

4.5 DRAINAGE, EROSION, AND SEDIMENTATION

The following section is based on a drainage analysis prepared by Boyle Engineering Corporation (refer to Appendix H).

Agricultural Residential Cluster Subdivision. Sediment transported from the Agricultural Residential Cluster Subdivision site during the construction period has the potential to cause downstream water quality impacts. Compliance with the National Pollutant Discharge Elimination System (NPDES) program would ensure less than significant impacts. The Agricultural Residential Cluster Subdivision would increase the area covered by impervious surfaces, resulting in potential increases in surface runoff and accelerated erosion. Although the Agricultural Residential Cluster Subdivision proposes a detention structure for the portion of the site draining to Yerba Buena Creek, runoff may overflow the proposed detention structure during a 100-year storm event. In addition, the Agricultural Residential Cluster Subdivision does not propose a detention structure for the portions of the site draining to Trout Creek and the unnamed tributary to Trout Creek. Potential inundation can be mitigated by the use of detention basins with adequate capacity to reduce the 24-hour 100-year post-development runoff to 100-year pre-development conditions, resulting in less than significant impacts. Portions of the Agricultural Residential Cluster Subdivision site are located in a 100-year flood zone. Since no habitable structures are proposed in these areas, impacts would be less than significant. Development of the Agricultural Residential Cluster Subdivision site with residential uses would be expected to increase the quantities of pollutants potentially entering stream courses with runoff from streets, lawns, and gardens. This is a Class II, significant but mitigable, impact.

Future Development Program. Because no active application currently exists for the Future Development Program, the assessment of drainage, erosion, and sedimentation impacts is based on a reasonable worst case scenario with regard to the location of future land uses within anticipated development areas. Buildout of the Future Development Program would result in impacts similar to those resulting from the Agricultural Residential Cluster Subdivision individually. However, because no active application currently exists for the Future Development Program subsequent to the Agricultural Residential Cluster Subdivision, and the precise size and location of Future Development components are unknown, it is assumed as a reasonable worst-case scenario that components of the Future Development Program would be required to comply with the NPDES program. Compliance with the NPDES program would ensure less than significant impacts short-term water quality impacts. The Future Development Program would increase the area covered by impervious surfaces, resulting in long-term increases in surface runoff and accelerated erosion. Impacts are significant but mitigable. In addition, the Future Development Program may place habitable structures in a 100-year flood zone. Flooding impacts are therefore Class II, significant but mitigable. Due to the intensification of uses proposed as part of the Future Development Program, there is the potential for storm water transport of pollutants, bacteria, and sediment into downstream facilities. Impacts are Class II, significant but mitigable.

4.5.1 Setting

a. Topography. The Santa Margarita Ranch property consists of varied terrain with the mountainous area on the west side of the Ranch containing the Santa Lucia Mountain ridge and slopes of 50 percent and greater. The predominant interior valleys of the Ranch are sloped at 1 to 9 percent while the Santa Margarita Creek lowlands typically contain slopes less than 5 percent. Elevations across the site range from a high of 1,276 feet along the Santa Lucia ridgeline to 1,020 feet at the north end of the site. At that location, the primary on-site tributary



(Trout Creek) drains to the Salinas River, located approximately 1.25 miles north of the subject property.

b. Site Drainage Pattern. The Santa Margarita Ranch is located in the Salinas River watershed which empties into the Pacific Ocean at Monterey Bay. Specifically, the Ranch contains a number of smaller internal drainage basins which are west bank tributaries to the Salinas River. Drainage generally flows from south to north via four main drainages: Trout Creek (northeast of Agricultural Residential Cluster Subdivision site); an unnamed tributary to Trout Creek (between Phase 1 and Phase 2 of the Agricultural Residential Cluster Subdivision site); Yerba Buena Creek (southwest of the Agricultural Residential Cluster Subdivision site); and Rinconada Creek (southeast of the Agricultural Residential Cluster Subdivision site). All of these drainages are categorized as Waters of the U.S. and each eventually flow to the Salinas River. From a hydrologic perspective, the water movement potential of the Ranch is quite variable because the Ranch's terrain varies from rugged mountains to rolling hills and flat land. A number of soil types on the Ranch are characterized by medium to very rapid runoff and high to very high erosion potential. Table 4.6-1 in Section 4.6, *Geologic Stability*, lists the different soils found on the Ranch property and includes an analysis of their drainage characteristics.

c. Existing Flood Hazards. Portions of the Santa Margarita Ranch are subject to potential flooding from Trout Creek, the unnamed tributary to Trout Creek, Yerba Buena Creek, and Rinconada Creek. The National Flood Insurance Program's Flood Insurance Rate Map (FIRM) for the Ranch property shows the central and northern portion of the property within the 100-year flood plain boundary adjacent to these creeks (refer to Figure 4.5-1). The 100-year flood, or "base flood," refers to the flood resulting from a storm event that has a probability of occurring once every 100 years, or a one percent chance of occurring in any given year. Areas mapped in the 100-year floodplain are subject to inundation during a 100-year storm event. The 100-year floodplain was used to designate Santa Margarita Creek and Yerba Buena Creek in the Flood Hazard combining designation within the Salinas River Area Plan.

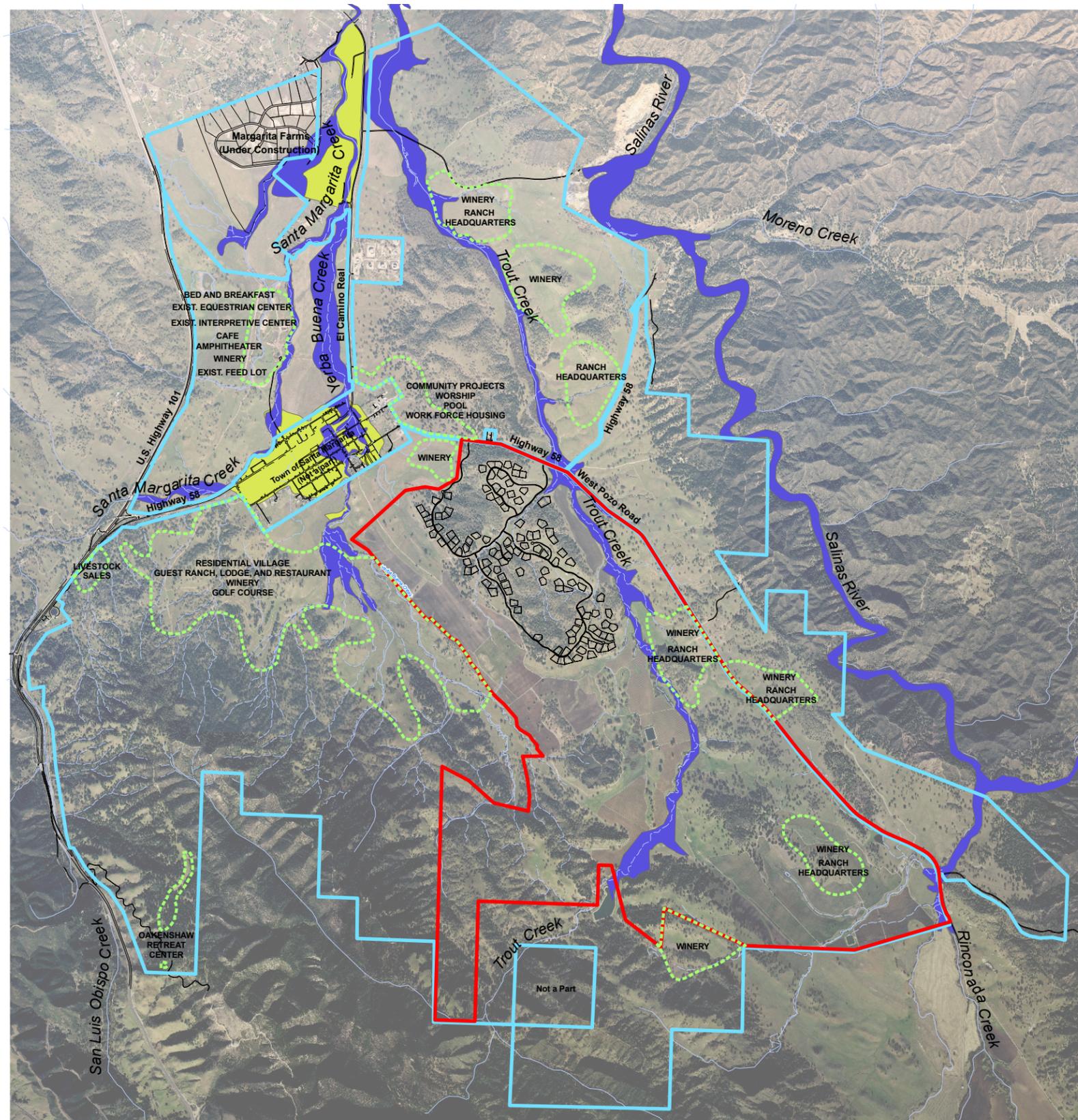
4.5.2 Impact Analysis

a. Methodology and Significance Thresholds. Assessment of impacts is based on review of site information and conditions and County information regarding geologic and drainage issues. Flooding risk was determined using a combination of a Federal Insurance Rate Maps for the area and the County of San Luis Obispo Safety Element maps and watershed information.

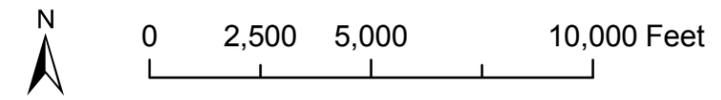
In accordance with Appendix G of the State CEQA Guidelines, impacts would be significant if development under the Agricultural Residential Cluster Subdivision or the Future Development Program would result in any of the following:

- *Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;*
- *Place within a 100-year flood hazard area structures which would impede or redirect flood flows;*
- *Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam;*





- TENTATIVE TRACT 2586 BOUNDARY
- PROPOSED LOT LINES FOR TENTATIVE TRACT 2586 RESIDENTIAL CLUSTER SUBDIVISION
- RANCH PROPERTY BOUNDARY
- ⋯ FUTURE DEVELOPMENT PROGRAM LAND USE LOCATIONS
- 100-YEAR FLOODPLAIN
- 500-YEAR FLOODPLAIN



Flood Hazard Areas

Figure 4.5-1

Source: Federal Emergency Management Agency Q3 Flood Data, May 1996, and EDA Design Professionals, June 2006.

- *Result in inundation by seiche tsunami or mudflow;*
- *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;*
- *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in flooding on- or off-site;*
- *Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff;*
- *Violate Regional Water Quality Control Board water quality standards or waste discharge requirements;*
- *Otherwise substantially degrade water quality; or*
- *Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.*

b. Agricultural Residential Cluster Subdivision Impacts and Mitigation Measures.

Agricultural Residential Cluster Subdivision Impact D-1 **During construction, disrupted soil may be subject to erosion, sedimentation, and pollutant discharges. This is a Class III, less than significant impact.**

If grading occurs during the rainy season or in the event of heavy storms, soils from the Agricultural Residential Cluster Subdivision site could be entrained (carried along), eroded, and transported to drainages within the Ranch property. Grading operations are expected to increase erosion and sedimentation within drainages. Uncontrolled discharges of sediment are a potentially significant impact to water quality.

Regulations under the federal Clean Water Act require that a National Pollutant Discharge Elimination System (NPDES) storm water permit be obtained for projects that would disturb greater than one acre during construction. Agricultural Residential Cluster Subdivision development would be subject to this requirement, which would apply to the tract in its entirety and not individual lots by themselves. Acquisition of an NPDES permit is dependent on the preparation of a Storm Water Pollution Prevention Plan (SWPPP) that contains specific actions, termed Best Management Practices (BMPs), to control the discharge of pollutants, including sediment, into the local surface water drainages. BMP methods may include, but would not be limited to, the use of temporary retention basins, straw bales, sand bagging, mulching, erosion control blankets and soil stabilizers. In the State of California, Regional Water Quality Control Boards administer the NPDES permit process. In addition, the Agricultural Residential Cluster Subdivision will be required to comply with County grading and storm water ordinances.

Mitigation Measures. Compliance with the National Pollutant Discharge Elimination System (NPDES) program and compliance with county grading and storm water ordinances would ensure less than significant impacts.

Residual Impacts. Impacts would be less than significant.



Agricultural Residential Cluster Subdivision Impact D-2 **The Agricultural Residential Cluster Subdivision would introduce paved and roofed areas and thus has the potential to result in increased peak storm water discharges and volumes of runoff. Impacts are Class II, significant but mitigable.**

The following analysis is based on a drainage and wastewater analysis prepared by Boyle Engineering Corporation (July 2006; refer to Appendix H).

The Agricultural Residential Cluster Subdivision would increase the area covered by impervious surfaces, resulting in potential increases in surface runoff and accelerated erosion. It is estimated that the Agricultural Residential Cluster Subdivision would add approximately 29 acres of impervious surfaces to the site. As proposed, the Agricultural Residential Cluster Subdivision would include a detention structure which would reduce the 50-year post-development storm event to a 2-year pre-development condition for the portion of the site draining to Yerba Buena Creek. This capacity is consistent with requirements of the San Luis Obispo County Department of Public Works. However, runoff to Yerba Buena Creek may overflow the proposed detention structure during a 100-year storm event, since the basin is designed to handle a 50-year storm event. This is a potentially significant impact.

The Agricultural Residential Cluster Subdivision does not propose a detention structure for the portions of the site draining to Trout Creek and the unnamed tributary to Trout Creek. Runoff volume to both of these drainages may significantly increase during all storm events. This would increase downstream flooding. Unless detention storage is provided in the unnamed tributary to Trout Creek Watershed, the proposed Agricultural Residential Cluster Subdivision would increase flooding along Trout Creek at the southern limits of the existing Santa Margarita Community during a 100-year storm event. A substantial portion of the Santa Margarita community is within the 100-year floodplain. Any additional runoff caused in part by the Agricultural Residential Cluster Subdivision would therefore exacerbate existing flooding in the community. Therefore, the proposed Agricultural Residential Cluster Subdivision would result in a significant impact related to off-site flooding.

Detention basins are required to be designed to County standards regarding outflow devices, slopes, emergency overflow, landscaping, and maintenance provisions.

Flooding impacts to Rinconada Creek would be less than significant because the proposed impervious areas are outside the Rinconada Creek watershed.

Mitigation Measures. Agricultural Residential Cluster Subdivision measure G-2(b) (Grading and Erosion Control Plan) in Section 4.6, *Geologic Stability*, would partially reduce impacts. The following additional mitigation measures are also required:

Agricultural Residential Cluster Subdivision D-2(a) **Yerba Buena Drainage System. Runoff from the Agricultural Residential Cluster Subdivision must be detained in on-site detention basins.** The proposed detention structure for the portion of the Agricultural Residential Cluster Subdivision site draining to Yerba Buena creek shall ~~have capacity to reduce the 24 hour 100-year post-development runoff to 100-year pre-development conditions, at a minimum~~ be designed to comply



with County criteria (reduction of the 50 year, 10 hour post-development peak flow to 2 year, 10 hour pre-development conditions). A Drainage Study shall be prepared by a qualified hydrologist to identify detention volumes and release rates for the proposed facilities. The study shall also address flow routing and relative times of concentration in the watershed at the detention facility compared with the existing channel. **The detention facility shall be located within an Agricultural Conservation Easement, in an area that does not contain oak trees, special status species or habitat, identified cultural resources, or prime agricultural soils.**

The design of all facilities must be reviewed and approved by County Public Works staff.

Plan Requirements and Timing. The Drainage Study and plans for the storm drain and detention system shall be ~~reviewed and designed,~~ approved **and constructed** by ~~Planning and Building, Public Works and the San Luis Obispo County Flood Control and Water Conservation District (SLOFCWCD)~~ prior to approval of a Land Use Permit **as part of the tract improvement plans.** The drainage system will be reviewed for compliance with Public Works Department Public Improvement Standards for detention basins. ~~These shall be installed prior to occupancy clearance.~~ Installation shall be ensured through a bond or performance security provided by the applicant **and shall be completed and accepted by the County prior to issuance of building permits.** An entity, comprised of homeowners, shall be formed to maintain storm drain systems for the life of the Agricultural Residential Cluster Subdivision. This entity shall also determine and specify long-term maintenance requirements. **Monitoring.** Public Works or Planning and Building shall site inspect to ensure installation of the drainage system prior to issuance of occupancy clearance.

Agricultural Residential
Cluster Subdivision
D-2(b)

Trout Creek Drainage System. Runoff from the Agricultural Residential Cluster Subdivision must be detained in on-site detention basins. Prior to approval of a Land Use Permit, the applicant shall design a detention structure for the portion of the Agricultural Residential Cluster Subdivision site that drains to the unnamed tributary to Trout Creek. **This detention structure shall be designed to comply with County criteria (reduction of the 50 year, 10 hour post-development peak flow to 2 year, 10 hour pre-development conditions), as well as reduce the 100-year 10-hour post-development runoff to 100 year 10 hour predevelopment conditions.** A Drainage Study shall be prepared to identify detention volumes and release rates for the required facilities. The study should also address flow routing



and relative times of concentration in the watershed in the watershed at the detention facility compared with existing channels. ~~This system shall have capacity to reduce the 24-hour 100-year post-development runoff to 100-year pre-development conditions, at a minimum.~~ **The detention facility shall be located within an Agricultural Conservation Easement, in an area that does not contain oak trees, special status species or habitat, identified cultural resources, or prime agricultural soils.**

Plan Requirements and Timing. The Drainage Study and plans for the storm drain and detention system shall be ~~reviewed and designed,~~ approved **and constructed** by ~~Planning and Building, Public Works and the San Luis Obispo County Flood Control and Water Conservation District (SLOFCWCD)~~ **prior to approval of a Land Use Permit as part of the tract improvement plans.** The drainage system will be reviewed for compliance with Public Works Department Public Improvement Standards for detention basins. ~~These shall be installed prior to occupancy clearance.~~ Installation shall be ensured through a bond or performance security provided by the applicant **and shall be completed and accepted by the County prior to issuance of building permits.** An entity, comprised of homeowners, shall be formed to maintain storm drain systems for the life of the Agricultural Residential Cluster Subdivision. This entity shall also determine and specify long-term maintenance requirements. **Monitoring.** Public Works or Planning and Building shall site inspect to ensure installation of the drainage system prior to issuance of occupancy clearance.

**Agricultural Residential
Cluster Subdivision
D-2(c)**

LID-Integrated Management Practices. Low Impact Development (LID) design technologies shall be employed by individual lot developers to the maximum extent practicable. LID is an alternative site design strategy that uses natural and engineered infiltration and storage techniques to control storm water runoff where it is generated to reduce downstream impacts. The following LID practices shall be implemented, as feasible, to re-establish pre-development runoff conditions:

1. Bioretention cells;
2. Tree boxes to capture and infiltrate street runoff;
3. Vegetated swales, buffers and strips;
4. Roof leader flows directed to planter boxes and other vegetated areas;
5. Permeable pavement;
6. Impervious surface reduction and disconnection;
7. Soil amendments to increase infiltration rates; and
8. Rain gardens, rain barrels, and cisterns.



Only natural fiber, biodegradable materials shall be used.

Since LID is intended to mimic the pre-development regime through both volume and peak runoff rate controls, the flow frequency and duration for the post-development conditions should be identical (to the greatest degree possible) to those for the pre-development conditions.

Plan Requirements and Timing. Prior to issuance of building permits, individual lot owners shall submit design plans containing applicable LID design technologies, subject to the review of the Public Works Department. **Monitoring.** Public Works shall review building plans prior to issuance of building permits and inspect units prior to occupancy clearance.

Residual Impacts. With implementation of the required measures, the Agricultural Residential Cluster Subdivision would result in less than significant impacts related to peak storm water discharges and volumes of runoff.

Agricultural Residential Cluster Subdivision Impact D-3 **Portions of the Agricultural Residential Cluster Subdivision are located in a 100-year flood zone. However, no habitable structures would be located in these areas. Impacts related to flood hazard exposure are Class III, less than significant.**

Based on a review of Federal Emergency Management Agency Flood Insurance Rate Maps (Community Panel number: 060304 revised 7/5/82), the eastern reaches of the Agricultural Residential Cluster Subdivision site, just south of the east driveway, would be located within the flood zone associated with Trout Creek (refer to Figure 4.5-1). The east driveway is expected to handle the majority (i.e., approximately 80%) of Agricultural Residential Cluster Subdivision traffic, and the main internal roadway connects to this driveway. However, because none of the proposed Agricultural Residential Cluster Subdivision lots are within the 100-year flood zone, impacts would be less than significant.

Refer to Agricultural Residential Cluster Subdivision Impact D-2 above for a discussion of potential downstream flooding impacts caused by Agricultural Residential Cluster Subdivision development.

Mitigation Measures. No mitigation measures are required.

Residual Impacts. Impacts related to exposure of people to flood hazards would be less than significant.

Agricultural Residential Cluster Subdivision Impact D-4 **Due to the intensification of uses proposed on the Agricultural Residential Cluster Subdivision site, there is the potential for storm water transport of pollutants, bacteria, and sediment into downstream facilities. Impacts are Class II, significant but mitigable.**



Development of the Agricultural Residential Cluster Subdivision site with residential uses would be expected to increase the quantities of pollutants potentially entering stream courses with runoff from streets, lawns, and gardens. Therefore, impacts on water quality are expected to be potentially significant but mitigable.

It should be noted that approximately 1,100 acres of the 3,778 acre Agricultural Residential Cluster Subdivision site is currently used for Cattle grazing. The conversion from agricultural to residential use would remove cattle from the Agricultural Residential Cluster Subdivision area, **which may** thereby ~~decreasing~~ **decrease** the quantity of pathogens (such as coliform bacteria) entering stream courses in the area. **However, the proposed Agricultural Residential Cluster Subdivision may also divert cattle grazing operations to other portions of the Ranch, such that grazing is intensified in other portions of the watershed. In such a case, the quantity of pathogens entering stream courses in the area would not appreciably change compared to pre-project conditions.**

Mitigation Measures. The following measure is recommended in addition to Agricultural Residential Cluster Subdivision measures D-2(a) (Yerba Buena Drainage System), D-2(b) (Trout Creek Drainage System), D-2(c) (LID-Integrated Management Practices) and G-2(b) (Grading and Erosion Control Plan) (in Section 4.6, *Geologic Stability*), which would ensure permanent sedimentation/detention basins are installed and control erosion, thereby enabling sediment to settle out of site runoff.

Agricultural Residential Cluster Subdivision D-4(a)

Pollutant Removal Techniques. In addition to LID-integrated management practices required by Agricultural Residential Cluster Subdivision measure D-2(c), the applicant shall integrate into the Agricultural Residential Cluster Subdivision design other available technologies and techniques to remove pollutants from site runoff prior to entering the drainage courses. Such techniques shall include reduced slope grading, drainage through vegetative zones (e.g., bio-swale) and other options to intercept pollutants being conveyed toward drainage paths. Technological solutions such as gravelly filter blankets or particulate filters (e.g. Fossil Filters) should also be installed as pollutant-removal solutions. **Only natural fiber, biodegradable materials shall be used.**

Plan Requirements and Timing. The applicant shall submit a drainage plan that graphically illustrates the location and design of pollutant-removal systems. Design plans shall be submitted to Planning and Building, Public Works and Environmental Health Services for review and approval prior to issuance of grading permits. **Monitoring.** Planning and Building and Public Works shall ensure installation prior to construction of any structures.

Residual Impacts. Implementation of the above mitigation measures would reduce the potential for storm water transport of pollutants, bacteria, and sediment into downstream facilities. Therefore, water quality impacts would be reduced to less than significant levels.



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 4.5.2(b) for a discussion of drainage, erosion and sedimentation impacts resulting from the Agricultural Residential Cluster Subdivision independently.

Future Development Program Impact D-1 **During construction, disrupted soil may be subject to erosion, sedimentation, and pollutant discharges. This is a Class III, less than significant impact.**

Grading and construction of Future Development Program components is expected to increase erosion and sedimentation to drainages. Uncontrolled discharges of sediment are a potentially significant impact to water quality.

Regulations under the federal Clean Water Act require that a National Pollutant Discharge Elimination System (NPDES) storm water permit be obtained for projects that would disturb greater than one acre during construction. Because no active application currently exists for the Future Development Program subsequent to the Agricultural Residential Cluster Subdivision, and the precise size and location of Future Development components are unknown, it is assumed as a reasonable worst-case scenario that components of the Future Development Program would be required to comply with the NPDES program. In addition, the Agricultural Residential Cluster Subdivision will be required to comply with County grading and storm water ordinances. Compliance with County ordinances and the National Pollutant Discharge Elimination System (NPDES) program would ensure less than significant impacts.

Mitigation Measures. Compliance with the National Pollutant Discharge Elimination System (NPDES) program and compliance with county grading and storm water ordinances would ensure less than significant impacts.

Residual Impacts. Impacts would be less than significant.

Future Development Program Impact D-2 **The Future Development Program would introduce paved and roofed areas and thus has the potential to result in increased peak storm water discharges and volumes of runoff. Impacts are Class II, significant but mitigable.**

The Future Development Program would increase the area covered by impervious surfaces, resulting in potential increases in surface runoff and accelerated erosion. Because no active application currently exists for the Future Development Program subsequent to the Agricultural Residential Cluster Subdivision, and the precise size and location of Future Development components are unknown, it is assumed as a reasonable worst-case scenario that a significant amount of impervious surfaces would be added to the Ranch property. The Future Development Program includes construction of a Community Drainage Facility which is intended to mitigate potential impacts. The location of the facility will be determined with the submittal of a Specific Plan for the first Future Development Program subdivision subsequent



to the Agricultural Residential Cluster Subdivision. This facility would help address some downstream flooding problems, but may not address all potential flooding impacts from Future Development Program components. Because the size, location, and design of the community drainage basin have not been defined, the future facility may be inadequate to address drainage and flooding hazards associated with Future Development Program implementation. Impacts are therefore potentially significant.

Mitigation Measures. Agricultural Residential Cluster Subdivision measures D-2(c) (LID-Integrated Management Practices) and G-2(b) (Grading and Erosion Control Plan) in Section 4.6, *Geologic Stability*, would apply to all Future Development Program land uses. In addition, Future Development Program measure D-2(a) (Community Drainage Master Plan) would further reduce impacts. The following mitigation is also required:

Future Development Program D-2(a)

Community Drainage Master Plan. A Community Drainage Master Plan shall be created as part of the required Specific Plan for future development subsequent to the Agricultural Residential Cluster Subdivision. The Master Plan shall address potential improvements (including size and location of local and regional storm water facilities) to address water quality, flooding potential, and erosion control throughout the Ranch property. The Plan shall present a phased implementation strategy to address project-by-project impacts as Future Development Program buildout occurs. Mitigation shall include implementation of drainage basins, channels, or other improvements recommended in the Plan, in accordance with County standards. The Plan shall consider using golf course features as drainage features, including bioswales/filtration areas and detention basins. The Plan shall define a financing mechanism for implementation and annual reporting. The Plan supplement the *Santa Margarita Drainage and Flood Control Study* (County of San Luis Obispo Public Works Department, February 2004), as applicable.

Plan Requirements and Timing. Prior to adoption of the Specific Plan subsequent to the Agricultural Residential Cluster Subdivision, the Community Drainage Master Plan shall be submitted for review by Planning and Building and the Public Works Hydraulic Planning Unit to ensure that downstream flooding in the community of Santa Margarita is not worsened by future development. All components of the Plan, including a financing system, shall be implemented prior to issuance of any occupancy permits subsequent to the Agricultural Residential Cluster Subdivision. **Monitoring.** Planning and Building and the Public Works Hydraulic Planning Unit shall review the Plan prior to issuance of grading permits for Future Development Program land uses subsequent to the Agricultural Residential Cluster Subdivision. Planning and Building shall ensure compliance with requirements set forth in the Plan.



Residual Impacts. With implementation of the above-referenced mitigation measures, the Future Development Program would result in less than significant impacts related to peak storm water discharges and volumes of runoff.

Future Development Program Impact D-3

Portions of the Future Development Program are located within a 100-year flood zone associated with Trout Creek, the unnamed tributary to Trout Creek, Yerba Buena Creek, Santa Margarita Creek and/or Rinconada Creek. Impacts related to flood hazard exposure to future uses in this area are Class II, significant but mitigable.

Based on a review of Federal Emergency Management Agency Flood Insurance Rate Maps (Community Panel number: 060304 revised 7/5/82), 100-year flooding from Trout Creek, the unnamed tributary to Trout Creek, Yerba Buena Creek, Santa Margarita Creek and Rinconada Creek would impact several Future Development Program land use locations. Land uses that may be impacted include: a 12-room Bed and Breakfast, 6,000 square foot café, 600 seat amphitheater and 40,000 square foot winery near the existing Ranch headquarters location; a residential village, 250-unit guest ranch and lodge with a 24,000 square foot restaurant, 40,000 square foot winery, and 36-hole golf course on 280 acres, including a 25,000 square foot clubhouse and shop southwest of the community of Santa Margarita; and a Ranch headquarter and two wineries located in the northeast corner of the Ranch property (refer to Figure 4.5-1). Because no application has been filed for the Future Development Program subsequent to the Agricultural Residential Cluster Subdivision, any of these uses could be located within a 100-year flood zone. Impacts related to flooding would therefore be potentially significant.

Mitigation Measures. The following mitigation measures are required to reduce impacts related to exposure to flood hazards:

Future Development Program D-3(a)

Avoidance of Flood Hazards. Preferred locations for Future Development Program components shall be in areas outside of the 100-year flood zones for Trout Creek, the unnamed tributary to Trout Creek, Yerba Buena Creek, Santa Margarita Creek and Rinconada Creek. This may require restricted building envelopes for the following Future Development Program land uses: a Bed and Breakfast, café, amphitheater and winery near the existing Ranch headquarters location; a residential village, guest ranch, lodge and restaurant, winery, and golf course southwest of the community of Santa Margarita; and a Ranch headquarter and two wineries located in the northeast corner of the Ranch property. If future development is proposed in flood zone areas, Future Development Program measures D-3(b) (Base Flood Elevation), D-3(c) (Prohibition of Floodwater Displacement) and D-3(d) [Conditional Letter of Map Revision (CLOMR)] shall apply.

Plan Requirements and Timing. Flood zones shall be included on building plans for future habitable structures and utilities.



Planning and Building shall review these plans prior to approval. **Monitoring.** Planning and Building shall be responsible for ensuring that all structures are outside 100-year flood hazard areas or are otherwise mitigated. If structures are proposed for location in 100-year flood areas, Planning and Building shall ensure that Future Development Program measures D-3(b), D-3(c), and D-3(d) are applied.

**Future Development
Program D-3(b)**

Base Flood Elevation. The ground floor elevation of all Future Development Program structures within flood zones shall be constructed at least one foot above the Base Flood Elevation (BFE).

Plan Requirements and Timing. Applicants within flood areas shall submit plans to Planning and Building for approval prior to issuance of grading permits. **Monitoring.** Planning and Building and Public Works shall review the plans prior to issuance of grading permits for Future Development Program land uses proposed for location in 100-year flood areas.

**Future Development
Program D-3(c)**

Prohibition of Floodwater Displacement. Prior to issuance of grading permits, applicants within flood areas shall submit plans to the Planning and Building Department and Public Works Department that identify an overland escape route for runoff to ensure that the placement of fill to raise building pads out of the floodplain will not divert runoff onto adjacent properties.

Plan Requirements and Timing. Applicants within flood areas shall submit plans to Planning and Building and Public Works for approval prior to issuance of grading permits. **Monitoring.** Planning and Building and Public Works shall review the plans prior to issuance of grading permits for Future Development Program land uses proposed for location in 100-year flood areas.

**Future Development
Program D-3(d)**

Conditional Letter of Map Revision (CLOMR). Without obtaining a Conditional Letter of Map Revision (CLOMR) from the Federal Emergency Management Agency (FEMA), development within the 100-year flood plain would not be guaranteed to comply with the National Floodplain Insurance Program (NFIP) requirement that a parcel of land or proposed structure that is to be elevated by fill would not be inundated by the base flood. Prior to approval of grading permits, applicants shall obtain a CLOMR from FEMA.

The CLOMR request shall include detailed flood hazard analyses prepared by a qualified professional engineer, consistent with FEMA requirements. The applicant shall comply with all conditions and requirements of the CLOMR.



Plan Requirements and Timing. Applicants within the 100-year floodplain shall submit a copy of the CLOMR prior to issuance of grading permits. **Monitoring.** Planning and Building and Public Works Department shall review the CLOMR documentation prior to approval of improvement plans for grading.

Residual Impacts. Implementation of the above mitigation, in conjunction with County standards and practices, would reduce potential flooding impacts to less than significant levels.

Future Development Program Impact D-4

Due to the intensification of uses proposed as part of the Future Development Program, there is the potential for storm water transport of pollutants, bacteria, and sediment into downstream facilities. Impacts are Class II, significant but mitigable.

The Future Development Program includes 514 dwelling units (402 units in addition to the Agricultural Residential Cluster Subdivision) and the additional following uses: private golf course, club house and pro shop; guest ranch, lodge, and restaurant; 12-room bed and breakfast; cafe; amphitheater; crafts studios, galleries and shops; interpretive center and gift shops; nine wineries with tasting rooms and permitted special events; neighborhood park and swimming pool; five ranch/farm headquarters; one livestock sales yard and café; three places of worship; and a retreat center. This level of development would be expected to increase the quantities of pollutants potentially entering stream courses with runoff from streets, lawns, and gardens. Other activities that may increase pollutants include: motor vehicle operations in the area, pesticide/herbicide/fertilizer uses, human littering, careless material storage and handling, and pavement disintegration. This is a potentially significant but mitigable water quality impact.

The Future Development Program envisions a livestock sales yard for location west of the community of Santa Margarita, adjacent to US 101. Equestrian and livestock facilities are recognized as a source of pollution as defined by the Clean Water Act. Livestock waste, including manure, urine, and bedding, contain nutrients such as phosphorous and nitrogen, and microorganisms such as coliform bacteria. Microorganisms such as bacteria consume organic matter in manure along with the oxygen found in the water and release carbon dioxide. Excess bacteria in water can lead to asphyxiation or suffocation of aquatic animals in the receiving waters downstream.

The Future Development Program also envisions a 36-hole golf course on 280 acres, including a 25,000 square foot clubhouse and shop, southwest of the community of Santa Margarita. The golf course would contribute various pollutants to the surface water, including fertilizer, pesticides, and organic wastes. In addition, pesticides (including herbicides) and fertilizers can leach into the underlying groundwater.

Mitigation Measures. Agricultural Residential Cluster Subdivision measures D-2(c) (LID-Integrated Management Practices) and D-4(a) (Pollutant Removal Techniques) would apply to all Future Development Program land uses. Mitigation Measure G-2(b) (Grading and Erosion Control Plan) in Section 4.6, *Geologic Stability*, would also reduce impacts related to



sediment in downstream facilities. The following additional mitigation measure is also required to reduce water quality impacts:

**Future Development
Program D-4(a)**

Integrated Pest Management Plan. Prior to issuance of grading permits, an Integrated Pest Management Plan shall be prepared for ongoing operations at the golf course. The Integrated Pest Management Plan should include, but not necessarily be limited to, the following:

- Use of biological, physical, and cultural controls rather than chemical controls.
- Use of insect-resistant cultivars.
- Mechanical weed control to be used wherever and whenever possible as the first choice.
- Establishment of thresholds for the use of fertilizers.
- Determination of the probable cause of an insect/disease problem and correction as necessary (i.e.: soil nutrient problems, irrigation, water quality, plant type, etc.) prior to chemical use.
- Development of thresholds to determine when pesticide use is necessary. Pesticides are to be used only when necessary to cure a problem and in positively identified pre-emergent situations and not as a preventative measure or as a regular, periodic application.
- Fumigation activities to be limited to greens only.
- Use of chemical forms that are the least toxic to non-target organisms (such as the use of a sodium salt if 2,4-D herbicide is used).
- Preferentially, the IPM should not permit the use of 2,4-D at the site and similar toxic chemicals that have a high potential for leaching from the site.
- Chemical controls should preferentially begin with the use of dehydrating dusts (silica gels, diatomaceous earth), insecticidal soaps, boric acid powder, horticultural oils, and pyrethrin-based insecticides.
- Late evening application of pesticides.
- Use of slow release fertilizers.
- Provision of vegetated riparian buffers around natural water features.

The golf course should also obtain Audubon Cooperative Sanctuary Program (ACSP) certification to mitigate storm water runoff impacts from the golf course.

Plan Requirements and Timing. The Integrated Pest Management Plan shall be submitted for review and approved by Planning and Building prior to issuance of grading permits for the golf course. All components of the Plan shall be



implemented prior to issuance of any occupancy permits.

Monitoring. Planning and Building shall review the Plan prior to issuance of grading permits for the golf course. Planning and Building shall ensure compliance with requirements set forth in the Plan.

Residual Impacts. Implementation of the required mitigation measures would reduce the potential for storm water transport of pollutants, bacteria, and sediment into downstream facilities. Therefore, water quality impacts would be reduced to less than significant levels.

d. Cumulative Impacts. The evaluation of the Future Development Program, which includes the Agricultural Residential Cluster Subdivision, in this EIR accounts for all of the expected growth in the Santa Margarita area, as it represents buildout of the major landholding that surrounds the existing community, consistent with the Salinas River Area Plan. Therefore, cumulative drainage, erosion, and sedimentation impacts from buildout of the Agricultural Residential Cluster Subdivision in combination with buildout of the Future Development Program were addressed in the Future Development Program impact analysis above. As future applications for individual Future Development Program projects are submitted at a project level of detail, the precise evaluation of future project cumulative impacts would be coordinated through the required Specific Plan and associated environmental review, or through individual project-level environmental review, as applicable.

