and Horizontal Expansion Alternative would require a greater disturbance of land that has not been previously disturbed. Thus, this alternative would result in greater biological impacts.

11.6.2.4 Cultural Resources

Where new ground is disturbed, there is potential to encounter archaeological resources or human remains. Due to the greater areas of disturbance compared to Variations 1 and 2, the Maximum Vertical and Horizontal Expansion Alternative would result in greater potential for cultural resources impacts.

11.6.2.5 Geology, Soils and Hydrogeology

Similar to Variations 1 and 2, the Sanitation Districts would continue to design, construct, and operate adequate stormwater run-off control measures to minimize erosion. Under the Maximum Vertical and Horizontal Expansion Alternative, there is potential for additional impacts related to foundation and slope stability relative to Variations 1 and 2 due to greater extent of excavation and liner. Further, this alternative could result in impacts related to tunneling through the ridgeline for diversion of surface water flows.

11.6.2.6 Greenhouse Gas Emissions

The Maximum Vertical and Horizontal Expansion Alternative would result in the same operational greenhouse gas emissions as Variations 1 and 2 since those emissions are driven by the amount of waste accepted per day and each alternative would handle the same amount of waste. This alternative would involve more construction than Variations 1 and 2, thereby resulting in greater construction greenhouse gas emissions. Although operational emissions are the primary source of greenhouse gas emissions, in this case, the emissions from excavation, liner construction, tunneling and off site drainage facility improvements are expected to be noteworthy. Thus, this alternative would result in greater greenhouse gas impacts than Variations 1 and 2.

11.6.2.7 Hazards and Hazardous Materials

The risk of wildfire under the Maximum Vertical and Horizontal Expansion Alternative would be similar to Variations 1 and 2. The potential for receiving a combustible load would be the same as Variations 1 and 2 since all alternatives would handle the same amount of waste. Therefore, this alternative would result in similar hazards and hazardous materials impacts as Variations 1 and 2.

11.6.2.8 Surface Water Hydrology

The Maximum Vertical and Horizontal Expansion Alternative would result in greater changes to SCLF hydrology than Variations 1 and 2 because a greater area of disturbance would be required and runoff from the eastern portion of the landfill would need to be rerouted to an off site drainage basin. Rerouting of runoff would require enlargement of the Linda Vista Debris Basin and could require improvements to downstream drainage facilities. The Sanitation Districts would continue to design, construct, and operate adequate stormwater run-off control measures to minimize erosion. However, additional measures would be required under this alternative due to the larger horizontal expansion. The larger horizontal expansion would also result in more undisturbed, permeable surfaces being converted to impermeable surfaces, thereby increasing surface runoff.

11.6.2.9 Water Quality

The Maximum Vertical and Horizontal Expansion Alternative would increase the life of the landfill and, relative to Variations 1 and 2, lead to more total construction activity at the SCLF that could result in equipment leaks or soil erosion/sedimentation. In addition, because the capacity of the landfill would be increased, more refuse, which could generate liquids and landfill gas, would be placed at the SCLF. Therefore, this alternative would result in greater potential for water quality impacts than Variations 1 and 2.

11.6.2.10 Noise

The Maximum Vertical and Horizontal Expansion Alternative would result in the same daily operational noise as Variations 1 and 2 since such noise is driven by the amount of waste accepted per day and each alternative would handle the same amount of waste. This alternative would involve more construction than Variations 1 and 2, thereby resulting in greater construction noise. Since operational noise is the primary source of noise, this alternative would result in similar noise impacts as Variations 1 and 2.

11.6.2.11 Transportation and Traffic

The Maximum Vertical and Horizontal Expansion Alternative would result in the same operational traffic impacts as Variations 1 and 2 since those impacts are driven by the amount of waste accepted per day and each alternative would handle the same amount of waste. This alternative would involve more construction than Variations 1 and 2, thereby resulting in greater construction traffic. Since operational traffic is the primary source of traffic, this alternative would result in similar traffic impacts as Variations 1 and 2.

11.6.3 SUMMARY OF ENVIRONMENTAL ANALYSIS OF ALTERNATIVES

A comparison of the environmental impacts of the No Project Alternative and the Maximum Vertical and Horizontal Expansion Alternative relative to Variation 1 and Variation 2 of the proposed project is provided in Table 11-3. Per Section 15126.6(d) of the *CEQA Guidelines*, the impacts of these alternatives are identified in less detail than Variations 1 and 2.

The No Project Alternative has been presented with both short-term and long-term impacts. The short-term impacts are based on use of remaining SCLF capacity while the long-term impacts are based on waste being disposed at another facility, which is likely to require a longer haul distance than current hauls to the SCLF. Long-term impacts closely related to hauling (air quality, greenhouse gasses, noise and traffic) have been evaluated assuming a longer haul distance. Long-term impacts for other resource areas such as aesthetics and biological resources would be speculative without knowing the specific alternate facility and are therefore not presented.

For the Maximum Vertical and Horizontal Expansion Alternative, short-term and long-term impacts are also presented. The short-term impacts reflect those for constructing this alternative, including alteration of the site's drainage required by this alternative. The long-term impacts reflect the benefits of the resulting additional capacity from this alternative. However, these benefits would not be gained for approximately 30 years assuming the baseline tonnage of 1,400 TPD.

TABLE 11-3. COMPARISON OF THE ENVIRONMENTAL IMPACTS OF ALL FEASIBLE ALTERNATIVES

		No Project		**Maximum Vertical and Horizontal Expansion**	
Impacts	**Variations 1 and 2**	**Short-Term Impacts**	**Long-Term Impacts**	**Short-Term Impacts**	**Long-Term Impacts**
Aesthetics	LTS	LTS (-)	*	LTS (+)	LTS (+)
Air Quality	SU	SU (0)	SU (+)	SU (+)	SU (-)
Biological Resources	LTS/LSM	LTS (0)/LTS (-)	*	LTS (+)	LTS (0)
Cultural Resources	LTS	LTS (0)/LTS (-)	*	LTS (+)	LTS (0)
Geology and Soils/Hydrogeology	LTS/LSM	LTS (-)	*	LSM (+)	LSM (0)
Greenhouse Gas Emissions	LTS	LTS (0)	LTS (+)	LTS (+)	LTS (-)
Hazards and Hazardous Materials	LTS	LTS (0)	*	LTS (0)	LTS (0)
Surface Water Hydrology	LTS	LTS(0)/LTS (-)	*	LTS (+)	LTS (0)
Water Quality	LTS	LTS (-)	*	LTS (+)	LTS (0)
Noise	LSM	LSM (0)	LSM (+)	LSM (0)	LSM (-)
Transportation and Traffic	LSM	LSM (0)	LSM (+)	LSM (0)	LSM (-)
Overall Impacts Relative to Variations 1 and 2		**Slightly Superior to Variation 1 / Superior to Variation 2**	**Inferior**	**Inferior to Variation 1 and Variation 2**	**Slightly Superior to Variation 1 and Variation 2**
		Overall Inferior		**Overall Inferior**	

Source: Sanitation Districts of Los Angeles County.
LTS = Less than significant impact
LSM = Less than significant impact with mitigation
SU = Significant and unavoidable impact
(0) = Similar impact
(-) = Environmentally superior (appreciably lower impact)
(+) = Environmentally inferior (appreciably greater impact)
*Speculative without knowing specific alternative disposal facility

11.7 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires that an EIR identify the environmentally superior alternative of a project other than the No Project Alternative (*CEQA Guidelines* §15126.6(e)(2)). Table 11-3 shows a comparison of the environmental impacts of the No Project Alternative and the Maximum Vertical and Horizontal Expansion Alternative to Variation 1 and Variation 2 of the proposed project. The No Project Alternative would avoid construction related to the Variation 2 horizontal expansion, but would result in the site's closure in the near future (2021 assuming the baseline tonnage of 1,400 TPD), which is much earlier than

Variations 1 and 2. Upon closure, the waste generated by the City of Glendale and other landfill users would need to be sent to an alternate disposal facility. Such an alternate is likely to be an existing, more distant facility that increases the waste haul distance relative to current hauls to the SCLF. Therefore, the No Project Alternative has the potential to result in greater impacts related to air quality, greenhouse gas emissions, noise and traffic than Variations 1 and 2. Further, the No Project Alternative would only do a fair job of meeting each of the four project objectives.

The Maximum Vertical and Horizontal Expansion Alternative would have similar but greater impacts than Variation 1 and Variation 2 in the short term due to the greater amount of construction required and larger area of disturbance. In the long term, this alternative would have a greater aesthetic impact once the fill elevation exceeds those of Variation 1 and Variation 2. However, other impacts such as those related to air quality, greenhouse gases, noise, and traffic would be less than those of Variation 1 and 2 based on the longer life expectancy of this alternative and the deferred need to haul waste a longer distance to another facility. Overall, this alternative was deemed environmentally inferior to the proposed project because the long-term impacts are only slightly superior to the proposed project while the short-term impacts are inferior.

In the short term, Variation 1 is slightly superior to Variation 2 due to the reduced biological, cultural and hydrologic impacts associated with the Variation 2 horizontal expansion. In the long term, Variation 1 is likely to result in higher air quality, greenhouse gas, noise, and traffic impacts since waste would need an alternative disposal option sooner. However, since the capacity for Variation 1 would not be exhausted until about 2034, the long-term impact in this comparison was given less weight than the biological, cultural and hydrologic impacts associated with Variation 2, and Variation 1 is therefore considered the environmentally superior alternative.