4.14 Utilities and Service Systems

This section of the Draft EIR includes an assessment of existing utilities and service systems in the project area and an evaluation of potential impacts to those utilities and services that could result from implementation of the Valley Oaks project (the proposed project). Utilities and service systems include water service, wastewater service, solid waste service, and electricity, natural gas, and telephone service. Each subsection includes descriptions of existing facilities, potential environmental impacts resulting from implementation of the proposed project, mitigation measures where appropriate, and cumulative impacts.

4.14.1 WATER SERVICE

4.14.1.1 EXISTING SETTING

HIDDEN VALLEY LAKE COMMUNITY SERVICES DISTRICT

The Hidden Valley Lake Community Services District (HVLCSD or District) provides municipal water service to the community of Hidden Valley Lake and would be the sole water purveyor for the proposed project.

Existing Water Supply

The HVLCSD obtains water from the Coyote Valley Groundwater Basin (CVGWB) by means of three existing wells which pump from the underflows of Putah Creek. The District holds appropriative water rights obtained from the State Water Resources Control Board (SWRCB Permit 20770B & License 13527) as well as a riparian right obtained from the former Stonehouse Mutual Water Company, which was acquired by HVLCSD in 1993. According to the existing SWRCB water rights, the District is permitted to divert up to 2,300 acre-feet annually from Putah Creek for municipal and irrigation uses as well as for fish and wildlife preservation within the downstream Putah Creek riparian corridor (Wagner & Bonsignore, 2007).

The District has three domestic water supply sources consisting of Grange Wells 1, 2, and 3. Well 1 is the District's main well and is used daily. Wells 2 and 3 are used only during the summer season and their uses are rotated as a supplement to Well 1. The combined maximum total source capacity of these wells is 2.72 million gallons per day (mgd) or 1,889 gallons per minute (gpm). A fourth well that does not meet state well construction standards, and is therefore not used as part of the domestic water system, supplies irrigation water for the District and has an approximate capacity of 1.44 mgd (1,000 gpm) (Winzler & Kelly, 2001; Winzler & Kelly, 2007).

Existing Water Demand

HLVCSD provides municipal water to both residential and non-residential customers as well as non-potable water for irrigation of the community golf course.

Residential Demand

As of 2007, the District had a total of 2,391 residential water connections (Winzler & Kelly, 2007). The average daily water demand per connection is estimated at 368 gpd while the average peak daily water demand per connection is estimated at 702 gpd (Winzler & Kelly, 2001). The total average daily water demand for residential uses is approximately 879,888 gpd with a peak total daily demand of approximately 1,678,482 gpd.

Non-Residential Demand

As of 2000, there were 28 non-residential connections served by the District including the Coyote Valley Elementary School, Hardester's Market, and the Hidden Valley Lake Association (multiple individual connections plus the golf course). The average historical daily and maximum daily demand for each of these uses is summarized in **Table 4.14.1-1** below.

TABLE 4.14.1-1
HISTORICAL AVERAGE DAILY WATER DEMAND BY NON-RESIDENTIAL USE (1995–2000)

Use	Average Daily Demand (gpd)	Average Peak Daily Demand (gpd)
Coyote Valley Elementary School	1,118	1,301
Hardesters Store	1,114	1,741
Hidden Valley Lake Association (excluding the golf course)	27,225	71,025
	28,457	**74,067**

Source: Winzler & Kelly, 2001

Golf Course Demand

In 1996, approximately 36 percent of the District's total production went to the golf course for irrigation. Since that time, through the District's promotion of the use of reclaimed wastewater, the golf course significantly decreased its use of potable water for irrigation. In 1997, the percentage of the District's total production that went to the golf course for irrigation was reduced to 12 percent and at present is down to almost zero percent (Winzler & Kelly, 2001).

Total Existing District Demand

Based on the historical water demand data, the current total average daily demand for all uses within the District (residential, non-residential, golf course irrigation) is estimated to be approximately 0.91 mgd. The total average peak daily demand for all uses is approximately 1.75 mgd. As stated above, the current existing total capacity of the District's wells is 2.72 mgd. Therefore, the District's existing capacity is sufficient to meet existing demands with a remaining capacity of approximately 0.97 mgd (Winzler & Kelly, 2001).

Future Water Demand

The District's current service area is anticipated to reach buildout by 2013 when the residential unit count reaches 3,281. At buildout, the District's average daily water demand is projected to be 1.25 mgd or approximately 1,400 acre-feet per year (Winzler & Kelly, 2001).

Existing Water Distribution, Storage, and Treatment Infrastructure

The existing HLVCSD water system consists of a distribution system, multiple booster pumps and stations, storage facilities, and a treatment facility. The locations of the District's existing water system facilities are depicted in **Figure 4.14.1-1**.

The District's distribution system consists of seven pressure zones which are hydraulically separated: Zone 1, Zone 4, Zone 9, Zone 9A, Knollview Zone, Eaglerock Zone, and Little Peak

Zone (Winzler & Kelly, 2001). The distribution system is looped with pipelines ranging from 4 inches to 12 inches in diameter and totaling approximately 164,800 feet. The majority of the distribution system is comprised of 6-inch asbestos cement (AC) pipe, with some of the newer lines consisting of high pressure polyvinylchloride (C-900 PVC) pipe (Winzler & Kelly, 2001).

HVLCSD's pumping/booster facilities include four water treatment booster pumps, the Greenridge Booster Station, and Tank 9/Eagle Rock Booster Station. The four water treatment booster pumps are located at the District's treatment plant and each have a capacity of 300 gallons per minute. Two of these pumps are used to boost water into Zone 1 and the other two are used to boost water into Zone 4. The Greenbriage Booster Station consists of two 200 gpm pumps which are used to boost water from Zone 1 into Tank 9. The Tank 9/Eagle Rock Booster Station is used to pump water from Tank 9 into the Little Peak storage tank (Winzler & Kelly, 2001).

HVLCSD's existing storage network includes the following facilities: (1) Little Peak Tank with a storage capacity of 500,000 gallons; (2) Tank 9 with a storage capacity of 150,000 gallons; (3) Tank 1A with a storage capacity of 150,000 gallons; (4) Tank 1B with a storage capacity of 200,000 gallons; and (5) Tank 4 with a storage capacity of 150,000 gallons. The District's current combined storage capacity for all tanks is approximately 1.15 million gallons (Winzler & Kelly, 2001).

The District's water treatment facility utilizes gas chlorine injection followed by detention in two chlorine contact tanks operated in series. Both chlorine contact tanks are redwood and have capacities of 15,000 gallons and 31,000 gallons, respectively (Winzler & Kelly, 2001).

4.14.1.2 REGULATORY FRAMEWORK FOR WATER SERVICE

STATE

Senate Bill (SB) 610 and Assembly Bill (AB) 901

During the 2001 regular session of the State Legislature, SB 610 and AB 910 – Water Supply Planning, were signed and became effective January 1, 2002. SB 610 amends Public Resources Code Section 21151.9, requiring any EIR, negative declaration, or mitigated negative declaration for a qualifying project to include consultation with affected water supply agencies (previous law applied only to notices of preparation). SB 610 also amends Water Code Section 10656 and 10657 to restrict state funding for agencies that fail to submit their urban water management plan to the Department of Water Resources, and Water Code Section 10910 to describe the water supply assessment that must be undertaken for projects referred under PRC Section 21151.9, including an analysis of groundwater supplies. Water agencies would be given 90 days from the start of consultation in which to provide a water supply assessment to the CEQA lead agency; Water Code Section 10910 would also specify the circumstances under which a project for which a water supply assessment was once prepared would be required to obtain another assessment. AB 901 amends Water Code Section 10631, expanding the contents of the urban water management plans to include further information on future water supply projects and programs and groundwater supplies.

California Government Code Section 66773.7 (SB 221)

Government Code Section 66455.3 requires that the local water agency be sent a copy of any proposed residential subdivision of more than 500 dwelling units within 5 days of the subdivision application being accepted as complete for processing by the city or county. Government Code Section 66473.7 provides detailed requirements for establishing whether a "sufficient water

supply" exists to support any proposed residential subdivisions of more than 500 dwellings, including any such subdivision involving a development agreement. When approving a qualifying subdivision tentative map, the city or county must include a condition requiring that a sufficient water supply be available. Proof of availability must be requested from and provided by the applicable public water system. If there is no public water system, the city or county must undertake the analysis described in Government Code Section 66473.7. The analysis must include consideration of effects on other users of water and groundwater.

California Water Code Section 10610–10645 (Urban Water Management Plan)

Water Code Section 10617 requires that every urban water supplier that provides water to more than 3,000 customers or supplies more that 3,000 acre-feet per year prepare and adopt an Urban Water Management Plan (UWMP). The UWMP shall describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. Additionally, the UWMP identifies and quantifies, to the extent practicable, the existing and planned sources of water available to the supplier and the reliability of the water supply and vulnerability to seasonal or climatic shortages.

State Water Resources Control Board Licenses and Permits

On November 29, 2001, SWRCB issued License 13527 and Permit 20770B pursuant to Applications 30049A and 30049B, respectively. License 13527 allows HVLCSD to divert up to 651 acre-feet annually from the underflow of Putah Creek by means of its Grange Road wells located in the Coyote Valley Groundwater Basin for municipal purposes with the Hidden Valley Lake Subdivision. Permit 20770B provides for HVLCSD to divert an additional 1,649 acre-feet annually from the underflow of Putah Creek at it's Grange Road wells and Agricultural Well for municipal use within the subdivision, and for fish and wildlife preservation within the Putah Creek corridor.

LOCAL

Lake County General Plan

Table 4.14.1-2 displays the proposed project's consistency with applicable Lake County General Plan water service policies. While this EIR analyzes the project's consistency with Lake County's General Plan pursuant to State CEQA Guidelines Section 15125(d), the Planning Commission and/or Board of Supervisors will make the final determination of the project's consistency with the identified General Plan policies.

TABLE 4.14.1-2
PROJECT CONSISTENCY WITH THE LAKE COUNTY GENERAL PLAN
WATER SERVICE POLICIES

General Plan Policies	Consistency with General Plan	Analysis
Policy PFS-1.3: Maintaining Existing Levels of Service The County shall ensure that proposed developments do not create significant adverse impacts on existing natural or man made infrastructure of the County and that the necessary man made infrastructure to support the project will be in place, bonded for, or other guarantee acceptable to the Approval Authority	Yes	The proposed project would not have a significant adverse effect on HVLCSD utilities, as discussed in Impact 4.14.1.1 of this EIR.

General Plan Policies	Consistency with General Plan	Analysis
prior to the filing of final maps or granting of other entitlements.		
Policy WR-1.2: Sustainable Groundwater Withdrawal The County shall manage groundwater resources within its jurisdiction through ordinances, project approvals and agreements to ensure an adequate, safe, sustainable and economically viable groundwater supply for existing and future use within the County, in order to maintain and enhance the natural environment, protect existing groundwater users, the overall economy of the County, and groundwater and surface water quality and quantity in a manner consistent with existing law and with a doctrine of safe yield within the groundwater basins of the County.	Yes	The proposed project would be an extension of HVLCSD facilities, and no substantial expansion of existing infrastructure would be required. It has been determined that this project would not cause any significant depletion of groundwater supplies and that current water supplies are adequate for the proposed development (see Impact 4.14.1.1).
Policy WR -1.3: Groundwater Monitoring The County shall develop and maintain a program of groundwater monitoring which gathers data on the behavior of groundwater source areas and basins twice yearly, in September and May. Additionally, the County shall identify and monitor potential sources of groundwater pollution. The County shall encourage active participation by local stakeholders and develop groundwater monitoring partnerships with local groundwater users. Prior to developing groundwater monitoring programs, the County shall consult with public agency water providers that have established water management programs to incorporate any monitoring data collected by those providers.	Yes	All groundwater services on the project site will fall under the jurisdiction of the HVLCSD, which has its own monitoring programs consistent with this policy.
Policy WR-3.2: Adequate Water Availability The County shall review new development proposals to ensure the intensity and timing of growth will be consistent with the availability of adequate water supplies. Projects must provide breaking ground for construction.	Yes	According to the SB 610 evaluation done for this project, water use has been shown to be consistent with the availability of adequate water supplies. See the discussion under Impact 4.14.1.1 for more details regarding the availability of adequate water supplies. Under the Lake County Code, Chapter 5, Article 1, Section 8.7, no permits will be granted for development where the applicant cannot provide satisfactory evidence that an adequate supply of water is or will be readily available.
Policy WR-4.2: Additional Water Supplies The County, working cooperatively with other local, state and federal agencies as well as developers, shall attempt to provide for the development of additional water supplies through any feasible means. These may include, but are not limited to; the expansion of existing water supply facilities, the promotion of water conservation programs, the re-operation of existing water supply facilities, the active implementation of locally or regionally cost	Yes	Implementation of the proposed project will result in increased revenue to the District through the payment of capital facilities fees and regular service rates that can be utilized to develop additional water supplies such as new wells.

General Plan Policies	Consistency with General Plan	Analysis
effective water resources, the active management of the County's groundwater basins and the development of other feasible methods.		
Policy WR-5.3: Efficient Use of Water Supplies The County shall promote efficient use of surface and groundwater resources to maintain a supply for all reasonable and beneficial uses within the County that is affordable and reasonable to the type of use of the water supply, and shall take appropriate measures to discourage unreasonable use and waste in the issuance of discretionary entitlements.	Yes	The proposed project would be an extension of HVLCSD facilities, and no substantial expansion of existing infrastructure would be required (see Impact 4.14.1-1). It has been determined that this project would not cause any significant depletion of groundwater supplies and that current water supplies are adequate for the proposed development (see Impact 4.14.1-2).

Middletown Area Plan

The Middletown Area Plan identifies policies specifically pertaining to the Middletown community area, as identified by the Lake County General Plan. **Table 4.14.1-3** displays the proposed project's consistency with applicable Middletown Area Plan water service policies. While this EIR analyzes the project's consistency with the Middletown Area Plan pursuant to State CEQA Guidelines Section 15125(d), the Planning Commission and/or Board of Supervisors will make the final determination of the project's consistency with the identified Area Plan policies.

TABLE 4.14.1-3
PROJECT CONSISTENCY WITH THE MIDDLETOWN AREA PLAN
WATER SERVICE POLICIES

Middletown Area Plan Policies	Consistency with Area Plan	Analysis
Policy 3.33: Developments should be designed to maximize groundwater recharge capabilities on the property where practical.	Yes	Coyote Creek runs through the project site, and open space and parks run throughout the site. This is expected to maximize groundwater recharge capabilities on the property.
Policy 3.34: Water resources for existing and future beneficial residential, commercial, and agricultural uses should be provided.	Yes	The SB 610 evaluation for the project determined that this project would not cause any significant depletion of groundwater supplies and that current water supplies are adequate for the proposed development.
Policy 3.35: Necessary support should be provided to ensure the protection of area water rights to accommodate projected long-term water needs.	Yes	According to the SB610 evaluation done for this project, long-term licenses are in place for HVLCSD to ensure the long-term proposed needs of the project.
Policy 5.9d: Groundwater usage of all water service agencies shall be monitored to prevent long-term degradation and depletion of groundwater basins in the vicinity of Hidden Valley Lake and Middletown.	Yes	The SB 610 evaluation for the project determined that this project would not cause any significant depletion of groundwater supplies and that current water supplies are adequate for the proposed development.

Middletown Area Plan Policies	Consistency with Area Plan	Analysis
Policy 5.10b: The creation or extension of a community water or sewer system in an area where water quality does not meet drinking water standards shall be designed to be consistent with the land use map and pertinent general plan goals, objectives and policies.	Yes	According to the most recent HVLCSD Annual Water Quality Report, municipal water provided by the District meets all federal and state requirements (HVLCSD, 2007).
Policy 5.10c: The extension of services by the Callayomi Water District, Anderson Springs Community Services District, or the Hidden Valley Community Services District shall conform to the District's sphere of influence, as approved by LAFCO. It is recommended that the ultimate sphere of influence amended to coincide with the sewer district boundaries. The extension of District services beyond its sphere of influence of community area boundary shall be allowed only when documented water quality problems are found to occur in outlying subdivisions and no other sources of water are reasonable available, or when consistent with the area plan with adequate services available.	Yes	HVLCSD has requested a change in its Sphere of Influence (SOI) to accommodate the entire Coyote Valley area, which has been submitted to Local Agency Formation Commission (LAFCo) for approval. All of the legal mapping was completed prior to application submittal. The District prepared a Municipal Service Review for the change and accepted it at a public hearing. SOI amendments and changes are subject to LAFCo approval. Final approval by LAFCo would occur upon completion of the environmental document. The SOI request is based on the presence of iron and manganese within the current service area boundaries. Therefore, this SOI extension would be consistent with this policy.

Lake County Groundwater Management Plan

The Lake County Groundwater Management Plan (LCGWMP) was developed by the Lake County Watershed Protection District to provide guidance in managing the County's ground water resources. The District initiated a number of efforts to address water resources issues in the county, including documenting the current status of water use and supply, identifying areas of need, and developing recommendations to ensure a high quality and reliable supply of water in the future. The LCGWMP, together with the Lake County Water Inventory and Analysis and the Lake County Water Demand Forecast, which were all approved by the County Board of Supervisors in April 2006, provide a framework for the County and individual water consumers to implement effective water resource management programs.

Lake County Groundwater Export Ordinance

On January 26, 1999, the Lake County Board of Supervisors adopted an ordinance adding Chapter 28 to the Lake County Code regarding the extraction and exportation of groundwater from Lake County. The ordinance was developed in conjunction with, and with the approval of, the Water and Land Subcommittee of the Lake County Coordinating Resource Management Committee and the Lake County Community Development Department and various other County departments. The ordinance requires a permit to be issued by the County in order to extract and export groundwater in excess of one acre-foot per year, which is granted if findings and determination is made that the extraction will not cause or increase an overdraft of the groundwater underlying the county, will not adversely affect the long-term ability for storage or transmission of groundwater within the aquifer, or will not (together with other extractions) exceed the safe yield of the groundwater underlying the county unless the safe yield is exceeded only by extractions in connection with a conjunctive use program.

Coyote Valley Groundwater Basin 2005 Monitoring Report

HVLCSD is required to prepare annual reports documenting compliance with terms and conditions of its SWRCB diversion and use permits. The Coyote Valley Groundwater Basin 2006 Monitoring Report was completed in January 2007 and includes all surface water and groundwater data for 2006 as well as historical diversion and use rates.

Hidden Valley Lake Community Services District Water Master Plan Update

HVLCSD's Water Master Plan Update was developed to update the Water Master Plan and Hydraulic Model that was developed for the Stonehouse Mutual Water Company in April 1992. The HVLCSD took ownership and operation of the Stonehouse Mutual Water Company and all system assets and properties in late 1992. The Water Master Plan Update includes historical and potential growth data, an evaluation of existing and future water demands, source requirements and storage facilities and requirements, compliance with established standards and regulations, cost estimates and improvement alternatives, and prioritization of those improvements. The plan sets forth recommendations for system improvements and upgrades which serve as guidelines to eliminate existing deficiencies in the system, meet future capacity and regulatory requirements, modernize facilities and add redundancy, and improve reliability. HVLCSD is in the planning process for future Master Plan updates, as the last update was revised in June 2001.

4.14.1.3 WATER SERVICE IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G thresholds of significance. A water supply impact is considered significant if implementation of the project would:

1) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);

2) Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

3) Have sufficient water supplies available to serve the project from existing entitlements and resources, or new or expanded entitlements.

METHODOLOGY

This section is based on review of applicable Lake County General Plan and Middletown Area Plan policies, the Lake County Groundwater Management Plan, and consultation with HVLCSD staff and consultants. The Lake County Groundwater Management Plan is available for public review at:

Lake County Department of Water Resources
255 North Forbes
Lakeport, CA 95453

In addition to the analysis contained in this section, a Water Supply Assessment (WSA) was prepared for the proposed project in accordance with Senate Bill 610. The WSA is included in this EIR as **Appendix K**. The WSA was utilized in the preparation of this section to determine the proposed project's projected water demands and the adequacy of the proposed water purveyor's existing water supplies and entitlements to meet this demand.

PROJECT IMPACTS AND MITIGATION MEASURES

New or Expanded Water Supply and Distribution Facilities

Impact 4.14.1.1 Implementation of the proposed project would not require expansion of existing District water supply infrastructure but would result in the need for additional water distribution and storage facilities. This is considered a **less than significant** impact.

The proposed project would be provided municipal water service by HVLCSD. The estimated water demands of the proposed project are summarized in **Table 4.14.1-4.**

TABLE 4.14.1-4
PROPOSED PROJECT'S ESTIMATED WATER DEMAND

Land Use	Water Demand	
	Acre-Feet per Year (af/yr)	Million Gallons per Day (mgd)
Residential	177.7	0.159
Residential Care Facility	3.5	0.005
Commercial	94.2	0.084
Total	**277.4**	**0.248**

Source: Civil Design Consultants, 2008

The capacity of the District's existing wells is 2.72 mgd, while the District's current peak day demand is approximately 1.75 mgd. The District has a remaining capacity available for future development of approximately 0.97 mgd. As shown in **Table 4.14.1-4** above, the project's estimated water demand at buildout would be 0.248 mgd. The District's existing groundwater wells therefore have sufficient existing capacity to serve the proposed project, and no new or expanded water supply infrastructure will be required.

The proposed project would require the expansion and upgrade of some existing District water storage and distribution facilities and infrastructure. The project proposes to construct a water distribution system on the project site that would be looped and would consist of 6- to 12-inch water mains. The system would tie into the District's existing conveyance system located along Hartmann Road in District Zone 4. Zone 4 has an existing water tank with a capacity of approximately 650,000 gallons. However, HVLCSD has indicated that it would be required to add a new storage tank with a capacity of 500,000 gallons in order to provide adequate water supply and pressure for municipal use and fire protection for the proposed project. The tank would be constructed on previously disturbed HVLCSD property.

The construction of water service, storage, and conveyance facilities required to serve the project would be phased consistent with demand and service requirements and would be constructed by HVLCSD. Most of the required infrastructure would be constructed within public

rights-of-way and in previously disturbed areas to minimize potential environmental impacts. The potential environmental impacts of constructing the proposed storage tank and other required infrastructure would likely include a change in the visual character of the site(s), air emissions associated with construction activities, disturbance of natural vegetation, potential disturbance of unknown cultural resources, soil erosion and related impacts to water quality, and temporary construction noise and traffic. Each of these potential impacts is addressed and, where necessary, mitigation measures are provided within the appropriate section (4.1 through 4.14) of this DEIR.

The capacity of HVLCSD's existing water supply infrastructure is sufficient to serve the proposed project. Although the project would require new and expanded water distribution and storage infrastructure, the environmental impacts of constructing this infrastructure would not be considered significant and are fully addressed elsewhere in this DEIR. Therefore, this impact is considered **less than significant.**

Mitigation Measures

None required.

4.14.1.4 WATER SERVICE CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

For the purposes of analyzing the project's cumulative demand for new or expanded water supply, storage, and distribution infrastructure, the cumulative setting is HVLCSD's service area and sphere of influence (SOI). Recently approved and proposed projects, as well as any other reasonably foreseeable development envisioned by the Lake County General Plan, comprise the cumulative setting for water service impacts. A list of recently approved and proposed projects can be found in **Table 4.0-1** in Section 4.0, Introduction to the Environmental Analysis and Assumptions Used. In addition, three major development projects which were in the early planning stages and so were not included in the General Plan Update, and therefore not included in **Table 4.0-1**, are considered part of this cumulative analysis. These projects are:

- Johnson Ranch – assumed 1,100 residences
- Crazy Creek – assumed 1,500 residences
- Raven Hill – assumed 3 to 6 parcels of low density residences

For the purposes of analyzing the proposed project's cumulative impact to groundwater supplies and groundwater recharge potential, the cumulative setting includes the District's service area, the entire Upper Inventory Unit of Lake County, and the basin-fill aquifer system of the Coyote Valley Groundwater Basin.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Demand for New or Expanded Water Supply and Distribution Facilities

Impact 4.14.1.2 The proposed project, in addition to other reasonably foreseeable development in the area, would result in increased demand for water supply from the District as well as new or expanded water distribution, storage, and

treatment infrastructure. The project's contribution to this impact is considered to be **less than cumulatively considerable.**

Development of the proposed project and other reasonably foreseeable development within the District's SOI would require additional water supply and storage capacity and extension of the existing water distribution system, including pipelines and other transmission and conveyance infrastructure.

There are a total of 3,281 buildable lots within the District's service area. As of 2007, 2,391 of these lots had been built out (Winzler & Kelly, 2007). Assuming a conservative growth rate of 6 percent, buildout of the residential lots is expected to occur by 2013 (Winzler & Kelly, 2001). As of 2000, there were 28 non-residential water service connections in the service area with buildout of non-residential uses expected to reach approximately 40 connections (Winzler & Kelly, 2001). The projected future total demand for the District's current service area at buildout is 1.25 mgd on average or 2.41 peak daily demand (Winzler & Kelly, 2001).

Additional development is anticipated outside of the current service area but within the District's expanded SOI which can be reasonably assumed to be implemented in the future and serviced by HVLCSD. It is projected that future water demands within the expanded SOI will average 3.24 mgd, with a peak of 6.21 mgd. With the addition of the proposed project, this total SOI buildout demand would be increased to a daily average of 3.49 mgd or a peak daily demand of 6.49 mgd.

As stated previously in this section, the District's current water supply capacity from its three existing wells is 2.72 mga. Separate analyses prepared for the District recommend that additional wells be constructed to meet full buildout conditions, and locations for some of these wells have been proposed (Winzler & Kelly, 2007). The projected growth within the District's service area and expanded SOI would also require the expansion of the District's existing water distribution system including pipelines and pumping facilities as well as new storage facilities to ensure adequate water supply and pressure for municipal purposes and fire protection.

The HVLCSD treatment facility is an existing water system constructed to serve existing and projected growth within the HVLCSD service area and would not need to be expanded as a result of the proposed project when combined with other future development within the HVLCSD service area.

HVLCSD finances new transmission lines, pump stations, wells, and other water service related infrastructure through assessment bonds which are funded through development and user/service fees from new developments and existing customer connections. These funding mechanisms would ensure adequate and reliable water distribution, conveyance, and treatment for cumulative/buildout conditions within the HVLCSD service area boundaries.

As previously discussed, new and expanded infrastructure is typically constructed by the District within public rights-of-way or in previously disturbed areas in order to avoid environmental impacts. Such impacts are generally related to aesthetics, air quality, water quality, noise, and traffic (see Impact 4.14.1.1). Specific impacts would be identified and analyzed during the environmental review process for individual development projects prior to their approval.

The proposed project would provide its fair share of the cost of constructing any required infrastructure improvements through the payment of capital facilities fees and regular service charges. The potential environmental effects of constructing the infrastructure are not anticipated to be significant and are addressed in the appropriate sections of this DEIR.

Therefore, the project's contribution to this cumulative impact is considered **less than cumulatively considerable.**

Mitigation Measures

None required.

4.14.2 WASTEWATER SERVICE

4.14.2.1 EXISTING SETTING

HIDDEN VALLEY LAKE COMMUNITY SERVICES DISTRICT

The Hidden Valley Lake Community Services District is located approximately 4 miles north of the community of Middletown on the eastern side of State Route 29 (SR 29). HVLCSD was formed by voters in 1984 and gave the District both water and sewer authority. HVLCSD's wastewater system provides wastewater collection, treatment, and disposal for all customers within its service area boundaries which is treated and disposed of by one of two means. The majority of the lots are served by private on-site wastewater systems, with the remainder of properties connected to and served by HVLCSD's municipal wastewater system. The design and installation of any private system is regulated by the Lake County Environmental Health Department. The HVLCSD municipal wastewater system generally serves domestic residential uses and institutional uses. There are no industrial customers within the HVLCSD boundaries and only a few existing commercial connections which are associated with Hidden Valley Lake golf course operations.

The current HVLCSD boundary is the boundary for the Hidden Valley Lake subdivision and golf course. In addition, HVLCSD provides service to a few areas outside the subdivision, which include the HVLCSD district office and the retail uses along Hartmann Road, as well as the Coyote Valley Elementary School. Within the boundary, the HVLCSD has 1,401 residential connections and 28 commercial connections (Winzler & Kelly, 2007).

The HVLCSD wastewater conveyance system is made up of 84,300 linear feet of gravity mains and 16,300 linear feet of force mains. The gravity mains range in diameter from 4 inches to 15 inches, and the force mains range in diameter from 6 inches to 12 inches. There are seven pump stations which serve to transport sewage to the treatment plant. Currently, all wastewater converges to a single 10-inch force main crossing under Putah Creek for treatment at the plant (Winzler & Kelly, 2007).

Wastewater Treatment Plant

The HVLCSD wastewater treatment plant (WWTP) is located at 18896 Grange Road in Middletown. The plant's current (June 2008) dry weather flow capacity is 350,000 gallons per day, which can serve 2,200 parcels (residential and commercial). The plant is currently (June 2008) operating at 200,000 gpd and is serving 1,429 parcels. The plant was designed to accommodate a second and third treatment train on either side of the existing plant, which could serve 2,200 parcels each (Aust, 2008a). Upon full expansion, the treatment plant could handle a total capacity of 2.67 mgd (Winzler & Kelly, 2007).

4.14.2.2 REGULATORY FRAMEWORK FOR WASTEWATER SERVICE

LOCAL

Lake County Code Chapter 9 "Health and Sanitation"

Lake County Code Chapter 9 Article III "Sanitary Disposal of Sewer" regulates individual, private, and public sewage systems for all properties located within Lake County. County Code Chapter 9 includes permitting requirements for all public and private wastewater systems (septic tanks, cesspools, etc). New systems are under the jurisdiction of the Lake County Health Department, which evaluates permit requests considering several factors, including but not limited to present and projected population served by the system, size of lots, topography, porosity and absorbency of soils (soil characteristics), and groundwater and surface water conditions. Mandatory compliance with Chapter 9 rules and regulations ensure that wastewater systems are constructed and maintained to eliminate or reduce injuries and potential public health hazards.

Lake County General Plan

Table 4.14.2-1 displays the proposed project's consistency with applicable Lake County General Plan wastewater service policies. While this EIR analyzes the project's consistency with Lake County's General Plan pursuant to State CEQA Guidelines Section 15125(d), the Planning Commission and/or Board of Supervisors will make the final determination of the project's consistency with the identified General Plan policies.

TABLE 4.14.2-1
PROJECT CONSISTENCY WITH THE LAKE COUNTY GENERAL PLAN
WASTEWATER SERVICE POLICIES

General Plan Policies	Consistency with General Plan	Analysis
Policy PFS-1.3: Maintaining Existing Levels of Service The County shall ensure that proposed developments do not create significant adverse impacts on existing natural or man made infrastructure of the County and that the necessary man made infrastructure to support the project will be in place, bonded for, or other guarantee acceptable to the Approval Authority prior to the filing of final maps or granting of other entitlements.	Yes	HVLCSD has indicated that it has adequate wastewater treatment, conveyance, and disposal capacity to accommodate the demand generated by the proposed project for short-term and buildout conditions (Aust, 2006), which would ensure compliance with this policy.
Policy PFS-6.3: Undergrounding of Utility Lines The County shall require utility lines in new subdivisions to be placed underground, except where it is not feasible due to operational constraints.	Yes	Wastewater services associated with this project will be co-located in trenches with other utilities and will be undergrounded within roadway rights-of-way and public utility easements.

Middletown Area Plan

The Middletown Area Plan identifies policies specifically pertaining to the Middletown community area, as identified by the Lake County General Plan. **Table 4.14.2-2** displays the proposed project's consistency with applicable Middletown Area Plan wastewater service

policies. While this EIR analyzes the project's consistency with the Middletown Area Plan pursuant to State CEQA Guidelines Section 15125(d), the Planning Commission and/or Board of Supervisors will make the final determination of the project's consistency with the identified Area Plan policies.

TABLE 4.14.2-2
PROJECT CONSISTENCY WITH THE MIDDLETOWN AREA PLAN
WASTEWATER SERVICE POLICIES

Middletown Area Plan Policies	Consistency with Area Plan	Analysis
Policy 5.10b: The creation or extension of a community water or sewer system in an area where water quality does not meet drinking water standards shall be designed to be consistent with the land use map and pertinent general plan goals, objectives and policies.	Yes	According to the most recent HVLCSD Annual Water Quality Report, municipal water provided by the District meets all federal and state requirements (HVLCSD, 2007).

4.14.2.3 WASTEWATER IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G thresholds of significance. A wastewater service impact is considered significant if implementation of the project would:

1) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.

2) Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

3) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

METHODOLOGY

Evaluation of potential impacts on wastewater service is based on meetings and consultation with HVLCSD staff, review of the existing Lake County General Plan, the existing Lake County Code, and the Middletown Area Plan.

PROJECT IMPACTS AND MITIGATION MEASURES

Wastewater Treatment Impacts

Impact 4.14.2.1 Implementation of the proposed project would increase demand for wastewater treatment. This is considered a **less than significant** impact.

Wastewater treatment for the proposed project site would be provided by HVLCSD. The WWTP currently (June 2008) has a dry weather flow of 200,000 gpd. The plant's total dry weather flow capacity is 350,000 gpd (Aust, 2008a). The WWTP has a wet weather flow of 280,000 mgd with a wet weather flow capacity of 894,000 mgd (Winter, 2008). **Table 4.14.2-3** below shows the projected wastewater generation for the project.

TABLE 4.14.2-3
PROJECTED WASTEWATER FLOWS

Land Use Type	Wastewater Generation (gpd)
Residential	95,160
Assisted Living Facility	2,940
Commercial	50,410
Total	**148,510**

Civil Design Consultants, 2008

The plant's wet weather flow is 40 percent more than its dry weather flow. Based on this percentage, the project's wet weather flow would be 207,914 gpd. Both flow rates are well below the plant's capacity. Therefore, construction of new wastewater treatment capacity or expansion of existing capacity would not be required to serve the proposed project. As such, environmental impacts from the provision of such treatment capacity would not occur and impacts to wastewater treatment are considered **less than significant.**

Mitigation Measures

None required.

Wastewater Conveyance Impacts

Impact 4.14.2.2 Implementation of the proposed project would increase wastewater flows and require the construction of wastewater conveyance infrastructure. This is considered a **less than significant** impact.

Wastewater throughout the project site would be collected and conveyed through 8-inch laterals, as well as a few 18-inch mains. Wastewater would be conveyed off the project site through an 18-inch main through an existing easement adjacent to the Coyote Valley Elementary School and then to an existing pump station located on Hartmann Road. This pump station would be upgraded to accommodate the flows from the proposed project (Aust, 2006). Upgrades and improvements would not result in physical environmental effects, since the upgrades would not result in any ground disturbance activities (Aust, 2008b).

Aside from the potential need to add additional staff, HVLCSD does not foresee any problems with providing wastewater service to the Valley Oaks project, provided that developer financing for required facilities is provided in a timely manner (Aust, 2008a). To fund the required improvements for the extension of the underground mains and collection pipes, as well as the upgrades to the pump station on Hartmann Road, HVLCSD requires that new development install all necessary infrastructure improvements needed to accommodate the increase in wastewater flows generated as a result of the project and pay for improvements and applicable service charges and connection fees prior to the operation of the project.

The environmental impacts associated with the placement of underground wastewater pipes on the project site could include impacts to biological resources, cultural resources, water quality, and other topics affected by ground disturbance. These impacts are considered in aggregate in this EIR.

Since the developer would be required to fund and construct all necessary wastewater infrastructure to serve the proposed project, impacts to wastewater conveyance are considered **less than significant.**

Mitigation Measures

None required.

4.14.2.4 WASTEWATER SERVICE CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for wastewater service is the service area of HVLCSD. Existing, approved, and proposed projects, as well as any other reasonably foreseeable development envisioned by the Lake County General Plan, comprise the cumulative setting for wastewater service impacts. A list of recently approved and proposed projects can be found in **Table 4.0-1** in Section 4.0, Introduction to the Environmental Analysis and Assumptions Used.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Increased Demand for Wastewater Treatment

Impact 4.14.2.3 Implementation of the proposed project, in combination with existing, recently approved, proposed, and reasonably foreseeable development in the area, could require additional wastewater treatment, conveyance, and disposal capacity to accommodate future growth within HVLCSD service area boundaries. This impact is **cumulatively considerable.**

Future development within the HVLCSD service area boundaries would result in additional wastewater generation and the need for additional infrastructure and wastewater treatment. As discussed above under Impact 4.14.2.1, the proposed project would generate approximately 148,510 gpd of wastewater, which would only leave 1,490 gpd of excess treatment capacity available to serve future development in HVLCSD's service area. Any significant additional development within the HVLCSD service area would likely result in the need for expanded wastewater treatment capabilities. However, the plant was designed to accommodate a second and third treatment train on either side of the existing plant, which could serve 2,200 parcels each (Aust, 2008a). Upon full expansion, the treatment plant could handle a total capacity of 2.67 million gallons per day (Winzler & Kelly, 2007). Therefore, the plant would be able to treat additional wastewater produced by other proposed or reasonably foreseeable projects in the service area. Construction of the second and third treatment trains would likely require additional environmental review, pursuant to local requirements and the requirements of CEQA. However, as no engineering or other planning for such expansion has occurred by the date of this EIR, any discussion of the environmental impacts of such expansion would be purely speculative.

As with the proposed project, any new development requiring the extension of sewer mains and collector facilities would be required to fund and construct those facilities on the specific project site. The physical effects of constructing new wastewater infrastructure and facilities to accommodate future development within the HVLCSD service area would be analyzed and environmentally evaluated on a project-by-project basis as new development proposals are submitted.

Although HVLCSD has plans for expansion of the WWTP with additional development in the service area, no specific analysis has been completed by the release of this EIR. Any potential significant impacts resulting from the expansion of the WWTP and providing additional wastewater treatment capacity to the Coyote Valley area would be reduced to the extent feasible as part of the CEQA analysis for the WWTP expansion. Therefore, since future impacts from the WWTP expansion are not known, the project's contribution to cumulative wastewater conveyance and treatment is **cumulatively considerable** and **significant and unavoidable.**

Mitigation Measures

None available.

4.14.3 SOLID WASTE SERVICE

4.14.3.1 EXISTING SETTING

LAKE COUNTY PUBLIC SERVICES DEPARTMENT – INTEGRATED WASTE MANAGEMENT DIVISION

South Lake Refuse

The Integrated Waste Management Division oversees the collection of solid waste and the administration of recycling programs within the county. The division contracts with South Lake Refuse for weekly solid waste pickup services. South Lake Refuse is under contract with the County to pick up refuse in 32-gallon cans on a weekly basis for a small fee. South Lake Refuse also provides a weekly pickup of recyclables and green waste in separate 90-gallon carts free of charge. The County's contract with South Lake Refuse expires in 2013 but contains a 5-year extension option.

Landfill Capacity and Recycling Facilities

All solid waste generated by the proposed project would be taken to the Eastlake Sanitary Landfill, located at 16015 Davis Road, just east of the City of Clearlake. The Eastlake Sanitary Landfill is one of two disposal facilities in the county. The other site is the Lakeport Transfer Station, located at 910 Bevins Street in the City of Lakeport. The maximum tons per day (tpd) allowed at the Eastlake Sanitary Landfill is 200. The landfill has a total maximum capacity of 6,050,000 cubic yards (www.ciwmb.ca.gov, 2008b). The landfill has approximately 2,000,000 cubic yards of remaining capacity (Clymire, 2007), which is about 33 percent of the total maximum capacity. The anticipated closing date of the landfill is December 31, 2027 (www.ciwmb.ca.gov, 2008a).

Recyclables picked up by South Lake Refuse are eventually delivered to a Materials Recovery Facility (MRF) for sorting in St. Helena in Napa County. However, some of the collection vehicles may haul recyclables to their facility in Lower Lake before transferring them to St. Helena. The

green waste they collect is hauled to the South Lake Resource Recovery and Compost Facility on Quackenbush Mountain, which is adjacent to the Eastlake Sanitary Landfill.

Household hazardous materials are collected on a regularly scheduled basis by Hazmobile (a mobile collection service). Hazmobile is operated as a joint project by Lake and Mendocino counties. Residents are not charged for the use of this program.

4.14.3.2 REGULATORY FRAMEWORK FOR SOLID WASTE SERVICES

STATE

California Integrated Waste Management Act

The California Integrated Waste Management Act of 1989 (AB 939) requires every city and county in the state to prepare a Source Reduction and Recycling Element (SRRE) to its Solid Waste Management Plan that identifies how each jurisdiction will meet the mandatory state waste diversion goals of 25 percent by 1995 and 50 percent by 2000. The purpose of AB 939 was to "reduce, recycle, and re-use solid waste generated in the state to the maximum extent feasible."

The term "integrated waste management" refers to the use of a variety of waste management practices to safely and effectively handle the municipal solid waste stream with the least adverse impact on human health and the environment. The Act has established a waste management hierarchy, as follows:

- Source reduction;
- Recycling;
- Composting;
- Transformation; and
- Disposal.

LOCAL

Lake County Integrated Waste Management Plan

The Lake County Department of Integrated Waste Management is responsible for implementing and monitoring the Lake County Integrated Waste Management Plan (IWMP). The IWMP has two elements, the Household Hazardous Materials Element and the Source Reduction and Recycling Element. The IWMP monitors the operation of the recycling centers, a household hazardous materials waste program, and other waste management services, educational programs, licensing, and regulatory activities required by the plan. Additionally, the IWMP ensures Lake County's compliance with federal and state environmental regulations.

Lake County Source Reduction and Recycling Element

The Lake County Source Reduction and Recycling Element (SRRE) was approved by the California Integrated Waste Management Board in 1995 in response to AB 939. The Lake County SRRE provides policies and programs that would be implemented by the County to achieve the

state waste reduction mandates. As required by AB 939, the SRRE projects disposal capacity needs for a 15-year period. The current SRRE period ends in 2010. In order to comply with the requirements of AB 939, the County has implemented the following services:

- Residential curbside recycling
- Commercial refuse and recycling pickup service
- Household hazardous materials pickup service
- Bulky item collection program

Lake County General Plan

Table 4.14.3-1 displays the proposed project's consistency with applicable Lake County General Plan solid waste policies. While this EIR analyzes the project's consistency with Lake County's General Plan pursuant to State CEQA Guidelines Section 15125(d), the Planning Commission and/or Board of Supervisors will make the final determination of the project's consistency with the identified General Plan policies.

TABLE 4.14.3-1
PROJECT CONSISTENCY WITH THE LAKE COUNTY GENERAL PLAN
SOLID WASTE SERVICE POLICIES

General Plan Policies	Consistency with General Plan	Analysis
Policy PFS 5.1: Solid Waste Reduction The County shall promote the maximum use of solid waste reduction, recycling, and composting of wastes, strive to reduce commercial and industrial waste on an annual basis, and pursue a financing mechanism for solid waste reduction programs in order to meet the requirements of Public Resources Code 41780 and 41780.1.	Yes	The project would comply with all applicable County solid waste reduction and recycling programs which would ensure compliance with this policy. The County does not currently meet Public Resources Code 41780 and 41780.1 standards of 50 percent waste reduction from 1990 to 2000, having achieved a 33 percent reduction as of December 2002. The County is, however, actively engaged in recycling efforts in an attempt to reach these mandatory goals.
Policy PFS 5.2: Ensure Capacity Concurrent with the approval of new development, the County shall require evidence that capacity exists within the solid waste system for the processing, recycling, transmission, and disposal of solid waste.	Yes	The Lake County IWMD has stated that the Eastlake Landfill currently has 35 percent of its remaining capacity, which is expected to last for an additional 17 years. Please see the Existing Setting section for more details.

Middletown Area Plan

The Middletown Area Plan has no relevant solid waste policies or action items that are directly applicable to the proposed project.

4.14.3.3 SOLID WASTE IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G thresholds of significance. A solid waste impact is considered significant if implementation of the project would:

1) Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs; or

2) Fail to comply with federal, state, and local statutes and regulations related to solid waste.

METHODOLOGY

Evaluation of potential impacts related to solid waste was based on consultation with Lake County's Public Services Department and review of the Lake County General Plan and Middletown Area Plan, as well as review of other pertinent literature.

PROJECT IMPACTS AND MITIGATION MEASURES

Solid Waste Impacts

Impact 4.14.3.1 Implementation of the proposed project would generate additional solid waste to be disposed of by South Lake Refuse. This impact is considered **less than significant.**

The proposed project involves residential, commercial, and recreational uses. Implementing the proposed project would generate approximately 6,079.5 pounds per day (lb/day) of residential solid waste (1,351 people on the Valley Oaks site x 4.5 lb/person/day), which equates to 1,109.5 tons of solid waste annually (6,079.5 pounds x 365 days/2,000 pounds), not including construction waste. These numbers are based on Lake County's solid waste generation rate of 4.5 lbs/day per person (Clymire, 2007). The California Integrated Waste Management Board's website provides examples of commercial waste generation rates from published environmental documents. Commercial generation rates ranged from 5 to 13 pounds per 1,000 square feet per day. Using the conservative estimate of 13 pounds per 1,000 square feet per day, the commercial potion of the project would produce a maximum of 2,990 pounds of waste per day (13lbs/1000sq. ft/day x 230,000 sq. ft. commercial). Using the 200 tons per day maximum of the Eastlake Sanitary Landfill, the project would account for approximately 2.3 percent of the landfill's maximum daily load (6,079.5 pounds per day+ 2,990 pounds per day/200 tons per day= 2.3%). Although the current daily intake at the Eastlake Sanitary Landfill is not known, it is anticipated that 2.3 percent would not create a significant impact to the maximum daily load allowed. Based on current generation and growth rates, the Eastlake Sanitary Landfill is expected to reach capacity in the year 2024 (Clymire, 2007). When the landfill is within 15 years of capacity (in approximately 2010), the County will determine how they will increase their landfill capacity. As of 2008, the County is considering horizontal expansion of the existing Eastlake site into an adjacent canyon (Chavez, 2008).

However, increasing residential and commercial construction will generate the need for additional collection equipment. The rate of buildout will determine at what point a new route,

personnel, or equipment would need to be added. It is likely the residential portion at buildout would generate a new full route that allows the driver to make the three passes required for pickup of the three types of materials collected weekly. This additional route would result in slight air emission and traffic increases, which are anticipated to be minimal. The project's potential impacts on air quality and traffic are addressed in the appropriate sections of this DEIR. The Lake County Public Service Department has stated that no new solid waste facilities would be required and no expanded landfill capacity would be required due to this project.

The proposed project is required to comply with all state and local regulations regarding solid waste, including the County Code and General Plan. General Plan policy compliance is discussed in **Table 4.14.3-1**. Article II of the Health and Sanitation chapter of the County Code sets regulations for garbage and refuse, including garbage collection and disposal, refuse enclosures required for commercial uses, and solid waste disposal sites. All development projects are also subject to mandatory source reduction and recycling programs.

In order to comply with County goals to meet AB 939 standards, the County's free recycling program, consisting of a 90-gallon green waste bin and a 90-gallon mixed recyclables bin, would be implemented for residential users of the curbside garbage service. For those who choose to self-haul their garbage to the landfill, garbage loads consisting of 25 percent or more recyclables will be charged an extra fee for not recycling. For the commercial portion of the project, South Lake Refuse is required by the County to provide adequate recycling bins free of charge based on each commercial facility's recyclable production.

Based on the foregoing analysis and consultation with County staff, implementation of the proposed project is anticipated to have a **less than significant** impact on solid waste services and landfill capacity.

Mitigation Measures

None required.

4.14.3.4 SOLID WASTE CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for solid waste is the service area for South Lake Refuse. Recently approved and proposed projects, as well as any other reasonably foreseeable development envisioned by the Lake County General Plan, comprise the cumulative setting for solid waste service impacts. A list of recently approved and proposed projects can be found in **Table 4.0-1** in Section 4.0, Introduction to the Environmental Analysis and Assumptions Used.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Generation of Additional Solid Waste Requiring Disposal

Impact 4.14.3.2 The proposed project, in addition to existing, recently approved, proposed, and reasonably foreseeable projects in the region, would generate solid waste that would require expanded collection and disposal services. The project's contribution would be **less than cumulatively considerable.**

The projected solid waste generated from the cumulative conditions in Lake County would increase the volume at the Eastlake Sanitary Landfill; however, the existing funding mechanisms

would pay for impacts on South Lake Refuse's solid waste disposal under cumulative conditions. Therefore, the proposed project would have a less than significant cumulative impact on affected solid waste facilities. South Lake Refuse funding from service charges would be used to pay for any expansion of their current facilities and operations.

The landfill is currently operating below permitted capacity and is estimated to have adequate service capacity for the next 20 (through 2027) years based on current disposal rates. Presently, the Eastlake Sanitary Landfill is operating below permitted capacity and would have adequate capacity for the next 20 years based on current disposal rates (www.ciwmb.ca.gov, 2008a). Additionally, there are other landfills available in the region that could accommodate future solid waste needs. These include the Yolo County Central Landfill in Yolo County, which is a 724-acre landfill.

Because South Lake Refuse would be able to accommodate future collection needs in the region by the use of services charges, and because the Eastlake Sanitary Landfill would have adequate service capacity through 2027, the project's contribution to cumulative solid waste impacts is considered **less than cumulatively considerable.**

Mitigation Measures

None required.

4.14.4 ELECTRICAL, GAS, TELEPHONE, AND CABLE SERVICES

4.14.4.1 EXISTING SETTING

ELECTRICAL SERVICE

Pacific Gas & Electric Company (PG&E) provides electrical and natural gas service to approximately 15 million residents throughout a 70,000-square-mile area in northern and central California. PG&E's service area stretches from Eureka in the north, the Sierra Nevada in the east, Bakersfield in the south, and the Pacific Ocean in the west. Lake County falls within the service area for PG&E.

PG&E filed a Plan of Reorganization in 2001. The company's reorganization established the reorganized Pacific Gas & Electric as an independent, investor-owned company focused on retail electricity and natural gas distribution to its customers in northern and central California. The reorganized PG&E Company will continue to be regulated by the California Public Utilities Commission (CPUC) as before. However, this entity will no longer be affiliated with PG&E Corporation. Retail customers of PG&E will continue to receive all of the same electric and natural gas services they currently receive.

PG&E would provide only electrical service for the proposed project. PG&E maintains existing aboveground lines that run along SR 29, as well as underground lines that serve the Hidden Valley Lake subdivision.

GAS SERVICE

Unincorporated portions of the county are not included in any natural gas provider service area. Gas to the project site would be supplied by numerous private propane providers. Most of the companies, such as Lake County Gas, Ferrell Gas in Lower Lake, and Suburban Propane in

Clearlake, offer both bulk and metered propane gas supplies. Propane services are offered by these companies on individual, community, and industrial levels. In community propane systems, large bulk tanks are installed either above or below ground in areas of low visibility within the development. Underground gas mains are run to individual lots as homes are built, then are metered and installed. The proposed project would run underground propane lines from one or more large propane tanks to each individual residential and commercial lot.

TELEPHONE SERVICE

AT&T provides telephone services to the residents and businesses of Lake County. The proposed project would receive telephone services from AT&T as well. AT&T currently maintains underground telephone lines that run parallel to Hartmann Road.

CABLE TELEVISION AND INTERNET SERVICES

Mediacom Communication Corporation and Lake County Television, as well as satellite TV companies, provide television services to the residents and businesses of Lake County. Mediacom is the only television provider that would require sufficient lead time and details of development locations in order to extend infrastructure to serve new development. Mediacom has underground cable lines that currently (June 2008) serve the residents in the adjacent Hidden Valley Lake subdivision. These cable lines run underground along Hartmann Road and would be able to provide service to the residents of the proposed project.

Lake County Television broadcasts a signal from the top of Mt. Konocti and only requires users to have a line of sight with Mt. Konocti. Utilization of stations broadcast by Lake County Television would therefore not require an extension of infrastructure to provide services to project area residences.

Internet services to residents and businesses of Lake County are provided by various companies through dial-up service, cable, and satellite services. DSL (Digital Subscriber Line) is not currently provided in Lake County.

4.14.4.2 REGULATORY FRAMEWORK FOR ELECTRICAL, TELEPHONE, AND CABLE TELEVISION SERVICES

STATE

California Building Energy Efficiency Standards

Title 24, Part 6 of the California Code of Regulations, known as the Building Energy Efficiency Standards, were established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. After adoption of the California Energy Security and Reliability Act of 2000 (AB 970), the California Energy Commission produced changes to the Building Energy Efficiency Standards. In November 2003, the California Energy Commission adopted these updated standards. The California Building Standards Commission adopted the 2003 changes in July 2005 and the updated standards took effect on October 1, 2005. Included in the update were requirements identified under Senate Bill 5X, part of which requires the California Energy Commission to adopt energy efficiency standards for outdoor lighting.

Lake County General Plan

Table 4.14.4-1 displays the proposed project's consistency with applicable Lake County General Plan electrical, gas, and telecommunications policies. While this EIR analyzes the project's consistency with Lake County's General Plan pursuant to State CEQA Guidelines Section 15125(d), the Planning Commission and/or Board of Supervisors will make the final determination of the project's consistency with the identified General Plan policies.

TABLE 4.14.4-1
PROJECT CONSISTENCY WITH LAKE COUNTY GENERAL PLAN
ELECTRICAL, GAS, AND TELECOMMUNICATIONS POLICIES

General Plan Policies	Consistency with General Plan	Analysis
Policy PFS-6.3: Undergrounding of Utility Lines The County shall require utility lines in new subdivisions to be placed underground, except where it is not feasible due to operational constraints.	Yes	The project applicant would submit all necessary information to the relevant utility agencies with enough lead time to ensure that these agencies are able to underground the necessary utilities.
Policy PFS-6.4: Energy Conservation The County shall support the use of energy conservation devices and renewable energy sources in residential, commercial, and industrial developments, and shall continue to develop renewable energy sources for County facilities when practical.	Yes	Due to the passage of Title 24, Part 6 of the California Code of Regulations and AB 970, coupled with the use of modern building materials, all development that occurs within the project area will have energy conservation measures and devices incorporated into the residential and commercial units.

Middletown Area Plan

The Middletown Area Plan has no relevant electrical, gas, phone, cable, or other service policies or action items that are directly applicable to the proposed project.

4.14.4.3 ELECTRICAL, TELEPHONE, AND CABLE TELEVISION SERVICES IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G thresholds of significance. An electrical, telephone, or cable service impact is considered significant if implementation of the project would:

1) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for other utilities.

METHODOLOGY

Evaluation of potential impacts on electrical, telephone, and cable services resulting from the proposed project is based on consultation with the service providers and review of California Energy Commission policies, other state standards, the Lake County General Plan and associated EIR, and the Middletown Area Plan.

PROJECT IMPACTS AND MITIGATION MEASURES

Electrical Services

Impact 4.14.4.1 Implementation of the proposed project would increase demand for electrical services. This is considered a **less than significant** impact.

In order to provide sufficient electrical services for both the residential and commercial users of the proposed project, PG&E's current electrical facilities would need to be expanded (Meyer, 2008). In the event that existing infrastructure located on or adjacent to the site would adequately serve the businesses and residences generated from this project site, PG&E would tie into the existing power supply line running underground along Hartmann Road rather than have new electrical lines and cables run to the project site to service the proposed residential and commercial developments. All electric line extensions would be made in accordance with the appropriate tariffs on file with and approved by the California Public Utilities Commission: Electric Rule 15 and 16.

In addition to the need for expansion of the existing electrical infrastructure, Policy PFS 6.3 of the proposed Lake County General Plan Update requires that new utility lines in new subdivisions be placed underground, except where it is not feasible due to operational constraints. In accordance with Policy PFS 6.3, the project proponent will be required to underground all transmission lines. The undergrounding of these lines would be placed in rows in the utility rights-of-way to minimize their physical impacts. All information in regard to the proposed placement of electrical infrastructure will be submitted to PG&E with sufficient lead time for review and approval of infrastructure placement, according to PG&E's policies and practices.

In addition to the above-mentioned requirements, the project would be required to comply with Title 24 of the California Code of Regulations regarding energy efficiency that became effective in September 2005. These new energy efficiency standards were developed in response to the state's energy crisis as well as AB 970 and SB 5X in regard to improving residential and nonresidential building energy efficiency, minimizing impacts to peak energy usage periods, and reducing impacts on overall state energy needs.

The physical effects of providing underground utility lines on the project site for the purpose of providing service to project uses are discussed in aggregate in the appropriate technical sections of this EIR. Compliance with the state and local policies stated above would ensure that all impacts related to the provision of electrical service are **less than significant.**

Mitigation Measures

None required.

Telephone and Cable Television Infrastructure

Impact 4.14.4.2 Implementation of the proposed project would require the extension of telephone and cable infrastructure to serve the proposed project. This would be a **less than significant** impact.

AT&T is the sole provider of telephone services to the residents of Lake County and would provide services to the proposed project site. In order to provide adequate service for the number of residential and commercial developments planned by this project, additional infrastructure would need to be extended into the project site. In order to do this, AT&T would tie into the existing telephone line running underground along Hartmann Road.

As was previously discussed in the Existing Setting section, Mediacom Communication Corporation, Lake County Television, and satellite providers currently offer cable services to the project area. Unlike Lake County Television and satellite providers, Mediacom is the only cable provider that would require sufficient lead time in order to extend infrastructure onto the project site. Lake County Television broadcasts its television stations from atop Mt. Konocti. These stations are received by means of a television antenna, while satellite companies require the installation of equipment on the individual property to provide services. Neither television broadcasts nor satellite television service requires infrastructure to be installed outside any one individual user's property, precluding any significant physical effects on the environment. In order to extend their infrastructure, Mediacom would tie into the existing cable line that runs underground along Hartmann Road.

Since the proposed project could tie into existing lines that run underground along Hartmann Road, impacts to telephone and cable services are considered **less than significant.** The environmental impacts associated with the placement of underground telephone and cable lines on the project site are considered in aggregate in this EIR.

Mitigation Measures

None required.

4.14.4.4 ELECTRICAL, TELEPHONE, AND CABLE TELEVISION SERVICES CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for electrical, telephone, and cable television services is the service areas for those utilities. Existing, approved, and proposed projects, as well as any other reasonably foreseeable development envisioned by the Lake County General Plan, comprise the cumulative setting for electrical, telephone, and cable television impacts. A list of recently approved and proposed projects can be found in **Table 4.0-1** in Section 4.0, Introduction to the Environmental Analysis and Assumptions Used.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Electrical, Gas, Telephone, and Cable Services

Impact 4.14.4.3 Implementation of the proposed project as well as existing, approved, proposed, and reasonably foreseeable development in the surrounding area

would result in cumulative utility service impacts. The project's contribution would be **less than cumulatively considerable.**

There are a number of current and proposed development projects within the Middletown Planning Area and Lake County that would be served by electric, telephone, and cable services, which would result in an increased cumulative demand for these services. Consultation with the service providers identified above indicated that there are adequate electric supplies to serve cumulative levels of development. Additionally, Title 24 energy efficiency requirements will apply to the proposed project as well as future projects that would occur under cumulative conditions, minimizing the electrical demand to some extent. The service providers consulted indicated that the project would not contribute to any cumulative environmental impacts, including the need for additional facilities to serve cumulative conditions.

The proposed project would not require the construction of new infrastructure beyond those needed to serve the project site. The environmental impacts of extending infrastructure to the project site are site-specific and not cumulative in nature, since the construction of the infrastructure would only occur on the proposed project. Therefore, this impact is considered **less than cumulatively considerable**.

Mitigation Measures

None required.

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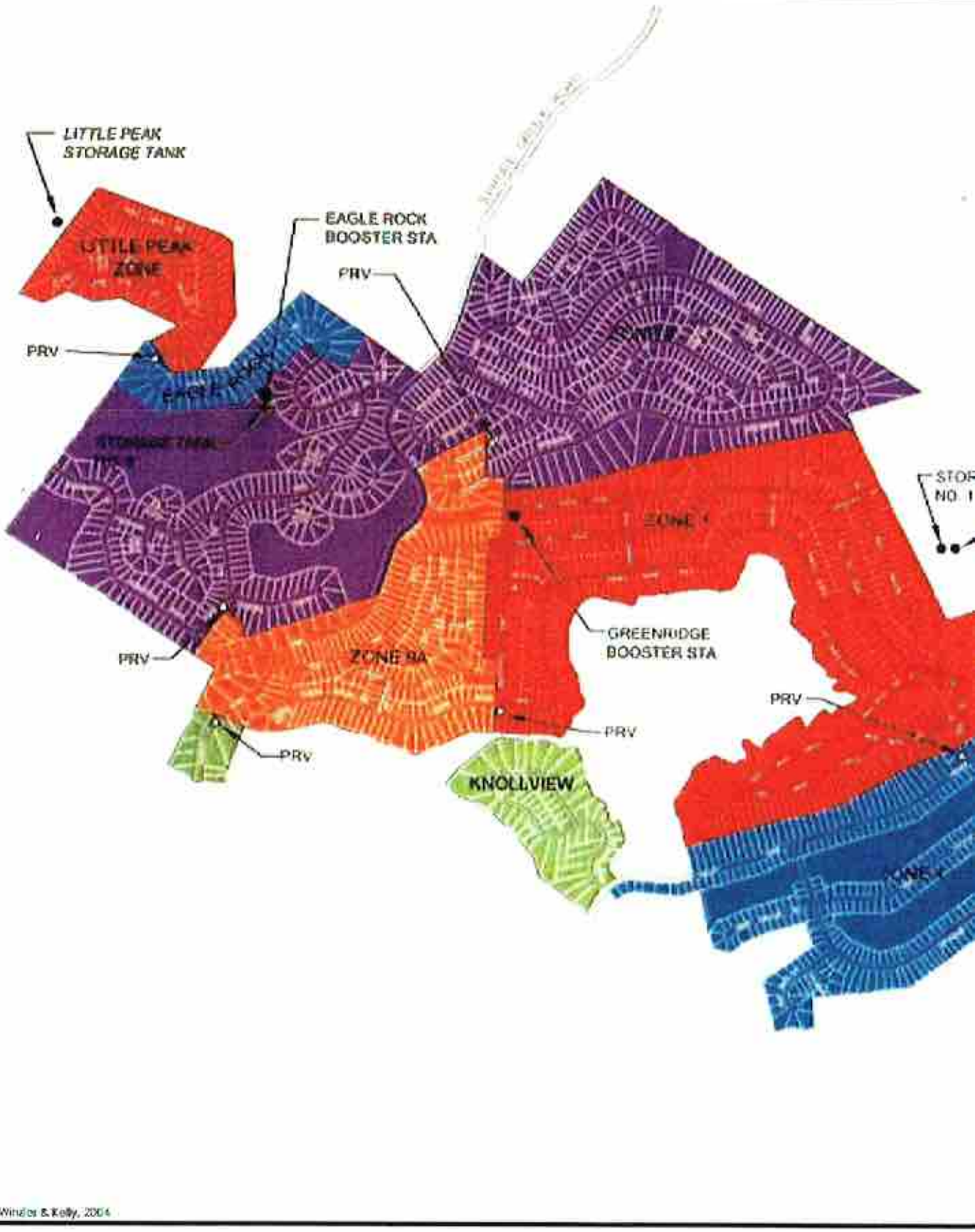

Source: Winzler & Kelly, 2004

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5.0 Cumulative Impacts Summary

This section identifies the cumulative impacts associated with the proposed project. Cumulative impacts are the result of combining potential effects of the project with other planned developments as well as foreseeable development projects. The following discussion considers the cumulative impacts of the relevant environmental issue areas.

5.1 INTRODUCTION

The California Environmental Quality Act (CEQA) requires that an environmental impact report contain an assessment of the cumulative impacts that may be associated with the proposed project. According to State CEQA Guidelines Section 15130(a), "an EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable." "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 by State CEQA Guidelines Section 15130).

As defined in State CEQA Guidelines Section 15355, cumulative impacts refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. In the case of the analysis contained within this EIR, a cumulative impact consists of an impact that is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. According to State CEQA Guidelines Section 15355(b), a cumulative impact occurs from:

> ...the change in the environment which results from the incremental effect of the project when added to other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

In addition, State CEQA Guidelines Section 15130(b) identifies that the following three elements are necessary for adequate cumulative analysis:

1) Either:

   a. A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or

   b. A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency.

2) A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available; and

3) A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.

This DEIR utilizes the "list" approach in the cumulative analysis, as described above. The list referenced in the cumulative analysis of this EIR is included in Section 4.0 as **Table 4.0-1.**

Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable (State CEQA Guidelines Section 15130).

5.2 CUMULATIVE SETTING

Table 4.0-1 in Section 4.0, Introduction to the Environmental Analysis and Assumptions Used, of this EIR details the development size of anticipated large-scale residential and commercial projects in the vicinity. Development of these projects would contribute to growth anticipated in the cumulative setting. Full discussions of cumulative impacts, as well as a description of the cumulative setting specific to each issue area, are provided in Sections 4.1 through 4.14 of this DEIR.

5.3 CUMULATIVE IMPACT ANALYSIS

Identified below is a compilation of the cumulative impacts that would result from the implementation of the project and future development in the vicinity, including existing, approved, proposed, and reasonably foreseeable development. As described above, cumulative impacts are two or more effects that, when combined, are considerable or compound other environmental effects. Each cumulative impact is determined to have one of the following levels of significance: less than cumulatively considerable (no mitigation necessary); cumulatively considerable (can be mitigated to a level of insignificance); or cumulatively considerable and significant and unavoidable (cannot be mitigated to a level of insignificance). The reader is referred to the individual sections in Chapter 4.0 for a complete discussion of the project's impacts and resulting level of significance.

SECTION 4.1 AESTHETICS/LIGHT AND GLARE

Cumulative Impacts to Scenic Resources

Impact 4.1.5 Implementation of the proposed project, along with existing, recently approved, proposed, and reasonably foreseeable development in the region, could result in cumulative impacts to aesthetic resources. This impact is considered **less than cumulatively considerable.**

Cumulative Nighttime Lighting and Daytime Glare Impacts

Impact 4.1.6 Implementation of the proposed project would contribute to cumulative increases in nighttime lighting and daytime glare levels in the area. This is considered a **less than cumulatively considerable** impact.

SECTION 4.2 AGRICULTURAL RESOURCES

Cumulative Impacts to Agricultural Resources

Impact 4.2.4 The proposed project, in combination with existing, recently approved, proposed, and reasonably foreseeable projects in the area, could contribute to the cumulative loss of agricultural land in Lake County. This is considered a **less than cumulatively considerable** impact.

SECTION 4.3 AIR QUALITY

Contribution to Cumulative Local Air Quality Concentrations

Impact 4.3.7 Implementation of the proposed project would not contribute to localized concentrations of mobile-source CO that would exceed applicable ambient air quality standards. This impact is considered **less than cumulatively considerable.**

Contribution to Cumulative Regional Air Quality Conditions

Impact 4.3.8 Long-term operation of the proposed project would result in increased emissions that, if uncontrolled, would exceed applicable significance thresholds. This impact is considered **cumulatively considerable.**

Cumulative Increases in GHG Emissions

Impact 4.3.9 Implementation of the proposed project would result in the cumulative increase of greenhouse gases including CO_2 emitted into the atmosphere. This is considered a **cumulatively considerable** impact.

SECTION 4.4 BIOLOGICAL AND NATURAL RESOURCES

Cumulative Impacts to Wildlife Habitat, Riparian Habitat, and Special-status Species

Impact 4.4.11 Implementation of the proposed project, in combination with existing, recently approved, proposed, and reasonably foreseeable development, would contribute to cumulative impacts to wildlife habitat, riparian habitat, and special-status species. This is considered a **less than cumulatively considerable** impact.

SECTION 4.5 CULTURAL AND PALEONTOLOGICAL RESOURCES

Cumulative Impacts on Prehistoric and Historic Resources

Impact 4.5.3 Implementation of the proposed project, along with existing, recently approved and proposed project as well as any foreseeable development in the project vicinity, could result in cumulative impacts on cultural resources in the region. These impacts are considered to be **less than cumulatively considerable.**

Cumulative Impacts on Paleontological Resources

Impact 4.5.4 Implementation of the proposed project, along with existing, recently approved and proposed project as well as any foreseeable development in the project vicinity, could result in cumulative impacts on paleontological resources in the region. These impacts are considered to be **less than cumulatively considerable.**

SECTION 4.6 GEOLOGY AND SOILS

Cumulative Geologic and Soil Impacts

Impact 4.6.4 Implementation of the proposed project, in combination with existing, recently approved, proposed, and reasonably foreseeable development in the region, would not contribute to cumulative geologic and soil impacts, as the impacts would be site-specific and not additive in character. Thus, the project's contribution would be **less than cumulatively considerable.**

SECTION 4.7 HAZARDS AND HUMAN HEALTH

Cumulative Hazards and Risks

Impact 4.7.6 Implementation of the proposed project, in addition to existing, recently approved, proposed, and other reasonably foreseeable development in the project vicinity, may result in cumulative hazardous materials and human health risk impacts. This is considered a **less than cumulatively considerable** impact.

SECTION 4.8 HYDROLOGY AND WATER QUALITY

Cumulative Hydrology and Water Quality Impacts

Impact 4.8.9 Implementation of the proposed project, in conjunction with existing, recently approved, proposed, and reasonably foreseeable development in the area, would contribute to cumulative effects of stormwater runoff, the alteration of existing drainage patterns, surface water and groundwater quality impacts, and flood hazards. The project's contribution to cumulative hydrology and water quality impacts would be **cumulatively considerable** in the absence of mitigation.

Cumulative Depletion of Groundwater Supplies

Impact 4.8.10 The proposed project, in addition to existing, approved, proposed, and other reasonably foreseeable development projects in the area, would result in greater demand for groundwater extractions from the CVGB. The basin in not in overdraft condition and would have sufficient supplies to serve planned future development within the cumulative setting. This impact is considered **less than cumulatively considerable.**

SECTION 4.9 LAND USE

Cumulative Land Use Impacts

Impact 4.9.3 The proposed project, in combination with existing, recently approved, proposed, and reasonably foreseeable development in the area, could contribute to the conversion of rural and open space lands to urban uses within the county. This is considered a **less than cumulatively considerable** impact.

SECTION 4.10 NOISE

Cumulative Traffic Noise Impacts

Impact 4.10.5 Implementation of the proposed project, along with existing, recently approved, proposed, and reasonably foreseeable development in the area, would result in increases to cumulative traffic noise impacts. This is considered a **less than cumulatively considerable** impact.

SECTION 4.11 POPULATION/HOUSING/EMPLOYMENT/ECONOMICS

Cumulative Population Impacts

Impact 4.11.2 Implementation of the proposed project, in conjunction with existing, recently approved, proposed, and reasonably foreseeable development in the area, would induce population growth in the area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure). The project's contribution to this impact is considered **less than cumulatively considerable.**

Cumulative Urban Decay Impacts

Impact 4.11.4 Implementation of the proposed project, along with existing, recently approved, proposed, and reasonably foreseeable development in the county, could result in cumulative urban decay impacts. This impact is considered **less than cumulatively considerable.**

SECTION 4.12 PUBLIC SERVICES

Cumulative Increased Demand for Fire Protection and Emergency Medical Services

Impact 4.12.1.3 Implementation of the proposed project, in combination with existing, approved, proposed, and reasonably foreseeable development, would increase the population within the SLCFPD service area, requiring additional fire and emergency medical services and related facilities. However, the project's contribution to cumulative fire protection and emergency medical services is considered **less than cumulatively considerable.**

Cumulative Increased Demand for Law Enforcement Services

Impact 4.12.2.2 The proposed project, in addition to existing, approved, proposed, and reasonably foreseeable development, would increase the population within the Lake County Sheriff's Department jurisdiction and surrounding areas and would require additional law enforcement services under cumulative conditions. This would be a **less than cumulatively considerable** impact.

Cumulative Increased Demand for School Facilities

Impact 4.12.3.2 The proposed project, in combination with existing, approved, proposed, and reasonably foreseeable development proposed within MUSD boundaries,

would result in a cumulative increase in student enrollment at the MUSD's schools. This impact is considered **less than cumulatively considerable.**

Cumulative Impacts on Park and Recreational Facilities

Impact 4.12.4.2 Implementation of the proposed project, along with existing, recently approved, proposed, and reasonably foreseeable development in the county, would require additional park and recreation facilities under cumulative conditions. This would result in **less than cumulatively considerable** impacts.

SECTION 4.13 TRANSPORTATION AND CIRCULATION

Cumulative Level of Service Impacts

Impact 4.13.6 Implementation of the proposed project, along with existing, recently approved, proposed and reasonably foreseeable development in the region, could result in cumulative level of service impacts. These impacts are considered **less than cumulatively considerable.**

SECTION 4.14 UTILITIES AND SERVICE SYSTEMS

Cumulative Demand for New or Expanded Water Supply and Distribution Facilities

Impact 4.14.1.2 The proposed project, in addition to other reasonably foreseeable development in the area, would result in increased demand for water supply from the District as well as new or expanded water distribution, storage and treatment infrastructure. The project's contribution to this impact is considered to be **less than cumulatively considerable.**

Cumulative Increased Demand for Wastewater Treatment

Impact 4.14.2.3 Implementation of the proposed project, in combination with existing, recently approved, proposed, and reasonably foreseeable development in the area, could require additional wastewater treatment, conveyance and disposal capacity to accommodate future growth within HVLCSD service area boundaries. This impact is **cumulatively considerable.**

Cumulative Generation of Additional Solid Waste Requiring Disposal

Impact 4.14.3.2 The proposed project, in addition to existing, recently approved, proposed, and reasonably foreseeable projects in the region, would generate solid waste that would require expanded collection and disposal services. The project's contribution would be **less than cumulatively considerable.**

Cumulative Electrical, Gas, Telephone, and Cable Services

Impact 4.14.4.3 Implementation of the proposed project as well as existing, approved, proposed, and reasonably foreseeable development in the surrounding area would result in cumulative utility service impacts. The project's contribution would be **less than cumulatively considerable.**

6.0 ALTERNATIVES

6.1 INTRODUCTION

CEQA REQUIREMENTS

The purpose of this alternatives analysis is to describe a range of reasonable alternatives to the proposed Valley Oaks Planned Development project. This analysis evaluates alternatives that would obtain most of the basic objectives of the project and the comparative merits of those alternatives (State CEQA Guidelines Section 15126.6(a)). In accordance with State CEQA Guidelines, an EIR does not need to consider every conceivable alternative to a project nor is it required to consider alternatives that are clearly infeasible. State CEQA Guidelines Section 15126.6(b) states that an alternatives analysis shall focus on those alternatives that are capable of avoiding or substantially lessening any significant effects of the project, even if they impede to some degree the attainment of the project objectives or would be more costly.

CEQA requires an EIR to identify project alternatives and to indicate the manner in which a project's significant effects may be mitigated or avoided, but does not mandate that the EIR itself contain an analysis of the feasibility of the various project alternatives or mitigation measures it identifies (Public Resources Code, §§ 21002.1, subd. (a); 21100, subd. (b)(4); *Sierra Club v. County of Napa* (2004) 121 Cal.App.4th 1490, 1503, citing *San Franciscans Upholding the Downtown Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656, 689-690). As the lead agency, Lake County bears the responsibility for the decisions that must be made before a project can go forward, including determinations of feasibility and whether the benefits of a project outweigh the significant effects the project will have on the environment (Public Resources Code §§ 21002.1, subds. (b) & (c), 21081). In addition, CEQA specifically provides that in making these determinations, the County shall base its findings on substantial evidence in the record, a provision reflecting an understanding that the Board of Supervisors will not limit its review to matters set forth in the EIR, but will base its decision on evidence found anywhere in the record (*Sierra Club v. County of Napa*, 121 Cal.App.4th at p. 1503; citing Public Resources Code, §§ 21081.5).

According to State CEQA Guidelines, an EIR need only examine in detail those alternatives that could feasibly meet most of the basic objectives of the project. When addressing feasibility, State CEQA Guidelines Section 15126.6 states that "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, jurisdictional boundaries, and whether the applicant can reasonably acquire, control or otherwise have access to alternative sites." The State CEQA Guidelines also specify that the alternatives discussion should not be remote or speculative. However, discussion of alternatives need not be presented in the same level of detail as the assessment of the proposed project.

State CEQA Guidelines indicate that several factors need to be considered in determining the range of alternatives to be analyzed in an EIR and the level of analytical detail that should be provided for each alternative. These factors include (1) the nature of the significant impacts to the proposed project; (2) ability of alternatives to avoid or lessen the significant impacts associated with the project; (3) the ability of the alternatives to meet the objectives of the project; and (4) the feasibility of the alternatives. These factors are unique for each project.

PROJECT ALTERNATIVES

In accordance with the provisions of State CEQA Guidelines Section 15126.6, the following alternatives to the proposed project are evaluated. Based on the environmental analysis in

Section 4.0 of this DEIR, the project's alternatives were developed to provide decision-makers with a reasonable range of alternatives to which to compare to the proposed project.

- Alternative 1 – No Project Alternative
- Alternative 2 – Open Space Preservation Alternative
- Alternative 3 – Reduced Intensity Alternative

The environmental effects of each of these alternatives are identified and compared with the environmental impacts resulting from the proposed project that are identified in issue areas in Sections 4.1 through 4.14 of this DEIR. **Table 6.0-2** at the end of this section provides a comparison of the environmental benefits and detriments of each alternative. Also, an "environmentally superior" alternative is identified.

State CEQA Guidelines Section 15126.6(c) provides details regarding the consideration of ranges of alternatives. The following alternatives analysis provides an adequate range or alternatives for consideration under the requirements of CEQA.

ALTERNATIVES CONSIDERED BUT NOT SELECTED FOR ANALYSIS

Another alternative was considered but not selected for analysis because it failed to meet most of the basic project objectives; it was infeasible; or unable to avoid significant environmental effects (State CEQA Guidelines Section 15126.6[c]). The following summarizes the alternative that was considered for evaluation in the EIR but was rejected from detailed consideration.

Alternative Locations

Alternative locations are generally evaluated in environmental documents to avoid, lessen, or eliminate the significant impacts of a project by considering the proposed development in an entirely different location. To be feasible, development of alternative locations must be able to fulfill the project purpose and meet most of the project's basic objectives.

The Middletown Area Plan was amended by the Lake County Board of Supervisors in order for development to occur on the proposed project site within the twenty year time frame of the plan. The Board of Supervisors amended Policy 5.1j of the Middletown Area Plan after several public hearings, reviews, and recommendations by the Planning Commission and input from the Middletown Area Plan Citizens Advisory Committee. Locating the proposed project on another site in the Middletown Planning Area is considered infeasible as the project's significant impacts would not be reduced as a result of an alternative location. Potential impacts associated with alternative locations could result in increased impacts to biological resources, hydrology and water quality, traffic, noise, or other potentially more significant impacts than those identified for the proposed project. None of those impacts would be reduced with another location. Implementation of an alternative location would conflict with planned development patterns of the project site as well as the land use policies of the Middletown Area Plan. In addition, the project site is located within the Coyote Valley Community Growth Boundary, so is envisioned for development in the Lake County General Plan. An alternative location would also not meet specific objectives of the proposed Valley Oaks project, which include addressing and reducing seasonal flooding including the off-site areas of Spy Glass and Fish Hook in Hidden Valley Lake; to establish assessments for both the residential and commercial components of the project in order to provide maintenance of the project roadways, maintenance of the proposed River Park along Hartmann Road and Putah Creek, and financial assistance to the local fire district;

and to provide recreational opportunities and alternative means of transportation by creating a linear park along Coyote Creek; pedestrian and bicycle linkages to the adjoining school; pedestrian/bicycle linkages to the existing and proposed trail system; and pedestrian and bicycle linkages to the proposed River Park, commercial development along Hartmann Road and, if desired by the residents, the Hidden Valley Lake subdivision. Therefore, there are no available or feasible alternative locations that would avoid or substantially lessen the environmental impacts of the proposed project or meet some of the specific objectives of the project.

6.2 ALTERNATIVE 1 – NO PROJECT ALTERNATIVE

CHARACTERISTICS

The "No Project" alternative is required by State CEQA Guidelines Section 15126.6(e). A no project alternative is required to examine the impacts that might occur if the site remains in its present condition, meaning the project is not built and the environmental setting of the project site remains the same. In this case, the site's existing land uses of a former Arabian horse ranch with associated structures and one rural residence would stay intact. Implementation of the No Project Alternative would eliminate the majority of environmental impacts identified in each technical section included in Sections 4.1 through 4.14 of this EIR. There would be fewer environmental impacts resulting from this alternative than from the proposed project as the site would be left in its present condition, even with development planned by the Lake County General Plan and Middletown Area Plan. However, this alternative would not meet any of the project objectives identified in Section 3.0, Project Description.

COMPARATIVE IMPACTS

Aesthetics/Light and Glare

A comparison of the proposed project and the No Project Alternative is provided below for each significant impact identified in Section 4.1, Aesthetics/Light and Glare.

Degradation of the Existing Visual Character (Impact 4.1.2)

Implementation of the proposed project would involve the construction of 380 single-family homes, 55 multi-family residential units, 53 senior-living multi-family residential units, a 49-bed residential care facility, 30 acres of commercial development, and approximately 21 acres of roadways. Since the No Project Alternative would not result in site development, the visual character of the project site would remain in its existing character. This impact would be avoided.

Daytime Glare (Impact 4.1.4)

Implementation of the proposed project would add new sources of daytime glare, resulting from the construction of 380 single-family homes, 55 multi-family residential units, 53 senior-living multi-family residential units, a 49-bed residential care facility, 30 acres of commercial development, and approximately 29 acres of active recreational uses. Since the No Project Alternative would not result in site development, no new sources of daytime glare would be generated. This impact would be avoided.

Agricultural Resources

As identified in Section 4.2, Agricultural Resources, the proposed project would not result in any significant impacts to agricultural resources. Even though the proposed project would not result in any significant impacts to agricultural resources, any potential impacts would be less than the proposed project since the No Project Alternative would not result in any site disturbance.

Air Quality

A comparison of the proposed project and the No Project Alternative is provided below for each significant impact identified in Section 4.3, Air Quality.

Short-Term Construction-Generated Emissions of Criteria Air Pollutants (Impact 4.3.1)

Implementation of the proposed project could result in the release of construction-generated emissions that could exceed applicable ambient air quality standards at nearby receptors. The No Project Alternative would not result in any construction activities. Therefore, this impact would be avoided.

Short-Term Exposure of Sensitive Receptors to Toxic Air Contaminants (Impact 4.3.2)

Construction activities associated with implementation of the proposed project could result in short-term diesel exhaust emissions as well as the potential disturbance of asbestos-containing soils. The No Project Alternative would not result in any construction activities. As such, this alternative would not result in any diesel exhaust emissions or potential disturbance of asbestos-containing soils. Therefore, this impact would be avoided.

Long-Term Emissions of Criteria Air Pollutants (Impact 4.3.3)

Implementation of the proposed project may result in operational emissions that exceed applicable significance thresholds. The No Project Alternative would not result in any uses that would result in operational emissions that exceed applicable significance thresholds. Therefore, this impact would be avoided.

Exposure of Sensitive Receptors to Odorous Emissions (Impact 4.3.5)

Implementation of the proposed project may result in the exposure of receptors to odorous emissions located in the vicinity of commercial land uses. The No Project Alternative would not result in the construction of any commercial land uses. Therefore, this alternative would not expose any receptors to odorous emissions. This impact would be avoided.

Contribution to Cumulative Regional Air Quality Conditions (Impact 4.3.8)

Long-term operation of the proposed project would result in increased emissions that, if uncontrolled, would exceed applicable significance thresholds. The No Project Alternative would not construct any uses that would result in long-term increased emissions. Therefore, this impact would be avoided.

Cumulative Increases in GHG Emissions (Impact 4.3.9)

Implementation of the proposed project would result in the cumulative increase of greenhouse gases, including CO_2, emitted into the atmosphere. The No Project Alternative would not result

in the construction of residential or commercial uses and as such would not add any vehicle traffic on existing roadways or the use of any equipment that would emit greenhouse gases. Therefore, this impact would be avoided.

Biological and Natural Resources

A comparison of the proposed project and the No Project Alternative is provided below for each significant impact identified in Section 4.4, Biological and Natural Resources.

Loss or Disturbance of Special-Status Plant Species (Impact 4.4.2)

Implementation of the proposed project may adversely affect a small population of the state and federally endangered Burke's goldfields. Since the No Project Alternative would not result in site disturbance, it would not result in the loss or disturbance of any special-status plant species. This impact would be avoided.

Potential Loss or Disturbance of Valley Oak Habitat (Impact 4.4.3)

Implementation of the proposed project could result in the loss or disturbance of valley oak stands, including 13 individual valley oak (*Quercus lobata*) trees. Since the No Project Alternative would not result in site disturbance, it would not result in the loss or disturbance of valley oak habitat. This impact would be avoided.

Potential Impacts to Valley Elderberry Longhorn Beetles (VELB) or Disturbance of VELB Habitat (Impact 4.4.4)

Implementation of the proposed project could result in disturbance and direct loss of habitat for the federally threatened valley elderberry longhorn beetle (VELB) (*Desmocerus californicus dimorphus*). Since the No Project Alternative would not result in site disturbance, it would not result in the loss or disturbance of any VELB habitat. This impact would be avoided.

Possible Water Quality Degradation Potentially Affecting Aquatic Species Including the Foothill Yellow-Legged Frog (Impact 4.4.5)

Implementation of the proposed project could result in releases of sediment and contaminants that could reach habitat occupied by aquatic and aquatic dependent species in the Putah Creek drainage basin. Since the No Project Alternative would not result in site disturbance, it would not result in the releases of any sediment and contaminants. This impact would be avoided.

Potential Disturbance to Northwestern Pond Turtles (Impact 4.4.6)

Implementation of the proposed project could result in disturbance and direct loss of habitat for the northwestern pond turtle, a California Species of Concern. Since the No Project Alternative would not result in site disturbance, it would not result in impacts to northwestern pond turtle habitat. This impact would be avoided.

Potential Disturbance of Special-Status Bird Species, Nesting Raptors, and Migratory Birds (Impact 4.4.7)

Implementation of the proposed project could adversely affect special-status bird species, nesting raptors, and migratory birds through disturbance during the breeding and nesting season. These species are provided varying levels of protection under federal and state wildlife laws. Since the No Project Alternative would not result in site disturbance, it would not result in impacts to special-status bird species, nesting raptors, or migratory birds. This impact would be avoided.

Potential Disturbance of Special-Status Bat Species (Impact 4.4.8)

Implementation of the proposed project could adversely affect special-status bat species, including the removal of habitat potentially used for roosting. Removal of an important day or maternity roost used by a special-status bat species would have a substantial adverse effect on local populations of the species. Since the No Project Alternative would not result in site disturbance, it would not result in impacts to special-status bat species or bat habitat. This impact would be avoided.

Potential Temporary and Permanent Fill of Wetlands (Impact 4.4.9)

Implementation of the proposed project could result in direct and indirect impacts to federally protected wetlands. Since the No Project Alternative would not result in site disturbance, it would not result in any impacts to federally protected wetlands. This impact would be avoided.

Cultural and Paleontological Resources

A comparison of the proposed project and the No Project Alternative is provided below for each significant impact identified in Section 4.5, Cultural and Paleontological Resources.

Potential Destruction of or Damage to Undiscovered Cultural Resources and Human Remains (Impact 4.5.1)

Implementation of the proposed project could potentially destroy or damage undiscovered prehistoric and historical cultural resources on the project site. Since the No Project Alternative would not result in site disturbance, it would not result in the potential destruction or damage of undiscovered prehistoric and historical cultural resources on the project site. This impact would be avoided.

Potential for Adverse Effects on Paleontological Resources (Impact 4.5.2)

Implementation of the proposed project could potentially destroy or damage undiscovered paleontological resources. Since the No Project Alternative would not result in site disturbance, it would not destroy or damage undiscovered paleontological resources. This impact would be avoided.

Geology and Soils

A comparison of the proposed project and the No Project Alternative is provided below for each significant impact identified in Section 4.6, Geology and Soils.

Geologic Stability (Impact 4.6.2)

Implementation of the proposed project may place structures and future residents within areas of geologic instability. Since the No Project Alternative would not result in site development, it would not place structures and future residents within areas of geologic instability. This impact would be avoided.

Hazards and Human Health

A comparison of the proposed project and the No Project Alternative is provided below for each significant impact identified in Section 4.7, Hazards and Human Health.

Exposure to Existing Hazard-Containing Materials and Soils (Impact 4.7.3)

Implementation of the proposed project may expose people to hazardous materials and/or soil contamination. Since the No Project Alternative would not result in site development, it would not expose people to hazard-containing materials and/or soil contamination. This impact would be avoided.

Propane Hazards (Impact 4.7.5)

Implementation of the proposed project would involve the use of propane as well as the storage of propane in large tanks. Filling these tanks would involve routine transport of propane and the storage of propane would involve the placement of hazardous material within the project site. Since the No Project Alternative would not result in site development, there would be no routine transport or storage of propane on site. Therefore, this impact would be avoided.

Hydrology and Water Quality

A comparison of the proposed project and the No Project Alternative is provided below for each significant impact identified in Section 4.8, Hydrology and Water Quality.

Increased Stormwater Runoff (Impact 4.8.1)

Implementation of the proposed project would increase stormwater runoff rates and volumes with the introduction of impervious surfaces to the project site. Since the No Project Alternative would not result in site development, it would not introduce impervious surfaces to the project site. Therefore, the No Project Alternative would not increase stormwater runoff rates and volumes on the project site. This impact would be avoided.

Alteration of Surface Water Drainage Patterns (Impact 4.8.2)

Implementation of the proposed project would alter existing surface water drainage patterns by rerouting the main Coyote Creek channel through the project site and discharging primary Coyote Creek flows to Putah Creek at a new location. Since the No Project Alternative would not result in site development, it would not reroute the main Coyote Creek channel through the project site and as such would not alter existing surface water drainage patterns. This impact would be avoided.

Operational Surface Water Quality Impacts (Impact 4.8.3)

Implementation of the proposed project would introduce sediments and constituent pollutants typically associated with urban development into stormwater runoff. These pollutants would have the potential of degrading downstream stormwater quality. Since the No Project Alternative would not result in site development, it would not introduce sediments and constituent pollutants into stormwater runoff. This impact would be avoided.

Construction Surface Water Quality Impacts (Impact 4.8.4)

Implementation of the proposed project would involve construction-related vegetation removal, excavation, grading, and other construction activities involving slope and soil disturbance that may impact water quality by increasing the potential for erosion and sedimentation. Slope and soil disturbance associated with construction activities may cause accelerated soil erosion and sedimentation and/or the release of pollutants to downstream properties and facilities. Since the No Project Alternative would not result in site development, it would not involve construction activities involving slope and soil disturbance. This impact would be avoided.

Groundwater Quality (Impact 4.8.6)

Implementation of the proposed project could result in activities that would infiltrate the groundwater and impact the quality of the groundwater. Since the No Project Alternative would not result in site development, no activities would occur that would infiltrate the ground and impact the quality of groundwater. This impact would be avoided.

Exposure to Flood Hazards (Impact 4.8.7)

Implementation of the proposed project could expose people, structures, or other facilities to injury or damage from flood hazards. Since the No Project Alternative would not result in site development, it would not place people, structures, or other facilities in an area where they could be injured or damaged by flood hazards. This impact would be avoided.

Dam Safety (Impact 4.8.8)

The project site is located just south and downstream of Hidden Valley Lake and Coyote Creek Dam and is entirely located within the published dam failure inundation area for this facility. Since the No Project Alternative would not result in site development, it would not place people, structures, or other facilities in an area where they could be injured or damaged from dam failure. This impact would be avoided.

Land Use

As identified in Section 4.9, Land Use, the proposed project would not result in any significant impacts to land use. Although the No Project Alternative would also not result in any significant impacts to land use, any potential impacts would be less as the No Project Alternative would not include a General Plan Amendment or Rezone.

Noise

A comparison of the proposed project and the No Project Alternative is provided below for each significant impact identified in Section 4.10, Noise.

Exposure to Short-Term Construction Noise (Impact 4.10.1)

Implementation of the proposed project could result in increases in ambient noise levels resulting from construction activities. Since the No Project Alternative would not result in site development, it would not result in increases in ambient noise levels. This impact would be avoided.

Traffic Noise Increases (Impact 4.10.2)

Implementation of the proposed project would result in increases to existing traffic noise levels on existing roadways, which would affect sensitive land uses. Since the No Project Alternative would not result in site development, it would not add traffic to existing roadways. Therefore, this alternative would not result in increases to existing traffic noise levels. This impact would be avoided.

Generation of Excessive Stationary-Source Noise Levels (Impact 4.10.3)

Implementation of the proposed project could result in additional noise impacts generating from stationary sources such as residences and commercial buildings. Since the No Project Alternative would not result in site development, it would not result in additional noise impacts generating from stationary sources. This impact would be avoided.

Population/Housing/Employment/Economics

As identified in Section 4.11, Population/Housing/Employment/Economics, the proposed project would not result in any significant impacts to population, housing, employment, or economics. Even though the No Project Alternative would also not result in any significant impacts to population, housing, employment, or economics, any potential impacts would be less since the No Project Alternative would not add any housing units or population to the area.

Public Services

A comparison of the proposed project and the No Project Alternative is provided below for each significant impact identified in Section 4.12, Public Services.

Fire Protection and Emergency Medical Services (Impact 4.12.1.1)

Implementation of the proposed project would increase demand for fire and emergency services and may result in unacceptable levels of service for structure fires, wildfires, and medical emergencies. Since the No Project Alternative would not result in site development, it would not increase demand for fire and emergency services. Therefore, unacceptable levels of service for structure fires, wildfires, and medical emergencies would be less than the proposed project.

Emergency Access (Impact 4.12.1.2)

Implementation of the proposed project could result in inadequate emergency vehicle access. Since the No Project Alternative would not result in site development, it would not result in inadequate emergency vehicle access to the project site. This impact would be avoided.

Increased Demand for Law Enforcement Services (Impact 4.12.2.1)

Implementation of the proposed project would increase demand for law enforcement services and reduce the level of service currently being provided. Since the No Project Alternative would not result in site development, it would not increase demand for law enforcement services. Therefore, unacceptable levels of service would be less than the proposed project.

Transportation and Circulation

A comparison of the proposed project and the No Project Alternative is provided below for each significant impact identified in Section 4.13, Transportation and Circulation.

Increase in Project-Related Traffic Volumes/Level of Service Impacts (Impact 4.13.1)

Implementation of the proposed project could result in unacceptable levels of service at study area intersections. Since the No Project Alternative would not result in site development, there would not be an increase in levels of service over existing conditions. Therefore, levels of service at study area intersections would be less than the proposed project.

Utilities and Service Systems

Cumulative Increased Demand for Wastewater Treatment (Impact 4.14.2.3)

Implementation of the proposed project, in combination with existing, recently approved, proposed, and reasonably foreseeable development in the area, could require additional wastewater treatment, conveyance, and disposal capacity to accommodate future growth within HVLCSD service area boundaries. Since the No Project Alternative would not result in site development, there would be no need for the extension of wastewater infrastructure onto the project site. Therefore, cumulative impacts would be less than the proposed project.

6.3 ALTERNATIVE 2 – OPEN SPACE PRESERVATION ALTERNATIVE

CHARACTERISTICS

The intent of this alternative is to cluster the single-family residential units in smaller areas and to preserve open space resources. This alternative would cluster 135 units into 11 acres, resulting in a density of 12.2 dwelling units per acre. This would move the 73 single-family residential units that are between Coyote Park and Coyote Valley Elementary School, combining them with the single-family units adjacent to the medium density residential units located along the realigned Hartmann Road and the area north of the Coyote Creek Linear Park and adjacent to Arabian Lane. This would result in additional medium density residential units, which are generally smaller than single-family homes. This area also encompasses the commercial area that is termed Village IV such that the commercial use would be eliminated and residential units would be clustered on that site as well. The area between Coyote Park and Coyote Valley Elementary School would remain in its existing condition, resulting in no ground disturbance (see **Figure 6.0-1**). This open area is approximately 15.2 acres in size.

COMPARATIVE IMPACTS

Aesthetics/Light and Glare

A comparison of the proposed project and the Open Space Preservation Alternative is provided below for each significant impact identified in Section 4.1, Aesthetics/Light and Glare.

Degradation of the Existing Visual Character (Impact 4.1.2)

Implementation of the proposed project could substantially degrade the existing visual character of the site. The Open Space Preservation Alternative would reduce disturbance on the project site by approximately 15.2 acres, which would reduce the degradation of the existing visual character of the site. Although this impact would be reduced through this alternative, it would not be substantially reduced as the area left in its existing condition would be surrounded by other new residential, commercial, and open space development.

Daytime Glare (Impact 4.1.4)

Implementation of the proposed project would result in the addition of sources of daytime glare, with the addition of 488 residential units and 30 acres of commercial units. The Open Space Preservation Alternative would reduce commercial acreage by 2.37 acres over that expected of the proposed project and would move 73 single-family residential units from the southeastern portion of the project site to the northern and middle portions of the site. The clustering of units would change the character of the residential uses from single-family units to multi-family units, thereby reducing the number of actual structures that would need to be constructed. In addition to the reduction of 2.37 acres of commercial uses, the reduction in the number of residential structures would also help reduce the amount of daytime glare on the project site. As such, the Open Space Preservation Alternative would have an incrementally reduced impact.

Agricultural Resources

As identified in Section 4.2, Agricultural Resources, the proposed project would not result in any significant impacts to agricultural resources. Although the Open Space Preservation Alternative would also not result in any significant impacts to agricultural resources, this alternative would result in the removal of fewer acres of Farmland of Local Importance than the proposed project. Therefore, impacts to agricultural resources would be less than the proposed project.

Air Quality

A comparison of the proposed project and the Open Space Preservation Alternative is provided below for each significant impact identified in Section 4.3, Air Quality.

Short-Term Construction-Generated Emissions of Criteria Air Pollutants (Impact 4.3.1)

Implementation of the proposed project could result in the release of construction-generated emissions that could exceed applicable ambient air quality standards at nearby receptors. The Open Space Preservation Alternative would result in the construction of fewer residential structures and the reduction of 2.37 acres of commercial uses. In addition, this alternative would relocate 73 residential units away from the adjacent elementary school. Therefore, this alternative would result in fewer impacts from short-term construction-generated emissions than the proposed project.

Short-Term Exposure of Sensitive Receptors to Toxic Air Contaminants (Impact 4.3.2)

Construction activities associated with implementation of the proposed project could result in short-term diesel exhaust emissions as well as the potential disturbance of asbestos-containing soils. The Open Space Preservation Alternative would result in the construction of fewer single-family units and more medium density residential units, which would result in lower levels of short-term diesel exhaust emissions. In addition, the reduction of approximately 15.2 acres of site disturbance reduces the potential disturbance of asbestos-containing materials. Therefore, impacts from the short-term exposure to toxic air contaminants would be less than the proposed project.

Long-Term Emissions of Criteria Air Pollutants (Impact 4.3.3)

Implementation of the proposed project may result in operational emissions that exceed applicable significance thresholds. The Open Space Preservation Alternative would change 135 single-family residential units to multi-family residential units. Since the design and amenities in the multi-family units are not known at this time (July 2008), any impacts to long-term emissions of criteria air pollutants would be considered similar to the proposed project.

Exposure of Sensitive Receptors to Odorous Emissions (Impact 4.3.5)

Implementation of the proposed project may result in the exposure of receptors to odorous emissions located in the vicinity of commercial land uses. The Open Space Preservation Alternative would relocate 73 units from areas adjacent to commercial uses to other areas farther away from the commercial uses. Therefore, impacts to the exposure of receptors to odorous emissions located in the vicinity of commercial land uses are less than the impacts associated with the proposed project.

Contribution to Cumulative Regional Air Quality Conditions (Impact 4.3.8)

Long-term operation of the proposed project would result in increased emissions that, if uncontrolled, would exceed applicable significance thresholds. The Open Space Preservation Alternative would reduce the number of single-family units and increase the number of multi-family units. Although the number of units would remain the same as the proposed project, the increase in multi-family units would decrease vehicle trips, which would reduce carbon dioxide emissions. The overall reduction in landscaping provided by communal landscaping typical of multi-family developments would likewise result in fewer emissions from gas-powered landscaping equipment. Therefore, this alternative's contribution to cumulative regional air quality conditions would be less than the proposed project.

Cumulative Increases in GHG Emissions (Impact 4.3.9)

Implementation of the proposed project would result in the cumulative increase of greenhouse gases including CO_2 emitted into the atmosphere. The Open Space Preservation Alternative would reduce the number of single-family units and increase the number of multi-family units. As shown in the traffic study prepared for the proposed project, the vehicle trip rate for multi-family units is lower than the trip rate for single-family units. Therefore, this alternative would result in fewer vehicle trips and a resultant reduction in greenhouse gas emissions as compared to the proposed project.

Biological and Natural Resources

A comparison of the proposed project and the Open Space Preservation Alternative is provided below for each significant impact identified in Section 4.4, Biological and Natural Resources.

Loss or Disturbance of Special-Status Plant Species (Impact 4.4.2)

Implementation of the proposed project may adversely affect a small population of the state and federally endangered Burke's goldfields. The Open Space Preservation Alternative would maintain approximately 15.2 acres of the project site in its existing condition. However, the Burke's goldfields found on the project site was not located within this area. Therefore, this alternative would result in similar impacts to Burke's goldfields as the proposed project.

Potential Loss or Disturbance of Valley Oak Habitat (Impact 4.4.3)

Implementation of the proposed project would result in the loss or disturbance of valley oak stands, including 13 individual valley oak (*Quercus lobata*) trees. The Open Space Preservation Alternative would maintain approximately 15.2 acres of the project site in its existing condition. This would result in maintaining a portion of Valley Oak Stand 3. Therefore, impacts to the potential loss or disturbance of valley oak habitat are considered less than the proposed project.

Potential Impacts to Valley Elderberry Longhorn Beetles (VELB) or Disturbance of VELB Habitat (Impact 4.4.4)

Implementation of the proposed project could result in disturbance and direct loss of habitat for the federally threatened valley elderberry longhorn beetle (VELB) (*Desmocerus californicus dimorphus*). The Open Space Preservation Alternative would relocate 15.2 acres of single-family residential units from the proposed project in order to maintain a portion of the site in its existing condition. This would preserve existing VELB habitat. Therefore, impacts to VELB or VELB habitat would be less than impacts under the proposed project.

Possible Water Quality Degradation Potentially Affecting Aquatic Species Including the Foothill Yellow-Legged Frog (Impact 4.4.5)

Implementation of the proposed project could result in releases of sediment and contaminants that could reach habitat occupied by aquatic and aquatic dependent species in the Putah Creek drainage basin. The Open Space Alternative would reduce 15.2 acres of single-family residential units from the proposed project in order to maintain a portion of the site in its existing condition. This would reduce the amount of land disturbance that could release contaminants into aquatic habitat. Therefore, impacts to aquatic species including the foothill yellow-legged frog would be less than impacts under the proposed project.

Potential Disturbance to Northwestern Pond Turtles (Impact 4.4.6)

Implementation of the proposed project could result in disturbance and direct loss of habitat for the northwestern pond turtle, a California Species of Concern. The Open Space Preservation Alternative would reduce approximately 15.2 acres of single-family residential units from the proposed project in order to maintain a portion of the site in its existing condition. However, the area that would be maintained in its existing condition is not anticipated to be habitat for the northwestern pond turtle. Therefore, impacts would be similar to impacts created by the proposed project.

Potential Disturbance of Special-Status Bird Species, Nesting Raptors, and Migratory Birds (Impact 4.4.7)

Implementation of the proposed project could adversely affect special-status bird species, nesting raptors, and migratory birds through disturbance during the breeding and nesting season. These species are provided varying levels of protection under federal and state wildlife laws. The Open Space Preservation Alternative would leave approximately 15.2 acres of the project site in its existing condition. This would leave habitat available for special-status bird species, nesting raptors, and migratory birds. As such, impacts from this alternative would be less than the proposed project.

Potential Disturbance of Special-Status Bat Species (Impact 4.4.8)

Implementation of the proposed project could adversely affect special-status bat species, including the removal of habitat potentially used for roosting. Removal of an important day or maternity roost used by a special-status bat species would have a substantial adverse effect on local populations of the species. Although the Open Space Preservation Alternative would maintain approximately 15.2 acres in its existing condition and potentially provide habitat for special-status bat species, there were no bat roosts found on the project site. There is also ample habitat in the surrounding region. Therefore, impacts to special-status bat species would be similar to the proposed project.

Potential Temporary and Permanent Fill of Wetlands (Impact 4.4.9)

Implementation of the proposed project could result in direct and indirect impacts to federally protected wetlands. The Open Space Preservation Alternative would reduce 15.2 acres of single-family residential units from the proposed project in order to maintain a portion of the site in its existing condition. However, the portion of the project site that would be preserved through this alternative does not contain any wetlands. Therefore, impacts would be similar to the proposed project.

Cultural and Paleontological Resources

A comparison of the proposed project and the Open Space Preservation Alternative is provided below for each significant impact identified in Section 4.5, Cultural and Paleontological Resources.

Potential Destruction of or Damage to Undiscovered Cultural Resources and Human Remains (Impact 4.5.1)

Implementation of the proposed project could potentially destroy or damage undiscovered prehistoric and historical cultural resources on the project site. Since the Open Space Preservation Alternative would leave 15.2 acres of the project site in its existing condition, the potential of destruction or damage to undiscovered cultural resources and human remains would be less than the proposed project.

Potential for Adverse Effects on Paleontological Resources (Impact 4.5.2)

Implementation of the proposed project could potentially destroy or damage undiscovered paleontological resources. Since the Open Space Preservation Alternative would leave 15.2 acres of the project site in its existing condition, the potential for discovery of and adverse effects on paleontological resources would be less than the proposed project.

Geology and Soils

A comparison of the proposed project and the Open Space Preservation Alternative is provided below for each significant impact identified in Section 4.6, Geology and Soils.

Geologic Stability (Impact 4.6.2)

Implementation of the proposed project may place structures and future residents within areas of geologic instability. The Open Space Preservation Alternative would leave 15.2 acres of the project site in its existing condition by eliminating the development of residential structures from that area of the site. As the Open Space Preservation Alternative would reduce the overall number of structures on the project site, impacts to structures from geologic instability would be less than the proposed project. Since there would be a reduction in single-family residential units and an increase in multi-family residential units, there would be a decrease in the overall number of residents on the project site, as multi-family residential units have lower persons per household capacities. Therefore, impacts to residents would be less than the proposed project.

Hazards and Human Health

A comparison of the proposed project and the Open Space Preservation Alternative is provided below for each significant impact identified in Section 4.7, Hazards and Human Health.

Exposure to Existing Hazard-Containing Materials and Soils (Impact 4.7.3)

Implementation of the proposed project may expose people to hazardous materials and/or soil contamination. The Open Space Preservation Alternative would preserve approximately 15.2 areas of the site in its existing condition by eliminating the development of residential structures from that area of the site. This would reduce the possibility of exposing people to hazardous materials and/or soil contamination. This impact would be less than the proposed project.

Propane Hazards (Impact 4.7.5)

Implementation of the proposed project would involve the use of propane as well as the storage of propane in large tanks. Filling these tanks would involve routine transport of propane and the storage of propane would involve the placement of hazardous material within the project site. The Open Space Preservation Alternative would involve the clustering of homes onto smaller acreages of land, thereby creating more multi-family residential units and fewer single family residential units. Because of this, there would be less need for the transport and storage of propane on site, since multi-family units do not require individual large tanks per unit. This hazard would be less than the proposed project.

Hydrology and Water Quality

A comparison of the proposed project and the Open Space Preservation Alternative is provided below for each significant impact identified in Section 4.8, Hydrology and Water Quality.

Increased Stormwater Runoff (Impact 4.8.1)

Implementation of the proposed project would increase stormwater runoff rates and volumes with the introduction of impervious surfaces to the project site. The Open Space Preservation Alternative would preserve approximately 15.2 areas of the site in its existing condition. This

alternative would result in fewer impervious surfaces and would thus result in decreased stormwater runoff rates and volumes than the proposed project.

Alteration of Surface Water Drainage Patterns (Impact 4.8.2)

Implementation of the proposed project would alter existing surface water drainage patterns by rerouting the main Coyote Creek channel through the project site and discharging primary Coyote Creek flows to Putah Creek at a new location. The Open Space Preservation Alternative would also reroute Coyote Creek as in the proposed project. Therefore, impacts to surface water drainage patterns would be similar to the proposed project.

Operational Surface Water Quality Impacts (Impact 4.8.3)

Implementation of the proposed project would introduce sediments and constituent pollutants typically associated with urban development into stormwater runoff. These pollutants would have the potential of degrading downstream stormwater quality. The Open Space Preservation Alternative would reduce the overall number of acres to be developed, which would reduce the amount of sediments and constituent pollutants that could infiltrate stormwater. Therefore, impacts to operational surface water quality would be less than the proposed project.

Construction Surface Water Quality Impacts (Impact 4.8.4)

Implementation of the proposed project would involve construction-related vegetation removal, excavation, grading, and other construction activities involving slope and soil disturbance that may impact water quality by increasing the potential for erosion and sedimentation. Slope and soil disturbance associated with construction activities may cause accelerated soil erosion and sedimentation and/or the release of pollutants to downstream properties and facilities. The Open Space Preservation Alternative would leave approximately 15.2 acres of land in its existing condition. This would result in fewer construction-related activities, which would create fewer construction surface water quality impacts than the proposed project.

Groundwater Quality (Impact 4.8.6)

Implementation of the proposed project could result in activities that would infiltrate the groundwater and impact the quality of the groundwater. The Open Space Preservation Alternative would result in approximately 15.2 fewer acres of activities that could emit materials that would infiltrate the groundwater and impact the quality of groundwater. Therefore, impacts to groundwater quality from this alternative would be less than the proposed project.

Exposure to Flood Hazards (Impact 4.8.7)

Implementation of the proposed project could expose people, structures, or other facilities to injury or damage from flood hazards. The Open Space Preservation Alternative would result in the same projected population as the proposed project, but it would result in the construction of fewer structures. Because this alternative would add fewer structures that would be at risk of flooding, impacts from flooding would be less than the proposed project.

Dam Safety (Impact 4.8.8)

The project site is located just south and downstream of Hidden Valley Lake and Coyote Creek dam and is entirely located within the published dam failure inundation area for this facility. The

Open Space Preservation Alternative would result in the same projected population as the proposed project, but it would result in the construction of fewer structures in a dam inundation zone. Therefore, impacts from dam inundation hazards would be less than the proposed project.

Land Use

As identified in Section 4.9, Land Use, the proposed project would not result in any significant impacts to land use. The Open Space Preservation Alternative would result in the conversion of 135 single-family residential units to multi-family residential uses. This alternative would also result in the reduction of approximately 15.2 acres of disturbance on the project site. Because of the increase in multi-family residential uses and the reduction in project site size, the overall average density of the site would be greater than the requirement of a Suburban Residential designation, as required by Policy 5.1j of the Middletown Area Plan. Therefore, impacts to land use would be worse than the proposed project.

Noise

A comparison of the proposed project and the Open Space Preservation Alternative is provided below for each significant impact identified in Section 4.10, Noise.

Exposure to Short-Term Construction Noise (Impact 4.10.1)

Implementation of the proposed project could result in increases in ambient noise levels resulting from construction activities. The Open Space Preservation Alternative would reduce the total number of structures to be built. This alternative would also relocate the construction activities of 73 residential units away from the adjacent elementary school, thereby relocating the source of short-term construction noise away from the adjacent sensitive receptor. Impacts from the exposure to short-term construction noise would be less than the proposed project.

Traffic Noise Increases (Impact 4.10.2)

Implementation of the proposed project would result in increases to existing traffic noise levels on existing roadways, which would affect sensitive land uses. The Open Space Preservation Alternative would change 135 single-family residential units to multi-family units, which have lower trip generation rates than single-family units. Therefore the overall traffic noise increases from this alternative would be less than those expected of the proposed project.

Generation of Excessive Stationary-Source Noise Levels (Impact 4.10.3)

Implementation of the proposed project could result in additional noise impacts generating from stationary sources such as residences and commercial buildings. The Open Space Preservation Alternative would maintain the total number of residential units while eliminating 2.37 acres of commercial uses from the project. Since this alternative would remove 2.37 acres of commercial uses, it would reduce any potential noise anticipated from the proposed project. Therefore, impacts from the generation of excessive stationary-source noise levels would be less than the proposed project.

Population/Housing/Employment/Economics

As identified in Section 4.11, Population/Housing/Employment/Economics, the proposed project would not result in any significant impacts to population, housing, employment, or economics.

Since the Open Space Preservation Alternative would retain the same number of residential units, which would result in the same number of residents, impacts to population, housing, employment, and economics would be similar to the proposed project.

Public Services

A comparison of the proposed project and the Open Space Preservation Alternative is provided below for each significant impact identified in Section 4.12, Public Services.

Fire Protection and Emergency Medical Services (Impact 4.12.1.1)

Implementation of the proposed project would increase demand for fire and emergency services and may result in unacceptable levels of service for structure fires, wildfires, and medical emergencies. The Open Space Preservation Alternative would maintain the same number of residential units as the proposed project, although in fewer total structures. However, the multi-family structures in this alternative would be taller than the structures in the proposed project. Impacts to fire protection and emergency medical services are anticipated to be similar to the proposed project.

Emergency Access (Impact 4.12.1.2)

Implementation of the proposed project could result in inadequate emergency vehicle access. The Open Space Preservation Alternative would not modify any of the emergency access points or internal circulation planned for the proposed project. Therefore, impacts to emergency access and internal circulation would be similar to the proposed project.

Increased Demand for Law Enforcement Services (Impact 4.12.2.1)

Implementation of the proposed project would increase demand for law enforcement services and reduce the level of service currently being provided. The Open Space Preservation Alternative would maintain the same number of residential units as the proposed project, although in fewer total structures. Since the number of units and the number of residents would be the same as the proposed project, impacts to law enforcement services would be similar to the proposed project.

Transportation and Circulation

A comparison of the proposed project and the Open Space Preservation Alternative is provided below for each significant impact identified in Section 4.13, Transportation and Circulation.

Increase in Project-Related Traffic Volumes/Level of Service Impacts (Impact 4.13.1)

Implementation of the proposed project could result in unacceptable levels of service at study area intersections. Since the Open Space Preservation Alternative would change 135 single-family residential units to multi-family residential units, and as multi-family residences generate fewer trips on average than single-family homes, there would fewer total trips generated by this alternative. Therefore, impacts to levels of service at study area intersections would be less than the proposed project.

Utilities and Service Systems

Cumulative Increased Demand for Wastewater Treatment (Impact 4.14.2.3)

Implementation of the proposed project, in combination with existing, recently approved, proposed, and reasonably foreseeable development in the area, could require additional wastewater treatment, conveyance, and disposal capacity to accommodate future growth within HVLCSD service area boundaries. Since the Open Space Preservation Alternative would result in the same number of residential units as the proposed project, but would reduce the commercial uses by 2.37 acres, cumulative impacts to wastewater systems would be less than the proposed project.

6.4 ALTERNATIVE 3 – REDUCED INTENSITY ALTERNATIVE

CHARACTERISTICS

The "Reduced Intensity Alternative" would result in the same 150-acre project site being developed, but would construct a portion of the single-family residential development on larger parcels and eliminate the multi-family, residential care facility, and senior living/multi-family components in order to reduce overall vehicle trips and air quality-related impacts. The location and size of the commercial uses would remain the same as the proposed project. This alternative would retain the lots that are adjacent to the Hidden Valley Lake subdivision at the same general size as the proposed project, resulting in approximately 77 residential lots at approximately 6,000 square feet each, which is consistent with Middletown Area Plan Policy 5.1j which states that "any lots that are proposed adjacent to the Hidden Valley Lake Subdivision shall be designed with average lot widths similar to (or greater than) the abutting HVL lots' average widths." The remainder of the single-family dwelling units would be constructed on larger lots, at approximately 11,000 square feet per lot. This would result in approximately 231 single-family dwelling units and an overall density of approximately 3.4 dwelling units per acre, compared to an overall density of 6.8 dwelling units per acre for the proposed project. This alternative would also include the realignment of Coyote Creek to allow for the Coyote Creek Linear Park and residential development on the northeastern portion of the site. The parks and open space component of this alternative would be slightly smaller than the proposed project and would include approximately 27.2 acres of parks, open space, and landscaped buffers. This alternative would include the Coyote Creek Linear Park, neighborhood parks, and a 50-foot landscaped buffer along SR 29, as required as a provision of Policy 5.1j of the Middletown Area Plan. This alternative also assumes 20 percent of the site designated for roadways, utility and maintenance easements, and public rights-of-way. This alternative would result in approximately 308 dwelling units with an overall average density of approximately 3.4 dwelling units per acre. The land uses, acreages, and dwelling units, when applicable, are shown below in **Table 6.0-1**.

TABLE 6.0-1
REDUCED INTENSITY ALTERNATIVE

Land Use	Acreage	Dwelling Units (if applicable)	Dwelling Units per Acre
Residential			
Single-family	92.5	308	3.4
Subtotal	**92.5**	**308**	**3.4**

Land Use	Acreage	Dwelling Units (if applicable)	Dwelling Units per Acre
Commercial			
Village I	11.0	–	–
Village II	3.2	–	–
Village III	8.4	–	–
Village IV	2.4	–	–
Village V	5.3	–	–
Subtotal	**30.3**	–	–
Parks and Open Space			
Parks and Open Space	27.2	–	–
Subtotal	**27.2**	–	–
Total	**150**		

COMPARATIVE IMPACTS

Aesthetics/Light and Glare

A comparison of the proposed project and the Reduced Intensity Alternative is provided below for each significant impact identified in Section 4.1, Aesthetics/Light and Glare.

Degradation of the Existing Visual Character (Impact 4.1.2)

Implementation of the proposed project would involve the construction of 380 single-family homes, 55 multi-family residential units, 53 senior-living multi-family residential units, a 49-bed residential care facility, 30 acres of commercial development, and approximately 21 acres of roadways. The Reduced Intensity Alternative would result in the same project site being developed, but with no multi-family, residential care facility, and senior living/multi-family components. Instead this alternative would construct a portion of the single-family residential development on larger parcels. However, this development would still degrade the existing visual character similar to the proposed project, since the entire project site would still be disturbed. Therefore, impacts to the degradation of the existing visual character of the project site would be similar to the proposed project.

Daytime Glare (Impact 4.1.4)

Implementation of the proposed project would add new sources of daytime glare, resulting from the construction of 380 single-family homes, 55 multi-family residential units, 53 senior-living multi-family residential units, a 49-bed residential care facility, 30 acres of commercial development, and approximately 29 acres of active recreational uses. The Reduced Intensity Alternative would result in 72 fewer single-family residences and no multi-family, residential care facility, and senior living/multi-family components while maintaining the same number of commercial and active recreational acres. Fewer total residences would result in fewer potential surfaces that could cause daytime glare. Therefore, the Reduced Intensity Alternative would result in less impact than the proposed project.

Agricultural Resources

As identified in Section 4.2, Agricultural Resources, the proposed project would not result in any significant impacts to agricultural resources. The Reduced Intensity Alternative would also not result in any significant impacts to agricultural resources. Therefore, this alternative would result in impacts similar to the proposed project.

Air Quality

A comparison of the proposed project and the Reduced Intensity Alternative is provided below for each significant impact identified in Section 4.3, Air Quality.

Short-Term Construction-Generated Emissions of Criteria Air Pollutants (Impact 4.3.1)

Implementation of the proposed project could result in the release of construction-generated emissions that could exceed applicable ambient air quality standards at nearby receptors. The Reduced Intensity Alternative would result in the construction of 72 fewer residential units than the proposed project. Although the impacts created from the release of construction-generated emissions would remain potentially significant and require mitigation similar to the proposed project, the emission levels would be less with the Reduced Intensity Alternative because the total number of structures to be constructed is less.

Short-Term Exposure of Sensitive Receptors to Toxic Air Contaminants (Impact 4.3.2)

Construction activities associated with implementation of the proposed project could result in short-term diesel exhaust emissions as well as the potential disturbance of asbestos-containing soils. The Reduced Intensity Alternative would eliminate the construction of 72 single-family residential units, 55 multi-family residential units, 53 senior-living multi-family residential units, and a 49-bed residential care facility. This would reduce the need for diesel-powered construction equipment. However, since the use of the equipment would be temporary and episodic, and the probability of contracting cancer would not be greater than 10 in 1 million, long-term health risks associated with short-term exposure to diesel-exhaust particulate matter are similar to the proposed project. In addition, under the Reduced Intensity Alternative, the same amount of land as the proposed project would be disturbed. Therefore, the potential to unearth asbestos-containing soils would be similar to the proposed project.

Long-Term Emissions of Criteria Air Pollutants (Impact 4.3.3)

Implementation of the proposed project may result in operational emissions that exceed applicable significance thresholds. The Reduced Intensity Alternative would construct 72 fewer single-family residential homes and would not construct the multi-family, senior multi-family, and assisted living units. This would result in lower summer and winter emission levels of criteria air pollutants than the levels produced by the proposed project, as there would be fewer vehicles on the project area roadways that produce emissions and fewer uses of gas-powered landscaping equipment by the residents. Therefore, impacts from the Reduced Density Alternative would be less than the proposed project.

Exposure of Sensitive Receptors to Odorous Emissions (Impact 4.3.5)

Implementation of the proposed project may result in the exposure of receptors to odorous emissions generated by the project's commercial land uses. The Reduced Intensity Alternative would construct commercial uses on the same number of acres as the proposed project.

Therefore, this alternative would have similar impacts from the exposure of sensitive receptors to odorous emissions as the proposed project.

Contribution to Cumulative Regional Air Quality Conditions (Impact 4.3.8)

Long-term operation of the proposed project would result in increased emissions that, if uncontrolled, would exceed applicable significance thresholds. The Reduced Density Alternative would also contribute to cumulative regional air quality conditions. However, with 72 fewer residential homes, no multi-family units, and no senior multi-family units or assisted living facility, the project's contribution to cumulative regional air quality conditions would be less than the proposed project.

Cumulative Increases in GHG Emissions (Impact 4.3.9)

Implementation of the proposed project would result in the cumulative increase of greenhouse gases including CO_2 emitted into the atmosphere. The Reduced Intensity Alternative would also contribute to the cumulative increase of greenhouse gases emitted into the atmosphere. Although there are currently no standards to determine the significance of greenhouse gas emission levels, the cumulative increases in GHG emissions from the Reduced Intensity Alternative would also be cumulatively considerable and significant and unavoidable, but since there would be less emissions from vehicles and households, the contribution of the Reduced Intensity Alternative to cumulative increases in GHG emissions would be less than the proposed project.

Biological and Natural Resources

A comparison of the proposed project and the Reduced Intensity Alternative is provided below for each significant impact identified in Section 4.4, Biological and Natural Resources.

Loss or Disturbance of Special-Status Plant Species (Impact 4.4.2)

Implementation of the proposed project may adversely affect a small population of the state and federally endangered Burke's goldfields. Although the Reduced Intensity Alternative would construct fewer residences, this alternative would disturb the same number of acres as the proposed project. Therefore, this alternative would result in a similar impact to Burke's goldfields and other special-status plant species.

Potential Loss or Disturbance of Valley Oak Habitat (Impact 4.4.3)

Implementation of the proposed project would result in the loss or disturbance of valley oak stands, including 13 individual valley oak (*Quercus lobata*) trees. Although the Reduced Intensity Alternative would construct fewer residences, this alternative would disturb the same number of acres as the proposed project. Therefore, this alternative would result in a similar impact to valley oak stands and valley oak trees.

Potential Impacts to Valley Elderberry Longhorn Beetles (VELB) or Disturbance of VELB Habitat (Impact 4.4.4)

Implementation of the proposed project could result in disturbance and direct loss of habitat for the federally threatened valley elderberry longhorn beetle (VELB) (*Desmocerus californicus dimorphus*). Although the Reduced Intensity Alternative would construct fewer residences, this

alternative would disturb the same number of acres as the proposed project. Therefore, this alternative would result in a similar impact to VELB habitat.

Possible Water Quality Degradation Potentially Affecting Aquatic Species Including the Foothill Yellow-Legged Frog (Impact 4.4.5)

Implementation of the proposed project could result in releases of sediment and contaminants that could reach habitat occupied by aquatic and aquatic dependent species in the Putah Creek drainage basin. The Reduced Intensity Alternative would result in the construction of fewer residential units, which would result in the potential release of lower levels of sediment and contaminants than the proposed project. Therefore, this alternative would have a lesser impact to the effect to aquatic species including the foothill yellow-legged frog.

Potential Disturbance to Northwestern Pond Turtles (Impact 4.4.6)

Implementation of the proposed project could result in disturbance and direct loss of habitat for the northwestern pond turtle, a California Species of Concern. Although the Reduced Intensity Alternative would construct fewer residences, this alternative would disturb the same number of acres as the proposed project. Therefore, this alternative would result in a similar impact to northwestern pond turtle habitat.

Potential Disturbance of Special-Status Bird Species, Nesting Raptors, and Migratory Birds (Impact 4.4.7)

Implementation of the proposed project could adversely affect special-status bird species, nesting raptors, and migratory birds through disturbance during the breeding and nesting season. These species are provided varying levels of protection under federal and state wildlife laws. Although the Reduced Intensity Alternative would construct fewer residences, this alternative would disturb the same number of acres as the proposed project. Therefore, this alternative would result in a similar impact to the potential disturbance of special-status bird species, nesting raptors, and migratory birds.

Potential Disturbance of Special-Status Bat Species (Impact 4.4.8)

Implementation of the proposed project could adversely affect special-status bat species, including the removal of habitat potentially used for roosting. Removal of an important day or maternity roost used by a special-status bat species would have a substantial adverse effect on local populations of the species. Although the Reduced Intensity Alternative would construct fewer residences, this alternative would disturb the same number of acres as the proposed project. Therefore, this alternative would result in a similar impact to the potential disturbance of special-status bat species and bat habitat.

Potential Temporary and Permanent Fill of Wetlands (Impact 4.4.9)

Implementation of the proposed project could result in direct and indirect impacts to federally protected wetlands. Although the Reduced Intensity Alternative would construct fewer residences, this alternative would disturb the same number of acres as the proposed project. Therefore, this alternative would result in a similar potential temporary and permanent fill of wetlands.

Cultural and Paleontological Resources

A comparison of the proposed project and the Reduced Intensity Alternative is provided below for each significant impact identified in Section 4.5, Cultural and Paleontological Resources.

Potential Destruction of or Damage to Undiscovered Cultural Resources and Human Remains (Impact 4.5.1)

Implementation of the proposed project could potentially destroy or damage undiscovered prehistoric and historical cultural resources on the project site. Because the Reduced Intensity Alternative would disturb the same number of acres as the proposed project, the potential destruction of or damage to undiscovered cultural resources and human remains would be similar to the proposed project.

Potential for Adverse Effects on Paleontological Resources (Impact 4.5.2)

Implementation of the proposed project could potentially destroy or damage undiscovered paleontological resources. Because the Reduced Intensity Alternative would disturb the same number of acres as the proposed project, the potential for adverse effects on paleontological resources would be similar to the proposed project.

Geology and Soils

A comparison of the proposed project and the Reduced Intensity Alternative is provided below for each significant impact identified in Section 4.6, Geology and Soils.

Geologic Stability (Impact 4.6.2)

Implementation of the proposed project may place structures and future residents within areas of geologic instability. The Reduced Intensity Alternative would include 180 fewer residential units than the proposed project and would eliminate the assisted living facility. This would result in fewer structures and residents. Therefore, this alternative would result in fewer impacts from the placement of residents and structures within areas of geologic instability.

Hazards and Human Health

A comparison of the proposed project and the Reduced Intensity Alternative is provided below for each significant impact identified in Section 4.7, Hazards and Human Health.

Exposure to Existing Hazard-Containing Materials and Soils (Impact 4.7.3)

Implementation of the proposed project may expose people to hazardous materials and/or soil contamination. The Reduced Intensity Alternative would still expose people to hazard-containing materials and/or soil contamination. Since this alternative would disturb the same number of acres as the proposed project, the potential to uncover any hazardous materials or soils is similar to the proposed project.

Propane Hazards (Impact 4.7.5)

Implementation of the proposed project would involve the use of propane as well as the storage of propane in large tanks. Filling these tanks would involve routine transport of propane and the storage of propane would involve the placement of hazardous material within the

project site. The Reduced Intensity Alternative would result in fewer residential homes, thereby reducing the need for the routine transport and storage of propane on site. Therefore, this would result in fewer potential impacts than the proposed project.

Hydrology and Water Quality

A comparison of the proposed project and the Reduced Intensity Alternative is provided below for each significant impact identified in Section 4.8, Hydrology and Water Quality.

Increased Stormwater Runoff (Impact 4.8.1)

Implementation of the proposed project would increase stormwater runoff rates and volumes with the introduction of impervious surfaces to the project site. The Reduced Intensity Alternative would result in the construction of 180 fewer residential units, as well as the elimination of the 49-bed assisted living facility. The reduction of these residential units would place the remaining single-family residential units on larger parcels. Development of larger single-family lots would result in a decrease in the amounts of impervious surfaces created as compared to the proposed project because much of the larger lot surface would likely remain uncovered. Therefore, the Reduced Intensity Alternative would have less impact to stormwater runoff.

Alteration of Surface Water Drainage Patterns (Impact 4.8.2)

Implementation of the proposed project would alter existing surface water drainage patterns by rerouting the main Coyote Creek channel through the project site and discharging primary Coyote Creek flows to Putah Creek at a new location. Although the Reduced Intensity Alternative would construct fewer residential units than the proposed project, the surface water drainage patterns would remain the same because Coyote Creek would still be rerouted as in the proposed project.

Operational Surface Water Quality Impacts (Impact 4.8.3)

Implementation of the proposed project would introduce sediments and constituent pollutants typically associated with urban development into stormwater runoff. These pollutants would have the potential of degrading downstream stormwater quality. The Reduced Intensity Alternative would reduce the number of residential units built on the project site. Therefore, the amount of sediments and constituent pollutants that could potentially degrade downstream stormwater quality would be less than the proposed project, since there would be fewer pollutants from items such as oil and grease from vehicles and landscaping chemicals used by residents.

Construction Surface Water Quality Impacts (Impact 4.8.4)

Implementation of the proposed project would involve construction-related vegetation removal, excavation, grading, and other construction activities involving slope and soil disturbance that may impact water quality by increasing the potential for erosion and sedimentation. Slope and soil disturbance associated with construction activities may cause accelerated soil erosion and sedimentation and/or the release of pollutants to downstream properties and facilities. Although the Reduced Intensity Alternative would result in the construction of fewer residential units than the proposed project, this alternative would result in the same number of acres being disturbed as the proposed project, thereby resulting in similar impacts to surface water quality from site preparation and construction activities.

Groundwater Quality (Impact 4.8.6)

Implementation of the proposed project could result in activities that would infiltrate the groundwater and impact the quality of the groundwater. Although the unknown depths to groundwater along the linear park channels would be similar to the proposed project, the Reduced Intensity Alternative would result in fewer pollutants with the potential of integrating into the soil, since there would be fewer pollutants from items such as oil and grease from vehicles and landscaping chemicals used by residents.

Exposure to Flood Hazards (Impact 4.8.7)

Implementation of the proposed project could expose people, structures, or other facilities to injury or damage from flood hazards. The Reduced Intensity Alternative would result in the construction of fewer residential units than the proposed project, thereby placing fewer people and structures in an area subject to injury or damage from flood hazards.

Dam Safety (Impact 4.8.8)

The project site is located just south and downstream of Hidden Valley Lake and Coyote Creek dam and is entirely located within the published dam failure inundation area for this facility. Although the Reduced Intensity Alternative would construct fewer residences, the alternative would be built on the same site as the proposed project, thereby placing people and structures within a delineated dam inundation zone. This would result in similar impacts to the proposed project.

Land Use

As identified in Section 4.9, Land Use, the proposed project would not result in any significant impacts to land use. The Reduced Intensity Alternative would also not result in any significant impacts to land use.

Noise

A comparison of the proposed project and the Reduced Intensity Alternative is provided below for each significant impact identified in Section 4.10, Noise.

Exposure to Short-Term Construction Noise (Impact 4.10.1)

Implementation of the proposed project could result in increases in ambient noise levels resulting from construction activities. The Reduced Intensity Alternative would construct 180 fewer residences than the proposed project as well as eliminate the 49-bed assisted living facility. As such, this alternative would result in lower levels of short-term construction noise than the proposed project.

Traffic Noise Increases (Impact 4.10.2)

Implementation of the proposed project would result in increases to existing traffic noise levels on existing roadways, which would affect sensitive land uses. The Reduced Intensity Alternative would result in the construction of 180 fewer residential units than the proposed project as well as the elimination of the 49-bed assisted living facility from the project. Fewer residences translates directly to fewer trips generated by the project. As such, this reduction in residential units would result in the lower levels of traffic noise on existing roadways than the proposed project.

Generation of Excessive Stationary-Source Noise Levels (Impact 4.10.3)

Implementation of the proposed project could result in additional noise impacts generating from stationary sources such as residences and commercial buildings. Although the Reduced Intensity Alternative would result in the construction of 180 fewer residential units on the project site, generation of excessive stationary-source noise levels usually do not arise from residential units, but from commercial units. Since the commercial acreage would remain the same as the proposed project, impacts from the generation of excessive stationary-source noise levels would be similar to the proposed project.

Population/Housing/Employment/Economics

As identified in Section 4.11, Population/Housing/Employment/Economics, the proposed project would not result in any significant impacts to population, housing, employment, or economics. The Reduced Intensity Alternative would result in the construction of 180 fewer residential units and the elimination of the 49-bed assisted living facility. This would result in a lower population created from the project, translating to a lower project demand on employment and shopping needs. However, reduced project demand for employment and shopping would not effect the potential for on-site commercial uses to draw customers from off-site existing businesses. As such, this alternative would have similar effects on the local economy as the proposed project.

Public Services

A comparison of the proposed project and the Reduced Intensity Alternative is provided below for each significant impact identified in Section 4.12, Public Services.

Fire Protection and Emergency Medical Services (Impact 4.12.1.1)

Implementation of the proposed project would increase demand for fire and emergency services and may result in unacceptable levels of service for structure fires, wildfires, and medical emergencies. Because the Reduced Intensity Alternative would construct fewer residences, there would be fewer people living on the project site. Therefore, fewer people and structures would be located on-site that would require fire and emergency medical services. Furthermore, the elimination of the residential care facility and the senior living components of the proposed project, two uses that commonly require a higher number of response calls from fire and emergency medical services, would reduce the call frequency generated by the project. Since the commercial uses in the Reduced Intensity Alternative would be the same as the proposed project, any requirements or new equipment needed by the South Lake County Fire Protection District to serve the commercial uses would be similar to the proposed project. The overall need for services is less than the proposed project.

Emergency Access (Impact 4.12.1.2)

Implementation of the proposed project could result in inadequate emergency vehicle access. Since the Reduced Intensity Alternative would be proposing the same emergency vehicle access points as the proposed project, impacts from this alternative to emergency access and internal circulation would be similar to the proposed project.

Increased Demand for Law Enforcement Services (Impact 4.12.2.1)

Implementation of the proposed project would increase demand for law enforcement services and reduce the level of service currently being provided. The Reduced Intensity Alternative

would result in the addition of fewer residents to the project site. Therefore, this would result a lesser need for law enforcement services.

Transportation and Circulation

A comparison of the proposed project and the Reduced Intensity Alternative is provided below for each significant impact identified in Section 4.13, Transportation and Circulation.

Increase in Project-Related Traffic Volumes/Level of Service Impacts (Impact 4.13.1)

Implementation of the proposed project could result in unacceptable levels of service at study area intersections. The Reduced Intensity Alternative would eliminate 180 residential units and the 49-bed residential care facility. This would result in approximately 2,183 fewer trips than the proposed project. Therefore, impacts to levels of service at study area intersections would be less than the proposed project.

Utilities and Service Systems

Cumulative Increased Demand for Wastewater Treatment (Impact 4.14.2.3)

Implementation of the proposed project, in combination with existing, recently approved, proposed, and reasonably foreseeable development in the area, could require additional wastewater treatment, conveyance, and disposal capacity to accommodate future growth within HVLCSD service area boundaries. The Reduced Intensity Alternative would construct 180 fewer residential units and would not construct the 49-bed residential care facility. This would reduce the cumulative demand on wastewater service and infrastructure. Therefore, cumulative impacts would be less than the proposed project.

6.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Table 6.0-2 provides a summary of the potential impacts of the alternatives evaluated in this section, as compared with the potential impacts of the proposed project.

TABLE 6.0-2
COMPARISON OF ALTERNATIVES TO THE PROPOSED PROJECT

Issue	Alternative 1 – No Project	Alternative 2 – Open Space Preservation Alternative	Alternative 3 – Reduced Intensity Alternative
Aesthetics/Light and Glare			
Degradation of Visual Character (4.1.2)	B	B	S
Daytime Glare (4.1.4)	B	B	B
Agricultural Resources	B	B	S
Air Quality			
Short-Term Construction Emissions (4.3.1)	B	B	B
Exposure to TACs (4.3.2)	B	B	S
Long-Term Emissions (4.3.3)	B	S	B

Issue	Alternative 1 – No Project	Alternative 2 – Open Space Preservation Alternative	Alternative 3 – Reduced Intensity Alternative
Odorous Emissions (4.3.5)	B	B	S
Cumulative Regional Air Quality (4.3.8)	B	B	B
Cumulative Increases in GHG Emissions (4.3.9)	B	B	B
Biological Resources			
Special-Status Plant Species (4.4.2)	B	S	S
Valley Oak Habitat (4.4.3)	B	B	S
VELB Impacts (4.4.4)	B	B	S
Aquatic Species Impacts (4.4.5)	B	B	B
Northwestern Pond Turtles (4.4.6)	B	S	S
Special-Status Birds, Nesting Raptors, Migratory Birds (4.4.7)	B	B	S
Special-Status Bats (4.4.8)	B	S	S
Fill of Wetlands (4.4.9)	B	S	S
Cultural Resources			
Undiscovered Cultural Resources and Human Remains (4.5.1)	B	B	S
Paleontological Resources (4.5.2)	B	B	S
Geology and Soils			
Geologic Stability (4.6.2)	B	B	B
Hazards and Human Health			
Hazard-Containing Materials and Soils (4.7.3)	B	B	S
Propane Hazards (4.7.5)	S	B	B
Hydrology and Water Quality			
Increased Runoff (4.8.1)	B	B	B
Alteration of Drainage Patterns (4.8.2)	B	S	S
Operational Water Quality (4.8.3)	B	B	B
Construction Water Quality (4.8.4)	B	B	S
Groundwater Quality (4.8.6)	B	B	B
Flood Hazards (4.8.7)	B	B	B
Dam Safety (4.8.8)	B	B	S
Land Use	B	W	S
Noise			
Construction Noise (4.10.1)	B	B	B
Traffic Noise (4.10.2)	B	B	B
Stationary-Source Noise Levels (4.10.3)	B	B	S

Issue	Alternative 1 – No Project	Alternative 2 – Open Space Preservation Alternative	Alternative 3 – Reduced Intensity Alternative
Population/Housing/Employment/Economics	B	S	B
Public Services			
Fire Protection and EMS (4.12.1.1)	B	S	B
Emergency Access (4.12.1.2)	B	S	S
Law Enforcement Services (4.12.2.1)	B	S	B
Transportation and Circulation			
LOS Impacts at Study Area Intersections (4.13.1)	B	B	B
Utilities and Service Systems	B	B	S
Cumulative Increased Demand for Wastewater Treatment (Impact 4.14.2.3)	B	B	B

B – Better (Fewer impacts than the proposed project)

S – Similar (Similar impacts to the proposed project)

W – Worse (Greater impacts than the proposed project)

Based upon the evaluation provided in this section, the No Project Alternative would be the environmentally superior alternative. However, under CEQA Guidelines Section 15126.6(e)(2), if the environmentally superior alternative is the No Project Alternative, another environmentally superior alternative must be chosen from the alternatives analyzed. For this analysis, after the No Project Alternative, the Open Space Preservation Alternative would be the environmentally superior alternative. However, the Open Space Preservation Alternative would not meet all of the project objectives.

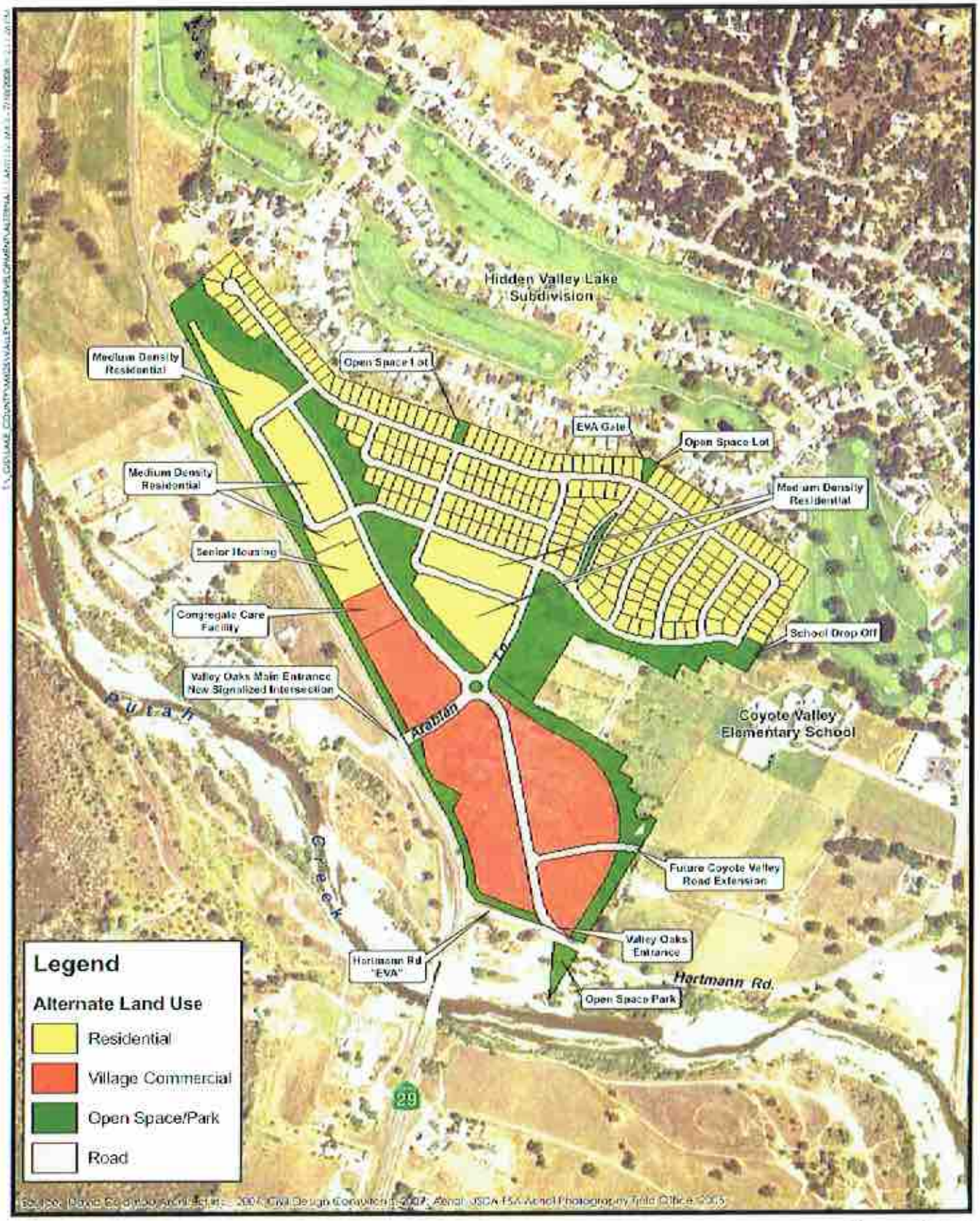

Figure 6.0-1

Alternative 2

Open Space Preservation Alternative

PMC

7.0 Long-Term Implications of the Project

This section discusses the additional topics statutorily required by CEQA. The topics discussed include significant and unavoidable environmental impacts, growth-inducing impacts, significant irreversible environmental changes, and irretrievable commitment of resources.

7.1 SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL EFFECTS

State CEQA Guidelines Section 15126.2(b) requires an EIR to discuss unavoidable significant environmental effects, including those that can be mitigated but not reduced to a level of insignificance. In addition, Section 15093(a) of the State CEQA Guidelines allows the decision-making agency to determine if the benefits of a proposed project outweigh the unavoidable adverse environmental impacts of implementing the project. The County can approve a project with unavoidable adverse impacts if it prepares a "Statement of Overriding Considerations" setting forth the specific reasons for making such a judgment. A list of unavoidable adverse impacts identified in this EIR is provided below.

AESTHETICS/LIGHT AND GLARE

Degradation of the Existing Visual Character

Impact 4.1.2 Implementation of the proposed project could substantially degrade the existing visual character of the site. This is considered a **potentially significant** impact.

Implementation of the mitigation measures would reduce impacts to the project site from off-site views. However, conversion of the project site from fallow agricultural and horse ranch uses to residential, commercial, and passive and active recreation uses would degrade the existing character of the project site. Therefore, impacts to the degradation of the existing visual character of the project site are considered **significant and unavoidable.**

AIR QUALITY

Long-Term Emissions of Criteria Air Pollutants

Impact 4.3.3 Implementation of the proposed project may result in operational emissions that exceed applicable significance thresholds. This impact is considered **significant.**

Implementation of the mitigation measures would reduce long-term operational emissions associated with the proposed project. For instance, during the winter months, the prohibited use of wood-burning heating devices is anticipated to result in overall project-generated emissions reductions of approximately 50 percent for ROG, 9 percent for NO_x, and 33 percent for PM_{10}. With the prohibited use of wood-burning heating devices, maximum project-generated emissions during the winter months would be reduced to approximately 106 pounds per day of ROG, 129 pounds per day of NO_x, 829 pounds per day of CO, and 182 pounds per day of PM_{10}. The various other mitigation measures, including incorporation of energy-saving features and promotion of alternative means of transportation and pedestrian access, would result in additional reductions of approximately 5 to 15 percent in overall summer and winter emissions. With mitigation, resultant long-term operational emissions would not exceed applicable LCAQMD-recommended significance thresholds for ROG and NO_x. However, operational emissions of PM_{10}, during both summer and winter conditions, would still be anticipated to exceed the LCAQMD significance threshold of 150 pounds per day. Even with mitigation, this impact is considered **significant and unavoidable.**

Contribution to Cumulative Regional Air Quality Conditions

Impact 4.3.8 Long-term operation of the proposed project would result in increased emissions that, if uncontrolled, would exceed applicable significance thresholds. This impact is considered **cumulatively considerable.**

Implementation of mitigation measures **MM 4.3.1** and **MM 4.3.3** would substantially reduce short-term and long-term operational emissions of the project, respectively. However, even with implementation of the proposed mitigation measures, predicted emissions of PM_{10} from mobile sources would still be anticipated to exceed the LCAQMD significance threshold of 150 pounds per day. As a result, the project's cumulative contribution to adverse regional air quality conditions is considered **cumulatively considerable** and **significant and unavoidable**.

Cumulative Increases in GHG Emissions

Impact 4.3.9 Implementation of the proposed project would result in the cumulative increase of greenhouse gases including CO_2 emitted into the atmosphere. This is considered a **cumulatively considerable** impact.

Although the County has included policies that would help reduce greenhouse gas emissions, there is no law currently in place that regulates GHG emission levels. In addition, there is no way to foresee how these policies would reduce the project's contribution to global GHG levels or to quantify a specific amount. Therefore, the project's contribution to cumulative GHG emissions is considered **cumulatively considerable** and **significant and unavoidable.**

Cumulative Increased Demand for Wastewater Treatment

Impact 4.14.2.3 Implementation of the proposed project, in combination with existing, recently approved, proposed, and reasonably foreseeable development in the area could require additional wastewater treatment, conveyance, and disposal capacity to accommodate future growth within HVLCSD service area boundaries. This impact is **cumulatively considerable**.

Future development within the HVLCSD service area boundaries would result in additional wastewater generation and the need for additional infrastructure and wastewater treatment. As under Impact 4.14.2.1, the proposed project would generate approximately 148,510 gpd of wastewater, which would only leave 1,490 gpd of excess treatment capacity available to serve future development in HVLCSD's service area. Any significant additional development within the HVLCSD service area would likely result in the need for expanded wastewater treatment capabilities. However, the plant was designed to accommodate a second and third treatment train on either side of the existing plant, which could serve 2,200 parcels each (Aust, 2008a). Upon full expansion, the treatment plant could handle a total capacity of 2.67 million gallons per day (Winzler & Kelly, 2007). Therefore, the plant would be able to treat additional wastewater produced by other proposed or reasonably foreseeable projects in the service area. Construction of the second and third treatment trains would likely require additional environmental review, pursuant to local requirements and the requirements of CEQA. However, as no engineering or other planning for such expansion has occured by the date of this EIR, any discussion of the environmental impacts of such expansion would be purely speculative.

As with the proposed project, any new development requiring the extension of sewer mains and collector facilities would be required to fund and construct those facilities on the specific project site. The physical effects of constructing new wastewater infrastructure and facilities to

accommodate future development within the HVLCSD service area would be analyzed and environmentally evaluated on a project-by-project basis as new development proposals are submitted.

Although HVLCSD has plans for expansion of the WWTP with additional development in the service area, no specific analysis has been completed by the release of this EIR. Any potential significant impacts resulting from the expansion of the WWTP and providing additional wastewater treatment capacity to the Coyote Valley area would be reduced to the extent feasible as part of the CEQA analysis for the WWTP expansion. Therefore, since future impacts from the WWTP expansion are not known, the project's contribution to cumulative wastewater conveyance and treatment is **cumulatively considerable** and **significant and unavoidable.**

7.2 GROWTH-INDUCING IMPACTS

INTRODUCTION

State CEQA Guidelines Section 15126.2(d) requires that an Environmental Impact Report (EIR) evaluate the growth-inducing impacts of a proposed action. A "growth-inducing impact" is defined by the State CEQA Guidelines as follows:

> ...the way in which a proposed project 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...increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also...the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively.

A project can have direct and/or indirect growth inducement potential. Direct growth inducement would result if a project, for example, involved construction of new housing. A project would have indirect growth inducement potential if it established substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises) or if it would involve a construction effort with substantial short-term employment opportunities that would indirectly stimulate the need for additional housing and services to support the new employment demand. Similarly, a project would indirectly induce growth if it would remove an obstacle to additional growth and development such as removing a constraint on a required public service. For example, a project providing an increased water supply in an area where water service historically limited growth could be considered growth-inducing.

The State CEQA Guidelines further explain that the environmental effects of induced growth are considered indirect impacts of the proposed action. These indirect impacts or secondary effects of growth may result in significant, adverse environmental impacts. Potential secondary effects of growth include increased demand on other community and public services and infrastructure, increased traffic and noise, and adverse environmental impacts such as degradation of air and water quality, degradation or loss of plant and animal habitat, and conversion of agricultural and open space land to developed uses.

Growth inducement may constitute an adverse impact if the growth is not consistent with or accommodated by the land use plans and growth management plans and policies for the area affected. Local land use plans provide for land use development patterns and growth policies that allow for the orderly expansion of urban development supported by adequate urban

public services, such as water supply, roadway infrastructure, sewer service, and solid waste service. A project that would induce "disorderly" growth (growth that conflicts with local land use plans) could indirectly cause additional adverse environmental impacts and other public services impacts. Thus, to assess whether a growth-inducing project would result in adverse secondary effects, it is important to assess the degree to which the growth accommodated by a project would or would not be consistent with applicable land use plans.

ANALYSIS

Implementation of the proposed project would result in the conversion of approximately 150 acres of agriculturally designated land to residential, commercial, and park and open space uses. A General Plan Amendment would result in the conversion of land uses from an Agriculture designation to Rural Residential and Community Commercial designations.

The proposed project is surrounded by land that is currently developed or approved and planned for development. The Hidden Valley Lake subdivision with golf course borders the project site to the north and east. The Coyote Valley Elementary School borders the site on the south, along with the approved 29-unit Creekside Oak Estates. The parcel adjacent to Creekside Oak Estates is currently designated for Rural Residential uses.

The proposed project includes commercial and office development which would provice for new employment opportunities. However, the new employment opportunities as well as the retail opportunities are intended to serve the residences to be built as part of the proposed project and the adjacent neighborhoods. The larger proposed retail uses, such as the grocery store and movie theater, may bring in people from other areas for the utilization of services, but would not result in growth inducement in the area.

The construction of the project site would provide short-term employment opportunities for employees of the construction trade as well as other businesses that support construction. The residential and commercial uses would be constructed in phases, limiting the scope of construction occurring at any one time. Therefore, the project is not anticipated to result in substantial short-term employment opportunities that would lead to indirect growth inducement.

The extension of water and sewer infrastructure is necessary to supply the residential and commercial uses of the project with these services. The proposed project would not result in indirect growth inducement since the extension of water and sewer infrastructure would only serve the project site and would not directly result in additional development in nearby areas.

7.3 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES/IRRETRIEVABLE COMMITMENT OF RESOURCES

LEGAL CONSIDERATIONS

State CEQA Guidelines Section 15126.2(c) and Public Resources Code Sections 21000(b)(2) and 21000.1(a), require that the EIR include a discussion of significant irreversible environmental changes which would be involved in the proposed action should it be implemented. Irreversible environmental effects would occur if:

- The project would involve a large commitment of nonrenewable resources;

- The primary and secondary impacts of a project would generally commit future generations to similar uses (e.g., a highway provides access to previously remote areas);
- The project involves uses in which irreversible damage could result from any potential environmental accidents associated with the project; or
- The phasing of the proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy).

Determining whether the proposed project would result in significant irreversible effects requires a determination of whether key resources would be degraded or destroyed such that there would be little possibility of restoring them. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

ANALYSIS

Implementation of the proposed project would result in the conversion of approximately 150 acres of agricultural land to residential uses, commercial uses, parks and open space. Development of the proposed project would constitute a long-term commitment to urban uses. It is unlikely that circumstances would arise that would justify the return of the land to its original condition.

A variety of resources (including land, energy, water, construction materials, and human resources) would be irretrievably committed for the project's initial construction, infrastructure installation and connection to existing utilities, ongoing build-out, and continued maintenance. Construction of the project would require the commitment of a variety of other non-renewable or slowly renewable natural resources such as lumber and other forest products, sand and gravel, asphalt, petrochemicals, and metals. Additionally, a variety of resources would be committed to the ongoing maintenance for the life of the proposed project. An increase in the intensity of land use on the site will result in an increase in regional energy consumption including electricity and gasoline associated with initial project construction, lighting, heating, and cooling of buildings, and the transport of people and goods. In addition, the construction of new roadways would generally commit future generations to similar uses of fossil fuels by constructing roadways and utility infrastructure in a previously undeveloped area.

7.4 MANDATORY FINDINGS OF SIGNIFICANCE

State CEQA Guidelines Section 15065 identifies four mandatory findings of significance that must be considered as part of the environmental review process of a project. These findings are identified below with an analysis of the project's relationship to these findings. According to State CEQA Guidelines Section 15065(a), a significant effect may occur if:

> The project has the potential to: substantially degrade the quality of the environment; substantially reduce the habitat for a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; substantially reduce the number or restrict the range of an endangered, rare or threatened species; or eliminate important examples of the major periods of California history or prehistory.

Sections 4.1 through 4.14 of this Draft EIR address environmental impacts that are anticipated to occur with implementation of the proposed project. Section 4.4, Biological and Natural Resources, evaluates in detail the project's impact on biological resources, including the

potential of the project to reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or substantially reduce the number or restrict the range of an endangered, rare, or threatened species. As discussed in Section 4.4, the project would have a potentially significant impact on the loss or disturbance of special-status plant species, the potential loss or disturbance of valley oak habitat, potential impacts to valley elderberry longhorn beetle (VELB) or disturbance of VELB habitat, potential water quality degradation effects to the foothill yellow-legged frog, potential disturbance to northwestern pond turtles, potential disturbance to special-status bird species which includes migratory birds and nesting raptors, potential disturbance to special-status bat species, and potential temporary and permanent fill of wetlands. Mitigation measures are identified to reduce potentially significant impacts to less than significant levels.

Section 4.5, Cultural and Paleontological Resources, evaluates the project's potential impacts to cultural resources. During field studies, no archaeological, historical, or paleontological resources were found. Mitigation measures are identified to reduce potentially significant impacts to any undiscovered resources.

State CEQA Guidelines Section 15065(a)(2) further identifies a potential significant effect if "[t]he project has the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals."

The proposed project does not include any land uses or design features that would result in short-term environmental goals to the disadvantage of long-term environmental goals. As noted in Sections 4.1 through 4.14 of the Draft EIR and as discussed in subsection 7.1 above, the project would result in some significant and unavoidable impacts which would have long-term environmental effects. As feasible, mitigation measures are required to reduce impacts to less than significant levels. Mitigation measures are identified for both the construction and operation of the project, in order to address the short-term and long-term (operational) effects of the project. None of the mitigation measures are anticipated to achieve short-term environmental goals to the disadvantage of long-term environmental goals.

State CEQA Guidelines Section 15065(a)(3) further identifies a potential significant effect if:

> The project has possible environmental effects that are individually limited but cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

The cumulative effect of developing the project site along with other development anticipated to occur in the cumulative area is addressed in Section 5.0, Cumulative Impact Summary, as well as in detail in Sections 4.1 through 4.14. This Draft EIR evaluates cumulative environmental impacts associated with the project and determines whether the project's contribution is cumulatively considerable. Mitigation measures and project alternatives are identified to reduce the project's contribution to cumulative impacts.

Lastly, State CEQA Guidelines Section 15065(a)(4) identifies a potential significant effect if "[t]he environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly."

Section 4.1, Aesthetics/Light and Glare, evaluates direct and indirect adverse effects on humans that may result from light and glare. Section 4.3, Air Quality, identifies emissions of air pollutants to which the project would subject people, both directly and indirectly. Section 4.7, Hazards and Human Health, discusses the potential for human beings to be exposed to hazardous materials or conditions, both directly and indirectly. Section 4.10, Noise, addresses the potential for human beings to be exposed to unacceptable noise levels, both directly and indirectly. Mitigation measures and project alternatives are identified to reduce identified significant impacts to these resource areas.

8.0 Report Preparers

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