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## 3.0 ANALYSIS FRAMEWORK

### 3.1 INTRODUCTION

In order to conduct environmental analysis for a large, complex project like Placer Parkway, it is necessary to use a variety of projections, models and analysis areas crafted to address the various environmental impact topics and methods of analysis.

Each environmental analysis section in Chapter 4 of this Tier 1 Environmental Impact Statement/Environmental Impact Report (EIS/EIR) discusses a particular resource and presents an evaluation of existing and future potential impacts associated with each Placer Parkway corridor alignment alternative. Each environmental analysis section also describes the methodology used to assess potential impacts to that particular resource; identifies the affected environment and existing conditions; assesses potential environmental impacts; and identifies mitigation strategies.

To assist the reader in understanding the methodology used, this chapter describes the framework of the environmental impact analysis used in this Tier 1 EIS/EIR. Presented below is a summary of the approach used in the technical analysis chapters.

### 3.2 ENVIRONMENTAL ANALYSES INCLUDED IN THE TIER 1 EIS/EIR

The following categories of impacts are addressed:

**Direct Impacts:** Direct impacts are effects of an action that are “caused by the action and occur at the same time and place” (Council on Environmental Quality). Such impacts occur as a direct result of the action and are generally closely linked to the project spatially or temporally. Direct impacts are usually predictable.

**Secondary and Indirect Impacts:** Secondary and indirect impacts are defined as impacts “caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable (40 Code of Federal Regulations [CFR] 1508.8).” Moreover, indirect effects “. . . may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems (40 CFR 1508.8).” Secondary and indirect impacts may occur as a result of direct impacts associated with the Parkway

Secondary and indirect impacts may also occur as a result of “Anticipated Growth” related to the Parkway. Anticipated growth is an estimate of growth between 2020 and 2040 which the Parkway may affect by facilitating planned and proposed developments in the region and influencing the timing of development in the vicinity of the future Parkway’s interchanges, particularly those proposed near vacant land adjacent to rapidly developing areas or areas now proposed for urban development. Anticipated growth is defined as the growth that is anticipated in the secondary and indirect study area as described in the relevant General Plans and adopted regional forecasts, such as the Sacramento Area Council of Governments (SACOG)’s Blueprint scenario (see Section 3.4.1), including additional growth that may occur as a result of major new development proposals that have not yet been formally approved. Anticipated growth may involve a change in timing or location of growth, compared with conditions without the Parkway, but would likely result in limited change in the estimated total growth levels described by the 2040 Cumulative Scenario, described below.

Secondary and indirect impacts associated with anticipated growth would be direct impacts of other projects not associated with Placer Parkway, and would be required to be analyzed as part

of independent environmental review of those projects. These impacts are evaluated in this Tier 1 EIS/EIR based on the guidance from the Mare Island Accord Interagency Working Group (Mare Island Accord, 2006) regarding analysis of potential impacts associated with growth. This group, with representatives from the Federal Highway Administration (FHWA), U.S. Environmental Protection Agency (U.S. EPA), and the California Department of Transportation (Caltrans) (Mare Island Accord, 2000), recommended a six-step approach for developing a growth related impact analysis. Additional details are provided in Section 6.1 of this Tier 1 EIS/EIR. Consistent with that guidance, the secondary and indirect impacts analysis in the EIS/EIR is an evaluation of the effects of growth on resources of concern.

Although it is not feasible to perform a detailed quantitative evaluation of these potential impacts as specific design details of other future projects are not known, potential impacts are evaluated qualitatively, based on typical reasonably foreseeable effects of the Parkway, and of impacts associated with anticipated growth. Further details on potential impacts associated with growth are provided in Section 6.1, Growth. For Placer Parkway, the anticipated growth overlaps substantially with the Cumulative Development Scenario.

**Cumulative Impacts:** The National Environmental Policy Act (NEPA) defines cumulative impacts as impacts on the environment which result from the incremental impact of the project when added to other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from relatively minor but collectively significant actions taking place over a period of time (40 CFR 1508.7). It is the combination of these effects, and any resulting environmental degradation, that are the focus of cumulative impact analysis. The California Environmental Quality Act (CEQA) defines cumulative impacts as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts” (CEQA Guidelines, §15355). Stated another way, “a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the environmental document together with other projects causing related impacts” (CEQA Guidelines, §15130). Although a project may cause an individually limited or individually minor incremental impact that, by itself, is not significant, the increment may be “cumulatively considerable” and thus significant. Cumulative impacts are analyzed by discussing the effects of the Parkway in combination with the level of growth in the 2040 Cumulative Scenario (see Section 3.4.1).

Similar to the Secondary and Indirect Impacts, the cumulative impacts analysis addresses the impacts of future projects that are also part of the anticipated growth. But, there are differences between the two sections. The cumulative impacts analysis addresses a projected cumulative scenario for 2040, not only the Anticipated Growth. In addition, because the cumulative impacts are focused on the additive effects of the proposed project with all reasonably foreseeable future projects, the entire Cumulative Development Scenario is considered along with the proposed project.

A separate CEQA Evaluation, which draws on the information in Chapter 4, is included as Chapter 5.

### 3.3 TIER 1 AND TIER 2 ANALYSES

The planning for Placer Parkway involves two phases: (1) selection of a corridor, known as the Placer Parkway Corridor Preservation Project, and (2) later selection of a more precise alignment within the corridor, and a decision whether or not to build the Parkway.

The Proposed Action for the Placer Parkway Corridor Preservation Project is to select and preserve a 500- to 1,000-foot-wide corridor in the project study area, within which the future four- or six-lane Placer Parkway may be constructed.

Each phase will be subjected to its own environmental review, a process known as “tiered” environmental review under both state and federal law. The selection of a corridor (Placer Parkway Corridor Preservation Project) will be the subject of the first tier (Tier 1) of environmental review, which is the purpose of this Tier 1 EIS/EIR. Selection of a more precise alignment within the corridor, and construction and operation of the Parkway will be the subject of a later, Tier 2 EIR.

As discussed in Chapter 1, this Tier 1 EIS/EIR is not limited to the direct effects of selecting the corridor. To the degree feasible, this Tier 1 EIS/EIR also reviews the reasonably foreseeable environmental effects of the construction and operation of the Parkway.

In Tier 1, avoidance and minimization measures were employed to reduce potential impacts of the build alternatives during the process of identifying the range of alternatives analyzed in this Tier 1 EIS/EIR. Also, certain analyses have been completed in Tier 1 which will not require revisiting in Tier 2, such as the project’s impact on wastewater treatment or schools, and the project’s potential to induce growth. In Tier 2, some studies performed for this Tier 1 analysis will be undertaken in greater detail, or will be revisited based on predicted availability of new, relevant information. For some topics, entirely new analyses will be performed in Tier 2, as no analysis was undertaken in Tier 1; examples of such topics include intersection Level of Service analyses or drainage analyses, as the information required to do so is not available at the Tier 1 level. Similarly, additional consultation and mitigation considerations will be developed in Tier 2 to enhance and provide more specificity to the mitigation commitments and strategies identified in this Tier 1 EIS/EIR. These topics are described in detail in each of the sections in Chapter 4, Environmental Analysis.

### **3.4 ANALYSIS YEARS AND COMPARISON OF ALTERNATIVES**

#### **3.4.1 Time of Analysis**

Under both NEPA and CEQA, the environmental analysis typically evaluates the project in the context of both existing environmental conditions and projected future conditions. The selection of analysis years for this Tier 1 EIS/EIR reflects the relatively long timeframe for the expected planning, corridor acquisition, and construction of Placer Parkway.

#### **Existing Conditions – 2004**

Existing conditions are defined under CEQA as “*the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published.*” Existing conditions usually constitute the baseline physical conditions by which the potential significance of impacts is evaluated under CEQA. For noise and visual impact analysis, federal regulatory guidance also requires the analysis to use existing conditions as the baseline for the analysis. Additional details of such guidance are provided in the technical analysis chapters of this Tier 1 EIS/EIR. Data collection commenced in 2003 using the best available data regarding conditions in the vicinity of the project. Where data were deficient, additional data was collected in the field in late 2003 and early 2004, and intermittently thereafter. In most of the Environmental Analysis chapters; therefore, direct impacts as well as secondary and indirect impacts are evaluated by comparing 2004 existing conditions with and without the project.

In the intervening years since the baseline year was identified, the existing conditions in the study area have experienced only a few changes other than continued agricultural activities which vary from season to season and year to year. These changes include grading and installation of infrastructure associated with the

approved West Roseville Specific Plan area, completion of the Pleasant Grove Wastewater Treatment Plant, and current construction of the Roseville Energy Facility, all of which lie outside the footprint of any of the corridor alignment alternatives under consideration. None of the many development proposals under consideration have been approved and, consequently, none have affected 2003/2004 existing conditions.

### **Opening Year Scenario – 2020**

The schedule for construction of the project is dependent on securing appropriate funding, and is not anticipated to begin for a number of years. The exact schedule is unknown. For planning purposes, the Placer County Transportation Planning Agency (PCTPA) has identified 2020 as the opening year of this facility. Therefore, for the transportation analysis, a second evaluation of impacts compares the projected conditions in the assumed opening year of Placer Parkway with and without the project. In the transportation analysis, where the transportation network is subject to reasonably foreseeable changes by 2020, this analysis is considered more meaningful than comparing existing conditions with and without the project, since the project clearly will not be superimposed on 2004 traffic conditions. For the several analyses that rely at least in part on traffic information—Air Quality, Noise, and Energy—this 2020 evaluation of impacts with and without the project is also presented.

### **Cumulative Development Scenario – 2040**

FHWA's guidelines recommend evaluation of a project's potential impacts projected forward twenty years after opening to ensure that the project is evaluated in the context of reasonably foreseeable future development, when anticipated future development in the study area would have occurred and when any potential direct, indirect or and/or cumulative impacts associated with the project would be evident. The cumulative impact analysis therefore considers 2040 as the Cumulative Development scenario against which the Parkway is evaluated.

### **Development Projections (2020 to 2040)**

After reviewing available demographic data and projections (see Chapter 1 for further discussion), the project's Project Development Team (described in Appendix A) concluded that the Opening Year and Cumulative Development scenarios would "bracket" regional development levels from a low (2020) level to a high (2040) level.

Most of the growth is projected to occur in Placer County. As shown on Table 3-1, the Opening Year scenario has the same average yearly growth rate in each land use category as the Cumulative Development scenario, and a somewhat higher yearly growth rate in residential units as SACOG's draft 2035 Metropolitan Transportation Plan (MTP) forecasts for Placer County.

Table 3-1 summarizes the development assumptions that were used for the 2020 Opening Year and Cumulative Development scenarios travel demand forecasts. The location of the assumed development areas in 2020 and 2040 are shown in Figures 4.8-2 and 4.8-3, respectively, in Section 4.8, Traffic and Transportation.

Detailed assumptions regarding these future development scenarios are described below.

### **Opening Year Scenario – 2020**

The 2020 Opening Year scenario was based on discussions with the Placer Parkway Corridor Preservation Technical Advisory Committee (TAC) and confirmed by the Study Advisory Committee (SAC) and Placer Parkway Corridor Preservation Policy Advisory Committee (PAC). The 2020 Opening Year scenario reflects the following assumptions about development:

**Table 3-1  
Summary of Placer County Growth**

Land Use	Forecast Year	Development	Estimate of Growth Rate	
			Period	Growth per Year
Residential (Dwelling Units)	2004	109,810 DU	—	—
	2020	181,437 DU	2004 to 2020	4,477 DU
	2035 (SACOG) <sup>1</sup>	217,838 DU	2004 to 2035	3,485 DU
	2040	261,980 DU	2004 to 2040	4,227 DU
Retail	2004	17,008,000 sq. ft.	—	—
	2020	28,575,000 sq. ft.	2004 to 2020	723,000 sq. ft.
	2040	43,015,000 sq. ft.	2004 to 2040	722,000 sq. ft.
Office	2004	9,904,000 sq. ft.	—	—
	2020	24,681,000 sq. ft.	2004 to 2020	924,000 sq. ft.
	2040	43,268,000 sq. ft.	2004 to 2040	927,000 sq. ft.
Industrial	2004	21,906,000 sq. ft.	—	—
	2020	34,640,000 sq. ft.	2004 to 2020	796,000 sq. ft.
	2040	50,565,000 sq. ft.	2004 to 2040	796,000 sq. ft.
Source: DKS Associates, 2007				
Notes:				
<sup>1</sup> Based on January 2007 draft development forecasts from SACOG				
DU = dwelling unit				
sq. ft. = square feet				

- Residential buildout of current general plans within Placer County (see Figure 4.8-2 in Section 4.8).
- No development in the following major proposed projects that would require General Plan amendments (see Figure 1-15):
  - The Creekview and Sierra Vista Specific Plans (CSP and SVSP) in Roseville’s Annexation Area;
  - The Sphere of Influence (SOI) expansion areas of Lincoln;
  - The Regional University and Placer Ranch Specific Plans (RUSP and PRSP) and Curry Creek Community Plan (CCCP) area in unincorporated Placer County; and
  - Sutter Pointe Specific Plan (SPSP) area in Sutter County.
- Development of the initial phase of Placer Vineyards (7,261 dwelling units out of 14,132 total). Placer Vineyards was included in the 2020 Opening Year scenario since urban development in that area was envisioned in Placer County General Plan (see Figure 1-15).

- Growth in retail employment in the current General Plan areas of Placer County that “balances” the growth in residential development by matching SACOG’s countywide estimate of about 0.32 employees per dwelling unit from their 2025 forecasts.
- Growth in total employment levels in the current General Plan areas of Placer County that “balances” the growth in residential development by matching SACOG’s 1.3 employee per dwelling unit from their 2025 forecasts.
- A straight-line growth rate between SACOG’s estimates of 2005 development levels and their draft 2032 forecasts in each travel model zone outside south Sutter County and Placer County.

### **Cumulative Development Scenario – 2040**

The 2040 Cumulative Development scenario is based on the “Super-Cumulative” development scenario that was developed for the evaluation of traffic impacts in several pending EIRs for major developments in Placer County. It was prepared through discussions with the staffs of Placer County and the cities of Roseville, Rocklin, and Lincoln, and confirmed by the TAC, the SAC, and the PAC. The Cumulative (2040) Development Scenario reflects the following assumptions about development:

- Full buildout of all residential land in Placer County west of Sierra College Boulevard including: current general plan areas and the following major development proposals in West Placer County (see Figure 4.8-3 in Section 4.8):
  - The CSP and SVSP in Roseville’s SOI Annexation area;
  - The SOI expansion areas of Lincoln;
  - The Placer Vineyards Specific Plan, RUSP, and PRSP in unincorporated Placer County; and
  - The CCCP area.
- Growth in retail employment in Placer County that “balances” the growth in residential development by matching SACOG’s countywide estimate of about 0.32 employees per dwelling unit from their 2025 forecasts.
- Growth in total employment levels in Placer County that “balances” the growth in residential development by matching SACOG’s 1.3 employee per dwelling unit from their 2025 forecasts.
- Full buildout of the residential development in the proposed SPSP area along with a nonresidential development level that “balances” the residential development in that area.
- Estimated 2040 development in all other portions of SACOG’s six-county region based on a straight-line ratio for the development growth between 2005 levels and the 2050 Preferred Blueprint scenario for each of SACOG’s Traffic Analysis Zones.

The above list was the basis for the cumulative development analysis.

Table 3-2 presents a summary of development assumptions made under the 2020 and 2040 scenarios.

**Table 3-2  
Summary of Development Assumptions – 2020 and 2040 Scenarios**

Jurisdiction	Residential (DU)			(KSF)								
				Retail			Office			Industrial		
	2004	2020	2040	2004	2020	2040	2004	2020	2040	2004	2020	2040
<b>Cities (Current General Plans)</b>												
Roseville	40,889	60,039	60,039	9,857	13,200	14,334	5,712	12,441	12,441	8,630	14,000	17,403
Rocklin	19,641	28,606	28,606	2,126	3,900	4,590	797	3,000	5,788	2,791	5,000	6,494
Lincoln	10,478	22,218	22,218	431	2,000	3,000	584	2,491	2,491	3,779	4,700	5,899
Loomis	2,274	4,087	4,087	323	932	932	94	492	492	1,038	1,100	1,124
Auburn	5,135	7,022	7,022	1,375	1,667	1,758	613	943	943	266	400	555
Colfax	622	921	921	250	448	448	35	68	68	175	200	204
<b>Unincorporated Areas (Current General Plans)</b>												
Auburn/Bowman	9,056	17,144	17,144	1,545	2,600	2,932	1,480	2,946	2,946	953	2,000	2,767
Granite Bay	7,140	7,892	7,892	602	919	919	286	819	819	12	40	62
Sunset	–	–	–	0	357	357	166	762	762	3,527	6,000	7,528
Bickford	9	1,890	1,890	3	105	105	–	–	–	–	–	–
Riolo Vineyard	6	958	958	–	88	88	–	–	–	–	–	–
Other Dry Creek	956	3,461	3,461	47	224	224	–	157	157	172	600	897
Other Unincorporated	13,457	19,938	19,938	450	1,040	1,225	137	400	400	533	600	747
<b>Major Projects in West Placer County</b>												
Curry Creek (Placer Co)	–	–	16,206	–	–	2,025	–	–	2,122	–	–	–
Regional University (Placer Co)	–	–	4,387	–	–	215	–	–	75	–	–	–
Lincoln SOI Expansion	–	–	33,720	–	–	5,659	–	–	5,748	–	–	2,700
Placer Ranch (Placer Co)	–	–	6,759	–	–	1,047	–	–	5,243	–	–	4,185
Placer Vineyards (Placer Co)	147	7,261	14,132	–	1,095	1,857	–	162	2,073	31	–	–
Creekview (Roseville)	–	–	2,600	–	–	300	–	–	–	–	–	–
Sierra Vista (Roseville)	–	–	10,000	–	–	1,000	–	–	700	–	–	–
<b>Total Placer County</b>	109,810	181,437	261,980	17,008	28,575	43,015	9,904	24,681	43,268	21,906	34,640	50,565
<b>South Sutter (South of Howsley)</b>	360	400	17,500	12	20	2,188	78	100	1,500	292	600	3,000
Source: DKS Associates, 2007 ksf = 1,000 square feet DU = dwelling units												

### **3.4.2 Analysis of Alternatives**

#### **No-Build Alternative**

The environmental impact analysis approach for the Placer Parkway Tier 1 EIS/EIR necessitates a comparison between existing conditions with and without the project and future conditions with and without the project. For the purposes of this analysis, conditions without the project are described as the No-Build Alternative. This is true for each analysis year (2004, 2020 [for transportation, air quality, noise and energy], and 2040). For 2004, population, land use, employment, traffic and environmental conditions in the study are assumed to be as of 2004. For the 2020 and 2040 analyses years, the No-Build Alternative includes 2004 existing conditions, as well as other projects, actions or anticipated changes in the study area between 2004 and either 2020 or 2040, independent of Placer Parkway, as generally described in Section 3.4.1.

#### **Build Alternatives**

Five alternative alignments, or build alternatives, for Placer Parkway are evaluated in this Tier 1 EIS/EIR. The build alternatives represent the addition of the Placer Parkway to the environment defined by the No-Build Alternative. In each year analyzed, the incremental difference between the No-Build Alternative and each of the build alternatives is then considered to be the potential environmental impact of Placer Parkway.

### **3.5 STUDY AREAS**

The Tier 1 EIS/EIR evaluates potential impacts within a defined study area. For most analyses, the study area is the main project study area described in Section 3.5.1, below. In some analyses, however, it is necessary to address a different area in order to meaningfully evaluate potential impacts. The paragraphs below briefly describe the various study areas used in the technical analysis chapters.

#### **3.5.1 Project Study Area**

The project study area is an area of approximately 33,460 acres located in Sutter and Placer counties, with a small section located in Sacramento County (Figure 1-1). The portion of the study area that is located in Sacramento County is located in the extreme southwestern corner of the study area and does not include any of the proposed corridor alignment alternatives. It extends from State Route (SR) 70/99 in the west to SR 65 in the east, with the northern boundary extending to Sunset Boulevard West and the southern boundary located adjacent to Riego/Baseline Road.

The study area is divided into three segments:

- The Western Segment extends from SR 70/99 to Pleasant Grove Road in Sutter County.
- The Central Segment extends from Pleasant Grove Road in Sutter County to approximately 2,300 feet north of Pleasant Grove Creek in Placer County.
- The Eastern Segment extends from approximately 2,300 feet north of Pleasant Grove Creek to SR 65 in Placer County.

#### **3.5.2 Regional Analysis Districts in the Local Project Vicinity**

Regional Analysis Districts (RADs) are geographical areas where data is gathered and projected over time for purposes of preparing SACOG's traffic model and ultimately its MTPs. RAD data is a good,

consistent source of land use and traffic information, and is used in this document to provide historic and forecasted data as background to the need for the Parkway. However, RADs are not structured in a way that allows effective analysis of transportation. For that purpose, other transportation analyses areas were developed as described below. The RADs in the local project vicinity (within and adjacent to the project study area) are shown on Figure 1-2 in Chapter 1.

### **3.5.3 Transportation Analysis Study Area**

Placer Parkway would have an impact on travel patterns in a fairly wide (large) area. Based on an evaluation of the changes in traffic volumes, a Transportation Analysis Study Area (TASA) was defined. It covers the area where the travel model shows changes in traffic volumes, although the percentage of roadways that would be affected by Placer Parkway decreases on the fringes of that area. The TASA extends from Nicolaus Road on the north to Interstate 80 on the south, and from Sierra College Boulevard on the east to west of SR 70/99. The TASA (shown in Figure 4.8-1 in Section 4.8, Traffic and Transportation) covers portions of eight jurisdictions: Placer County, Sutter County, Sacramento County, the cities of Roseville, Rocklin, Lincoln and Sacramento, and the town of Loomis. Additional details of the TASA are provided in Section 4.8, Traffic and Transportation.

### **3.5.4 Analysis Focus Area**

For some system-wide transportation analysis measures, two study areas were used: (1) the TASA, as described above, and (2) an Analysis Focus Area (AFA), also shown in Figure 4.8-1 in Section 4.8). The AFA is the portion of the TASA that is close to the build alternatives. Its boundaries were selected to define the area where most of the transportation benefits of constructing Placer Parkway would occur. Additional details of the AFA are provided in Section 4.8, Traffic and Transportation.

### **3.5.5 Air Quality Analysis Study Area**

As air quality within the project study area is regulated by local government agencies, Placer County Air Pollution Control District, and Feather River Air Quality Management District, a study area was defined for the analysis of air quality. This study area is defined as Sutter County, Placer County, and northern Sacramento County. The study area is located in the Sacramento Valley Air Basin which is shown on Figure 4.9-1 in Section 4.9, Air Quality.

### **3.5.6 Area of Potential Effects**

The Area of Potential Effects (APE) is the area where potential impacts on cultural resources are anticipated. For this Tier 1 EIS/EIR, one APE for archaeological resources and one APE for historic properties were developed in consultation with URS Corporation and Caltrans. Additional details of the APE are provided in Section 4.7, Cultural Resources. The APE is also depicted on Figure 4.7-1 in Section 4.7.

### **3.5.7 Secondary and Indirect Impact Analysis Study Area**

Based on guidance from the Mare Island Accord Interagency Working Group (Mare Island Accord, 2006), a study area was developed for the analysis of secondary and indirect impacts, including anticipated growth (Figure 3-1). This area was based on the location of the corridor alignment alternatives in relationship to existing city boundaries and SOIs, developed unincorporated areas, community plan and redevelopment areas, and major development projects that have been proposed and are undergoing environmental review but that have not yet been approved. The secondary and indirect impact analysis study area encompasses the entire TASA and expands it in several ways, including extending it westward to the Sacramento and Feather Rivers, which present natural barriers to

development. The TASA was also expanded to the north to encompass all of the City of Lincoln's proposed SOI expansion area, as well as to the east to encompass all of the land within the city limits of Roseville and most of Rocklin as well as a portion of the town of Loomis.

### **3.6 TIME MARCHES ON**

The dynamic existing planning environment in the study area, and the projected elapsed time until the Parkway would be constructed, if approved, is challenging in the context of preparing an environmental document that analyzes existing and future conditions.

#### **3.6.1 Evolving Existing Conditions**

This Tier 1 EIS/EIR evaluates the effects of the Project compared to existing conditions in 2004. As with any large project planned over a long time, changes in conditions may occur during the preparation of the Tier 1 study, or between the draft and final versions of the Tier 1 EIS/EIR, as well as during the period between the Tier 1 and Tier 2 processes. The possibility of changes in the level of urban development is particularly high for Placer Parkway, due to the strong development pressure in the project vicinity. As discussed in Section 6.1, Growth, population and employment growth projections for California and the Sacramento Region in general, and for southwestern Placer County and south Sutter County in particular, indicate that development pressures in the project vicinity will remain relatively intense, irrespective of the Placer Parkway.

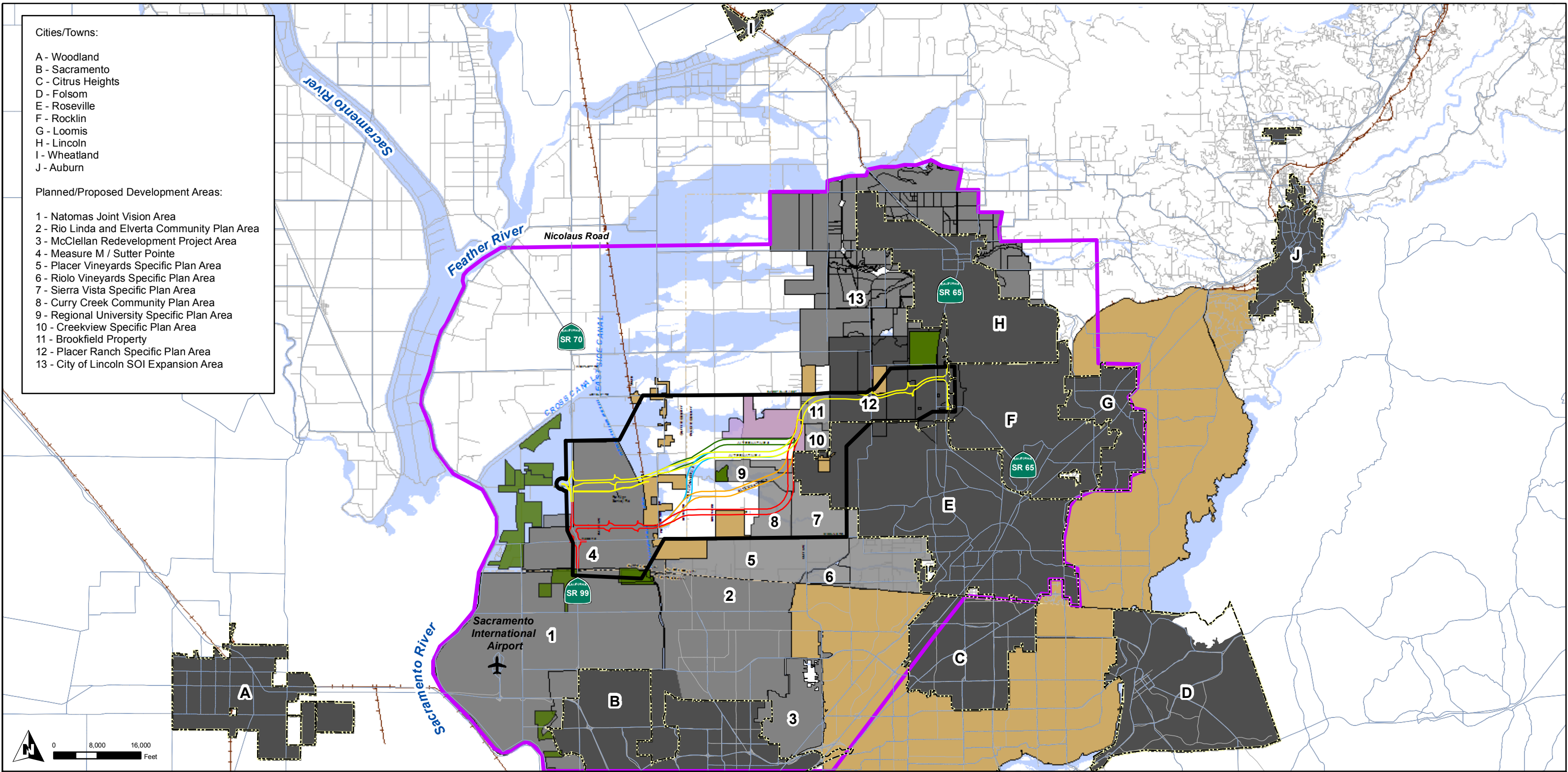
While the project study area is predominantly undeveloped at this time, parts of the study area are within local General Plan designations that allow urban growth. In addition, numerous proposals for major new development projects in and around the study area are currently in various stages of the approval and entitlement process (see Figure 1-15, Planned/Proposed Development, in Chapter 1). The ultimate level of development, including the growth represented by these current project proposals, is addressed by this Tier 1 EIS/EIR in the Cumulative Scenario (Year 2040). This accounts for the cumulative impact of the Parkway and other reasonably foreseeable developments, including those now in the planning process of the local jurisdictions.

The EIR assesses project impacts on baseline conditions, as discussed in Section 3.4.1. While CEQA does not require an assessment of project impacts on post-Notice of Preparation development, it is nevertheless worth noting that if new land uses/projects are approved by city or county jurisdictions prior to completion of this Tier 1 EIS/EIR process, such land uses could potentially lie within one or more of the alternatives analyzed in this Tier 1 EIS/EIR.

There are three such large projects under review. The PRSP and the RUSP are currently going through the planning and environmental review process in Placer County. Both projects, if approved in the form initially requested by the landowners, would locate urban development in one or more of the Parkway corridors evaluated in this Tier 1 EIS/EIR. The SPSP is currently undergoing a similar process in Sutter County. The South Placer Regional Transportation Authority is engaged in ongoing consultation with the counties and the landowners to avoid or minimize any such conflicts, in the event these projects do go forward. At a land use workshop in October 2003, the Placer County Board of Supervisors directed Placer County planning staff to process these Specific Plans concurrently with the PCTPA's processing of Placer Parkway Tier 1 EIS/EIR.

As a result of approval of such development projects, the Parkway could have some impacts that are not identified in this document, for the simple reason that the affected resources (i.e., approved urban developments) were not present when the environmental analysis for the Tier 1 EIS/EIR was conducted. Such additional impacts could include, but would not necessarily be limited to, impacts on planned or existing residential, commercial, or parkland uses; incompatibility with such uses; a change in the viewshed for approved projects that could result in visual impacts; or other impacts typical of such land use conflicts.

- Cities/Towns:
- A - Woodland
  - B - Sacramento
  - C - Citrus Heights
  - D - Folsom
  - E - Roseville
  - F - Rocklin
  - G - Loomis
  - H - Lincoln
  - I - Wheatland
  - J - Auburn
- Planned/Proposed Development Areas:
- 1 - Natomas Joint Vision Area
  - 2 - Rio Linda and Elverta Community Plan Area
  - 3 - McClellan Redevelopment Project Area
  - 4 - Measure M / Sutter Pointe
  - 5 - Placer Vineyards Specific Plan Area
  - 6 - Riolo Vineyards Specific Plan Area
  - 7 - Sierra Vista Specific Plan Area
  - 8 - Curry Creek Community Plan Area
  - 9 - Regional University Specific Plan Area
  - 10 - Creekview Specific Plan Area
  - 11 - Brookfield Property
  - 12 - Placer Ranch Specific Plan Area
  - 13 - City of Lincoln SOI Expansion Area



County Boundary	Alternative 1	Alternative 4	Existing and Approved Development	Existing Conservation Areas	Study Area for Secondary and Indirect Impacts
Railroads	Alternative 2	Alternative 5	Planned / Proposed Development (including future conservation areas)	Developed Unincorporated Areas	Project Study Area Boundary
	Alternative 3		Municipal Facilities	100 Year Floodplain Areas	

Source: North Fork Associates; Mara Feeney Associates; Sutter County Planning Division; County of Sacramento Planning and Community Development Department; City of Sacramento Development Services Department; Sunset Industrial Area Plan; City of Lincoln Community Development Department; Natomas Basin HCP; Placer County Planning Department; City of Sacramento; City of Roseville



TIER 1 EIS/EIR

## Secondary and Indirect Impact Analysis Study Area

Figure 3-1

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Although effects related to possible new urban development approvals are identified in this Tier 1 EIS/EIR to the limited extent feasible, they will be fully addressed during the Tier 2 study of the Parkway, which will identify and respond to existing conditions at that time.

### **3.6.2 Future Availability of Fossil Fuels**

Currently more than 95 percent of transportation energy comes from oil (Energy Bulletin, 2007). In recent years there has been a growing concern that oil availability will decline in the future, resulting in substantial increases in oil and gasoline prices. This could reduce the need for new roadway construction if the number of vehicle miles traveled decreases as a result of reduced car usage. The concept of future oil supply decline has been termed “Peak Oil.”

World oil demand is expected to grow 50 percent by 2025 (Hirsch, 2005). To meet that increased demand, oil production will have to be increased correspondingly. Oil is a finite, non-renewable resource and the rate of oil “production,” meaning extraction and refining has grown in most years over the last century to its current level of about 84 million barrels/day. The theory of “Peak Oil” suggests that once the halfway point of all reserves is reached, production becomes ever more likely to decline, hence use of the term peak. If, as generally expected, oil production peaks at some point in the next few decades, then world oil production will no longer satisfy demand. That point is referred to as Peak Oil.

Peak Oil refers to a global decline in oil availability at currently affordable prices. This could have social and economic consequences in situations where there is substantial reliance on oil-dependant transportation modes.

There is considerable debate as to when the peak of global oil production will be reached. The World Energy Council anticipates it will occur after 2010, while the Shell Oil Company predicts this will occur after 2025 (Hirsch, 2005). The U.S. Geological Survey position is that the global peak is still about three decades away (U.S. DOE, 2001). Cambridge Energy Research Associates, Inc., a leading advisor to international energy companies, governments, financial institutions, and technology providers on the energy markets, suggests that there is no evidence of a peak before 2030 (JTP Online, 2007). The most optimistic opinions still put the timing of the peak no later than 2040 (U.S. DOE, 2001).

The Hirsch Report (Hirsch, 2005), which presented an extensive study sponsored by the U.S. Department of Energy into the potential peaking of oil production, assumes that peaking will occur in or before 2025, after which time there would be dramatic increases in global oil prices. The report concludes that the key to mitigation of potential social and economic impacts of this increase would be development of and construction of a large number of substitute fuel production facilities, coupled to significant increases in transportation fuel efficiency.

Concern regarding this issue as it relates to construction of new roadways, which include organizations such as the Natural Resources Defense Council (2007), the Sierra Club (2007), Defenders of Wildlife (2007), Friends of the Earth (2007), Greenpeace (2007), and numerous other environmental, community groups and private individuals, suggest that planning for future construction of roadways is an inappropriate investment, as potential use of such facilities will inevitably decline in the future as oil prices rise.

Many of the world’s major oil companies, including Shell, ExxonMobil, Chevron, and British Petroleum accept the theory of peak oil but do not consider that it will substantially affect the use of road transportation or the need for or use of roadways planned for future construction for the following reasons:

- Viable alternatives to oil for vehicle transportation already exist, already are in widespread use, and are increasing in use. These include coal, hydrogen, renewable fuels, biomass sources such as ethanol, and other sources of alternative fuels;
- New technology will continue to develop alternatives to oil, such as renewables and other more sustainable fuel types. Major oil companies are already investing in alternative and renewable technologies that will eventually provide substitutes for oil;
- The decline in oil availability will occur gradually over many years, allowing for adjustment to use of alternative fuels; and
- Vehicle fuel efficiency is increasing and will continue to increase as manufacturers invest in fuel-efficiency technology to meet market demands. Increasing use of more fuel-efficient vehicles will help to offset the decline in oil availability.

Potential changes in oil availability and price have been assumed to be a part of future conditions in the study area which would not be affected by the Parkway. It is assumed that, irrespective of the extent or magnitude of changes in availability and price of oil and other fuels, the Parkway would still have future utility either as a roadway or as another modal route. It is considered speculative to predict how potential issues associated with peak oil may influence future transportation decisions.

In 2003 the California Energy Commission (CEC) and the California Air Resources Board agreed to a strategy to reduce demand for oil (petroleum) in California. This comprised a commitment to promoting improved energy efficiency and increasing the use of alternative fuels. The two agencies set a goal to achieve 20 percent use of transportation energy in the form of alternative fuels by 2020. The current percentage is 6 percent.

A recent independent paper (CEC, 2005), prepared by staff of the CEC based on recommendations of six alternative fuels work groups staffed by a range of private and public alternative fuel specialists, suggests that these targets are achievable. The prime replacements for petroleum are expected to be ethanol and natural gas (CEC, 2005), with petroleum displacement also occurring through use of biodiesel, electricity, hydrogen, liquefied petroleum gas and gas-to-liquid diesel fuel. The workgroups recommended a series of measures to support the successful growth of the alternative fuels markets to meet California targets, including adopting clear state policies committed to petroleum use reduction, funding incentives for use of alternative fuels and cooperation between agencies to resolve current regulatory barriers restricting alternative fuel market growth.