

## **6 CUMULATIVE AND GROWTH INDUCING IMPACTS**

### **6.1 CUMULATIVE IMPACTS OF THE PROPOSED PROJECT**

The State CEQA Guidelines §15130 require that an EIR discuss cumulative impacts of a project when the project's incremental effect is "cumulatively considerable." According to §15065(c), "'Cumulatively considerable' means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects as defined in §15130." Pursuant to §15130 of the State CEQA Guidelines, "(t)he discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impacts to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact." The proposed project is considered to have a significant cumulative effect if:

- (1) The cumulative effects of development without the project are not significant and the project's additional impact is substantial enough, when added to the cumulative effects, to result in a significant impact; or
- (2) The cumulative effects of development without the project are already significant and the project contributes measurably to the effect. The term "measurably" is subject to interpretation. The standards used herein to determine measurability are that either the impact must be noticeable to a reasonable person, or must exceed an established threshold of significance.

Mitigation measures are to be developed that reduce the project's contribution to cumulative effects to a less-than-significant level. The CEQA Guidelines acknowledge that sometimes the only feasible method for mitigating or avoiding significant cumulative effects is to adopt ordinances or regulations that apply to all projects that contribute to the cumulative effect.

The CEQA Guidelines provide two approaches to analyzing cumulative impacts. The first is the list approach, which requires a listing of past, present, and reasonably anticipated future projects producing related or cumulative impacts. The second is the summary approach wherein the relevant projections contained in an adopted general plan or related planning document that is designed to evaluate regional or area wide conditions are summarized. This EIR uses the second approach by providing a summary of growth projections from the Solano County General Plan.

#### **6.1.1 SOLANO COUNTY GENERAL PLAN**

Cumulative development assumptions were generated from the Solano County General Plan. Because Solano County does not maintain or distribute census data, these assumptions include county population forecasts provided by the Association of Bay Area Governments (ABAG).

ABAG's Projections 2000 provides population and growth estimates and projections for the years 1990 through 2020. According to Projections 2000, Solano County is expected to experience substantial growth over the next 15 years. ABAG projections show a county-wide population increase of 26% between the years 2000 and 2020. Table 6-1 summarizes population projections, according to ABAG estimates, for both the incorporated and unincorporated areas within Solano County.

	1990	1995	2000	2005	2010	2015	2020
Benicia	24,437	26,700	27,500	28,500	29,000	29,400	30,100
Dixon	10,417	12,600	15,200	17,900	20,500	23,800	26,900
Fairfield	78,650	86,000	93,500	106,400	112,200	120,700	128,200
Rio Vista	3,316	3,700	4,400	8,700	13,400	17,500	21,400
Suisun City	22,704	25,100	26,900	29,400	30,300	30,900	31,400
Vacaville	71,476	83,000	89,400	98,100	102,000	106,700	111,100
Vallejo	109,199	112,400	114,600	123,200	129,200	133,800	138,300
Unincorporated	19,272	21,200	29,800	38,100	45,100	52,000	60,000
Solano County	339,471	370,700	401,300	450,300	481,700	514,800	547,400

Source: Association of Bay Area Governments, Projections 2000

### 6.1.2 CUMULATIVE IMPACTS

No developments are currently planned within the vicinity of the existing PHLF. Because the PHLF site is located within the Secondary Management Area and surrounded by the Primary Management Area of the Suisun Marsh, new development is generally discouraged by the Suisun Marsh Protection Plan (SMPP) and the Local Protection Plan (LPP). New development is subject to the approval of a Marsh Development Permit by the County. In addition, the PHLF expansion site is designated as a Limited Agricultural (AL) District by the Solano County General Plan. According to the General Plan, the objective of the AL District is to preserve the county's high quality soils and protect and maintain essential agricultural lands including areas that possess unique characteristics for raising specialty crops. Solid waste disposal sites, such as PHLF, are allowed in the AL District as a conditional use, subject to permit approval.

However, long-term population growth in the County could contribute to increased growth pressures in the unincorporated area near PHLF. In addition, public infrastructure projects within the county could contribute to cumulative impacts in the region. The following impacts, discussed according to resource topics, would be anticipated with cumulative development in the county.

## **LAND USE**

Development directly surrounding PHLF is not anticipated in the near future based on the existing zoning and surrounding environment. Cumulative planned development in the county is not expected to result in incompatible development adjacent to the project site and no cumulative land use impacts would be anticipated.

## **BIOLOGICAL RESOURCES**

Cumulative growth in the region would contribute to the cumulative loss of sensitive vegetation and wildlife species in Solano County. The proposed project's site-specific impacts on biological resources would contribute cumulatively to this loss. However, mitigation measures have been identified in this EIR to reduce these impacts to less-than-significant levels. Therefore, significant cumulative biological resource impacts would not be anticipated with project implementation.

## **GEOLOGY, SOILS, AND SEISMICITY**

Geologic, soil, and seismic impacts are site-specific and are not generally affected by cumulative development in the region. There are no geologic features unique to the region that would be affected by the proposed project. The geologic, soil, and seismic impacts of the proposed landfill expansion are restricted to the project site, and other development planned in Solano County would not contribute to onsite geologic, soil, and seismic impacts. Impacts to these resources would be determined on a project-by-project basis and significant cumulative impacts to these resources are not anticipated.

## **HYDROLOGY AND WATER QUALITY**

Cumulative flooding impacts could occur if nearby projects contributed to additional runoff, resulting in increased erosion or flood hazard. However, because the project site is not in an area of historic flooding or designated 100-year flood hazard, no cumulative flooding impacts are anticipated. In addition, because development of adjacent lands is unlikely based on the existing zoning and surrounding environment, no cumulative drainage or erosion impacts are anticipated. Therefore, significant cumulative impacts related to hydrology and water quality are not anticipated.

## **UTILITIES AND PUBLIC SERVICES**

The proposed project is not anticipated to contribute significantly to the demand for public services. The site is not served by a municipal water supply, public wastewater infrastructure, or the PG&E power grid. The site's demand for police and fire protection services is negligible and would not cumulatively degrade service levels in the county. In addition, because development of adjacent lands is unlikely based on the existing zoning and surrounding environment, no cumulative increase in demand for public services is anticipated. Therefore, significant cumulative impacts related to utilities and public services are not anticipated.

## **PUBLIC SAFETY**

Within the area close enough to the landfill to be potentially affected by its risk to public health and safety, potential future development is unlikely, based on surrounding zoning and environmental constraints. Existing state and federal regulations require pollution controls, release prevention plans, and accident response plans for commercial and industrial facilities to minimize the potential risk to the surrounding populations. Because compliance with these regulations is required, the increase in the potential exposure to public health and safety events would not be significantly increased with cumulative development. Therefore, significant cumulative impacts related to public health and safety are not anticipated.

## **NOISE**

The project components that could result in noise impacts are the proposed power generation facility and the change in hours of operations. In addition, on-road trucks hauling refuse and cover material would generate noise along the truck routes for a longer duration with the increase in the landfill service life. However, based on the analysis in Section 4.7, Noise, noise levels associated with these components would not exceed the noise level criterion established by the county for the nearest residences. In addition, a lack of other noise-sensitive uses exists along local roads due to the agricultural nature of the surrounding land uses. No significant cumulative noise impacts are anticipated.

Development directly surrounding PHLF is not anticipated in the near future because of the existing zoning and surrounding environment. Therefore, no significant cumulative noise impacts are anticipated from the combination of noise from the proposed project and nearby uses over the life expectancy of the landfill.

## **TRAFFIC**

Based on discussions with Solano County staff, no new developments are planned within the vicinity of PHLF through the year 2020, therefore cumulative traffic volumes only accounted for background traffic growth in the region. This analysis applied a 1% growth factor per year to the adjacent roadway system and assumes the re-optimization of the traffic signals under cumulative conditions. This growth factor is generally consistent with the Association of Bay Area Government population projections for the county. Exhibit 6-1 illustrates the resulting peak hour traffic volumes under cumulative no project conditions and Table 6-2 presents the resulting level of service and average delay for each study intersection.

Table 6-2 indicates that the increase in traffic volume due to background growth would cause the intersections of SR 12 at Beck Avenue and Marina Boulevard to deteriorate to LOS F during the PM peak hour. In addition, the intersection of SR 12/Pennsylvania Avenue is expected to deteriorate from LOS D to LOS E in the AM peak hour. Although the intersection of SR 12/Pennsylvania Avenue would continue to operate unacceptably at LOS F, the average delay is expected to increase by approximately 76 seconds in the PM peak hour. Similarly, the level of service at the intersection of SR 12/Marina Boulevard would remain the same (LOS F)



in the AM peak hour, however, the average delay is expected to increase by approximately 56 seconds.

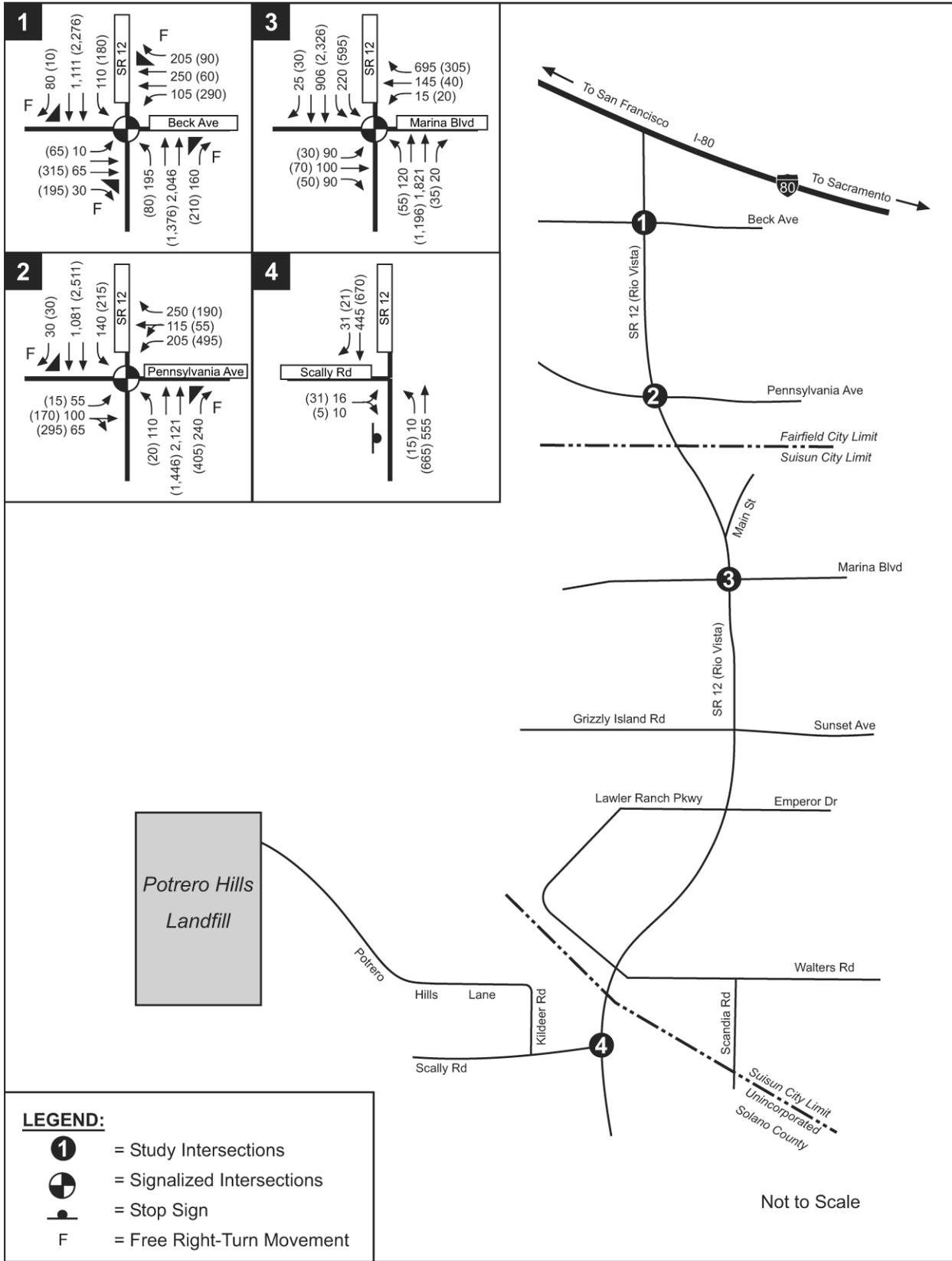
Additionally, the SR 12/Scally Road intersection is expected to deteriorate from LOS E to LOS F under cumulative conditions in the PM peak hour. This is largely due to the expected increase of uncontrolled traffic traveling on SR 12 under cumulative conditions. This substantial increase in traffic on SR 12 may potentially increase delay for vehicles exiting Scally Road by not allowing sufficient time to safely complete a left-turn movement onto SR 12. The results of this analysis indicate that the installation of a traffic signal at the SR 12/Scally Road intersection would improve overall traffic operations under cumulative conditions. However, the expected traffic volume on Scally Road under cumulative conditions does not meet Caltrans' requirement to warrant a signal at this location.

Intersection	Control	LOS/Delay (seconds)	
		AM Peak	PM Peak
SR 12/Beck Avenue <sup>1</sup>	Signalized <sup>1</sup>	C / 24.0	F / 81.8
SR 12/Pennsylvania Avenue <sup>1</sup>	Signalized <sup>1</sup>	E / 77.0	F / 196.6
SR 12/Marina Boulevard <sup>1</sup>	Signalized <sup>1</sup>	F / 152.4	F / 82.0
SR 12/Scally Road <sup>2</sup>	Unsignalized <sup>2</sup>	C / 21.3	F / 72.4

<sup>1</sup> Signalized intersection LOS based on average intersection delay, according to the Highway Capacity Manual, 2000.  
<sup>2</sup> Side street stop-controlled intersection LOS based on average delay in seconds per vehicle for the worst approach, based on the methodology in the Highway Capacity Manual, 2000.  
Source: Fehr & Peers, March 2003

To determine traffic conditions with the project in the year 2020, project trips were added to the traffic volumes under cumulative no project conditions and distributed to each study intersection based on existing travel patterns. Exhibit 6-2 shows the resulting peak hour traffic volumes under cumulative plus project conditions and Table 6-3 presents the resulting level of service and average delay for each study intersection.

According to the results shown in Table 6-2, the addition of projects would not cause levels of service to change under cumulative conditions. The project is not expected to increase the average delays at the study intersections already failing under cumulative no project conditions by more than 2 seconds. The intersections of SR 12 at Beck Avenue and Scally Road are the only intersection expected to maintain current levels of service during the AM peak hour. Because the addition of project traffic would not change intersection levels of service and would not increase delay by more than 2 seconds at affected intersections, the cumulative traffic impacts of the proposed project would be considered less than significant.



Source: Fehr & Peers 2003

## Peak Hour Traffic Volumes and Lane Configurations Cumulative (Year 2020) Plus Project Conditions

EXHIBIT 6-2

<b>Table 6-3 Intersection Levels of Service Cumulative (2020) Plus Project Conditions</b>			
<b>Intersection</b>	<b>Control</b>	<b>LOS / Delay (seconds)</b>	
		<b>AM Peak</b>	<b>PM Peak</b>
SR 12/Beck Avenue <sup>1</sup>	Signalized <sup>1</sup>	C / 24.0	F / 81.8
SR 12 Pennsylvania Avenue <sup>1</sup>	Signalized <sup>1</sup>	E / 77.0	F / 196.6
SR 12/Marina Boulevard <sup>1</sup>	Signalized <sup>1</sup>	F / 152.5	F / 82.0
SR 12/Scally Road <sup>2</sup>	Unsignalized <sup>2</sup>	C / 21.6	F / 74.4

<sup>1</sup> Signalized intersection LOS based on average intersection delay, according to the Highway Capacity Manual, 2000.  
<sup>2</sup> Side street stop-controlled intersection LOS based on average delay in seconds per vehicle for the worst approach, based on the methodology in the Highway Capacity Manual, 2000.  
Source: Fehr & Peers, March 2003

**AIR QUALITY**

The project site is located in a rural area with few sources of air pollution other than those resulting from landfill operations. Because development of adjacent lands is unlikely based on the existing agricultural zoning and surrounding marsh environment, no localized cumulative air quality impacts are anticipated.

The proposed project would extend the operating life of the landfill, which would extend the time period in which emissions are generated from the site. However, because the permitted tonnage of waste accepted at the site is not anticipated to substantially increase with project implementation, air emissions generated at the site are not expected to substantially differ from current conditions. An Authority to Operate air pollution control permit has been issued for the site by the Bay Area Air Quality Management District (BAAQMD). This permit includes specific air pollution control requirements that the project applicant must comply with in operating the landfill. These requirements would also apply to any landfill expansion. These include the implementation of ongoing dust control, the expansion of the landfill gas collection system as the landfill expands, and the control of emissions from the power generating facility, per BAAQMD requirements. Continued implementation of these measures would reduce the cumulative pollutant load to a level considered less than significant.

**VISUAL RESOURCES**

The proposed project would increase the maximum permitted landfill height from 220 feet to 345 feet. This increase in height would alter the ridgeline profile of the Potrero Hills, as viewed from SR 12. However, no other development is anticipated in the local area. Therefore, the visual impacts of the proposed project would not combine with other projects in the local area to cause significant cumulative visual impacts. Less-than-significant cumulative visual impacts would be anticipated with project implementation.

## **CULTURAL RESOURCES**

Due to the nature of cultural resources, adverse impacts are site-specific and not generally affected by cumulative development in the region. Impacts would need to be determined on a project-by-project basis. Because cultural resources are not anticipated to be adversely affected by the proposed project, development of the proposed project would not be expected to contribute to cumulative cultural resource impacts. Therefore, less-than-significant cumulative cultural resource impacts are anticipated with the proposed project.

### **6.1.3 GROWTH-INDUCING IMPACTS OF THE PROPOSED PROJECT**

State CEQA Guidelines §15126.2(d) specifies that the growth-inducing impacts of a project must be addressed in an environmental impact report. A project is regarded as growth inducing if it “could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth.” Examples of growth-inducing actions include developing service capabilities in areas previously not served, extending transportation routes into previously undeveloped areas, establishing major new employment opportunities, or expansion of a major wastewater treatment plant.

With project approval, the construction activity related to landfill facilities would generate a minor increase in construction employment opportunities. Extending the operating hours of the landfill would require some additional employees but significant new employment growth would not be anticipated. The extension of the landfill’s service life associated with the proposed project would extend the duration that employment activities occur at the landfill, but would not cause significant new employment growth.

Approval of the proposed project essentially removes a potential obstacle for growth by providing an increase in the long-term waste disposal capacity in the county. Therefore, the proposed project would result in regional growth-inducing impacts. However, the proposed project would not be expected to induce additional growth in the local area because of the predominance of agriculturally-zoned land. Also, the landfill expansion would tend to discourage development that may be incompatible with landfill activities (e.g., residential land uses).