3.0 CUMULATIVE IMPACT ANALYSIS METHODOLOGY

1. PURPOSE

The purpose of this section is to explain the methodology for the cumulative project analysis presented in this EIR. This section is important because, in many cases, the impact of a single project may not be significant, but when combined with other projects the "cumulative" impact may be greater. Section 15355 of the California Environmental Quality Act (CEQA) Guidelines defines "cumulative impacts" as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." State CEQA Guidelines Section 15130(b) states, "[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 of the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness."

Significant cumulative impacts often result from the combined effect of past, present, and future related projects that are located in proximity to the project under review. For example, the wastewater demand generated by a proposed project may not be significant when analyzed alone; however, when analyzed in combination with the wastewater demand of other approved or proposed related projects, the cumulative wastewater demands may exceed the resource capabilities of the wastewater agency, resulting in a significant cumulative impact. Therefore, it is important for a cumulative impacts analysis to be viewed over time and in conjunction with other related past, present, and reasonably foreseeable future developments, which may have impacts that might compound or interrelate with those of the project under review. Furthermore, the cumulative impact analysis is an important part of an EIR as it allows the environmental analysis to provide a more complete forecast of future environmental conditions and show the impacts of other reasonably foreseeable related projects.

This section describes the cumulative growth forecasting methodology and cumulative impact analysis methodology utilized in this EIR to assess cumulative impacts. The assessment of cumulative impacts for each environmental impact category is presented in ***Section 4.0, Environmental Impact Analysis****.*

2. CUMULATIVE GROWTH FORECASTING METHODOLOGY

In order to analyze the cumulative impacts of the Vista Canyon project in combination with other expected future growth, the amount and location of growth expected to occur must be predicted. Section 15130(b) of the *State CEQA Guidelines* allows two methods of prediction: "(A) a list of past, present, and reasonably anticipated future projects producing related or cumulative impacts, including those projects outside the control of the agency, or (B) a summary of projections contained in an adopted general plan or related planning document which is designed to evaluate regional or areawide conditions." In order to account for varying conditions under the environmental categories addressed in the EIR, this EIR uses a combination of both the "list" and "projection" methods to provide a reasonable and comprehensive estimate of cumulative impacts.

For this EIR, some impact analysis sections present the following two separate cumulative development scenarios:

- Santa Clarita Valley (SCV) Cumulative Build-Out Scenario; and
- Proposed One Valley One Vision (OVOV) General Plan Buildout Scenario

a. Santa Clarita Valley Cumulative Build-Out Scenario

This cumulative development scenario (herein referred to as the "SCV Cumulative Build-Out Scenario") entails buildout of all lands under the current land use designations indicated in the Los Angeles County Santa Clarita Valley Area Plan, the City of Santa Clarita General Plan, the proposed project, plus all known active pending General Plan Amendment requests for additional urban development in the City of Santa Clarita and the County unincorporated area. Because this scenario combines both of the CEQA future development prediction methods (i.e., the listing of known projects, plus a summary of development projections from an adopted general plan), the SCV Cumulative Build-Out Scenario is considered a worst-case projection of future development activity. It also allows a comprehensive analysis of the infrastructure, services, and other impacts of the region's buildout.

The source of data for the SCV Cumulative Build-Out Scenario is the April 2003 Santa Clarita Valley Consolidated Traffic Model, 2003 Update and Validation (SCVCTM), which was used in the traffic analysis. The SCVCTM was developed jointly by the City of Santa Clarita and the Los Angeles County Department of Public Works (LACDPW) and is amended as necessary to include General Plan Amendment applications as they are submitted to the City and County. The modeled area extends easterly from the Los Angeles County/Ventura County line to where the Antelope Valley Freeway (SR-14) passes out of the SCV near Vasquez Rocks Park; northerly to the Grapevine area north of Castaic; and southerly to the confluence of the Interstate 5 (I-5) and SR-14 freeways south of Newhall Pass (this is the area that is the subject of the County's Santa Clarita Valley Area Plan).

In this EIR, the SCVCTM area is often referred to as the "Valley." A list of the future development activity expected in the Valley under the SCV Cumulative Build-Out Scenario is presented in **Table 3.0-1**, **Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario with Project** (refer to each environmental topic appendix for detailed calculations). The City of Santa Clarita General Plan can be reviewed at the City of Santa Clarita, Community Development Department (Planning Division Public Counter), 23920 Valencia Boulevard, Suite 300, Santa Clarita, California, and the Los Angeles County Santa Clarita Valley Area Plan can be reviewed at the County of Los Angeles Department of Regional Planning, 320 West Temple Street, Los Angeles, California. Both documents are incorporated by reference in this EIR.

Table 3.0-1
Santa Clarita Valley Cumulative Build-Out Scenario

Land Use Types	Cumulative Buildout w/o Project[1]	Proposed Project	Cumulative Total	Project with Overlay	Cumulative Total
Single-Family	93,412 du	96 du	93,508 du	96 du	93,508 du
Multi-Family	47,621 du	1,021 du	48,642 du	1,254 du	49,875 du
Mobile Home	2,699 du		2,699 du		2,699 du
Commercial Retail	18,866,030 sq. ft.	164,000 sq. ft.	19,030,030 sq. ft.	164,000 sq. ft.	19,030,030 sq. ft.
Hotel	2,071 rooms	200 rooms	2,271 rooms	200 rooms	2,271 rooms
Sit-Down Restaurant	283,790 sq. ft.		283,790 sq. ft.		283,790 sq. ft.
Fast Food Restaurant	23,600 sq. ft.		23,600 sq. ft.		23,600 sq. ft.
Movie Theater	3,300 seats		3,300 seats		3,300 seats
Health Club	54,000 sq. ft.		54,000 sq. ft.		54,000 sq. ft.
Car Dealership	411,000 sq. ft.		411,000 sq. ft.		411,000 sq. ft.
Elem./Middle School	278,590 students	431 students	279,021 students	520 students	279,110 students
High School	12,843 students	112 students	12,955 students	132 students	12,975 students
College	29,948 students		29,948 students		29,948 students
Hospital	247,460 sq. ft.		247,460 sq. ft.		247,460 sq. ft.
Library	171,790 sq. ft.		171,790 sq. ft.		171,790 sq. ft.
Church	501,190 sq. ft.		501,190 sq. ft.		501,190 sq. ft.
Day Care	785,000 sq. ft.		785,000 sq. ft.		785,000 sq. ft.
Industrial Park	41,743,950 sq. ft.		41,743,950 sq. ft.		41,743,950 sq. ft.
Business Park	8,424,330 sq. ft.		8,424,330 sq. ft.		8,424,330 sq. ft.
Manufact./Warehouse	3,932,470 sq. ft.		3,932,470 sq. ft.		3,932,470 sq. ft.
Utilities	1,150,240 sq. ft.		1,150,240 sq. ft.		1,150,240 sq. ft.
Commercial Office	6,380,520 sq. ft.	646,000 sq. ft.	7,026,520 sq. ft.	396,000 sq. ft.	6,776,520 sq. ft.
Medical Office	133,730 sq. ft.		133,730 sq. ft.		133,730 sq. ft.
Golf Course	1,209.0 ac		1,209.0 ac		1,209.0 ac
Developed Parkland	477.3 ac	6.3 acres	483.6 ac	6.3 acres	483.6 ac
Undeveloped Parkland	1,000.0 ac		1,000.0 ac		1,000.0 ac
Special Generator[2]	413.0 sg		413.0 sg		413.0 sg

du = dwelling unit; sq. ft. = square feet; sta = staff; ac = acres; sg = special generator

[1] *Santa Clarita Valley Consolidated Traffic Model (November 2002). Includes existing development, buildout under the existing City of Santa Clarita General Plan and Santa Clarita Valley Area Plan, and active pending General Plan Amendment requests.*

[2] *Includes Wayside Honor Ranch, Six Flags Magic Mountain, Travel Village, CHP Office, and Aqua Dulce Airport.*

b. Proposed OVOV General Plan Build-Out Scenario

This scenario is based on buildout of the City of Santa Clarita and the proposed buildout of the City of Santa Clarita sphere of influence (SOI) under the proposed One Valley One Vision (OVOV) General Plan. **Table 3.0-2, OVOV General Plan Build-Out Scenario**, shows a list of the existing and pending future buildout for each land use type within the existing City of Santa Clarita boundaries and the proposed City of Santa Clarita SOI boundaries.

Table 3.0-2
OVOV General Plan Build-Out Scenario

Land Use Types	Cumulative Buildout of the City of Santa Clarita and City SOI
Single-Family Residential Units	77,975 du
Multi-Family Residential Units	65,327 du
Mobile Home Units	3,420 du
Senior Active Units	2,352 du
Commercial Center	21,126,810 sq. ft.
Commercial Shops	2,104,110 sq. ft.
Hotel	2,527 rooms
Sit-Down Restaurant	289,720 sq. ft.
Fast-Food Restaurant	64,420 sq. ft.
Movie Theater	3,600 seats
Health Club	138,000 sq. ft.
Car Dealership	530,000 sq. ft
Elementary School/Middle School	51,667 students
High School	18,500 students
College	36,062 students
Hospital	365,160 sq. ft.
Library	91,400 sq. ft.
Church	997,460 sq. ft.
Day Care	540 students
Industrial Park	36,687,270 sq. ft.
Business Park	7,797,080 sq. ft.
Manufacturing/Warehouse	3,268,690 sq. ft.
Utilities	1,032,440 sq. ft.
Regional Post Office	780,000 sq. ft.
Commercial Office	8,483,890 sq. ft.
High-Rise Office	300,000 sq. ft.
Medical Office	730,560 sq. ft.

Land Use Types	Cumulative Buildout of the City of Santa Clarita and City SOI
Post Office	50,000 sq. ft.
Golf Course	1,338 ac
Developed Parkland	1,040.2 ac
Undeveloped Parkland	890 acres
Special Generator	380.13 sg

Source: Written Communication with Mike Ascione, City of Santa Clarita, with Susan Tebo (April 2, 2009).
du = dwelling unit; sq. ft. = square feet; sg = special generator; ac = acres
Special Generators include Wayside Honor Ranch, Six Flags Magic Mountain, Travel Village, CHP Office, and Aqua Dulce Airport.

3. CUMULATIVE IMPACT ANALYSIS METHODOLOGY

The specific group of projects that interact to produce cumulative impacts can differ from environmental topic to environmental topic due to a number of reasons, including the extent of the geographic area affected. For example, the William S. Hart Union High School District serves the project site, but also serves a large area of unincorporated County land. The potential for cumulative impacts on high school education services, therefore, is analyzed for the entire Hart School District service boundary area to account for a worst case analysis. On the other hand, the Sulphur Springs Union School Districts also serves the project site, but provides elementary school education to a smaller portion of the unincorporated County land than the area the Hart School District serves for high school services. Thus, a smaller geographical area (and, therefore, a smaller amount of future growth) is analyzed for cumulative impacts on elementary school services than is analyzed for impacts to high school services. **Figure 3.0-1**, **Cumulative Impact Analysis Methodology**, illustrates this concept. The topics in this EIR that fit this type of service boundary-driven cumulative impact analysis methodology include: water resources; wastewater disposal; education; and libraries.

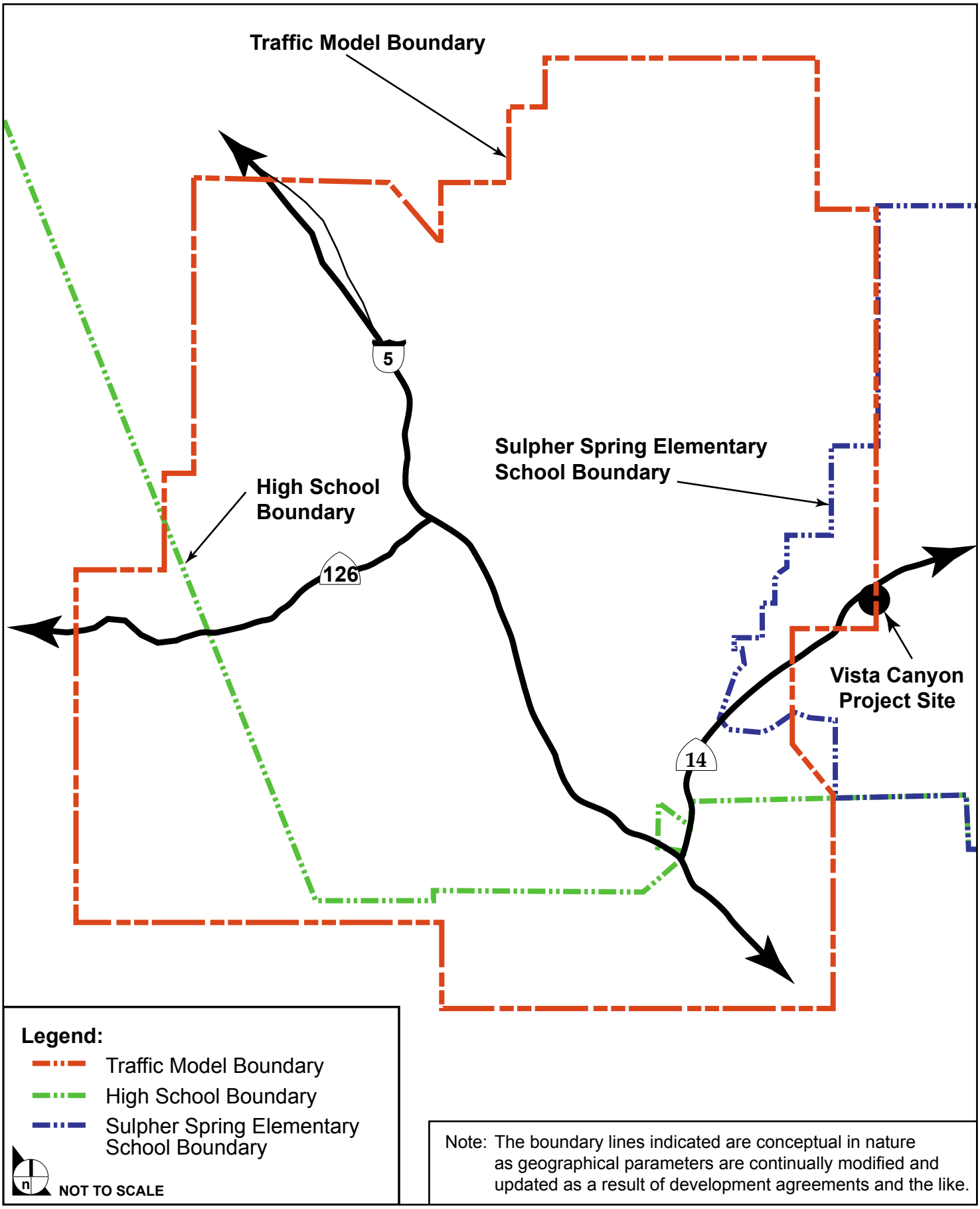
Other environmental impacts do not confine themselves to specific service boundaries. For example, in analyzing cumulative impacts to transportation/circulation, the relevant geographical area is subject to certain variables such as the current structure of the regional and local roadway system, variables in driving behavior, future modifications to the circulation system, and uncertainty with respect to the pace of buildout of other development projects that would affect the same elements of the circulation system. In this case, a conservative approach (i.e., overestimated) was taken and a wide study area was utilized; the broad geographical area used is the SCVCTM Planning Area described above for the SCV Cumulative Build-Out Scenario. The topics in this EIR that fit this type of cumulative impact analysis methodology include: transportation/circulation; noise (because it relies on traffic data from the SCVCTM); population, housing, and employment; solid waste; and parks and recreation.

The potential cumulative effects relating to another group of environmental topics can be felt beyond the SCVCTM Planning Area referred to in the previous paragraph. For example, cumulative impacts on biological resources can occur regionally, particularly when sensitive resources that occur over a large regional context are involved. For instance, a freeway may be proposed in a way that cuts off the regional movement of animals from one large open area to another, thereby having a regional impact that is not restricted to a planning area, but likely affecting the biological environment in topographically related areas. The topics in this EIR that fit this type of cumulative impact analysis methodology include flood, agricultural resources, and biota. As an example, biota cumulative impacts will be addressed in relation to not only the project site, but also to the river system and watershed. This discussion can be found in **Section 4.6**, **Biological Resources**.

The assessment of cumulative air quality impacts relies on project-specific methods suggested by South Coast Air Quality Management District rather than the aforementioned growth predictions. The Air Quality Management District's methods are based on performance standards and emission reduction targets necessary to attain the federal and state air quality standards identified in the *Air Quality Management Plan* (*AQMP*). The 2007 *AQMP* was prepared to accommodate growth, to reduce the high levels of pollutants within the South Coast Air Basin, to meet state and federal air quality standards, and to minimize the fiscal impact pollution control measures have on the local economy. If the analysis shows that a project does not comply with the standards, then cumulative impacts are considered to be significant unless there is other pertinent information available to the contrary.[1]

Lastly, some cumulative impacts confine themselves to the project site. An example would be geotechnical impacts. For such impacts, the effects of two or more projects that occur at different locations are not affected by, and would not impact, the same piece of land. The topics in this EIR that fit this type of cumulative impact analysis methodology include: geotechnical resources; cultural/paleontological resources; and environmental safety.

1 The 2007 *AQMP* is available for public review at City of Santa Clarita, 23920 Valencia Boulevard, Suite 300, California, and is incorporated by reference in this EIR.



SOURCE: Impact Sciences, Inc. – July 2010

FIGURE **3.0-1**

Cumulative Impact Analysis Methodology

In summary, the first step in evaluating cumulative impact potential is to predict the amount of future cumulative growth that is expected to occur. As indicated previously in this EIR section, such predictions have been completed under two growth scenarios, the Development Monitoring System (DMS) Build-Out Scenario and the SCV Cumulative Build-Out Scenario. Where the boundaries of an affected service district are precisely defined, the growth prediction was adjusted to estimate future growth on a district-by-district basis. Where boundaries are not as narrowly defined, the total cumulative growth prediction for the SCVCTM is utilized. For those impacts that are isolated to just the project site, the prediction of future growth beyond that proposed for the site or the expected tributary area is not needed. The database (growth predictions) used to assess cumulative impacts is provided in **Appendix 3.0** of this EIR.

4. COUNTY OF LOS ANGELES DEVELOPMENT MONITORING SYSTEM

The existing General Plan of the County of Los Angeles includes provisions known as the "Development Monitoring System" (DMS) to give decision makers information about the existing capacity of certain public services at the time a new development proposal is considered in the four major Urban Expansion Areas of the Los Angeles County General Plan (Antelope Valley, Santa Clarita Valley, Malibu/Santa Monica Mountains, and East San Gabriel Valley).[2] Specifically, the DMS was established to support the following 1987 General Plan Amendment Policy 22: "Ensure that new development in Urban Expansion Areas will occur in a manner consistent with state plan policies and will pay for the expansion costs that it generates." Expansion cost is defined as "the capital cost of constructing the smallest facility acceptable to the servicer provider. The expansion costs for schools, fire, sewerage, and libraries are included in the Development Monitoring System."

The County's DMS includes a computerized database that incorporates information supplied by service providers, and determines capital facility capacity and demand placed on the system by existing, pending, approved, and recorded projects for which land divisions have been filed within the County for the four major Urban Expansion Areas. This system quantitatively determined project and cumulative impacts on specified public services in the four major Urban Expansion Areas.

2 See Resolution of the Los Angeles County Board of Supervisors, Plan Amendment Case No. S.P. 86-173.

Since the County adopted the DMS, however, expansion costs for most public services are no longer covered by the County's General Fund, but rather by development fees. For example, in lieu of the DMS, the County now requires all new development to pay its fair share of the development fees imposed for the following public services:

- Library Facilities Mitigation Fee (see Los Angeles County Code, title 22, Chapter 22.72);
- Sewer Connection Mitigation Fee (see California Health & Safety Code, section 5474);
- School Facilities Fee (see California Government Code, section 53080); and
- Fire Protection Facilities Fee (see California Revenue & Finance Code, title 4, chapter 4.92).

In addition, since the DMS was added to the County's General Plan in 1987, water service (which was tracked by DMS) is now linked to land planning through state laws designed to ensure that an adequate water supply exists for new development, in conjunction with other planned and projected demands. For example, a Water Supply Assessment (WSA) must be prepared for most larger-scale development pursuant to applicable sections of the California Water Code and the California Public Resources Code as contemplated by Senate Bill 610 (Costa, SB 610, Chap. 643, Stats. 2001).[3] These state statutory provisions require public water agencies, parties, or purveyors that may supply water to certain proposed development projects to prepare a WSA for use by the lead agency in compliance with CEQA.

The Urban Water Management Planning Act (UWMP Act; Water Code sections 10610-10656) also requires most water agencies to adopt and implement an Urban Water Management Plan (UWMP). The UWMP assesses whether there is sufficient water supply to meet the demand of a particular service area during normal, dry, and multiple dry years over a 20-year horizon. The UWMP must be updated every five years, and includes other information on water use, water resources, recycled water, water quality, reliability planning, conservation practices, and water shortage contingency planning.

In light of the above, expansion costs for libraries, sewers, schools, fire, and water service are now covered by state law, County and City regulations, and local agency fees; thus, the DMS assessment is no longer necessary.

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3 SB 610 amended section 21151.9 of the California Public Resources Code (CEQA), and amended sections 10631, 10656, 10910, 10911, 10912, and 10915 of the California Water Code, repealed section 10913 of the California Water Code, and added an amended section 10657 of the California Water Code.