

## 6 ALTERNATIVES

### 6.1 INTRODUCTION

#### 6.1.1 CEQA AUTHORITY FOR CONSIDERATION OF ALTERNATIVES

Section 15126.6(a) of the State CEQA Guidelines requires EIRs to describe "...a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives which are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason." This section of the State CEQA Guidelines also provides guidance regarding what the alternatives analysis should consider. Subsection (b) further states the purpose of the alternatives analysis, as follows:

Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

The State CEQA Guidelines further require that the alternatives be compared to the proposed project's environmental impacts and that the "no project" alternative be considered (CEQA Guidelines Section 15126.6[d][e]). In defining "feasibility" (e.g., "...feasibly attain most of the basic objectives of the project..."), State CEQA Guidelines Section 15126.6(f)(1) states, in part:

Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of reasonable alternatives.

In determining what alternatives should be considered in the EIR, it is important to acknowledge the objectives of the project, the project's significant effects, and unique project considerations. These factors are crucial to the development of alternatives that meet the criteria specified in Section 15126.6(a). Although, as noted above, EIRs must contain a discussion of "potentially feasible" alternatives, the ultimate determination as to whether an alternative is feasible or infeasible is made by the lead agency's decision-making body, here the Elk Grove City Council. (See Pub. Resources Code, § 21081[a][3].) At the time of action on the project, the City Council may consider evidence beyond that found in this EIR in addressing such determinations. The Council, for example, may conclude that a particular alternative is infeasible (i.e., undesirable) from a policy standpoint, and may reject an alternative on that ground provided that the Council adopts a finding, supported by substantial evidence, to that effect, and provided that such a finding reflects a "reasonable balancing of the relevant economic, environmental, social, and technological factors." (*City of Del Mar v. City of San Diego* (1982) 133 Cal.App.3d 401, 417; see also *Sequoyah Hills Homeowners Assn. v. City of Oakland* (1993) 23 Cal.App.4th 704, 714–716 (court upholds findings rejecting alternatives for not fully satisfying project objectives).)

## **6.1.2 FACTORS CONSIDERED IN IDENTIFYING PROJECT ALTERNATIVES**

The proposed project's intended function is to provide the City of Elk Grove with a more convenient and cost effective waste management facility. In identifying potentially feasible alternatives to the proposed project, the following project objectives were considered:

- ▶ To provide convenient, cost-effective and environmentally sound waste management services to the citizens of Elk Grove,
- ▶ To control the rising costs of managing solid wastes and recyclables for the City,
- ▶ To reduce regional vehicular traffic and associated air pollution,
- ▶ To comply with AB 32 (California Global Warming Solutions Act of 2006) by reducing greenhouse gas emissions,
- ▶ To comply with AB 939 (California's Integrated Waste Management Act of 1989) by improving recycling and diversion of waste from landfills, and
- ▶ To provide new employment opportunities to the residents of the City of Elk Grove and the surrounding areas.

Under CEQA Guidelines section 15126.6, as noted earlier, the alternatives to be discussed in detail in an EIR should be able to "feasibly attain most of the basic objectives of the project[.]" For this reason, the objectives described above provided the framework for defining possible offsite alternative project locations. Based on these objectives, potentially feasible offsite locations were limited to the southern portion of the City of Elk Grove due to its proximity to SR 99 and availability of industrially-zoned land. Feasible sites need to be of sufficient size to accommodate the proposed project (i.e., a minimum of approximately 20 developable acres) and be separated from residential areas in order to minimize potential land use conflicts. The sites also need to be sufficiently close to SR 99 in order to minimize traffic generation on local streets and provide easy vehicle access.

## **6.2 PROJECT ALTERNATIVES EVALUATED IN THIS EIR**

### **6.2.1 DESCRIPTION OF ALTERNATIVES**

Based on the requirements of State CEQA Guidelines § 15126.6 and the project's objectives, the following alternatives to the proposed project were identified:

- ▶ No Project Alternative,
- ▶ Offsite Development Alternative–Site 3,
- ▶ Offsite Development Alternative–Site 5, and
- ▶ Household Hazardous Waste Collection Facility Only Alternative.

### **6.2.2 NO PROJECT ALTERNATIVE**

State CEQA Guidelines Section 15126.6(e)(1) requires that the no project alternative be described and analyzed "to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project." The no project analysis is required to discuss "the existing conditions at the time the notice of preparation is published...as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services" (Section 15126.6[e][2]). "If the project is...a development project on identifiable property, the 'no project' alternative is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in its existing state against environmental

effects which would occur if the project is approved. If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this ‘no project’ consequence should be discussed. In certain instances, the no project alternative means ‘no build’ wherein the existing environmental setting is maintained. However, where failure to proceed with the project will not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project’s non-approval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment.” (Section 15126.[e][3][B].)

## **DESCRIPTION**

Site 4 is currently undeveloped and Site 2 is partially developed. In the short-term, no substantial changes in the development condition of the two potential project sites would be anticipated. However, in the long-term, industrial development would be anticipated on both sites due to their location within an established industrial area with easy access to the regional freeway system and the availability of adequate infrastructure at the sites to support industrial development. Therefore, the No Project Alternative assumes that development of the sites consistent with their existing land use and zoning designations would reasonably be expected to occur in the long-term.

## **IMPACTS OF THE NO PROJECT ALTERNATIVE**

With the implementation of the No Project Alternative, the adverse environmental impacts anticipated with the proposed project would not be anticipated in the short-term. However, over the long-term, industrial development would be anticipated on the sites. The extent of the potential environmental impacts would be directly dependent upon the type of industrial activities that occur on the sites. Future development is assumed to include industrial uses that would be either more or less intensive than anticipated with the proposed project. With a more intensive use, greater environmental impacts would be anticipated such as higher noise levels, increased truck traffic and increased air emissions. However, a less intensive use would be anticipated to diminish these impacts when compared to the proposed project. Because the intensity of a future industrial use on the site can not be determined at this time, it is difficult to predict with any certainty the severity of the environmental impacts that would occur with future industrial uses. However, it is reasonable to assume that future industrial developments on the potential project sites would generate adverse environmental impacts that may not be substantially different from those anticipated with the proposed project. Therefore, the implementation of this alternative over the long-term would represent a relatively negligible change in the proposed project’s anticipated impacts and would not be expected to reduce any significant environmental impacts of the proposed project to less-than-significant levels.

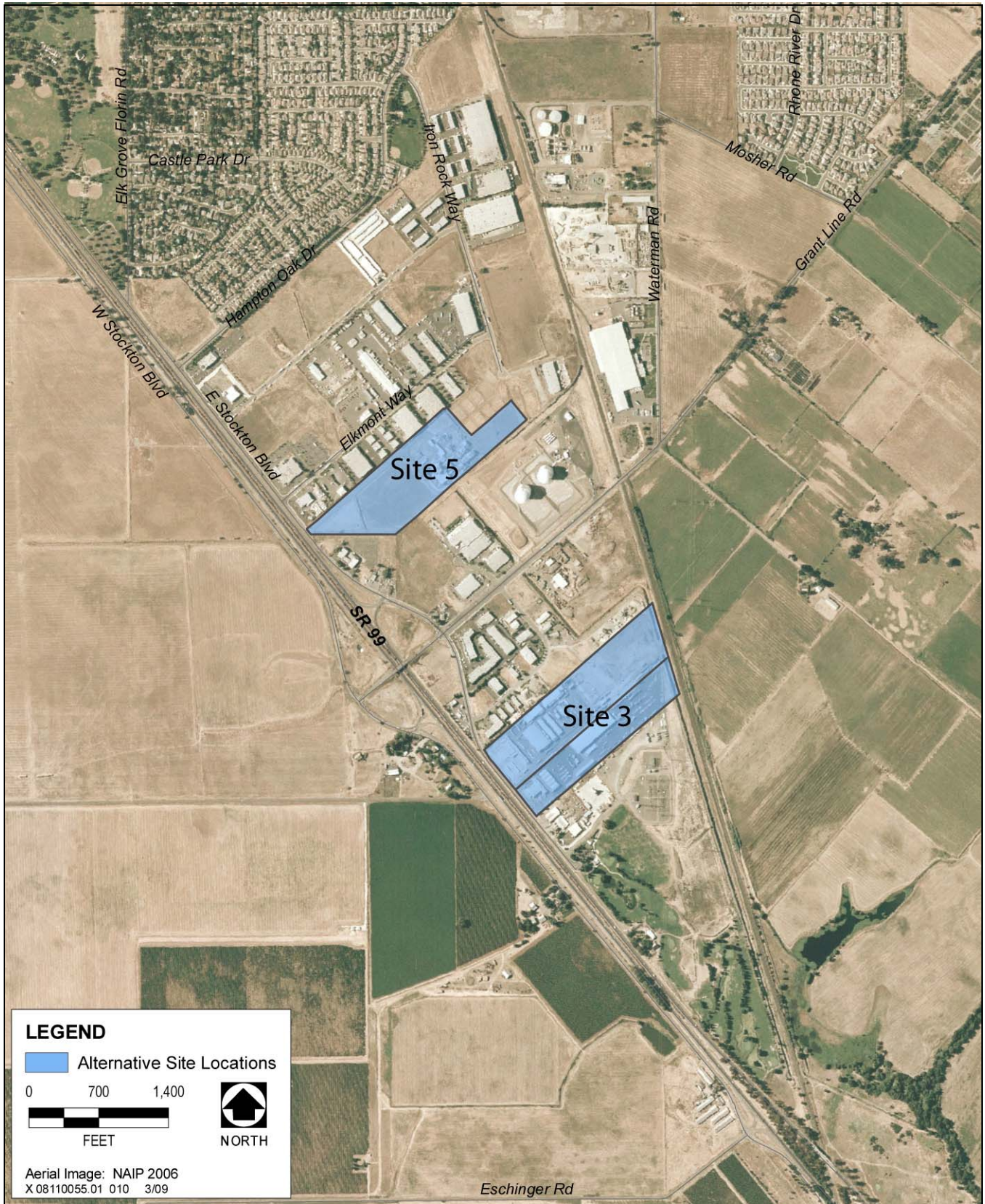
## **CONCLUSION**

The No Project Alternative would not have the environmental impacts anticipated with the proposed project in the short-term but could have impacts that are similar to the proposed project in the long-term. The No Project Alternative would not achieve the proposed project’s identified objectives.

### **6.2.3 OFFSITE DEVELOPMENT ALTERNATIVE—SITE 3**

#### **DESCRIPTION**

This alternative includes developing either the proposed transfer station operations or the HHW facility on approximately 41 acres at Site 3, also identified as the Meeks Lumber site (Exhibit 6-1). An established business (Meeks Lumber) is located on a portion of this site and it only has sufficient space to accommodate either the transfer station or the HHW facility. Sufficient space is not available to accommodate both of these project components. This site is located directly south of Site 2 and directly north of the Emerald Lakes Golf Course. It is bordered on the southwest by SR 99 and on the east by the Union Pacific rail line and includes two separate parcels (APN 134-022-0054 and 134-022-0055). Both parcels are zoned Heavy Industrial (M-2).



Source: Sacramento County 2006

**Alternative Site Locations**

**Exhibit 6-1**

## **IMPACTS OF THE OFFSITE DEVELOPMENT ALTERNATIVE—SITE 3**

### **Aesthetics/Visual Resources**

The visual resource impacts of this alternative would not substantially differ when compared to the proposed project because this alternative would include development of an industrial property within an industrial area. Because this site is located directly adjacent to SR 99, it would be visible to more people than either of the two potential project sites. However, it currently includes some industrial development so converting it to a transfer station or HHW facility would not represent a substantial change in the visual character of the site.

### **Air Quality**

The air quality impacts associated with construction activities would be generally similar to the proposed project, assuming development of the transfer station. If the HHW facility is constructed, the total development area would be substantially reduced when compared to the proposed project due to the relatively small size of the HHW facility. The operational air quality impacts with this alternative would also be similar to the proposed project if the transfer station is constructed because the site operation would be substantially the same as the proposed project. The operational air quality impacts associated with the HHW facility would be substantially less than the proposed project due to the substantial reduction in vehicle trips generated by the site.

### **Biological Resources**

Implementation of this alternative would potentially reduce the biological resource impacts anticipated with implementation of the proposed project on Site 2. Site 2 includes wetland resources that would be disturbed with development. Based on a review of aerial imagery, the undeveloped portion of the Site 3 alternative site consists almost exclusively of ruderal vegetation. Therefore, unlike the proposed project, the development of this site would not result in the loss of wetland resources, regardless of whether the transfer station or HHW facility is constructed. However, this site is located directly adjacent to the Grant Line Channel, which runs parallel to the site's eastern boundary. This channel has been identified as potential habitat for giant garter snake, state and federally listed as a threatened species. The development of this site would result in the loss of upland habitat for this species, although to a lesser degree than for Site 2 because it includes less habitat and to an even lesser degree if the HHW facility is constructed. Because Site 4 does not include any sensitive biological resources, the biological impacts of this alternative would be greater than anticipated with the development of Site 4.

### **Cultural Resources**

The potential impacts on cultural resources anticipated with this alternative are currently unknown. A cultural resource survey was not conducted on this site as part of this analysis. However, there is no indication based on a review of aerial photographs that sensitive historic resources are present on the site. Because no sensitive cultural resources have been identified on the potential project sites, substantial differences in cultural resource impacts between this alternative and the proposed project would not be anticipated.

### **Energy**

This alternative would be expected to require generally the same amount of energy as the proposed project if the transfer station is constructed. Therefore, assuming development of the transfer station, no substantial difference in the energy impacts would be anticipated when this alternative is compared to the proposed project. The development of the HHW facility would substantially reduce the energy demands when compared to the proposed project due to the reduced facility size. Neither the proposed project nor this alternative would be expected to result in significant energy impacts.

## **Geology and Soils**

This site is situated in the same geologic area as both Sites 4 and 2. Also, the site is relatively flat and much of it has already been developed. Therefore, the development of this site for transfer station operations or a HHW facility would be expected to result in the same seismic and erosion hazards that would be anticipated with the development of Sites 4 and 2.

## **Hydrology and Water Quality**

Similar to the two potential project sites, this site is relatively flat and would not experience excessive erosion with site development. Also, similar to Site 2, this alternative would direct storm water runoff to the Grant Line Channel. However, unlike Sites 2 and 4, the majority of this site is already developed with impervious surfaces. Therefore, it would not be expected to substantially increase the peak runoff during storm events regardless which facility is constructed. As with the two potential project sites, the hydrology and water quality impacts associated with this site would be considered less than significant following implementation of appropriate hydrology and water quality mitigation measures.

## **Land Use**

Similar to the two potential project sites, this site is zoned for industrial uses and is located within an industrial area. Therefore, the land use impacts of this alternative would not differ substantially from the proposed project.

## **Public Health and Hazards**

This site would include fewer uses than are proposed on Sites 4 and 2. Therefore, the public health and hazard impacts associated with this alternative would generally be reduced when compared to the proposed project. The specific impacts would depend upon whether a transfer station or HHW facility is constructed on the site. It is unknown whether this site includes any soil or groundwater contamination from existing or prior uses. This site is located further from the Suburban Propane facility than either Site 4 or 2; however, it is located within 0.5 mile of the facility. Therefore, the potential risks associated with locating near this facility would be generally the same as for the two potential project sites.

## **Public Services and Utilities**

The development of this site with a transfer station facility would have public service and utility impacts similar to the proposed project. The impacts would be reduced if only an HHW facility were constructed. The site is located within a developed industrial area and currently receives services and utilities from the City for the developed portion of the site. This site is easily accessible for emergency vehicles from Grant Line Road and would not substantially burden existing public services and utilities.

## **Noise**

Similar to the proposed project, development of this alternative would generate construction noise associated with the use of heavy equipment for site grading and excavation, installation of utilities, paving, and building fabrication. This alternative would also generate generally the same operational noise impacts as anticipated with the proposed project, assuming a transfer station is constructed. Noise impacts would be reduced if a HHW facility is constructed. Because this site is not located near a church, it would not have the significant and unavoidable noise impact that is anticipated with the development of Site 4. Also, this site is located further from land uses designated for noise sensitive uses (i.e., residential subdivisions). Therefore, the noise generated from the site would be less noticeable at these subdivisions. However, this site is located within approximately 400 feet of an existing farm residence, which is located on the west side of SR 99. Typically, this residence would experience significant noise levels from the site operations. Because the residence is located on the opposite side of the highway, however, the significant noise generated from the highway traffic would obscure the facility's operational noise because the highway noise would dominate the ambient noise environment. Therefore, this

alternative would have noise impacts that are generally less than anticipated with development of the facility on Sites 4 or 2.

### **Traffic**

This alternative would generally have traffic impacts similar to Site 2 if a transfer station is constructed and would not contribute to the significant traffic impacts north of Grant Line Road anticipated with the development of Site 4. Access to the site could be provided from either E. Stockton Boulevard or Survey Road. However, because of the proximity of these two intersections, the impacts on Grant Line Road would not be expected to differ from those anticipated with the development of Site 2. Traffic impacts would be reduced when compared to the proposed project if an HHW facility is constructed.

### **Cumulative Climate Change**

This alternative would generate emissions similar to the proposed project if a transfer station is constructed. No significant difference in the cumulative greenhouse gas (GHG) emissions from area- and mobile-sources would be anticipated with this alternative if a transfer station is constructed when compared to the proposed project. GHG emissions would be reduced when compared to the proposed project if an HHW facility is constructed.

### **CONCLUSION**

The Offsite Development Alternative–Site 3 would generally have impacts similar to those anticipated with the proposed project if a transfer station is constructed. The biological resource impacts associated with this alternative would be less than anticipated with development of Site 2 but would be greater than with development of Site 4. Also, the significant and unavoidable noise impact associated with the development of Site 4 on the adjacent church would not be anticipated with this alternative. The traffic impacts would be similar to those identified for Site 2 if a transfer station is constructed and would not contribute to the significant traffic impacts north of Grant Line Road anticipated with the development of Site 4. Because this site is located directly adjacent to SR 99, it would be visible to more people than either of the two potential project sites. However, it currently includes some industrial development so converting it to a transfer station or HHW facility would not represent a substantial change in the visual character of the site. Overall, the development of a transfer station on this alternative site would have environmental impacts generally similar to the proposed project. The impacts would be reduced if a HHW facility is constructed. Because the development of this site would be limited to either a transfer station or an HHW facility, the City identified Site 3 as a secondary alternative for the proposed project.

## **6.2.4 OFFSITE DEVELOPMENT ALTERNATIVE–SITE 5**

### **DESCRIPTION**

This alternative includes developing the proposed transfer station operations on Site 5, also identified as the Georgia Pacific site (Exhibit 6-1). This site is located to the southwest of Site 4 and is directly northwest of the Suburban Propane facility. It is bordered on the southwest by SR 99 and on the north, east and south by industrial development. Approximately half of this site is currently occupied by the Georgia Pacific Resin facility. The undeveloped portion of the site includes approximately 15 acres of flat land. Access to this site would be provided from E. Stockton Boulevard. This parcel includes a combination of Heavy Industrial (M-2) and Light Industrial (M-1) zoning.

### **IMPACTS OF THE OFFSITE DEVELOPMENT ALTERNATIVE–SITE 5**

#### **Aesthetics/Visual Resources**

The visual resource impacts of this alternative would not substantially differ when compared to the proposed project because this alternative would include development of an industrial property within an industrial area.

Because this site is located directly adjacent to SR 99, it would be visible to more people than either of the two potential project sites. Although the site currently includes some industrial development, the undeveloped portion of this site is closest to SR 99, so the change would be noticeable for highway travelers. However, industrial development of this site would not be visually inconsistent with the surrounding industrial uses and would not represent a substantial change in the visual character of the site.

## **Air Quality**

The air quality impacts associated with construction activities would be similar to the proposed project because a similar development footprint would be constructed. The operational air quality impacts with this alternative would also be similar to the proposed project because the site operation would be substantially the same as the proposed project. No discernable difference in the air quality impacts would be expected between this alternative and the proposed project.

## **Biological Resources**

Implementation of this alternative would potentially reduce the biological resource impacts anticipated with implementation of the proposed project on Site 2. Site 2 includes wetland resources that would be disturbed with development. Based on a review of aerial imagery, the undeveloped portion of this site consists almost exclusively of ruderal vegetation. Therefore, unlike the proposed project, the development of this site would not result in the loss of wetland resources. Also, unlike Site 2, this site does not contain habitat for the giant garter snake, a state and federally-listed threatened species. No impact on this species would be anticipated with the use of this site. Because Site 4 does not include any sensitive biological resources, the biological impacts of this alternative would be the same as anticipated with the development of Site 4.

## **Cultural Resources**

The potential impacts on cultural resources anticipated with this alternative are currently unknown. A cultural resource survey was not conducted on this site as part of this analysis. However, there is no indication based on a review of aerial photographs that sensitive historic resources are present on the site. Because no sensitive cultural resources have been identified on the potential project sites, substantial differences in cultural resource impacts between this alternative and the proposed project would not be anticipated.

## **Energy**

This alternative would be expected to require the same amount energy as the proposed project. Therefore, no difference in the energy impacts would be anticipated when this alternative is compared to the proposed project. Neither the proposed project nor this alternative would be expected to result in significant energy impacts.

## **Geology and Soils**

This site is located in the same geologic area as Sites 4 and 2. Also, the site is relatively flat and half of it has already been developed. Therefore, the development of this site for transfer station operations would be expected to result in the same seismic and erosion hazards that would be anticipated with the development of Sites 4 and 2.

## **Hydrology and Water Quality**

Similar to the two potential project sites, this site is relatively flat and would not experience excessive erosion with site development. Also, similar to Site 4, this alternative would direct storm water runoff to the existing street collection system. However, unlike Site 4, approximately half of this site is already developed with impervious surfaces. Therefore, it would not be expected to substantially increase the peak runoff during storm events. As with the two potential project sites, the hydrology and water quality impacts associated with this site would be considered less than significant following implementation of appropriate hydrology and water quality mitigation measures.

## **Land Use**

Similar to the two potential project sites, this site is zoned for industrial uses and is located within an industrial area. Therefore, the land use impacts of this alternative would not differ substantially from the proposed project.

## **Public Health and Hazards**

This site would include the same uses as are proposed on Sites 4 and 2. Therefore, this site would have generally the same public health and hazard impacts as the proposed project. It is unknown whether this site includes any soil or groundwater contamination from existing or prior uses. This site is located closer to the Suburban Propane facility than either Site 4 or 2 so the potential risks associated with locating near this facility would be slightly higher than for the two potential project sites.

## **Public Services and Utilities**

The development of this site with a transfer station would have public service and utility impacts similar to the proposed project. The site is located within a developed industrial area and currently receives services and utilities from the City for the developed portion of the site. This site is easily accessible for emergency vehicles from Grant Line Road and would not substantially burden existing public services and utilities.

## **Noise**

Similar to the proposed project, development of this alternative would generate construction noise associated with the use of heavy equipment for site grading and excavation, installation of utilities, paving, and building fabrication. This alternative would also generate the same operational noise impacts as anticipated with the proposed project. Because this site is located in close proximity to the Harvest Church on E. Stockton Boulevard, it would have the same significant and unavoidable noise impact that is anticipated with the development of Site 4. However, this site is located further from the Hampton Villages residential subdivision than Site 4, so the noise generated from the site would be less noticeable at this subdivision. Therefore, this alternative would have noise impacts that are generally less than anticipated with development of the facility on Site 4 and greater than anticipated with Site 2.

## **Traffic**

This alternative would have traffic impacts similar to Site 4 but would not contribute to the significant traffic impacts at the E. Stockton Boulevard/Elkmont Way intersection anticipated with development of Site 4 because this site would directly access E. Stockton Boulevard rather than Elkmont Way.

## **Cumulative Climate Change**

This alternative would generate emissions similar to the proposed project. Therefore, no significant difference in the cumulative GHG emissions from area- and mobile-sources would be anticipated with this alternative when compared to the proposed project.

## **CONCLUSION**

The Offsite Development Alternative–Site 5 would generally have impacts similar to those anticipated with the proposed project. The biological resource impacts associated with this alternative would be less than anticipated with development of Site 2 but would be the same as with development of Site 4. Also, the significant and unavoidable noise impacts associated with the development of Site 4 on the adjacent church would occur with this alternative, although at a different church. The noise impacts associated with this alternative would be greater than anticipated with the development of Site 2. Overall, this alternative would have environmental impacts generally similar to the proposed project. However, because an established business (Georgia Pacific Resin facility) is located on a portion of this site, this site has less area to accommodate the proposed transfer station and HHW

facilities than the two potential project sites, which could limit the facility's operational flexibility. Based on this site's space limitations, the City identified Site 5 as a secondary alternative for the proposed project.

## **6.2.5 HOUSEHOLD HAZARDOUS WASTE COLLECTION FACILITY ONLY ALTERNATIVE**

### **DESCRIPTION**

This Household Hazardous Waste Collection Facility Only Alternative assumes development of a Household Hazardous Waste (HHW) Collection Facility on either Site 4 or Site 2 but does not include any other components of the proposed project. Because no other uses would be included with this alternative, the undeveloped portions of the sites are assumed to remain undeveloped. The operation of a HHW at one of the two sites would also likely include dropoff for a variety of other non-landfill allowed wastes such as electronic waste, tires, and limited recyclable materials.

This alternative is being considered by the City for several reasons. In the event that the City of Sacramento determines that Elk Grove residents are no longer permitted to use their HHW facility, a local HHW disposal option would be necessary. Also, constructing a HHW facility only would limit the project's environmental impacts while still providing a needed service to the residents of Elk Grove.

The City has also considered building a HHW facility at the existing corporation yard located directly west of Site 4. This option is not evaluated in this EIR. If the City considers building an HHW facility at the existing corporation yard, subsequent CEQA environmental review for that project would be required.

### **IMPACTS OF THE HOUSEHOLD HAZARDOUS WASTE COLLECTION FACILITY ONLY ALTERNATIVE**

#### **Aesthetics/Visual Resources**

This alternative would reduce the visual impacts anticipated with development of the proposed project due to the relatively small size of the HHW facility. However, the proposed project is not anticipated to generate significant visual impacts due to its location in an industrial area at either of the potential project sites. Therefore, although the visual impacts associated with this alternative would be less than for the proposed project, it would not eliminate a significant visual impact.

#### **Air Quality**

The air quality impacts associated with construction activities would be reduced for this alternative due to the smaller development footprint. The on-site operational emissions would also be reduced with this alternative. However, this alternative would not result in an overall reduction in vehicle miles driven by waste collection and self haul vehicles. As described in detail in Section 4.3 Air Quality, the total distance waste collection and self haul vehicles would need to travel to dispose of waste would be reduced with the location of a transfer station within Elk Grove. Because this alternative does not include a transfer station, the reduction in total vehicle miles driven attributable to the transfer station would not occur with this alternative. Therefore, the reduction in air quality impacts associated with this alternative would not be substantial when compared to the proposed project.

#### **Biological Resources**

If this alternative were constructed on Site 2, the sensitive biological resources on this site would be avoided. Therefore, the biological impacts associated with this alternative would be less than anticipated with the development of the proposed project on Site 2. If this alternative were constructed on Site 4, it would disturb less area than anticipated with the proposed project. However, no significant biological resources are located on Site 4. Therefore, the impacts would not substantially differ between this alternative and the development of the project on Site 4.

## **Cultural Resources**

Because less total area would be disturbed with this alternative, the potential to disturb yet undiscovered subsurface cultural resources would be reduced when compared to the proposed project.

## **Energy**

This alternative would use substantially less energy for site operations than the proposed project but would not result in an overall reduction in vehicle miles driven as anticipated with the proposed project. Therefore, the energy impacts associated with this alternative would likely require more energy compared to the proposed project because of the greater vehicle miles traveled. Neither the proposed project nor this alternative would be expected to cause significant energy impacts.

## **Geology and Soils**

Less total area would be disturbed with this alternative than anticipated with the proposed project. Therefore, the total soil disturbance and erosion potential would be reduced when compared to implementation of the proposed project.

## **Hydrology and Water Quality**

This alternative would be expected to generally have less of an impact on hydrology and water quality than the proposed project due to the small development footprint. Therefore, the hydrology and water quality impacts of this alternative would be less than those anticipated with the proposed project.

## **Land Use**

The development of either Site 4 or 2 with a HHW facility would be consistent with the zoning for each site. Because no significant land use impacts would be anticipated with implementation of the proposed project, the land use impacts of this alternative would be similar to the proposed project.

## **Public Health and Hazards**

The public health and hazards impacts associated with development of the proposed project would be largely avoided with this alternative. This alternative would only include the delivery of HHW materials to the site and would not include any other waste acceptance or processing activities. Therefore, the public health and hazard impacts associated with this alternative would be substantially less than anticipated with the proposed project.

## **Public Services and Utilities**

This alternative would have substantially lower demands for public services and utilities due to the smaller size of the development. The HHW facility would typically only operate two days per week, would have a limited workforce, and would not require the extensive processing equipment associated with the transfer station. Therefore, the project's public service and utility impacts would be reduced if this alternative were implemented.

## **Noise**

The noise impacts associated with this alternative would be substantially reduced when compared to the proposed project. This alternative would not include the waste acceptance and processing activities that generate high noise levels and would typically only operate two days per week. This alternative would also avoid the significant and unavoidable noise impact anticipated with the development of Site 4 and would reduce the overall operational noise levels generated from the sites when compared to the proposed project.

## Traffic

Because this alternative would substantially reduce the number of vehicle trips generated at the potential project sites with the facility operations, it would avoid the traffic impacts anticipated with the development of the proposed project. Generally only residents and small businesses would deliver HHW to the site, which eliminates the commercial and residential collection trucks, the self-haul waste vehicles, the transfer trucks and most employee and visitor vehicles. Tables 6-1 and 6-2 below identify the changes in intersection delay and level of service for the existing and cumulative with and without project conditions for this alternative. As identified in these tables, the proposed project would not result in a significant increase in the delay or level of service at the study intersections in either the existing or cumulative conditions.

Intersection	Traffic Control	Baseline No Project		Baseline Plus HHW	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
		Second Delay/LOS	Second Delay/LOS	Second Delay/LOS	Second Delay/LOS
State Route 99 SB Ramps / Elk Grove Boulevard	Signal	>80/F	>80/F	>80 (no increase)/F	>80 (increase by <1 second)/F
State Route 99 NB On-Ramp / Elk Grove Boulevard	Signal	19/C	23/C	19 (no increase)/C	23 (no increase)/C
Elk Grove Boulevard / East Stockton Boulevard	Signal	50/D	75/E	50 (no increase)/D	75 (increase by <1 second)/E
Elk Grove Boulevard / Elk Grove-Florin Road	Signal	32/C	>80/F	32 (no increase)/C	>80 (increase by <1 second)/F
Elk Grove-Florin Road / East Stockton Boulevard	Side-Street Stop	32/D	>80/F	32 (increase by <1 second)/D	>80 (increase by <1 second)/F
Union Parkway / East Stockton Boulevard	Side-Street Stop	14/B	21/C	14 (no increase)/B	21 (increase by <1 second)/C
Elkmont Way / East Stockton Boulevard	All-Way Stop	12/B	44/E	12 (increase by <1 second)/B	45 (increase by 1 second)/E
Grant line Road / East Stockton Boulevard	Side-Street Stop	24/C	37/D	24 (no increase)/C	37 (no increase)/D
Grant Line Road / Waterman Road	Signal	14/B	25/C	14 (no increase)/B	25(no increase)/C
Grant Line Road / State Route 99 NB On-Ramp	Signal	50/D	73/E	50 (no increase)/D	73 (no increase)/E
Grant Line Road / State Route 99 SB On-Ramp	Signal	54/D	51/D	54 (no increase)/D	51 (no increase)/D
Kammerer Road / Promenade Parkway	Side-Street Stop	>80/F	>80/F	>80 (no increase)/F	>80 (no increase)/F
Kammerer Road / Lent Ranch Parkway	Signal	15/B	14/B	15 (no increase)/B	14 (no increase)/B
Kammerer Road / Lotz Parkway	Signal	16/B	12/B	16 (no increase)/B	12 (no increase)/B

Notes:  
 Level of Service based on Highway Capacity Manual (Transportation Research Board 2000).  
 Shading indicates that the intersection operates unacceptably based on the significance criteria.  
 Source: Fehr & Peers 2009.

**Table 6-2  
Intersection Control Delay and Level of Service – Cumulative Conditions**

Intersection	Traffic Control	Cumulative No Project		Cumulative Plus HHW	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
		Second Delay/LOS	Second Delay/LOS	Second Delay/LOS	Second Delay/LOS
State Route 99 SB Ramps / Elk Grove Boulevard	Signal	>80/F	>80/F	>80 (increase by <1 second)/F	>80 (increase by <1 second)/F
State Route 99 NB On-Ramp / Elk Grove Boulevard	Signal	21/C	30/C	21 (increase by <1 second)/C	30 (increase by <1 second)/C
Elk Grove Boulevard / East Stockton Boulevard	Signal	>80/F	>80/F	>80 (increase by <1 second)/F	>80 (increase by <1 second)/F
Elk Grove Boulevard / Elk Grove-Florin Road	Signal	60/E	70/E	60 (increase by <1 second)/E	70 (increase by <1 second)/E
Elk Grove-Florin Road / East Stockton Boulevard	Side-Street Stop	>80/F	>80/F	>80 (increase by 2 second)/F	>80 (increase by 2 second)/F
Union Parkway / East Stockton Boulevard	Side-Street Stop	19/C	19/C	19 (no increase)/C	19 (no increase)/C
Elkmont Way / East Stockton Boulevard	All-Way Stop	57/F	27/D	58 (increase by 1 second)/F	28 (increase by 1 second)/D
Grant line Road / East Stockton Boulevard	Side-Street Stop	>80/F	>80/F	>80 (increase by <1 second)/F	>80 (increase by <1 second)/F
Grant Line Road / Waterman Road	Signal	>80/F	23/C	>80 (increase by <1 second)/F	23(no increase)/C
Grant Line Road / State Route 99 NB On-Ramp	Signal	32/C	37/D	32 (increase by <1 second)/C	37 (no increase)/D
Grant Line Road / State Route 99 SB On-Ramp	Signal	23/C	31/C	23 (no increase)/C	31 (no increase)/C
Kammerer Road / Promenade Parkway	Side-Street Stop	>80/F	>80/F	>80 (no increase)/F	>80 (no increase)/F
Kammerer Road / Lent Ranch Parkway	Signal	62/E	59/E	62 (no increase)/E	59 (no increase)/E
Kammerer Road / Lotz Parkway	Signal	25/C	20/C	25 (no increase)/C	20 (no increase)/C
Kammerer Road / Big Horn Boulevard	Signal	13/B	15/B	13 (no increase)/B	15 (no increase)/B

**Notes:**

Level of Service based on Highway Capacity Manual (Transportation Research Board 2000).  
 Shading indicates that the intersection operates unacceptably based on the significance criteria.  
 Source: Fehr & Peers 2009.

**Cumulative Climate Change**

The on-site operational emissions would be reduced with this alternative and the number of vehicles driving to the site would be reduced. However, this alternative would not result in an overall reduction in vehicle miles driven by waste collection and self haul vehicles. As described in detail in Section 4.3 Air Quality, the total distance waste collection and self haul vehicles would need to travel to dispose of waste would be reduced with the location of a transfer station within Elk Grove. Because this alternative does not include a transfer station, the reduction in total vehicle miles driven attributable to the transfer station would not occur with this alternative.

Therefore, the reduction in the generation of GHG emissions associated with this alternative would not be substantial when compared to the proposed project.

## **CONCLUSION**

The impacts of this alternative would be less than anticipated with the proposed project for most of the resource issues evaluated due to the smaller development footprint and smaller overall operations. However, with this alternative, municipal solid waste and recyclable materials would continue to be delivered to more distant transfer station and materials recovery facilities. As a result, the reduction in total vehicle miles traveled by waste collection and self haul vehicles associated with the proposed project would not occur. On balance, this alternative would be considered the environmentally superior alternative due to its limited development footprint and substantially reduced operational impacts. However, because this alternative does not include all of the components of the proposed project, it would not as effectively achieve the overall project objectives.

## **6.3 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER REVIEW**

To evaluate alternatives to constructing a transfer station that requires the transfer of waste material to a landfill for disposal, alternative solid waste management technologies were explored. These technologies include incineration, pyrolysis and gasification. These technologies allow waste volumes that need to be transported off-site to be substantially reduced, limiting the number of truck trips generated from a site and the project's effects on landfill capacity.

The incineration of waste relies on the combustion of the organic fraction of the solid waste stream to reduce the volume and weight of waste and convert municipal solid waste into energy. Pyrolysis is the thermal processing of the organic fraction of the waste stream in the absence of oxygen. The waste is subjected to high temperatures (approximately 1,400°F) and the process relies on an external heat source. Combustion does not occur and the organic waste is thermally reduced to products including solid carbon and a gas consisting of hydrogen, methane, carbon monoxide, carbon dioxide and other gases. The byproducts of pyrolysis are used to generate energy. The gasification process includes partial combustion of a carbon-rich fuel to produce a combustible fuel gas rich in carbon monoxide, hydrogen and methane. The resultant gas can be combusted in an internal combustion engine or boiler.

Due to their controversial nature and potential concerns regarding the toxicity of the combustion emissions, the use of these facilities in the United States is very limited. These alternative waste management technologies are difficult to site in urbanized areas. Therefore, these facilities would need to be located in an undeveloped rural area distant from where the waste is generated (i.e., the waste centroid). Such a location would not be available within the City. Locating a facility distant from the waste centroid would result in substantially greater annual vehicle miles traveled by the collection vehicles, which would result in substantially greater air quality and storm water quality impacts. Also, the capital cost for an incineration facility may range from \$75,000 to \$125,000 per ton per day of capacity. Therefore, a facility capable of meeting the City's needs would be economically infeasible. The use of pyrolysis and gasification plants for processing municipal solid waste remains an unproven technology in the United States. Because of the potential toxicity of combustion emissions from these facilities and the increase in air quality and storm water quality impacts, the implementation of these alternative technologies would not be considered a feasible alternative to the proposed project. Therefore, the use of alternative waste technologies was eliminated from further consideration.