4.2 AIR QUALITY

*Agricultural Residential Cluster Subdivision. There are several sources of air emissions associated with the proposed Agricultural Residential Cluster Subdivision. These include: long term emissions associated with vehicle traffic and electricity and natural gas usage; emissions associated with construction equipment; dust generated by grading required for the installation of infrastructure systems as well as individual lot development; and potential odor emissions associated with proposed private septic systems. Agricultural Residential Cluster Subdivision-related mobile and stationary source emissions have been determined to be Class I**I**, significant and unavoidable impacts. Potential dust generation and odor impacts have been determined to be Class II, significant but mitigable. Odor nuisance impacts from private septic systems are Class III, less than significant. Since the Agricultural Residential Cluster Subdivision is potentially inconsistent with the CAP, this is a Class I, significant and unavoidable, impact.*

Future Development Program. Because no active application exists for the Future Development Program subsequent to the Agricultural Residential Cluster Subdivision, the assessment of air quality impacts is based on a reasonable worst case scenario with regard to the future location and size of future land uses within anticipated development areas. Future Development Program air emissions sources would be similar to those associated with the Agricultural Residential Cluster Subdivision individually. ~~Future Development Program-related mobile and stationary source emissions have been determined to be Class II, significant but mitigable impacts~~. Potential dust generation and odor impacts have been determined to be Class II, significant but mitigable. Since the Future Development Program is potentially inconsistent with the CAP, this is a Class I, significant and unavoidable, impact.

Cumulative air quality impacts would be significant and unavoidable. ***Global Climate Change related impacts are discussed in Section 4.2.3.***

4.2.1 Setting

The Santa Margarita Ranch is part of the South Central Coast Air Basin (SCCAB) which includes all of San Luis Obispo, Santa Barbara, and Ventura counties. The climate of San Luis Obispo County and all of the SCCAB is strongly influenced by its proximity to the Pacific Ocean and the location of the semi-permanent high pressure cell in the northeastern Pacific. With a Mediterranean-type climate, the Santa Margarita Ranch is characterized by warm, dry summers and cool winters with occasional rainy periods. Maximum summer temperatures in the County average about 70 degrees Fahrenheit near the coast, while inland valleys are often in the high 90's. Average minimum winter temperatures range from the low 30's along the coast to the low 20's inland.

Airflow around the County plays an important role in the movement and dispersion of pollutants. The speed and direction of local winds are controlled by the location and strength of the Pacific high pressure system and other global patterns, topographical factors, and circulation patterns resulting from temperature differences between the land and the sea. The region is also subject to seasonal "Santa Ana" winds. These are typically hot, dry northerly winds which blow offshore at 15-20 mph, but can reach speeds over 60 mph. Two types of temperature inversions (warmer air on top of cooler air) are created in the area: subsidence and radiational. The subsidence inversion is a regional effect created by the Pacific high in which air is heated as it is compressed when it flows from the high pressure area to the low pressure areas

inland. This type of inversion generally forms at about 1,000 to 2,000 feet and can occur throughout the year, but it is most evident during the summer months. Surface inversions are formed by the more rapid cooling of air near the ground during the night, especially during winter. Both types of inversions limit the dispersal of air pollutants within the regional airshed, with the more stable the air (low wind speeds, uniform temperatures), the lower the amount of pollutant dispersion.

a. Air Pollution Regulation. Both the federal and state governments have established ambient air quality standards for the protection of public health. The U.S. Environmental Protection Agency (EPA) is the federal agency designated to administer air quality regulation, while the California Air Resources Board (CARB) is the state equivalent in the California Environmental Protection Agency. Local control in air quality management is provided by the CARB through regional-level Air Pollution Control Districts (APCDs). The CARB has established air quality standards and is responsible for the control of mobile emission sources, while the local APCDs are responsible for enforcing standards and regulating stationary sources. The CARB has established 14 air basins statewide.

The U.S. EPA has set primary and secondary ambient air quality standards for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, suspended particulates (PM_{10}) and lead. In addition, the State of California has established health-based ambient air quality standards for these and other pollutants, which are more stringent than the federal standards. Table 4.2-1 shows the federal and state primary standards for the major pollutants. On July 18, 1997, the U.S. EPA announced changes to the National Ambient Air Quality Standards for ozone and particulate matter. The federal ozone standard was lowered to 0.08 parts per million (ppm) and the averaging period was changed from one-hour to an eight-hour running average. A new particulate matter standard for 2.5 micron particulates ($PM_{2.5}$) was created in addition to the standard for 10 micron particulates (PM_{10}).

Table 4.2-1 Air Quality Standards

Pollutant	Averaging Time	Federal Primary Standards	California Standard
Ozone	1-Hour	---	0.09 PPM
	8-Hour	0.08 PPM	0.070 PPM
Carbon Monoxide	8-Hour	9.0 PPM	9.0 PPM
	1-Hour	35.0 PPM	20.0 PPM
Nitrogen Dioxide	Annual	0.053 PPM	~~---~~ **0.030 PPM**
	1-Hour	---	~~0.25~~ **0.18 PPM**
Sulfur Dioxide	Annual	0.030 PPM	---
	24-Hour	0.14 PPM	0.04 PPM
	1-Hour	---	0.25 PPM
PM_{10}	Annual	~~50 µg/m^3~~ **---**	20 µg/m^3
	24-Hour	150 µg/m^3	50 µg/m^3
$PM_{2.5}$	Annual	15 ug/m^3	12 ug/m^3
	24-Hour	~~65~~ **30** ug/m^3	*
Lead	30-Day Average	---	1.5 µg/m^3
	3-Month Average	1.5 µg/m^3	---

** No separate State standard*
ppm = parts per million
µg/m^3 = micrograms per cubic meter
*Source: ARB, ~~May 17, 2006~~ **February 22, 2007***

The local air quality management agency is required to monitor air pollutant levels to assure that air quality standards are met, and if they are not met, to develop strategies to meet these standards. Depending on whether the standards are met or exceeded, the local air basin is classified as being in "attainment" or as in "nonattainment." The proposed Agricultural Residential Cluster Subdivision and Future Development Program falls within the jurisdiction of the County of San Luis Obispo APCD. Federal air quality standards within the jurisdiction of the San Luis Obispo APCD have been attained, while the County is in non-attainment for the state standards for **both** PM_{10} **and ozone**. In addition, the San Luis Obispo Air Basin is in attainment for the state and federal carbon monoxide standards.

b. Current Ambient Air Quality. The nearest air monitoring station to the Agricultural Residential Cluster Subdivision and Future Development Program is located on Lewis Avenue in the City of Atascadero, approximately eight miles north of the community of Santa Margarita. This station measures ozone, PM_{10}, CO, and NO_x. Table 4.2-2 summarizes the available annual air quality data for the local airshed. As described therein, this monitoring station has recorded one exceedance of State standards for ozone in 2005 and one exceedance of State standards for PM_{10} in 2003. However, this monitoring station has not recorded exceedances of State or federal standards for ~~CO or~~ NO_x over the years 2003-2005, inclusive**, or for CO between 2003 and 2004 (CO monitoring ceased in June 2004)**.

Table 4.2-2. Ambient Air Quality Data at the Atascadero Monitoring Station

Pollutant	2003	2004	2005
Ozone, ppm – Worst Hour	0.093	0.085	0.096
Number of days of State exceedances (>0.09 ppm)	0	0	1
Number of days of Federal exceedances (>0.12 ppm)	0	0	0
Particulate Matter <10 microns, $\mu g/m^3$ Worst 24 Hours	58	42	45
Number of samples of State exceedances (>50 $\mu g/m^3$)	1	0	0
Number of samples of Federal exceedances (>150 $\mu g/m^3$)	0	0	0
Carbon Monoxide (ppm), Highest 8-Hour Average	1.46	1.25	ND
Number of days of State exceedances (>9.0 ppm)	0	0	ND
Number of days of Federal exceedances (>9.0 ppm)	0	0	ND
Nitrogen Dioxide (ppm), Worst Hour	0.063	0.051	0.052
Number of days of State exceedances (>0.25 ppm)	0	0	0

Source: CARB, Annual Air Quality Data Summaries, 2003-2005.

Ozone is a secondary pollutant that is not produced directly by a source, but rather is formed by a reaction between nitrogen oxides (NO_x) and reactive organic gases (ROG) in the presence of sunlight. Reductions in ozone concentrations are dependent on reducing the amount of these precursors. In San Luis Obispo County, the major sources of ROG are motor vehicles, organic solvents, the petroleum industry, and pesticides; and the major sources of NO_x are motor vehicles, public utility power generation, and fuel combustion by various industrial sources.

~~Since 1989, San Luis Obispo County had been designated as non-attainment with the state health based standard for ozone. However, ozone forming pollutants throughout San Luis Obispo County have been significantly reduced since that time. For the years 2002 through 2004, no violations of the State hourly ozone standard (0.09 ppm) were measured at any of the six community-based monitoring stations in San Luis Obispo County. Accordingly, the State Air Resources Board re-designated the County as attainment with the state health based ozone standard in January 2004 (http://www.slocleanair.org/air/attainment.asp; February 22, 2006).~~

~~However, one violation of the State ozone standard was measured at the Atascadero Monitoring Station in 2005.~~ **On April 28, 2005, the California Air Resources Board (CARB) approved the nation's most health protective ozone standard with special consideration for children's health. The new 8-hour-average standard at 0.070 parts per million (ppm) will further protect California's most vulnerable population from the adverse health effects associated with ground-level ozone. Based on monitoring data, San Luis Obispo County has once again been deemed non-attainment for the new ozone standard.**

As noted above, San Luis Obispo County is in nonattainment for **State ozone and** PM_{10} levels. ~~but has recently achieved attainment status regarding the state standard for ozone. As measured at~~ **In 2005,** the Atascadero Monitoring Station~~, the PM_{10} State threshold was exceeded once in 2003 and was not exceeded in 2004 or 2005~~ **had one violation of the State 1-hour ozone standard and would have had at least three violations of the current 8-hour standard**. **The station also had one exceedance of the State PM_{10} standard between 2003 and 2005.**

Ground level ambient ozone is primarily generated by combustion byproducts reacting with sunlight and ambient conditions. San Luis Obispo County's primary areas where ozone violations occur are in the northern and eastern portions of the County where the summer temperatures are high. In addition, ozone is transported to San Luis Obispo County from upwind regions of the state.

Ambient PM_{10} concentrations have been primarily a localized issue of concern in the southern portion of San Luis Obispo County, providing the major impetus for the County's non-attainment designation for the State PM_{10} standard. The major sources for PM_{10} are mineral quarries, grading, demolition, agricultural tilling, road dust, and vehicle exhaust. PM_{10} levels in the Santa Margarita Ranch area are primarily due to agriculture tilling, road dust, motor vehicle emissions, and the sand and gravel quarry located northeast of the Ranch property.

4.2.2 Impact Analysis

a. Methodology and Significance Thresholds. This analysis of air quality issues follows the guidance and methodologies recommended in the APCD's *CEQA Air Quality Handbook* (April, 2003). The URBEMIS ~~2002 version 8.7~~ **2007 version 9.2** for Windows computer modeling program, which was developed by the California Air Resources Board, was utilized in estimating composite mobile emission factors for the Agricultural Residential Cluster Subdivision and is based on the number and length of vehicle trips to and from the proposed development. A program-level analysis was performed for the Future Development Program. According to the APCD, a program-level environmental review does not require a quantitative air emissions analysis at the project scale. Rather, a qualitative analysis of the air quality impacts was conducted, based upon criteria such as prevention of urban sprawl and reduced dependence on automobiles. A finding of significant impacts can be determined qualitatively by comparing consistency of the project with the Transportation and Land Use Planning Strategies outlined in the District's Clean Air Plan.

Pursuant to the State CEQA Guidelines, air quality impacts related to the proposed Agricultural Residential Cluster Subdivision and Future Development Program would be significant if they would:

- *Conflict with or obstruct implementation of the applicable air quality plan;*
- *Violate any air quality standard or contribute substantially to an existing or projected air quality violation;*
- *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);*
- *Expose sensitive receptors to substantial pollutant concentrations; and/or*
- *Create objectionable odors affecting a substantial number of people.*

The APCD has established four separate categories of evaluation for determining the significance of project impacts: 1) Comparison of calculated project emissions to District emission thresholds; 2) Consistency with the most recent Clean Air Plan (CAP) for San Luis Obispo County; 3) Comparison of predicted ambient pollutant concentrations resulting from the project to state and federal health standards, when applicable; and 4) The existence of special conditions which apply to certain projects.

Comparison to APCD Emissions Thresholds. The threshold criteria established by the District to determine the significance and appropriate mitigation level for long-term emissions from a project are presented in Table 4.2-3. Emissions which equal or exceed the designated threshold levels are potentially significant and should be mitigated. As shown in the table, the level of analysis and mitigation recommended follows a tiered approach based on the amount of emissions generated by the project.

Table 4.2-3 Significance Thresholds for Operational Emissions

Pollutant	Minimal Emissions	Tier 1	Tier 2	Tier 3
ROG, NOx, SO2, PM_{10}	< 10 lbs/day	10 lbs/day	25 lbs/day	25 tons/year
Carbon Monoxide	< 550 lbs/day		550 lbs/day	
Significance	Insignificant	Potentially Significant	Significant	Significant
Environmental Document	Negative Declaration (ND)	Mitigated ND	Mitigated ND or EIR	EIR

Comparison to Air Quality Standards. State and federal air quality standards are excerpted in Table 4.2-1. A project is to have a significant impact if its emissions are predicted to cause or contribute to a violation of any ambient air quality standard.

Short-Term Construction Impacts. Table 4.2-4 below shows the approximate level of construction activity that would result in a potentially significant impact for each pollutant of concern:

Table 4.2-4. Level of Construction Activity Requiring Mitigation

Pollutant of Concern	Thresholds		Amount of Material Moved	
	Tons/Qtr	Lbs/Day	Cu. Yds/Qtr	Cu. Yds/Day
ROG	2.5	185	247,000	9,100
	6.0	185	593,000	9,100

Table 4.2-4. Level of Construction Activity Requiring Mitigation

Pollutant of Concern	Thresholds		Amount of Material Moved	
	Tons/Qtr	Lbs/Day	Cu. Yds/Qtr	Cu. Yds/Day
NO_x	2.5	185	53,500	2,000
	6.0	185	129,000	2,000
PM10	2.5		Any project with a grading area greater than 4.0 acres of continuously worked area will exceed the 2.5 ton PM10 quarterly threshold. Combustion emissions should also be calculated based upon the amount of cut and fill expected.	

All calculations assume working conditions of 8 hours per day, 5 days per week, for a total of 65 days per quarter.
Source: San Luis Obispo County APCD, CEQA Air Quality Handbook, April 2003.

In addition, since the County is in nonattainment for **both** PM_{10} **and ozone**, construction mitigation measures are required for all projects involving earthmoving activities regardless of size or duration.

Consistency with the District's Clean Air Plan (CAP). Projects and programs requiring an analysis of consistency with the Clean Air Plan include: General Plan Updates and Amendments, Specific Plans, Area Plans, large residential developments and large commercial/industrial developments. Therefore, both the proposed Agricultural Residential Cluster Subdivision and the Future Development Program are evaluated for impacts related to CAP consistency. The consistency analysis must evaluate the following questions:

- *Are the population projections used in the plan or project equal to or less than those used in the most recent CAP for the same area?*
- *Is rate of increase in vehicle trips and miles traveled less than or equal to the rate of population growth for the same area?*
- *Have all applicable land use and transportation control measures from the CAP been included in the plan or project to the maximum extent feasible?*

If the answer to all of the above questions is yes, then the proposed project or plan is consistent with the CAP. If the answer to any one of the questions is no, then the emissions reductions projected in the CAP may not be achieved, which could delay or preclude attainment of the state ozone standard. This would be inconsistent with the Clean Air Plan.

b. Agricultural Residential Cluster Subdivision Impacts and Mitigation Measures.

Agricultural Residential Cluster Subdivision Impact AQ-1

The proposed Agricultural Residential Cluster Subdivision will result in operational air pollutant emissions, primarily from vehicular traffic. This would result in an exceedance of the APCD thresholds, and would be a Class I, *significant and unavoidable*, impact.

Based on APCD criteria, a project that generates more than 10 pounds per day (lbs/day) of ROG, NO_x or PM_{10} would exceed ~~the County's~~ **Tier 1** significance thresholds**, while a project that generates more than 25 lbs/day of ROG, NO_x or PM_{10} would exceed Tier 2 significance**

thresholds (refer to Table 4.2-3). Agricultural Residential Cluster Subdivision-related vehicle emissions were calculated using the URBEMIS ~~2002 version 8.7~~ **2007 version 9.2** air quality model. The model assumed a buildout year of ~~2007~~ **2008**, which is a reasonable worst case scenario.

Table 4.2-5 summarizes the emissions from area sources and vehicular traffic associated with the proposed Agricultural Residential Cluster Subdivision. Assumptions used in the mobile emissions analysis included a project fleet mix of ~~55.2~~ **41.7**% light ~~duty~~ automobiles; ~~31.2~~ **38.6**% light~~-duty~~ trucks; ~~7.1~~ **8**% medium~~-duty~~ trucks; ~~3.4~~ **4.7**% heavy~~-duty~~ trucks; ~~1.7~~ **5.1**% motorcycles; ~~1.2~~ **1.7**% motor home; and 0.2% urban**,** ~~and~~ school **and other** buses. Average trip type, ~~length, and~~ speed and cold/hot start default percentages provided with the model were used. **Average trip length was based on the remote nature of the Agricultural Residential Cluster Subdivision, per guidance from the San Luis Obispo APCD.**

Table 4.2-5. Operational Emissions Associated with Proposed Agricultural Residential Cluster Subdivision (lbs/day)*

Emission Source	ROG	NO_x	CO	PM_{10}
Area Source	~~9.96~~ **13.47**	~~1.42~~ **3.18**	~~4.5~~ **63.4**	~~0.02~~ **10.25**
Operational (Vehicle)	~~10.47~~ **25.38**	~~13.46~~ **38.34**	~~131.13~~ **291.4**	~~12.59~~ **27.17**
Totals	***~~20.43~~ 38.85***	***~~14.88~~ 41.52***	***~~135.63~~ 354.8***	***~~12.61~~ 37.42***
*~~Significance~~ **Tier 1** Threshold*	*10*	*10*	*~~550~~*	*10*
Tier 2 Threshold	***25***	***25***	***550***	***25***
Threshold Exceeded?	*Yes, **Tier 2***	*Yes, **Tier 2***	*No*	*Yes, **Tier 2***

** Although winter emissions were used as a worst case scenario, summer emissions would similarly exceed Tier 2 thresholds for ROG, NO_X and PM_{10}.*
Note: See Appendix D for Calculations

The proposed Agricultural Residential Cluster Subdivision is projected to generate ~~20.45~~ **38.85** lbs/day of ROG, ~~14.88~~ **41.52** lbs/day of NO_x, and ~~12.61~~ **37.42** lbs/day of PM_{10} as a result of operational emissions associated with project vehicular traffic and electrical and natural gas usage. When compared to the County's thresholds of significance, the Agricultural Residential Cluster Subdivision would exceed the ~~Tier 1 threshold for ROC, NOx, or PM_{10}~~ **the Tier 2 threshold for ROG, NOx and PM_{10}.** This is a potentially significant impact.

Mitigation Measures. The San Luis Obispo County APCD *CEQA Air Quality Handbook* (April 2003) requires that all projects generating ~~20 to 24~~ **25 or more** pounds per day of any individual pollutant implement standard site design and energy efficiency measures, as well as ~~additional~~ **all feasible** discretionary **site design and energy efficiency** mitigation measures. **Standard and discretionary measures are described in greater detail below. In addition, in certain cases further mitigation measures are required for projects generating 25 or more pounds per day, including off-site measures, which are designed to offset emissions from large projects that cannot be fully mitigated with on-site measures.**

APCD requires standard site-design measures for urban uses, such as: linking cul-de-sacs and dead-end streets to encourage pedestrian and bicycle travel; providing traffic calming modifications to project roads, such as narrower streets, speed platforms, bulb-outs and intersection modifications designed to reduce vehicle speeds; easements or land dedications for bikeways and pedestrian walkways; and, providing continuous sidewalks separated from the roadway by landscaping and on-street parking. These measures apply primarily to urban residential development and would not ~~feasibly reduce impacts associated with~~ **be applicable**

to the Agricultural Residential Cluster Subdivision. **Similarly, not all discretionary site-design measures would be feasible due to the rural location of the Agricultural Residential Cluster Subdivision, including providing transit turnouts and pedestrian signalization and signage. Due to the infeasibility of standard and discretionary site-design measures, as well as the remote nature and size of the Agricultural Residential Cluster Subdivision, off-site mitigation would be required.**

It should be noted, however, that several Agricultural Residential Cluster Subdivision measures in Section 4.12, *Transportation and Circulation,* improve pedestrian and bicyclist infrastructure. These measures include Agricultural Residential Cluster Subdivision measures T-1(a) (SR 58 South of J Street), T-1(e) (Estrada Avenue/H Street Warning Beacon), T-4(a) (El Camino Real/Encina Avenue In-Pavement Flashing Lights) and T-4(b) (Pedestrian Pathway). Although these measures would not reduce the transportation-related air quality impacts to a less than significant level, they would partially reduce vehicle trips in the vicinity.

~~However, the~~ **The** following ~~standard energy efficiency~~ **mitigation** measures ~~and discretionary measures~~ are required**, which incorporate all applicable and feasible standard and discretionary measures, as well as off-site measures in accordance with APCD guidance**:

Agricultural Residential Cluster Subdivision AQ-1(a)

Energy Efficiency. The applicant shall increase building energy efficiency ratings by at least 10% above what is required by Title 24 requirements. Potential energy consumption reduction measures include, but are not limited to:

- Using roof material with a solar reflectance value meeting the EPA/DOE Energy Star® rating to reduce summer cooling needs and/or installing photovoltaic roof tiles;
- Using high efficiency gas or solar water heaters;
- Using built-in energy efficient appliances;
- Installing double-paned windows;
- **Installing door sweeps and weather stripping if more efficient doors and windows are not available;**
- Installing low energy interior lighting;
- Using low energy street lights (i.e. sodium); and
- Installing high efficiency or gas space heating.

Plan Requirements and Timing. The applicant shall incorporate the listed provisions into ~~building and improvement~~ **development** plans or shall submit proof of infeasibility prior to issuance of grading permits. **Monitoring.** Planning and Building shall site inspect to ensure development is in accordance with approved plans prior to occupancy clearance.

Agricultural Residential Cluster Subdivision AQ-1(b)

Shade Trees. Shade trees **native to the Santa Margarita Ranch** shall be planted to shade **the southern exposure of** on-site **homes and** structures, decreasing indoor temperatures and reducing energy demand for air conditioning. The landscape

plan shall be submitted to the San Luis Obispo APCD for review and comment. County Planning and Building shall review project landscaping plans for consistency with this mitigation measure.

Plan Requirements and Timing. The applicant shall incorporate the listed provision into development plans. **Monitoring.** Planning and Building shall conduct a site inspection to ensure development is in accordance with approved plans prior to occupancy clearance. Planning and Building staff shall verify installation in accordance with approved building plans.

Agricultural Residential Cluster Subdivision AQ-1(c)

Outdoor Electrical Outlets. All new homes shall be constructed with outdoor electrical outlets to encourage the use of electric appliances and tools.

Plan Requirements and Timing. The applicant shall incorporate the listed provision into development plans. **Monitoring.** Planning and Building shall conduct a site inspection to ensure development is in accordance with approved plans prior to occupancy clearance. Planning and Building staff shall verify installation in accordance with approved building plans.

Agricultural Residential Cluster Subdivision AQ-1(d)

Telecommuting. All new homes shall be constructed with internal wiring/cabling that allows telecommuting, teleconferencing, and telelearning to occur simultaneously in at least three locations in each home. This control measure seeks to reduce emissions by promoting telecommuting for any employee whose job can accommodate working from home.

Plan Requirements and Timing. The applicant shall incorporate the listed provision into development plans. **Monitoring.** Planning and Building shall conduct a site inspection to ensure development is in accordance with approved plans prior to occupancy clearance. Planning and Building staff shall verify installation in accordance with approved building plans.

Agricultural Residential Cluster Subdivision AQ-1(e)

Residential Wood Combustion. All new homes shall only be permitted to install APCD-approved wood burning devices, as applicable. Approved devices include:

- All EPA-certified phase II wood burning devices;
- Catalytic wood burning devices which emit less than or equal to 4.1 grams per hour of particulate matter which are not EPA-certified but have been verified by a nationally-recognized testing lab;
- Non-catalytic wood burning devices which emit less than or equal to 7.5 grams per hour of particulate matter which

are not EPA-certified but have been verified by a nationally-recognized testing lab;
- Pellet-fueled wood heaters; and
- Dedicated gas-fired fireplaces.

"Backyard" green waste burning shall be prohibited due to nuisance and negative health effects.

Plan Requirements and Timing. Wood burning devices shall be shown on **development** plans submitted to Planning and Building for review and approval prior to issuance of building permits, as applicable. **Monitoring.** Planning and Building shall review site plans for compliance prior to issuance of building permits. County inspector shall inspect site for installation of APCD-approved wood burning devices prior to occupancy of the structures.

Agricultural Residential Cluster Subdivision AQ-1(f)

Off-Site Mitigation. Prior to issuance of grading permits, the applicant shall work with APCD to define and implement off-site emission reduction measures to reduce emissions to below Tier 2 levels. In accordance with APCD methodology, the excess emissions shall be multiplied by the cost effectiveness of mitigation as defined in the State's current Carl Moyer Incentive Program Guidelines to determine the annual off-site mitigation amount. This amount shall then be extrapolated over the life of the project to determine total off-site mitigation. Off-site emission reduction measures may include, but would not be limited to:

- **Developing or improving park-and-ride lots;**
- **Retrofitting existing homes in the project area with APCD-approved wood combustion devices;**
- **Retrofitting existing homes in the project area with energy-efficient devices;**
- **Constructing satellite worksites;**
- **Funding a program to buy and scrap older, higher emission passenger and heavy-duty vehicles;**
- **Replacing/re-powering transit buses;**
- **Replacing/re-powering heavy-duty diesel school vehicles (i.e. bus, passenger or maintenance vehicles);**
- **Funding an electric lawn and garden equipment exchange program;**
- **Retrofitting or re-powering heavy-duty construction equipment, or on-road vehicles;**
- **Re-powering marine vessels;**
- **Re-powering or contributing to funding clean diesel locomotive main or auxiliary engines;**
- **Installing bicycle racks on transit buses;**

- **Purchasing particulate filters or oxidation catalysts for local school buses, transit buses or construction fleets;**
- **Installing or contributing to funding alternative fueling infrastructure (i.e. fueling stations for CNG, LPG, conductive and inductive electric vehicle charging, etc.);**
- **Funding expansion of existing transit services;**
- **Funding public transit bus shelters;**
- **Subsidizing vanpool programs;**
- **Subsidizing transportation alternative incentive programs;**
- **Contributing to funding of new bike lanes;**
- **Installing bicycle storage facilities; and**
- **Providing assistance in the implementation of projects that are identified in City or County Bicycle Master Plans.**

Plan Requirements and Timing. The applicant shall coordinate with APCD and implement off-site emissions reduction measures prior to issuance of grading permits. Monitoring. Planning and Building shall verify compliance prior to issuance of grading permits.

Residual Impacts. ~~Because s~~**S**tandard site-design mitigation measures required by the APCD would not be applicable to the proposed Agricultural Residential Cluster Subdivision, **and discretionary site design measures would be largely infeasible. Off-site measures would reduce emissions to below Tier 2 thresholds. However, the Agricultural Residential Cluster Subdivision would still exceed Tier 1 thresholds. ~~i~~I**mpacts would **therefore** remain Class I, *significant and unavoidable.*

Agricultural Residential Cluster Subdivision Impact AQ-2	**The Agricultural Residential Cluster Subdivision will generate construction-related emissions as the site develops. These emissions would exceed ~~recommended ozone precursor and~~ PM_{10} significance thresholds. Construction activities could also expose people to naturally-occurring asbestos. Construction related air quality impacts are Class II, *significant but mitigable.***

Construction activities are expected to result in temporary short-term air quality impacts. These impacts are associated with dust generated by on-site grading activities and as a result of heavy construction vehicle emissions. No import or export of material is anticipated. Agricultural Residential Cluster Subdivision grading includes earthwork for construction of roads (including off-site circulation improvements), driveways, tank sites, and residential building pads.

Table 4.2-6 summarizes the dust generation from construction activities. ~~Fugitive dust emissions associated with grading activities assume that grading occurs on up to 32 acres per day.~~ As identified in Table 4.2-6, Agricultural Residential Cluster Subdivision construction emissions of ~~NO_x and~~ PM_{10} are potentially significant.

~~**Table 4.2-6 Emissions During Agricultural Residential Cluster Subdivision Development (lbs/day)**~~

~~Emission Source~~	~~ROG~~	~~NO_x~~	~~PM_{10}~~
~~Construction~~	~~176.22~~	~~207.41~~	~~328.96~~
~~***Totals***~~	~~***176.22***~~	~~***207.41***~~	~~***328.96***~~
~~*APCD Thresholds for Short term Emissions*~~	~~*185*~~	~~*185*~~	~~*~~~~*~~
~~*Threshold Exceeded?*~~	~~*No*~~	~~*Yes*~~	~~*Yes***~~

~~** Any project with a grading area greater than 4.0 acres of continuously worked area will exceed the 2.5 ton PM10 quarterly threshold.*~~
~~*** The project is anticipated to result in grading of up to 32 acres of continuously worked area.*~~

Table 4.2-6 Emissions During Agricultural Residential Cluster Subdivision Development

Pollutant of Concern	Tons per Quarter (Tons/Qtr)		
	Emissions	Threshold	Threshold Exceeded?
ROG	1.92	2.5	No
NO_x	1.61	2.5	No
PM_{10}	2.98	2.5	Yes

The proposed Agricultural Residential Cluster Subdivision is projected to generate 1.92 tons/qtr of ROG, 1.61 tons/qtr of NO_x, and 2.98 tons/qtr of PM_{10} as a result of construction emissions. When compared to the County's thresholds of significance, the Agricultural Residential Cluster Subdivision would exceed the tons per quarter threshold for PM_{10}. This is a potentially significant impact.

The Agricultural Residential Cluster Subdivision would be required to comply with standard APCD permitting and requirements, including the prohibition of developmental burning of vegetative material within San Luis Obispo County.

Given that San Luis Obispo County violates the state standards for PM_{10}, any amount of dust generated from construction activities is potentially significant and mitigation measures are required. Additionally, grading activities may uncover naturally occurring asbestos. Human contact with asbestos would result in significant adverse health effects. Measures must be taken to assure proper handling if asbestos is present.

Refer also to Agricultural Residential Cluster Subdivision Impact S-6 in Section 4.9, *Public Safety*, for a discussion of impacts related to valley fever.

Mitigation Measures. Portable equipment 50 horsepower or greater will require California statewide portable equipment registration (issued by the California Air Resources Board) or an APCD permit. In addition, the following mitigation measures are recommended to minimize emissions and to reduce the amount of dust that drifts onto adjacent properties. These measures would apply to both tract grading and development of individual lots:

Agricultural Residential Cluster Subdivision AQ-2(a) **Construction Equipment Controls**. Upon application for grading permits, the applicant shall submit grading plans**, the proposed rate of material movement** and a construction

equipment schedule ~~demonstrating the rate of material movement~~ to the APCD. ~~If the rate of grading will be more than 53,500 cubic yards (cy) in a quarter or 2,000 cy in a day, then~~ **In addition,** the applicant shall implement the following measures to mitigate equipment emissions:

- All construction equipment and portable engines shall be properly maintained and tuned according to manufacturer's specifications;
- All off-road and portable diesel powered equipment, including but not limited to bulldozers, graders, cranes, loaders, scrapers, backhoes, generator sets, compressors, auxiliary power units, shall be fueled exclusively with CARB-certified motor vehicle diesel fuel;
- The applicant shall maximize to the extent feasible, the use of diesel construction equipment meeting the California Air Resources Board's 1996 (or newer) certification standard for off-road heavy-duty diesel engines.
- All on and off-road diesel equipment shall not be allowed to idle for more than 5 minutes. Signs shall be posted in the designated queuing areas to remind drivers and operators of the 5 minute idling limit;
- The applicant shall electrify equipment where feasible;
- The applicant shall substitute gasoline-powered for diesel-powered equipment where feasible;
- The applicant shall use alternatively fueled construction equipment, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel, where feasible; and
- The applicant shall apply Best Available Control Technology (CBACT) as determined by the APCD.

Plan Requirements and Timing. The applicant shall provide the grading amounts and schedule to the APCD Planning Division at least 3 months prior to the start of construction, at which time the APCD will define the appropriate level of BACT for the Agricultural Residential Cluster Subdivision. The application of all BACT features shall occur prior to Agricultural Residential Cluster Subdivision construction. These measures shall be shown on all grading and construction plans prior to issuance of construction permits. Compliance with these measures shall be included as bid specifications submitted to contractors.
Monitoring. The applicant shall provide the APCD with proof that the above listed measures, as well as those required by the APCD upon review of grading plans, have been implemented prior to the start of the Agricultural Residential Cluster Subdivision's construction activity. The grading inspector shall

perform periodic site inspections.

Agricultural Residential Cluster Subdivision AQ-2(b)

Dust Control. The following measures shall be implemented to reduce PM_{10} emissions during Agricultural Residential Cluster Subdivision construction:

- Reduce the amount of the disturbed area where possible;
- Use water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. Water shall be applied as soon as possible whenever wind speeds exceed 15 miles per hour. Reclaimed (nonpotable) water should be used whenever possible;
- All dirt-stock-pile areas shall be sprayed daily as needed;
- Permanent dust control measures shall be identified in the approved project revegetation and landscape plans and implemented as soon as possible following completion of any soil disturbing activities;
- Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading shall be sown with a fast-germinating native grass seed and watered until vegetation is established;
- All disturbed soil areas not subject to revegetation shall be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the APCD;
- All roadways, driveways, sidewalks, etc., to be paved shall be completed as soon as possible. In addition, building pads shall be laid as soon as possible after grading unless seeding or soil binders are used;
- Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site;
- All trucks hauling dirt, sand, soil or other loose materials shall be covered or shall maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with CVC Section 23114;
- Install wheel washers where vehicles enter and exit unpaved roads onto streets, or wash off trucks and equipment leaving the site; and
- Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers with reclaimed water shall be used where feasible.

The above measures shall be shown on development plans.

Plan Requirements and Timing. Conditions shall be adhered to throughout all grading and construction periods for all project

components. Prior to issuance of grading permits, the applicant shall include, as a note on a separate informational sheet to be recorded with any map, the aforementioned dust control requirements. All requirements shall be shown on grading and building plans. **Monitoring.** Planning and Building inspectors shall perform periodic spot checks during grading and construction. APCD inspectors shall respond to nuisance complaints.

Agricultural Residential Cluster Subdivision AQ-2(c)

Cover Stockpiled Soils. If importation, exportation, or stockpiling of fill material is involved, soil stockpiled for more than two days shall be covered, kept moist, or treated with soil binders to prevent dust generation. Trucks transporting material shall be tarped from the point of origin.

Plan Requirements and Timing. Conditions shall be adhered to throughout all grading and construction periods for all project components. **Monitoring.** Planning and Building inspectors shall perform periodic spot checks during grading and construction. APCD inspectors shall respond to nuisance complaints.

Agricultural Residential Cluster Subdivision AQ-2(d)

Dust Control Monitor. The contractor or builder shall designate a person or persons to monitor the dust control program and to order increased watering as necessary to prevent transport of dust off-site. Their duties shall include holiday and weekend periods when work may not be in progress.

Plan Requirements and Timing. The name and telephone number of such persons shall be provided to the APCD **prior to land use clearance for map recordation and finished grading of the area**. The dust monitor shall be designated prior to approval of a Land Use Permit. **Monitoring.** Planning and Building shall contact the designated monitor as necessary to ensure compliance with dust control measures.

Agricultural Residential Cluster Subdivision AQ-2(e)

Active Grading Areas. Prior to commencement of tract improvements, a Construction Management Plan shall be submitted for county approval that shows how the project will not exceed continuous working of more than four acres at any given time (according to the APCD, any project with a grading area greater than 4 acres of continuously worked area will exceed the 2.5 ton PM_{10} quarterly threshold). The Dust Control Monitor shall verify in the field during tract improvements that the Construction Management Plan is being followed.

Plan Requirements and Timing. Conditions shall be adhered to throughout all grading and construction periods for all project

components. **Monitoring.** Planning and Building inspectors shall perform periodic spot checks during grading and construction.

Agricultural Residential Cluster Subdivision AQ-2(f)

Naturally Occurring Asbestos. Prior to grading on the Agricultural Residential Cluster Subdivision site, the applicant shall ensure that a geologic evaluation is conducted to determine if naturally occurring asbestos is present within the areas that will be disturbed. At a minimum, the geologic evaluation must include:

1. A general description of the property and the proposed use;
2. A detailed site characterization which may include:
   a. A physical site inspection;
   b. Offsite geologic evaluation of adjacent property;
   c. Evaluation of existing geological maps and studies of the site and surrounding area;
   d. Development of geologic maps of the site and vicinity;
   e. Identification and description of geologic units, rock and soil types, and features that could be related to the presence of ultramafic rocks, serpentine, or asbestos mineralization; and
   f. A subsurface investigation to evaluate the nature and extent of geologic materials in the subsurface where vertical excavation is planned; methods of subsurface investigation may include, but are not limited to borings, test pits, trenching, and geophysical surveys;
3. A classification of rock types found must conform to the nomenclature based on the International Union of Geological Science system;
4. A description of the sampling procedures used;
5. A description of the analytical procedures used, which may include mineralogical analyses, petrographic analyses, chemical analyses, or analyses for asbestos content;
6. An archive of collected rock samples for third party examination; and
7. A geologic evaluation report documenting observations, methods, data, and findings; the format and content of the report should follow the Guidelines for Engineering Geologic Reports issued by the State Board of Registration for Geologists and Geophysicists.

If naturally occurring asbestos is not present, an exemption request must be filed with the APCD. If naturally occurring asbestos is found, the applicant must comply with all requirements outlined in the State ARB's Asbestos Air Toxic Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations. These requirements may include

but are not limited to: 1) an Asbestos Dust Mitigation Plan which must be approved by APCD before construction begins, and 2) an Asbestos Health and Safety Program.

The Asbestos Dust Mitigation Plan must specify dust mitigation practices which are sufficient to ensure that no equipment or operation emits dust that is visible crossing the property line, and must include one or more provisions addressing: track-out prevention and control measures; adequately watering or covering with tarps active storage piles; and controlling for disturbed surface areas and storage piles that will remain inactive for more than seven (7) days.

An Asbestos Health and Safety Program would be required if ~~substantial~~ grading were to occur in serpentine or ultramafic rock deposits with ~~high~~ **such** concentrations of asbestos **present that there is potential to exceed the Cal OSHA asbestos permitable exposure limit (PEL: 0.1 fiber/cc)**. If required, the Asbestos Health and Safety Program shall be designed by a certified asbestos consultant to ensure the personal protection of workers. The Asbestos Health and Safety Program will include, but will not be limited to, **an** air monitoring **plan approved by the APCD to include: air monitoring** in the worker breathing zone, the use of respirators, and/or decontamination.

Plan Requirements and Timing. Prior to grading activities, a geologic evaluation shall be conducted by a registered geologist in all areas of disturbance. If naturally occurring asbestos is not present, the applicant shall file an exemption request with the APCD. If naturally occurring asbestos is found, the applicant shall comply with the State ARB's Asbestos Air Toxic Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations. **Monitoring.** The APCD shall ensure compliance with applicable requirements.

Residual Impacts. With implementation of the above mitigation measures, construction air quality impacts would be reduced to a less than significant level.

Agricultural Residential Cluster Subdivision Impact AQ-3

The Agricultural Residential Cluster Subdivision involves development of private septic systems, which have the potential to generate odor nuisance effects. These impacts are Class III, *less than significant.*

The Agricultural Residential Cluster Subdivision includes the use of individual septic systems. The septic systems are required to be installed per County Private Sewage Disposal System standards. If not properly installed, these have the potential of creating nuisance odors on the Agricultural Residential Cluster Subdivision site, or to existing residential development in the community of Santa Margarita. The APCD would respond to septic system odor complaints on a case-by-case basis, taking enforcement action as necessary. According to the APCD, however,

odor complaints from septic systems are rare. As a result, no mitigation is required and impacts are less than significant.

Mitigation Measures. No mitigation is required.

Residual Impacts. Impacts would be less than significant.

Agricultural Residential Cluster Subdivision Impact AQ-4	**The Agricultural Residential Cluster Subdivision would exceed the population growth assumptions of the 2001 Clean Air Plan (CAP). In addition, due to the distance of the site from services, Agricultural Residential Cluster Subdivision implementation would result in a substantial increase in vehicle miles traveled. Therefore, the Agricultural Residential Cluster Subdivision is inconsistent with the CAP. This is a Class I, *significant and unavoidable* impact.**

As described in *Methodology and Thresholds*, above, the Agricultural Residential Cluster Subdivision would be consistent with the 2001 CAP if: (1) the population projections used in the Agricultural Residential Cluster Subdivision are equal to or less than those used in the CAP; (2) the rate of increase in vehicle trips and mile traveled is less than or equal to the rate of population growth for the same area; and (3) all applicable transportation control measures and land use management strategies from the CAP have been included in the Agricultural Residential Cluster Subdivision to the maximum extent feasible. The consistency of the Agricultural Residential Cluster Subdivision with each of these thresholds is discussed in the paragraphs below.

Population Projection Consistency. The 2001 CAP population statistics and projections for the County of San Luis Obispo are based on the San Luis Obispo County Planning Department and San Luis Obispo Council of Governments population estimates for January 1, 1999 and growth projections. San Luis Obispo County had a 1999 population of approximately 241,600 people, an increase of about 14,375, or 6%, since 1995. The CAP estimates the number of rural San Luis Obispo residents to increase 16% between the years 1995 and 2015. The proposed Agricultural Residential Cluster Subdivision would increase the population of the community of Santa Margarita by approximately 22.8%, which would exceed the CAP growth rate estimate. Therefore, the Agricultural Residential Cluster Subdivision would be inconsistent with the CAP based on this CAP consistency criterion.

Vehicle Trip Rate of Increase and Miles Traveled. The CAP assumes a population growth rate of approximately 16% between the years 1995 and 2015 in rural San Luis Obispo. The proposed development of 112 residential units would generate approximately 1,150 trips per day. This increase in trips would represent a relatively large percentage of total trips on roadways in the project vicinity. The Agricultural Residential Cluster Subdivision would not provide a land use that would be considered a destination for substantial vehicles. However, residential development outside of urban areas tends to generate more, and longer trips compared with similar development within urban areas. Therefore, the Agricultural Residential Cluster Subdivision would be expected to substantially increase trip lengths and vehicle miles traveled in the vicinity. The rate of increase in vehicle trips and miles traveled would exceed the rate of population growth for the same area. Therefore, the Agricultural

Residential Cluster Subdivision would be inconsistent with the CAP based on this CAP consistency criterion.

Implementation of Transportation Control Measures (TCMs). The following TCMs would apply to the proposed Agricultural Residential Cluster Subdivision: T-1C (Voluntary Commute Options Program); T-3 (Bicycling and Bikeway Enhancements); and T-8 (Telecommuting, Teleconferencing, and Telelearning). The Agricultural Residential Cluster Subdivision would partially implement TCM T-3 by including a trail between the Agricultural Residential Cluster Subdivision and the community of Santa Margarita (refer to Section 4.12, *Transportation and Circulation*). However, no other TCMs would be implemented in the Agricultural Residential Cluster Subdivision as proposed.

In addition, as described in San Luis Obispo County's Resource Management System, the County will implement applicable transportation and land use planning strategies recommended in the CAP. According to CAP Land Use Management Strategy L-1:

- Cities and unincorporated communities should be developed at higher densities that reduce trips and travel distances and encourage the use of alternative forms of transportation.
- Urban growth should occur within the urban reserve lines of cities and unincorporated communities. Rural areas of the county should be maintained as open space, agricultural lands and very low density residential development (20 acre or larger parcel size).
- Local planning agencies should encourage transit use by planning neighborhoods and commercial centers at densities to allow for convenient access to and use of local and regional transit systems.

The proposed Agricultural Residential Cluster Subdivision does not meet the intent of CAP Land Use Management Strategy L-1. The Agricultural Residential Cluster Subdivision would be developed at a relatively low density, and would be expected to substantially increase trip lengths and vehicle miles traveled in the vicinity (refer to *Vehicle Trip Rate of Increase and Miles Traveled* discussion above). In addition, the Agricultural Residential Cluster Subdivision would place suburban uses in a rural area; thereby converting open space and fragmenting agricultural land (refer to Section 4.1, *Agricultural Resources*). Additionally, the Agricultural Residential Cluster Subdivision would not be located near a commercial center, and would be unlikely to create demand for transit facilities due to the relatively low density of the proposed development (refer to Section 4.12, *Transportation and Circulation*). Therefore, the Agricultural Residential Cluster Subdivision is inconsistent with the CAP based on this CAP-consistency criterion.

Because the proposed Agricultural Residential Cluster Subdivision does not include sufficient Transportation Control Measures or Land Use Management Strategies, and because the rate of increase in vehicle trips and miles traveled may exceed population growth rates for the area, the Agricultural Residential Cluster Subdivision would be potentially inconsistent with the CAP, which would be a Class I, *significant and unavoidable*, impact.

Mitigation Measures. No feasible measures are available to reduce the population generation associated with the Agricultural Residential Cluster Subdivision without substantially redesigning the proposed subdivision. In addition, no measures are available to

substantially reduce the vehicle miles traveled associated with the Agricultural Residential Cluster Subdivision, due to the distance between the project and community services.

Residual Impacts. Impacts would remain Class I, s*ignificant and unavoidable*.

c. Future Development Program Impacts and Mitigation Measures. The Future Development Program represents potential future buildout of the Santa Margarita Ranch, including the proposed Agricultural Residential Cluster Subdivision. Refer to Section 4.2.2(b) for a discussion of air quality impacts resulting from the Agricultural Residential Cluster Subdivision independently. It should be noted that the Air Pollution Control District (APCD) does not require quantified analysis of construction or operational air contaminant emissions impacts for program-level evaluations, such as for the Future Development Program. Future projects proposed on the property would be required to comply with APCD requirements regarding residential wood stove combustion and backyard burning, residential and commercial site design, energy efficiency, transportation demand and compatible uses. In addition, all development would be subject to APCD operational permitting (e.g., for portable generators, fuel dealers, dry cleaning, and other commercial and industrial operations). Mixed uses air quality incompatibilities would also be regulated by APCD. Additionally, future projects proposed on the property would be required to conduct individual air contaminant emissions analyses as part of the separate, additional, required project-level CEQA review.

Future Development Program Impact AQ-1 — **The Future Development Program involves development of equestrian facilities, a livestock sales yard, nine wineries, and private septic systems. All of these uses have the potential to generate odor nuisance effects. These impacts are Class II, *significant but mitigable.***

There are four principal features of the Future Development Program subsequent to the Agricultural Residential Cluster Subdivision that have the potential to create odors which may be nuisance either to adjoining residents, including residents of the Agricultural Residential Cluster Subdivision and the community of Santa Margarita, or to residents and occupants of the Future Development Program land uses. These features include odors associated with equestrian uses, a livestock sales yard, nine wineries, and those that may be associated with individual septic systems on each lot.

Equestrian and livestock uses can generate odors that are perceived as unpleasant to some people. The degree of unpleasantness is partly a function of personal tolerance for short-term odors associated with horse manure, and the attending flies that are attracted. Horse manure is essentially highly–processed hay, with little additional organic material that produces long-term odors, such as those commonly associated with cow excrement. Odors generating from wineries may also be perceived as unpleasant, and result primarily from the fermentation and aging processes and the resultant ethanol emissions. Lastly, septic systems that are not properly installed have the potential of creating nuisance odors, as described in Agricultural Residential Cluster Subdivision Impact AQ-3.

The San Luis Obispo County Agricultural Commissioner responds to odor complaints from agricultural operations, including equestrian uses and livestock sales. The Agricultural Commissioner would respond to complaints on a case-by-case basis, taking enforcement action as necessary. The APCD would respond to septic system odor complaints in a similar manner. In both cases, odor nuisances are considered minor, and do not warrant mitigation beyond standard complaint procedures. However, odor from industrial uses, including wineries, could be significant.

Mitigation Measures. The following mitigation is required:

Future Development Program AQ-1(a)

Odor Abatement Plan. Future applicants for wineries shall develop and implement an Odor Abatement Plan (OAP). The OAP shall include the following:

- Name and telephone number of contact person(s) responsible for logging and responding to winery odor complaints;
- Policy and procedure describing the actions to be taken when an odor complaint is received, including the training provided to the responsible party on how to respond to an odor complaint;
- Description of potential odor sources (i.e. fermentation and aging processes and the resultant ethanol emissions);
- Description of potential methods for reducing odors, including minimizing potential add-on air pollution control equipment; and
- Contingency measures to curtail emissions in the event of a continuous public nuisance.

Plan Requirements and Timing. This plan shall be prepared prior to issuance of grading permits. **Monitoring.** Planning and Building shall review the OAP prior to issuance of grading permits.

Residual Impacts. With implementation of the above measure, the Future Development Program would have less than significant odor nuisance impacts.

Future Development Program Impact AQ-2

Many of the Future Development Program conceptual land uses are inconsistent with the land use designations and population assumptions of the San Luis Obispo County General Plan. In addition, Future Development Program implementation would result in a substantial increase in vehicle miles traveled. Therefore, the Future Development Program is inconsistent with the 2001 Clean Air Plan (CAP). This is a Class I, *significant and unavoidable* impact.

As described in *Methodology and Thresholds*, above, the Future Development Program would be consistent with the 2001 CAP if: (1) the population projections used in the project are equal to or

less than those used in the CAP; (2) the rate of increase in vehicle trips and mile traveled is less than or equal to the rate of population growth for the same area; and (3) all applicable transportation control measures and land use management strategies from the CAP have been included in the project to the maximum extent feasible. The consistency of the Future Development Program with each of these thresholds is discussed in the paragraphs below.

Population Projection Consistency. As discussed in Section 2.0, *Project Description,* Future Development Program components subsequent to the Agricultural Residential Cluster Subdivision would require various land use approvals prior to implementation. Many of these uses would require a General Plan Amendment and/or a Specific Plan. Because implementation of the Future Development Program subsequent to the Agricultural Residential Cluster Subdivision would require amendments to the General Plan, the Future Development Program is inconsistent with the land uses anticipated for the area and therefore inconsistent with the population projections of the CAP.

Vehicle Trip Rate of Increase and Miles Traveled. The development of 514 dwelling units included in the Future Development Program would generate approximately 9,290 trips per day. 1,150 of these trips would be generated by the Agricultural Residential Cluster Subdivision alone. This increase in trips would represent a substantial percentage of total trips on roadways in the Future Development Program vicinity. In addition, the Future Development Program would provide land uses that may be considered destinations for substantial vehicles, particularly the nine wineries and associated special events (with an estimated 120,000 visitors annually), golf course, and lodge. In addition, residential development outside of urban areas tends to generate more, and longer trips compared with similar development within urban areas. Therefore, the Future Development Program would be expected to substantially increase trip lengths and vehicle miles traveled in the vicinity. The rate of increase in vehicle trips and mile traveled would be expected to exceed the rate of population growth for the same area.

Implementation of Transportation Control Measures (TCMs). The following TCMs would apply to the Future Development Program: T-1C (Voluntary Commute Options Program); T-3 (Bicycling and Bikeway Enhancements); and T-8 (Telecommuting, Teleconferencing, and Telelearning). The Future Development Program would partially implement TCM T-3 by including a trail that would implement a portion of the County Trails Plan by connecting the East Cuesta Ridge Trail to the Community of Santa Margarita (refer to Section 4.11, *Recreation*).

Although the Future Development Program partially implements TCM T-3 (Bicycling and Bikeway Enhancements), the trail would not be a viable commuter route because of the distance to employment locations in Atascadero or San Luis Obispo. Consequently, it would not substantially reduce commute-related vehicular emissions. For this reason, and because the rate of increase in vehicle trips and miles traveled associated with the Future Development Program may exceed population growth rates for the area, the Future Development Program would be inconsistent with the CAP, which would be a Class I, significant and unavoidable, impact.

Mitigation Measures. Agricultural Residential Cluster Subdivision measure AQ-1(d) (Telecommuting) would apply to all Future Development Program land uses. The following additional mitigation measures are also required to reduce CAP inconsistency impacts:

Future Development Program AQ-2(a)

Trip Reduction Measures. To reduce overall trip generation and associated air contaminant emissions, future commercial tenants will be required to establish and maintain employee trip reduction programs that should include, but are not limited to, the following elements:

- Install bicycle racks and/or bicycle lockers at a ratio of 1 bicycle parking space for every 10 car parking spaces for customers and employees, or at a ratio otherwise acceptable the SLOAPCD to be determined prior to occupancy clearance;
- Post carpool, vanpool and transit information in employee break/lunch areas;
- Employ or appoint an Employee Transportation Coordinator;
- Implement a Transportation Choices Program. Project applicants should work with the Transportation Choices Coalition partners for free consulting services on how to start and maintain a program. Contact SLO Regional Rideshare at 541-2277;
- Provide for shuttle/mini bus service;
- Provide incentives to employees to carpool/vanpool, take public transportation, telecommute, walk, bike, etc.;
- Implement compressed work schedules;
- Implement telecommuting program;
- Implement a lunchtime shuttle to reduce single occupant vehicle trips;
- Include teleconferencing capabilities, such as web cams or satellite linkage, which will allow employees to attend meetings remotely without requiring them to travel out of the area;
- Provide on-site eating, refrigeration and food vending facilities to reduce employee lunchtime trips;
- Provide preferential carpool and vanpool parking spaces; and
- Provide shower and locker facilities to encourage employees to bike and/or walk to work (typically one shower and three lockers per every 25 employees).
- Provide off-site improvements to offset contaminant emissions, including: retrofitting existing homes and businesses with energy-efficient devices, replacing transit or school buses, contributing to alternative fueling infrastructure, and/or improving park and ride lots.

The specific components of a trip reduction program that will be required for a particular commercial development will be at the

discretion of the Planning and Building Department, based on the recommendations of the APCD.

Plan Requirements and Timing. Future commercial developers under the Future Development Program shall incorporate the listed provisions into development plans or shall submit proof of unfeasibility prior to initiation of construction. **Monitoring.** The Planning and Building Department shall site inspect to ensure development is in accordance with approved plans prior to occupancy clearance. Planning and Building staff shall verify installation in accordance with approved building plans.

Residual Impacts. Implementation of the above mitigation measure would reduce impacts. However, due to population projection inconsistencies and because no mitigation measures are feasible to sufficiently reduce vehicle miles traveled, impacts related to consistency with the CAP would remain Class I, *significant and unavoidable*.

Future Development Program Impact AQ-3

Buildout of envisioned Future Development Program land uses would result in construction-related emissions. These emissions may result in short-term adverse impacts to local air quality. Construction activities could also expose people to naturally-occurring asbestos. However, such emissions would be temporary and would be mitigated on a specific development basis. Construction air quality impacts are therefore considered Class II, *significant but mitigable*.

Construction activity, including off-site transportation improvements, that would occur in accordance with the Future Development Program would cause temporary, short-term emissions of various air pollutants. NO_x and CO would be emitted by the operation of construction equipment, while fugitive dust (PM_{10}) would be emitted by activities that disturb the soil, such as grading and excavation, road construction and building construction. Information regarding specific development projects, soil types, and the locations of receptors would be needed in order to quantify the level of impact associated with construction activity.

Taken individually, construction activities are not generally considered to have significant air quality impacts because of their short-term and temporary nature. However, given the amount of development that the Future Development Program would accommodate, it is reasonable to conclude that some major construction activity could be occurring at any given time over the life of the program. Impacts could also be complicated by the fact that multiple construction projects could occur simultaneously. Therefore, construction-related impacts associated with Land Use Element and Circulation Element Update buildout are considered potentially significant.

Given that the County violates the state standard for PM_{10}, the amount of dust generated from construction activities is potentially significant and mitigation measures are required. Additionally, grading activities may uncover naturally occurring asbestos. Human contact with asbestos would result in significant adverse health effects. Measures must be taken to assure proper handling if asbestos is present.

Refer also to Future Development Program Impact S-7 in Section 4.9, *Public Safety*, for a discussion of impacts related to valley fever.

Mitigation Measures. Agricultural Residential Cluster Subdivision measures AQ-2(a) (Construction Equipment Controls), AQ-2(b) (Dust Control), AQ-2(c) (Cover Stockpiled Soils), AQ-2(d) (Dust Control Monitor), AQ-2(e) (Active Grading Areas), and AQ-3(f) (Naturally Occurring Asbestos) would apply to all Future Development Program land uses. No additional mitigation measures are required.

Residual Impacts. With implementation of the above mitigation measures, construction air quality impacts would be reduced to a less than significant level.

d. Cumulative Impacts. In San Luis Obispo County, impact thresholds have been established to assess a project's effect on the regional air quality. A project that does not exceed SLOAPCD thresholds and is consistent with the 2001 Clean Air Plan would have a less than significant cumulative impact on the airshed. Conversely, a project that exceeds the SLOAPCD significance thresholds or is found to be inconsistent with the CAP would result in significant cumulative impacts.

The Agricultural Residential Cluster Subdivision independently exceeds the SLOAPCD Tier ~~1~~ **2 operational** thresholds of significance and is potentially inconsistent with long-term regional air quality planning efforts. Similarly, buildout of the Future Development Program is inconsistent with the CAP. Cumulative impacts on air quality would be significant and unavoidable, as described above.

4.2.3 Global Climate Change

a. Greenhouse Effect and Greenhouse Gases (GHGs). The greenhouse effect is a natural process by which some of the radiant heat from the sun is captured in the lower atmosphere of the earth. The gases that help capture the heat are called greenhouse gases (GHGs). While GHGs are not normally considered air pollutants, all have been identified as forcing the earth's atmosphere and oceans to warm above naturally occurring temperatures. Some GHGs occur naturally in the atmosphere, while others result from human activities. Naturally occurring GHGs include water vapor, carbon dioxide, methane, nitrous oxide and ozone. Certain human activities add to the levels of most of these naturally occurring gases.

Of all the greenhouse gases in the atmosphere, water vapor is the most abundant and variable. The main source of water vapor is evaporation from the oceans (approximately 85%). Other sources include evaporation from other water bodies, sublimation (change from solid to gas) from ice and snow, and transpiration from plant leaves. The primary human-related source of water vapor comes from fuel combustion in motor vehicles. However, this is believed to contribute a negligible amount (less than 1%) to atmospheric concentrations of water vapor. As a result, the control and reduction of water vapor emissions is not within reach of human actions, and is therefore excluded from regulation under AB 32.

The second most prevalent GHG is carbon dioxide (CO_2). Natural sources of CO_2 include: decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. However, in contrast to water vapor, CO_2

is primarily generated by anthropogenic (human caused) sources, including burning coal, oil, natural gas and wood.

In addition to CO_2, the GHGs humans have the greatest control over include methane (CH_4) and nitrous oxide (N_2O). CH_4 is a flammable gas and is the main component of natural gas. Natural sources of CH_4 include anaerobic decay of organic matter and natural gas fields; anthropogenic sources include landfills, fermentation of manure, and cattle. N_2O is produced by microbial processes in soils and water, including those reactions which occur in fertilizer containing nitrogen. Anthropogenic sources of N_2O include agricultural soil management, animal manure management, sewage treatment, and mobile and stationary combustion of fossil fuel. Reducing emissions from CO_2, CH_4 and N_2O is the focus of AB 32.

b. Global Climate Change Impacts. Global climate change (GCC) refers to a change in the average weather of the earth which can be measured by wind patterns, storms, precipitation, and temperature. The impact of anthropogenic activities on GCC is evident in the scientific correlation between rising global temperatures, atmospheric concentrations of CO_2 and other GHGs, and the industrial revolution[1].

The United States is the top producer of GHG in the world. California's GHG emissions rank second in the United States (behind Texas) and rank internationally just below Australia.[2] The primary contributors to anthropogenic GHG emissions in California are transportation, electric power production from both in-state and out-of-state sources; industry; agriculture and forestry; and other sources, which include commercial and residential activities.

According to the 2006 California Climate Action Team Report (CCAT, 2006) the following climate change effects are predicted in California over the course of the next century:

- **Diminishing Sierra snow pack by 70 to 90%, threatening the state's water supply.**
- **Increasing temperatures from 8 to 10.4 degrees Fahrenheit under the higher emission scenarios, leading to a 25 to 35% increase in the number of days ozone pollution levels are exceeded in most urban areas.**
- **Rising sea level (from 4 to 33 inches), causing coastal erosion along the length of California and sea water intrusion into the Delta. This would also exacerbate flooding in already vulnerable regions.**
- **Increased vulnerability of forests due to pest infestation and increased temperatures.**
- **Increased challenges for the State's agriculture industry from water shortages, increasing temperatures, and saltwater intrusion into the Delta.**
- **Increased electricity demand, particularly in the hot summer months.**

c. Regulatory Setting. In June 2005, Governor Schwarzenegger established California's GHG emissions reduction targets in Executive Order S-3-05. The Executive Order established that GHG emissions should be reduced to 2000 levels by 2010; to 1990 levels by 2020; and to 80 percent below 1990 levels by 2050. In furtherance of the goals

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[1] Intergovernmental Panel on Climate Change (IPCC). *Climate Change 2001: The Scientific Basis.* Cambridge University Press, 2001.

[2] United Nations Framework Convention on Climate Change (UNFCCC). *GHG Emissions Data, National Inventory*. Available on-line at http://unfccc.int/2860.php. Accessed 29 August 2007.

established in Executive Order S-3-05, the Legislature enacted Assembly Bill 32 (AB 32), the California Global Warming Solutions Act of 2006, which Governor Schwarzenegger signed on September 27, 2006. AB 32 represents the first enforceable statewide program to limit GHG emissions from all major industries with penalties for noncompliance. The California Air Resources Board (CARB) has been assigned to carry out and develop the programs and requirements necessary to achieve the goals of AB 32. By January 2008, a statewide cap for 2020 emissions based on 1990 levels must be adopted. The following year (January 2009), CARB must adopt mandatory reporting rules for major sources of GHGs and also a plan indicating how reductions in significant GHG sources will be achieved through regulations, market mechanisms, and other actions.

d. Methodology and Significance Thresholds. No air district in California, including the San Luis Obispo Air Pollution Control District (APCD), has identified a significance threshold for GHG emissions or a methodology for analyzing air quality impacts related to GHGs. Even though the GHG emissions associated with an individual development project could be estimated, there is no emissions threshold that can be used to evaluate the California Environmental Quality Act (CEQA) significance of these emissions. In addition, GCC models are not sensitive enough to be able to predict the effect of individual projects on global temperatures and the resultant effect on climate. Therefore, they cannot be used to evaluate the significance of a project's impact. Thus, insufficient information and predictive tools exist to assess whether an individual project would result in a significant impact on global climate. For these reasons, determining the CEQA significance of the impact of the Agricultural Residential Cluster Subdivision and Future Development Program at a project- or program-level is speculative.

In the absence of quantitative emissions thresholds, consistency with adopted programs and policies is used by many jurisdictions to evaluate the significance of cumulative impacts. A project's consistency with the implementing programs and regulations to achieve the statewide GHG emission reduction goals established under Executive Order S-3-05 and AB 32 cannot yet be evaluated because they are still under development. Nonetheless, the Climate Action Team, established by Executive Order S-3-05, has recommended strategies for implementation at the statewide level to meet the goals of the Executive Order. In the absence of an adopted plan or program, the Climate Action Team's strategies serve as current statewide approaches to reducing the State's GHG emissions. As no other plan or program for GHG emissions that would apply to the Agricultural Residential Cluster Subdivision or Future Development Program has been adopted, consistency with these strategies is assessed to determine if the contribution of the Agricultural Residential Cluster Subdivision and/or Future Development Program to cumulative GHG emissions is considerable.

e. Agricultural Residential Cluster Subdivision and Future Development Program Impacts. The primary source of GHGs in California is fossil fuel combustion. The primary GHG associated with fuel combustion is carbon dioxide (CO_2), with lesser amounts of methane (CH_4) and nitrous oxide (N_2O). The Agricultural Residential Cluster Subdivision and Future Development Program would result in emissions of these GHGs due to fuel combustion in motor vehicles, which would contribute to potential cumulative impacts of GHG emissions on global climate. The URBEMIS 2007 version 9.2 computer modeling program, which was used to quantify emissions from the Agricultural Residential Cluster Subdivision, also estimates CO_2 emissions. In accordance with this model, the proposed

Agricultural Residential Cluster Subdivision would generate and estimated 15,219.14 pounds per day (lbs/day) of CO_2 during construction and 17,645.93 lbs/day of CO_2 during operation (refer to Appendix A for calculations). As noted in Section 4.2.2(a), a program-level analysis does not require a quantitative air emissions analysis in accordance with APCD standards. As a result, no such analysis was conducted for the Future Development Program and no CO_2 emissions estimates are available.

In its report to the Governor and the Legislature, the Climate Action Team recommended strategies that could be implemented by various state boards, departments, commissions, and other agencies to reduce GHG emissions. The proposed Agricultural Residential Cluster Subdivision and Future Development Program contain design features and mitigation measures that would result in lower fuel combustion emissions, water conservation, increased energy efficiency, reduced energy usage and other collateral benefits with respect to GHG emissions. The Climate Action Team strategies that are relevant to the proposed Agricultural Residential Cluster Subdivision and Future Development Program and applicable design features or mitigation measures that would be consistent with these strategies are listed in Table 4.2-7 below.

Table 4.2-7 Agricultural Residential Cluster Subdivision and Future Development Program Consistency with California Climate Action Team Strategies

CCAT Strategy	Implementing Design Features/Mitigation Measures
Vehicle Climate Change Standards	The Agricultural Residential Cluster Subdivision and Future Development Program would be consistent with this strategy to the extent that new passenger vehicle and light trucks purchased by Agricultural Residential Cluster Subdivision residents and Future Development Program residents and patrons starting in the 2009 model year would be required to comply with said standards.
Achieve 50% Statewide Recycling Goal	Agricultural Residential Cluster Subdivision measure PS-5(b) (Recycling Plan) in Section 4.10, *Public Services*, requires that a long term plan for recycling be developed with a goal of 50% waste stream diversion. This measure would also apply to the Future Development Program.
Water Use Efficiency	Agricultural Residential Cluster Subdivision measure W-1(b) (Water Conservation Measures) in Section 4.14, *Water and Wastewater*, would help facilitate compliance with this strategy. This measure would also apply to the Future Development Program. In addition, Future Development Program measure W-1(a) (Reclaimed Water) would further implement this strategy.
Building Energy Efficiency Standards in Place	Agricultural Residential Cluster Subdivision measure AQ-1(a) (Energy Efficiency) in Section 4.2, *Air Quality*, requires that building energy efficiency ratings be increased by at least 10% above what is required by Title 24 requirements. Agricultural Residential Cluster Subdivision measure AQ-1(b) (Shade Trees) would also help reduce energy demands for air conditioning. Similar mitigation would apply to individual Future Development Program land uses once building permit applications are received and project-level CEQA analysis is completed.
Appliance Energy Efficiency Standards in Place	Agricultural Residential Cluster Subdivision measure AQ-1(a) (Energy Efficiency) in Section 4.2, *Air Quality*, includes the use of energy efficient appliances as a possible measure to increase energy efficiency ratings. Similar mitigation would apply to individual Future Development Program land uses once building permit applications are received and project-level CEQA analysis is completed.

Source: California Climate Action Team. Final 2006 Climate Action Team Report to the Governor and Legislature, March 2006.

Based on the analysis in Table 4.2-7, the contributions of the proposed Agricultural Residential Cluster Subdivision and Future Development Program to GHG emissions and GCC would be partially reduced due to consistency with the above strategies. However, the design of both the Agricultural Residential Cluster Subdivision and Future Development Program would result in inconsistencies with the Climate Action Team Strategy "Smart Land Use and Intelligent Transportation," which promotes jobs/housing proximity, transit-oriented development, and high density residential/commercial development along transit corridors. Inconsistencies with this strategy from both the Agricultural Residential Cluster Subdivision and Future Development Program are outlined below.

Agricultural Residential Cluster Subdivision:

- **The Agricultural Residential Cluster Subdivision would not be located in close proximity to any commercial or job center (approximately 8 miles to Atascadero and approximately 10 miles to San Luis Obispo). As a result, it would reduce job/housing proximity and increase vehicle trips and travel distances.**

- **The Agricultural Residential Cluster Subdivision would not be located along an established transit route and would be unlikely to create demand for transit facilities due to the relatively low density of the proposed development.**

- **The Agricultural Residential Cluster Subdivision would be developed at a relatively low density in a rural area.**

Future Development Program:

- **The Future Development Program would not be located in close proximity to any commercial or job center. As a result, it would reduce job/housing proximity and increase vehicle trips and travel distances.**

- **The Future Development Program would be located in a rural area and would provide land uses that may be considered destinations for substantial vehicles, particularly the nine wineries and associated special events (with an estimated 120,000 visitors annually), golf course, and lodge.**

- **The Future Development Program would also include residential development outside of an urban area.**

Despite being consistent with several Climate Action Team strategies, both the Agricultural Residential Cluster Subdivision and Future Development Program would be inconsistent with the "Smart Land Use and Intelligent Transportation" strategy. The Agricultural Residential Cluster Subdivision and Future Development Program would result in an incremental contribution to cumulative quantities of GCC.

f. Mitigation Measures. The San Luis Obispo County APCD has identified mitigation measures which are required to reduce impacts related to GCC. These measures include the following construction equipment controls: maintaining equipment according to manufacturer's specifications; maximizing the use of diesel construction equipment; idling

limitations; and using electric or alternatively fueled construction equipment. These controls are included in Agricultural Residential Cluster Subdivision measure AQ-2(a) (Construction Equipment Controls). In addition, the following mitigation measures are required:

AQ-GCC(a) **Construction Phase Mitigation to Reduce Fuel Usage and thus Greenhouse Gases. In addition to construction equipment controls required by Agricultural Residential Cluster Subdivision measure AQ-2(a), the following construction equipment measures shall be implemented to improve fuel efficiency and reduce greenhouse gas (GHG) emissions such as CO_2:**

1. **Maximize, to the extent feasible, the use of on-road heavy-duty equipment and trucks that meet the CARB's 1998 or newer certification standard for on-road heavy-duty diesel engines.**
2. **Add a section to the Construction Management Plan identified in Agricultural Residential Cluster Subdivision measureAQ-2(e) (Active Grading Areas) that schedules construction-related trips during non-peak hours to reduce peak hour and congestion-related emissions.**

Plan Requirements and Timing. These measures shall be shown on all grading and construction plans prior to issuance of construction permits. Compliance with these measures shall be included as bid specifications submitted to contractors. Monitoring. The applicant shall provide the APCD with proof that the above listed measures have been implemented prior to the start of the Agricultural Residential Cluster Subdivision's construction activity. The grading inspector shall perform periodic site inspections.

AQ-GCC(b) **Operational Phase Mitigation to Reduce Fuel Usage and thus Greenhouse Gases. In addition to energy efficiency measures listed in Agricultural Residential Cluster Subdivision measure AQ-1(a) (Energy Efficiency), the following green building techniques shall be implemented where feasible:**

1. **Engineer and position buildings to eliminate or minimize the development's active heating and cooling needs (e.g., solar orientation).**
2. **Install solar systems to reduce energy needs (e.g., solar panels).**
3. **Install solar water heaters.**
4. **Plant native, drought resistant landscaping.**
5. **Use locally-produced building materials.**
6. **Use renewable or reclaimed building materials.**
7. **Increase building energy efficiency ratings by at least 20% above what is required by Title 24 requirements, rather**

than 10% as required by Agricultural Residential Cluster Subdivision measure AQ-1(a) (Energy Efficiency).

Plan Requirements and Timing. The applicant shall incorporate the listed provisions into building and improvement plans or shall submit proof of infeasibility prior to issuance of grading permits. Monitoring. Planning and Building shall site inspect to ensure development is in accordance with approved plans prior to occupancy clearance.

AQ-GCC(c) **Alternative Transportation. The Agricultural Residential Cluster Subdivision shall further offset greenhouse gas (GHG) emissions by improving nearby transit amenities to help expand the interest and use of transit, thus reducing vehicle trips, fossil fuel consumption, and related GHG impacts:**

1. **Provide Regional Transit Authority (RTA) approved transit shelters for the three unsheltered RTA bus stops in the community of Santa Margarita.**
2. **Provide the funding needed by the RTA to implement real-time Smart Signage for the four RTA bus stops in the community of Santa Margarita.**
3. **Work with RTA to include bus stops at the two Agricultural Residential Cluster Subdivision entrances for the Santa Margarita Lake Shuttle.**

Plan Requirements and Timing. The applicant shall coordinate with APCD and implement above transit-related measures prior to issuance of grading permits Monitoring. Planning and Building shall verify compliance prior to issuance of grading permits.

In addition to the above measures, several Climate Action Team strategies could be implemented by the Agricultural Residential Cluster Subdivision and Future Development Program. Voluntary implementation of these strategies would further reduce the Agricultural Residential Cluster Subdivision and Future Development Program's contributions to GHG emissions and GCC:

- **High Recycling. Additional recovery of recyclable materials beyond the 50% goal (refer to Table 4.2-7).**
- **Green Buildings Initiative. Reducing energy use in public and private buildings by 20% by the year 2015, as compared with 2003 levels.**
- **California Solar Initiative. Installation of solar roofs on homes and businesses, increased use of solar thermal systems to offset the increasing demand for natural gas, and use of advanced metering in solar applications.**