ADDENDUM TO THE AVIANO ADULT COMMUNITY PROJECT

PROJECT NAME:	Aviano Farms		FILE NUMBER: PD-14-01
SITE ADDRESS:	Hillcrest Avenue and Prewett Ranch Drive	APN: 057-030-050 and	
	Antioch, CA	057-050-014	
APPLICANT:	Aviano Farms, LLC 1500 Willow Pass Court Concord, CA 94520		PHONE: (925) 685-0110
PROPERTY OWNER:	Aviano Farms, LLC	Prev. Cert SCH #:	. EIRs: 2006072027

BACKGROUND:

An EIR was previously completed for the Aviano Farms Project in 2008. The current project site was previously entitled by the City of Antioch in 2009 for the development of a 533-unit active adult community, called the Aviano Adult Community Project. An EIR was prepared in 2008 and certified as part of the project approvals. The current project applicant, Aviano Farms LLC, is proposing a similar development for 533 single-family market rate homes, removing the "age restriction" component of the previous project.

PROJECT DESCRIPTION:

The current project is a residential development on approximately 184 acres. The project is comprised of 533 single family units (including local streets) on 107 acres; 16.9 acres of park, including basins; 15 acres of private park (11.4 exclusive of basins); 12 acres of master roads (including Hillcrest Avenue, Sand Creek Road, Dozier-Libby Road and master entry roads); 3 acres of master road frontage landscaping; 10 acres of landscape/basins/Sand Creek regional trail south of Sand Creek Road; and 35 acres of open space south of Sand Creek Road. The current project would also construct roadway and utility improvements that would serve the Antioch Unified School District (AUSD) Dozier/Libbey Medical High School (Medical High School) adjacent to the southwest corner of the site (Hillcrest Avenue, Sand Creek Road and Dozier-Libby Road). See Figure 1 for the tentative subdivision map.

The current project would construct off-site improvements, including a portion of the Royal Formosa/Chen property located west of the project site (construction for the entrance to AUSD site) and portions of the Ginocchio property located east of the project site (construction for the main sewer trunk line and a portion of Hillcrest Avenue). The adjacent properties are primarily flat and consist of grazing and agricultural lands.

The proposed project would be built in phases. A preliminary phasing plan is shown in Figure 2.

Project Entitlements:

Requested project entitlements include the following:

- Amendment to the General Plan for purposes of amending the Sand Creek Focus Area text to allow small-lot single family residential uses on-site;
- Rezone to modify the current Planned Development zone standard;
- Vesting Tentative Map (VTM), Final Development Plan (FDP), and Use Permit (UP);
- Approval of a new Development Agreement, including, among other items, provisions for financing police services.

Figure 1 Current (2015) Tentative Subdivision Map





Figure 2 Preliminary Phasing Plan

ENVIRONMENTAL SETTING:

The 184-acre project site is comprised of two parcels, collectively known as the "Williamson" property. The site is generally rectangular; however the western, southwestern, and southern borders curve inward and are irregularly shaped. The site's northern terrain is generally flat and the existing topography falls from west to east at approximately one percent slope with elevations ranging from 171 to 200 feet above mean sea level. The unchannelized Sand Creek, a tributary of Marsh Creek, flows in a northeastern direction across the southern portion of the site. A north-south drainage channel flows along the eastern boundary of the project site, emptying into Sand Creek. A north facing hill slope is located in the southernmost portion of the site, south of Sand Creek. The hill slopes upwards to an elevation of about 328 feet above mean sea level at the southern property boundary. The project site is primarily covered with non-native vegetation and is currently used for cattle grazing.

The project site is located in a mostly undeveloped area but is entitled for 533 active adult units. The site is surrounded by a mixture of uses including existing single-family residential uses and a community park to the north; the AUSD Dozier/Libbey Medical High School, Kaiser Hospital medical facilities, and undeveloped land planned for future residential, mixed use, and commercial development to the west; undeveloped land planned for future business park uses to the east but currently under review for a residential tentative map project entitled Vineyards at Sand Creek; and undeveloped grazing land and the Contra Costa County Flood Control and Water Conservation District (CCCFCD) detention basin to the south (planned for a future Sports Complex).

DETERMINATION: CEQA allows the preparation of an addendum to a previously certified EIR if some changes or additions are made to the previous EIR and no conditions are present that would require the preparation of a subsequent EIR (*PRC Section 21166, CEQA Guidelines Sections 15162, 15164*). As explained throughout this Addendum, and summarized below, no such conditions are present.

ADDITIONAL / NO ADDITIONAL IMPACT FINDING:

A. Statement of Findings

- 1. Substantial changes are not proposed to the project that would require major revisions to the 2008 EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of a previously identified effect.
- 2. Substantial changes have not occurred with respect to the circumstances under which the project is undertaken requiring major revisions to the 2008 EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of a previously identified effect.
- 3. There is no new information of substantial importance which was not known and could not have been known at the time the 2008 EIR was certified showing any of the following:
 - a. The project will have a new significant effect not previously discussed in the 2008 EIR.
 - b. The project will not cause any significant effect examined in the 2008 EIR to be substantially more severe.
 - c. The mitigation measures in the 2008 EIR and adopted in the CEQA Findings for the 2008 Aviano Adult Community Project remain feasible but some have been modified to reflect the proposed project. All mitigation measures identified in this Addendum and required for the proposed project as identified in the 2008 EIR that are necessary to reduce the potentially significant impacts to a level of insignificance will be made a requirement of the project and are acceptable by the project proponent.

B. Evidence Supporting Findings

The proposed project is generally the same as the 2008 Aviano Adult Community Project, except the age restriction component is proposed to be removed. The proposed project includes the same number of units and general layout as the 2008 Aviano Adult Community Project.

An updated Noise Analysis was prepared as part of this Addendum to evaluate the changes in the ambient noise levels in the vicinity of the project area since 2008 and the traffic noise level effects resulting from a non-age restricted project. As explained in Section D, Noise, of the Addendum, the proposed project will not cause any new significant noise impacts or increase the severity of the noise impacts already evaluated in the 2008 EIR. Conversely, as noted on page 30 of the Addendum, the new noise measurements have determined that sound walls along Hillcrest Avenue and Sand Creek Road of 6 feet as opposed to 8 feet that was required of the 2008 Aviano Adult Community Project are adequate to allow the noise levels to remain at acceptable levels.

A traffic report was prepared to evaluate what changes might occur in traffic generated by a non-age restricted project, and to take into consideration the changes in land use projections in the area and the traffic improvements that have occurred since 2008 or will occur before the project is built out. As explained in Section B. Traffic, the proposed project, along with the updated land use forecasts (including the reduction in units once planned on Roddy Ranch) and the new traffic improvements (additional widening of Highway 4), will continue to have a less-than-significant impact on traffic with the same measures in the 2008 EIR.

Section C, Air Quality, and Section M, Global Climate Change, utilized the BAAQMD CEQA thresholds for significance which include thresholds for greenhouse gas emissions (GHG) which were not available for the 2008 Aviano Adult Community Project . An updated GHG analysis was also prepared in July 2014. That analysis confirmed, that even with these stricter thresholds, the proposed project will result in a less than significant impact on air quality and less than significant impact relating to the incremental contribution the project may have on global climate change.

All potential impacts that were known or could have been known were adequately analyzed in the 2008 EIR (i.e., land use, traffic/circulation, air quality, noise, cultural resources, geology, soil and seismicity, hydrology and storm drainage, public health and safety, biological resources, public services, utilities and infrastructure, visual resources, agricultural and mineral resources, and global climate change). It is important to note that potential impacts related to greenhouse gases is not "new information" as defined by CEQA. As explained in a series of cases, and mostly recent in Concerned Dublin Citizens v. City of Dublin (2013) 214 Cal. App. 4th 1301 greenhouse gases were known as potential environmental issues before 1994 and thus do not qualify as "new information." However to provide full disclosure and a conservative analysis, a greenhouse gase analysis was prepared and concluded that potential project impacts relating to global climate change are less than significant. (Also see, Citizens of Responsible Equitable Development v. City of San Diego (2011) 196 Cal.App.4th 515).

As summarized above and explained throughout this Addendum, this Addendum is appropriate for the proposed project since 1) substantial changes are not proposed in the project which will require major revisions to the 2008 EIR, 2) there are no substantial changes with respect to the circumstances under which the project is being undertaken that would require major revisions to the 2008 EIR, and 3) there is no new information which was not known or could not have been known at the time the 2008 EIR was certified.

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All referenced documentation is available for Public Review at:

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ENVIRONMENTAL IMPACT COMPARISON

The purpose of the comparison is to evaluate the categories in terms of any "changes" or "new information" that may result in a changed environmental impact evaluation. A "no" answer does not necessarily mean that there are no potential impacts relative to the environmental category, but that there is no relevant change in the condition or status of the impact due to its insignificance or its treatment in a previous environmental document.

Overriding considerations were adopted with the certification of the 2008 Aviano Adult Community Project EIR that accepted the possibility of certain impacts regardless of whether mitigations could reduce them to a less-than-significant level. Thus, certain environmental categories might be answered with a "no" in the checklist because the current project does not introduce changes that would result in a modification to the conclusion of the 2008 EIR Findings Document.

Explanation of Impact Evaluation Categories

<u>2008 EIR Conclusion</u>: This column provides the conclusion reached by the 2008 EIR as well as a reference to the page(s) of the 2008 EIR where information and analysis may be found relative to the environmental issue listed under each topic (found in parenthesis).

<u>Do Proposed Changes Involve New or More Severe Impacts?</u>: Pursuant to Section 15162(a)(1) of the CEQA Guidelines, this column indicates whether the changes represented by the current project will result in new impacts that have not already been considered and mitigated by other EIRs or that substantially increase the severity of a previously identified impact. If a "yes" answer is given and more severe impacts are specified, additional mitigations will be specified in the discussion section including a statement of impact status after mitigation.

<u>Any New Circumstances Involving New or More Severe Impacts?</u>: Pursuant to Section 15162(a)(2) of the CEQA Guidelines, this column indicates whether there have been changes to the project site or the vicinity (environmental setting) that have occurred subsequent to the certification of an EIR, which would result in the current project having significant impacts that were not considered or mitigated by that EIR or which substantially increase the severity of a previously identified impact.

Any New Information Requiring New Analysis or Verification?: Pursuant to Section 15162(a)(3) of the CEQA Guidelines, this column indicates whether new information is available requiring an update to the analysis of a previous EIR to verify that the environmental conclusions and mitigations remain valid. This also applies to any new regulations that might change the nature of analysis or the specifications of a mitigation measure. If additional analysis is conducted as part of this environmental impact comparison and the environmental conclusion remains the same, no new or additional mitigation is necessary. If the analysis indicates that a mitigation requires supplemental specifications, no additional environmental documentation is needed if it is found that the modified mitigation achieves a reduction in impact to the same level as originally intended.

<u>Discussion</u>: A discussion of the elements of the impact is provided for each impact statement in order to clarify the answers. The discussion provides information about the particular environmental issue, how the project relates to the issue, and the status of any mitigation that may be required or that has already been implemented.

Mitigation Sections

<u>2008 EIR Mitigation Measures:</u> Applicable mitigation measures from the 2008 EIR that apply to the changes or new information are referenced under each environmental category. The 2008 mitigation measures include a statement of impact status after mitigation (found in parenthesis).

<u>Special Mitigation Measures:</u> If changes or new information involve new or more severe impacts, special mitigations will be listed which will be included as project conditions to address those impacts.

Environmental Impact Comparison

The following environmental factors were considered in determining if potential impacts from the current project would be *potentially greater* when compared to the 2008 Aviano Adult Community Project. It has been determined that the current project would not result in any greater impacts when compared to the 2008 Aviano Adult Community Project.

□ Aesthetics

- ☐ Agriculture and Forest Resources☐ Cultural Resources
- **Biological Resources**
- □ Climate Change
- □ Land Use and Planning
- Population and HousingTransportation &
- Circulation
- Hazards and Hazardous MaterialsMineral Resources
- Public Services
- □ Utilities and Service Systems
- □ Air Quality
- □ Geology, Soils, and Seismicity
- □ Hydrology and Storm Drainage
- □ Noise
- □ Recreation
- □ Mandatory Findings of Significance

Aviano Project Environmental Impacts Comparison						
Impact	2008 EIR Conclusion	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Discussion	
•		-	A. La	nd Use and Plann	ing Policy	
(1) Divide an established community.	LS (p. 80)	No	No	N/A	The physical division of an established community typically refers to the construction of a physical feature (such as interstate highway or railroad tracks) or removal of a means of access (such as a local road or bridge) that would impair mobility within an existing community, or between a community and outlying areas. Similar to the 2008 Aviano Adult Community Project, the current project would result in the development of residential uses on the undeveloped, vacant project site. The residential uses would not divide an established community in the vicinity of the project site. The current project would extend Hillcrest Avenue south to connect with a segment of Sand Creek Road, also to be developed as part of the current project. Sand Creek Road would eventually provide connections to Heidorn Ranch Road to the east, and Deer Valley Road to the west. In addition to providing access to the project site, project roadways would provide access to the planned Sports Complex and Antioch Unified School District (AUSD) Dozier/Libbey Medical High School, which currently is accessible by a paved road extending east from Deer Valley Road. The roadways would also contribute to access from the east to the Kaiser Medical Facility. Therefore, the current project would not divide an established community and would have a <i>less-than-significant</i> impact, similar to the 2008 Aviano Adult Community Project.	
(2) Compatibility with surrounding land uses.	LS (p. 81)	No	No	N/A	Similar to the 2008 Aviano Adult Community Project, the current project would introduce residential uses onto the currently undeveloped project site. The southern portion of the site, south of the proposed segment of Sand Creek Road, would be used for detention basins, passive recreational use as part of the Sand Creek Regional Trail, and as a creek buffer and wildlife habitat area, all of which provide a transition from the more intensive uses to the north to the undeveloped open space areas south of Sand Creek. Similar to the 2008 Aviano Adult Community Project, residential uses developed as part of the current project would be compatible with the existing residential neighborhoods located north of the project site, and planned single-family	

Aviano Project Environmental Impacts Comparison						
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					residential uses to the northwest and adjacent east (Vineyards at Sand Creek Project). Residential uses at the eastern portion of the site would be separated from existing agricultural lands (planned for future business park uses) by the proposed extension of Hillcrest Avenue, sidewalks on both sides of the roadway, and the associated median and roadway landscaping (an approximate total of 80 feet). The proposed roadways would generally be consistent with the development pattern envisioned by the General Plan and would not result in conflicts with existing land uses. Therefore, the current project would generally be compatible with existing and planned land uses within the vicinity and would have a <i>less-than-significant</i> impact on land use compatibility, similar to the 2008 Aviano Adult Community Project.	
(3) Conflict with applicable land use plans.	LS (P. 82)	No	No	Yes (analysis shows that original environmental conclusion of LS remains the same)	Antioch General Plan. Similar to the 2008 Aviano Adult Community Project, the current project would be generally consistent with General Plan land use- related goals, objectives, and policies that envision development on the site. It should be noted that the General Plan contains many policies, which may in some cases address different goals, and thus some policies may compete with each other. Housing within the Sand Creek Focus Area may consist of Single- Family Detached, Small-Lot Single-Family Detached, or Multi-Family Attached housing. Development of the project site with single-family housing would be consistent with the General Plan vision for development in this area of the City. The project site is designated for Low Density Residential, Multiple Family Residential, and Public/Quasi-Public land uses by the General Plan under the Sand Creek Focus Area. The Low Density Residential designation for the 137-acre northern portion of the project site permits a maximum of four dwelling units per gross developable acre (du/ac) on lots ranging from 7,000 to 10,000 square feet (sf). While the density is within the range in the General Plan, an amendment to the text of the General Plan would be required in order to allow small-lot single family residential uses (lots less than 7,000 sq ft) on- site. A portion of the project site, south of Sand Creek Road, is designated Multiple Family Residential and Public/Quasi-Public.	

Aviano Project Environmental Impacts Comparison						
Import	2008 EIR	Do Proposed Changes Involve New or More Severe Imposts?	Any New Circumstances Involving New Significant Impacts or Substantially More	Any New Information Requiring New Analysis or Varification?	Discussion	
Impuer	Concrusion	mpuetor			allows 20 du/ac, and the southernmost approximately 36 acres of the site are	
					designated Hillside Estate, Executive Residential or Open Space, which allows one to two du/ac. Under the current project, the entire area south of the Sand Creek Road extension would be used for Open Space uses consistent with the proposal for the 2008 Aviano Adult Community Project. More specifically, the area immediately north of Sand Creek itself would be used for water quality basins and the area south of the Creek would remain in its current, open conditions. In total, approximately 802 residential units could be built on the project site under the existing land use designations, at a development density of 4.2 du/acre. Development of approximately 93 acres of the 189-acre project site with up to 533 single-family residential units, at an average density of approximately 2.8 du/acre, would be consistent with the development intensity envisioned for the project site.	
					Policy 3.5.3.1 of the City's Growth Management Element of the General Plan includes performance standards for police staffing. According to the standard, the City strives to maintain a force level within a range of 1.2 to 1.5 officers, including community service officers assigned to community policing and prisoner custody details, per 1,000 population. However, the current Antioch Police Department (PD) staffing ratio is approximately 1.0, which is	
					unacceptable. Although the staffing for the Antioch PD is unacceptable, staffing is not identified as a physical environmental impact. The need to build additional law enforcement facilities, which could cause further environmental impacts, is considered a physical environmental impact. The Antioch PD has a state of the art 67.000-square foot police facility located at	
					300 "L" Street, near the Marina. The police facility features an indoor firing range, weight training and exercise room, spacious locker rooms and a computer aided dispatch system and a new law enforcement facility is not needed to serve the needs of the proposed project's residents. Although the	
					project would add population to the Antioch PD service area and the current staffing ratio is unacceptable, the proposed Development Agreement includes a special tax or other financing mechanism to fund additional officers needed	

Aviano Project Environmental Impacts Comparison						
Impact	2008 EIR Conclusion	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Discussion	
					In addition, in November 2014, the City of Antioch residents passed Measure O, which became effective in December 2014. Measure O updates the existing business license tax ordinance and requires residential landlords to pay a per unit, per year tax for single-family dwelling units of \$250.00 and \$150.00 for multi-family rental units. The intent of Measure O is to provide General Fund revenue, which primarily funds the Antioch PD. Measure O is anticipated to increase funding for the Antioch PD for the purpose of expanding law enforcement facilities and hiring additional sworn officers. Due to the recently voter approved Measure O and the Development Agreement financing mechanism, the Antioch PD is anticipated to continue to serve the project site and provide law enforcement services to the new residents upon project buildout.	
2008 EIR Mitigation M	Measures: None	e required.			Aviano Adult Community Project rezone from the Study district (S) to the Planned Development (PD) zoning district. The current project proposes to amend the PD district with respect to lot coverage and setbacks. <i>Conclusion.</i> The recently approved Measure O and the proposed Development Agreement financing mechanism would ensure that the current project would have a <i>less-than-significant</i> impact related to compatibility with the performance standards for police services identified in the Antioch General Plan and the Antioch Zoning Code, similar to the 2008 Aviano Adult Community Project.	

Special Mitigation Measures: None required.

Aviano Project Environmental Impacts Comparison						
Impact	2008 EIR Conclusion	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Discussion	
		k	B. Tra	insportation and C	Circulation	
The current project involves a change from age-restricted to non-age restricted. In addition, the current project has an identical site plan as the 2008 Aviano Adult Community Project. Due to the amount of time that has passed since the 2008 EIR was completed, the City has decided to complete a new Traffic Impact Study (TIS). It should be noted that the Contra Costa Transportation Authority (CCTA) model has been updated since the completion of the 2008 EIR. As such, some of the intersections included in the TIS are different than those analyzed in the 2008 TIS. In addition, due to the amount of time that has passed since the 2008 EIR was completed, the development conditions have slightly changed. The 2008 Near-Term (2011) condition will be referred to below as the Near-Term (2015) condition and the 2008 EIR Cumulative (2025) condition will be referred to as the Long-Term (2030) condition						
(1) Near-Term Condition (2011) Plus Project intersection level of service impacts.	LS (p. 125)	No	No	Yes (see discussion above)	All study intersections function with acceptable standards in the Near-Term (2015) Plus Project condition, with the exception of the Sand Creek Road and Kaiser Way intersection. The aforementioned intersection operates at Level of Service (LOS) F in the AM peak hour in the Near-Term No Project condition. The Sand Creek Road and Kaiser Way intersection would operate below acceptable standards regardless of the current project. Although the intersection operates at LOS F without the project, the delay decreased with the addition of project trips and redistribution of school trips. Therefore, the current project would have a <i>less-than-significant</i> impact related to intersection LOS in the Near Term Plus Project condition, similar to the 2008 Aviano Adult Community Project.	
(2) Cumulative (2025) Plus Project intersection level of service impacts.	LS (p. 125)	No	No	Yes (see discussion above)	All study intersections would function with acceptable standards in the Long-Term (2030) Plus Project condition. Therefore, the current project would have a <i>less-than-significant</i> impact related to intersection LOS in the Long-Term (2030) Plus Project condition, similar to the 2008 Aviano Adult Community Project.	
(3) The Hillcrest Avenue/Lone Tree Way intersection would operate	LSM (p. 127)	No	No	Yes (see discussion above)	All study intersections would function with acceptable standards in the Long-Term (2030) and Long-Term (2030) Plus Project conditions. Therefore, the current project would have a <i>less-than-significant</i> impact related to LOS for the Hillcrest Avenue and Lone Tree Way intersection in the Long-Term (2030) and Long-Term (2030) Plus Project conditions.	

	Aviano Project Environmental Impacts Comparison					
Impact	2008 EIR Conclusion	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Discussion	
below an acceptable level of service in 2025 independent of the current project. The addition of project traffic in the Cumulative (2025) Plus Project condition would exacerbate the unacceptable operation of this intersection.						
(4) The SB SR-4 Bypass/Lone Tree Way intersection would operate below an acceptable level of service in 2025 regardless of the current project. The addition of project traffic in the 20205	LSM (p. 128)	No	No	Yes (see discussion above)	All study intersections would function with acceptable standards in the Long-Term (2030) and Long-Term (2030) Plus Project conditions. Therefore, the current project would have a <i>less-than-significant</i> impact related to operation of the SB SR 4/Lone Tree Way intersection in the Long-Term (2030) and Long-Term (2030) Plus Project conditions.	

Aviano Project Environmental Impacts Comparison						
Impact	2008 EIR Conclusion	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Discussion	
plus project condition would further exacerbate the poor operation of this intersection.						
(5) The Hillcrest Avenue/Lone Tree Way intersection would have a northbound left turn queue that would spill out of the turn pocket in the Near-Term regardless of the current project. The addition of the project traffic would increase the queue by less than three vehicles.	LSM (p. 129)	No	No	Yes (see discussion above)	In the Near-Term Plus Project condition, the Lone Tree Way and Hillcrest Avenue intersection would have a westbound left turn queue of 559 feet, which extends beyond the 260 foot turn pocket by 290 feet during the PM peak hour. Without the project, the 150 foot queue would be fully contained in the 260 foot turn pocket in the PM peak. The project would create the entire 290 feet of the total queue exceeding the turn pocket in the PM peak; this would create at least one car length of the total queue exceeding the turn pocket, and the queue spilling out of the turn pocket is greater than one car in the PM peak hour. The City has improvements planned at this intersection which include the restriping of one of the westbound through lanes to be a left turn lane. This restriping would result in two westbound left turn lanes at the intersection. The improvement is anticipated to be completed by 2017, as part of a City overlay and restriping project before the proposed project would have an impact on this intersection. The improvement would reduce the queue to be contained in the left turn lane and, therefore, the impact would be <i>less than significant</i> .	
(6) The Hillcrest Avenue/Lone Tree Way intersection would have	LSM (p. 129)	No	No	Yes (see discussion above)	In the Long Term (2030) Plus Project condition, the Lone Tree Way and Hillcrest Avenue intersection would have a westbound left turn queue of 359 feet, which extends beyond the 260 foot turn pocket by 99 feet during the PM peak hour. Without the project, the 150 foot queue would be fully contained in the 260 foot turn pocket in the PM peak hour. The current project would	

Aviano Project Environmental Impacts Comparison						
	2008 EIR	Do Proposed Changes Involve New or More Severe	Any New Circumstances Involving New Significant Impacts or Substantially More	Any New Information Requiring New Analysis or		
Impact	Conclusion	Impacts?	Severe Impacts?	Verification?	Discussion	
westbound left and northbound left turn queues that would spill out of the turn pockets in 2025 regardless of the current project. The addition of project traffic would increase the westbound left turn queue by less than two vehicles and the northbound left turn queue by less than three vehicles.					create the entire 99 feet of the total queue exceeding the turn pocket in the PM peak hour. As noted above, the City has planned improvements at the Lone Tree Way and Hillcrest Avenue intersection. The City will restripe one of the westbound through lanes to be a left turn lane. This improvement would result in two westbound left turn lanes at the intersection. The improvement is anticipated to be completed by 2017, before the proposed project would have an impact on this intersection. The improvement would reduce the queue to be contained in the left turn lane and, therefore, the impact would be <i>less than significant</i> .	
(7) Alteration of the delay index for any of the routes of regional significance under any of the scenarios.	LS (p. 129)	No	No	Yes (see discussion above)	The delay index (DI) is defined as the ratio between the peak congested travel time and the uncongested travel time along a roadway segment. Based on the Contra Costa Transportation Authority (CCTA) established criteria, Lone Tree Way, Hillcrest Avenue (north of Lone Tree Way), and Deer Valley Road are considered routes of regional significance within the current project area and would be subject to delay index analysis. In the Long-Term (2030) condition, Sand Creek Road will be extended from State Route (SR) 4 to Deer Valley Road and will become a route of regional significance. CCTA criteria do not have a threshold for DI and, therefore, the DI is used for comparison purposes only. Based on the analysis, all routes of regional significance will operate at a delay index of 2.3 or better. Therefore, the current project would have a <i>less-than-significant</i> impact related to the delay	

Aviano Project Environmental Impacts Comparison							
	2008 EIR	Do Proposed Changes Involve New or More Severe	Any New Circumstances Involving New Significant Impacts or Substantially More	Any New Information Requiring New Analysis or			
Impact	Conclusion	Impacts?	Severe Impacts?	Verification?	Discussion		
					index for the routes of regional significance, similar to the 2008 Aviano Adult Community Project.		
(8) Construction traffic.	LS (p. 130)	No	No	Yes (see discussion above)	Similar to the 2008 Aviano Adult Community Project, the day-to-day construction operations for the construction of the current project would include traffic impacts related to construction employees, site grading, construction material importation, and more. However, because construction activities generate significantly less traffic than the project would and because construction-related trips would occur partly outside of the peak hours, construction would not create additional impacts beyond those already identified in the 2008 EIR. Therefore, a <i>less-than-significant</i> impact would occur, similar to the 2008 Aviano Adult Community Project.		
(9) Transit operations.	LS (p. 130)	No	No	Yes (see discussion above)	 The City of Antioch General Plan has several policies established to help maximize the amount of transit usage that occurs within the City. The relevant policies include: Preserve options for future transit use when designing roadway and highway improvements. Include Tri-Delta Transit in the review of new development projects and require new developments to provide transit improvements in proportion to traffic demands created by the project. Transit improvements may include direct and paved access to transit stops, provision of bus turnout areas and bus shelters, and roadway geometric designs to accommodate bus traffic. Similar to the 2008 Aviano Adult Community Project, Routes 384 and 388 on the Tri Delta Transit System would be the closest routes available to persons traveling to and from the project neighborhood. The closest bus stop to the project is located at Kaiser Hospital. According to the 2000 U.S. Census, only 4.3 percent of Antioch residents use transit to travel to work. The percentage typically represents the highest level of transit ridership during the day. If five percent of the current project residents were assumed to use transit during the peak hours of the day, approximately eight passengers in the weekday AM 		

Aviano Project Environmental Impacts Comparison						
Impact	2008 EIR Conclusion	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Discussion	
					 peak and nine in the weekday PM peak would make use of these buses, similar to the 2008 Aviano Adult Community Project. Data was not readily available for peak hour ridership levels on the Tri Delta Transit System, but during the morning and evening periods, the two routes operate every 30 to 60 minutes and observations indicate that sufficient capacity exists on the buses to accommodate the potential additional transit demand. Furthermore, dispersion of project-generated riders to the various bus routes would result in a minimal effect on transit capacity. Although transit stops or service adjacent to the project site does not currently exist, the service is anticipated to be extended in the future. Similar to the 2008 Aviano Adult Community Project, the current project would be required to provide bus turn outs on Hillcrest Avenue at the Project East Access intersection and on Sand Creek Road at the South Project Access intersection. The aforementioned improvements are included on the Tentative Map. The bus turn outs are to be located on the far side of each intersection. A bus turn out will also be provided on Sand Creek Road at the High School Access intersection. The addition of the bus stops would place most residents of the proposed development within ¼ mile walking distance of public transit. Based on the foregoing discussion, adequate capacity on existing transit routes would exist to accommodate the small number of project residents projected to use the local transit service in Antioch. The project complies with applicable General Plan policies related to transit stops, which would be eliminated with installation of the bus turnouts on Hillcrest Avenue and Sand Creek Road. The project would have a <i>less-than-significant</i> impact on transit operations, similar to the 2008 Aviano Adult Community Project. 	
(10) Bicycle and pedestrian operations.	LS (p. 131)	No	No	Yes (see discussion above)	Several Class II bike lanes currently exist in the vicinity of the project site on the following roadways: Canada Valley Road, Deer Valley Road, Prewett Ranch Drive, Marita Drive, and Hillcrest Avenue. Sand Creek Road and Heidorn Ranch Road are proposed to be Class II bicycle facilities in the	

			Aviano Project En	vironmental Im	pacts Comparison
	2008 EIR	Do Proposed Changes Involve New or More Severe	Any New Circumstances Involving New Significant Impacts or Substantially More	Any New Information Requiring New Analysis or	
Impact	Conclusion	Impacts?	Severe Impacts?	Verification?	Discussion
					future. The Mokelumne Trail (a Class I facility – i.e., completely separate from traffic travel lanes) runs parallel to Lone Tree Way. An inventory of pedestrian facilities at the project study intersections indicates that continuous sidewalk facilities exist at all existing project study intersections and that sidewalk facilities will be included when Hillcrest is extended south to Sand Creek and Sand Creek Road is extended from Deer Valley Road to the SR-4 Bypass/Sand Creek Road interchange. Similar to the 2008 Aviano Adult Community Project, sidewalks would be included on all streets within the project. In addition, the project would construct a segment of the Sand Creek regional trail along the Sand Creek buffer area, south of Sand Creek Road. The 12-foot wide paved pathway would provide pedestrian and bike access from the proposed residential neighborhood to the planned Sports Complex south of the site.
					residents would be able to conveniently walk to nearby destinations or access transit services. Pedestrian crosswalks are present on approaches at signalized intersections near the project site. Based on the foregoing discussion, the site is well connected to multiple existing bicycle and pedestrian facilities and capacity deficiencies are not anticipated for either of these systems within the project vicinity. Similar to the 2008 Aviano Adult Community Project, the current project complies with applicable General Plan policies related to bicycle and pedestrian access. Therefore, the current project would have a <i>less-than-significant</i> impact on bicycle and pedestrian operations, similar to the 2008 Aviano Adult Community Project.
(11) At locations where the greenway path crosses the current project's	LSM (p. 134)	No	No	No	Although the updated TIS did not analyze impacts related to collisions specifically, the current project has a similar site plan as the 2008 Aviano Adult Community Project. As such, any potential for collision due to drivers not anticipating pedestrians and bicyclists crossing at greenway paths would be identical to the 2008 Aviano Adult Community Project. Therefore, Mitigation Measure TRANS-5 remains adequate in order to ensure that

			Aviano Project En	vironmental Im	pacts Comparison
	2008 EIR	Do Proposed Changes Involve New or More Severe	Any New Circumstances Involving New Significant Impacts or Substantially More	Any New Information Requiring New Analysis or	
Impact	Conclusion	Impacts?	Severe Impacts?	Verification?	Discussion
internal streets, there is increased potential for collision due to drivers not anticipating pedestrians and bicyclists crossing at those locations.					impacts related to potential collisions at greenway path crosses are <i>less than</i> significant.
(12) At locations where the greenway path abuts some cul- de-sacs and internal loop roads, residents are not able to directly access the greenway path and must take a circuitous route.	LSM (p. 134)	No	No	No	Although the updated TIS did not analyze impacts related to access to the greenway path specifically, the current project has a similar site plan as the 2008 Aviano Adult Community Project. As such, any potential impacts to site access for residents due to cul-de-sacs and internal loop roads would be identical to the 2008 Aviano Adult Community Project. Therefore, Mitigation Measure TRANS-6 remains adequate in order to ensure that impacts related to potential collisions at greenway path crosses are <i>less than significant</i> .

2008 EIR Mitigation Measures applicable to the proposed project:

<u>TRANS-5</u>: Lighted crosswalks and flashing traffic signs are recommended to increase driver awareness of the crossing, slow traffic and thereby increase safety. The current project should be responsible for all of the mitigation costs associated with this measure. Adding the raised crosswalks and signage would reduce the impact to a less-than-significant level. (LTS)

<u>TRANS-6</u>: Direct access from the cul-de-sacs and loop streets should be provided to the path in harmony with the general plan policy to remove barriers for safe and convenient movement of pedestrians. The current project should be responsible for all of the mitigation costs associated with this measure. Adding additional access points to the greenway reduces the impact to a less-than-significant level. (LTS)

			Aviano Project En	vironmental Im	pacts Comparison
Impact	2008 EIR Conclusion	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Discussion
Special Mitigation Me	easures: None r	equired.			
				C. Air Quali	ity
(1) Clean Air Plan (CAP) consistency.	LS (p. 145)	No	No	No	The Bay Area Air Quality Management District (BAAQMD) has prepared the 2005 Ozone Strategy for the San Francisco Bay Area as a roadmap to show how the region will continue to make progress toward meeting the State 1-hour ozone standard as expeditiously as practicable, and how the region will reduce transport of ozone and ozone precursors to neighboring areas. Similar to the 2008 Aviano Adult Community Project, the current project would locate new residential development on a parcel designated for residential use. The current project would be generally consistent with General Plan land use-related goals, objectives, and policies that envision development on the site. In this way, the current project is consistent with growth anticipated under the City's General Plan and falls within the population projections prepared by the Association of Bay Area Governments (ABAG). As a result, the project would not conflict with the Bay Area 2005 Ozone Strategy or create a cumulative air quality impact. The current project involves a change from age-restricted to non-age restricted and therefore the changes would not create new or more severe impacts related to CAP consistency. Therefore, a <i>less-than-significant</i> impact would occur, similar to the 2008 Aviano Adult Community Project.
(2) Odor emissions.	LS (p. 145)	No	No	No	Similar to the 2008 Aviano Adult Community Project, heavy-duty equipment in the project area during construction would emit odors. However, the construction activity would be short-term and would cease to occur after individual construction is completed. Other sources of objectionable odors have not been identified for the current project. The current project involves a change from age-restricted to non-age restricted and, therefore, the changes would not create new or more severe impacts related to odorous emissions. Therefore, a <i>less-than-significant</i> impact would occur, similar to the 2008 Aviano Adult Community Project.

			Aviano Project En	vironmental Im	pacts Comparison
Import	2008 EIR	Do Proposed Changes Involve New or More Severe Importe?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Varification?	Discussion
(3) Toxic Air	LS	No	No	No	Similar to the 2008 Aviano Adult Community Project, implementation of the
Contaminants.	(p. 146)				current project would not result in any new sources of Toxic Air Contaminants, and the project land uses would not be located near any existing major sources of Toxic Air Contaminants. The project would not have the potential to expose sensitive receptors or the general public to substantial levels of Toxic Air Contaminants. The current project involves a change from age-restricted to non-age restricted and therefore the changes would not create new or more severe impacts related to Toxic Air Contaminants. Therefore, a <i>less-than-significant</i> impact would result, similar to the 2008 Aviano Adult Community Project.
(4) Operational emissions – CO analysis.	LS (p. 146)	No	No	No	The CO analysis performed for the study intersections in the 2008 EIR was completed for the 14 intersections in the project study area. The estimated CO concentrations for the 14 intersections were compared to the State CO standard (20 parts per million [ppm] for one-hour CO levels) and the federal CO standard (9 ppm for eight-hour CO levels). The 2008 EIR determined that all of the 14 intersections would be below the State and federal standards for all intersections in the near-term plus project condition. The CO concentrations at all of the 14 intersections were determined to be well below the State and federal CO thresholds and the additional traffic resulting from the current project would not substantially increase the CO emissions at the intersections. According to the 2008 EIR, the one-hour CO levels range from 3.5 ppm to 4.8 ppm, which are much lower than the State standard of 20 ppm. The eight-hour CO levels would range from 1.9 ppm to 2.8 ppm, which are much lower than the State standard of 9 ppm. Although the current project would result in greater project would not be expected to result in substantial levels of localized CO at surrounding intersections or generate localized concentrations of CO that would exceed State or federal standards. Therefore, a <i>less-than-significant</i> impact would result, similar to the 2008 Aviano Adult Community Project.
(5) Operational	LS	No	No	Yes	Long-term air emission impacts would be those associated with changes in

			Aviano Project En	vironmental Im	pacts Comparison
Impact	2008 EIR Conclusion	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Discussion
emissions – regional emissions.	(p. 146)			(analysis shows that original environmental conclusion of LS remains the same)	usage of the project site. Mobile source emissions would result from vehicle trips associated with the current project. The current project's emissions were quantified using the California Emissions Estimator Model (CalEEMod) software version 2013.2.2. ¹ Results of the CalEEMod modeling are expressed in lbs/day for construction and operational emissions, and in tons/yr for cumulative emissions, which allows for comparison between the model results and the BAAQMD significance thresholds. ²
					The daily emissions increase associated with 2008 Aviano Adult Community Project and the current project's operational vehicular trip generation are identified in Table 1 for reactive organic gases (ROG) and nitrogen oxides (NO _x) (two precursors of ozone) as well as coarse particulate matter (PM ₁₀) and fine particulate matter (PM _{2.5}). Table 1 Unmitigated Project Operational Emissions

¹ CalEEMod is a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify air quality emissions, including GHG emissions, from land use projects. The model applies inherent default values for various land uses, including construction data, trip generation rates based on the Institute of Transportation Engineers (ITE) Manual, vehicle mix, trip length, average speed, etc. However, where project- or site-specific data was available, such data was input into the model (e.g., construction phases and timing).

² The BAAQMD was challenged in Alameda County Superior Court, and was ordered to set aside the thresholds and conduct CEQA review of the proposed thresholds. On August 13, 2013, the First District Court of Appeal reversed the trial court's decision striking down BAAQMD's CEQA thresholds of significance for GHG emissions. The Court of Appeal's held that CEQA does not require BAAQMD to prepare an EIR before adopting thresholds of significance to assist in the determination of whether air emissions of current projects might be deemed "significant." The Court of Appeal's decision provides the means by which BAAQMD may ultimately reinstate the GHG emissions thresholds, though the court's decision does not become immediately effective. It should be further noted that a petition for review has been filed; however, the court has limited its review to the following issue: Under what circumstances, if any, does CEQA require an analysis of how existing environmental conditions will impact future residents or users (receptors) of a current project. Per CEQA Guidelines Section 15064.7, the City has elected to use the BAAQMD's thresholds and methodology for this project, as they are based on substantial evidence and remain the most up-to-date, scientifically-based method available to evaluate air quality impacts. Thus, the BAAQMD's thresholds of significance are utilized for the following analysis.

	Aviano Project Environmental Impacts Comparison									
Impact	2008 EIR Conclusion	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?				Discussion		
						Pollutant	2008 Project Emissions (lbs/day)	2014 Project Emissions (lbs/day)	BAAQMD Significance Threshold (lbs/day)	Would 2014 Exceed?
						ROG	60.47	44.51	54.0	No
						NO _X	44.34	42.72	54.0	No
						PM 10	44.12	26.28	82.0	No
						PM _{2.5}		8.44	54.0	No
					L	Source: CalE	EMod, July 2014.			
					Cu th cu pr im Pr	urrent projection presholds of project. There are the the the the the are the the the the the the are the the the the the the the are the the the the the the the the the are the the the the the the the the the th	ct emissions show significance for ct's emissions e efore, the current ional air quality	wn in Table 1 wo ROG, NO_x , PM exceed the emiss nt project would , similar to the 20	uld not exceed th (10, and PM _{2.5} , m sions projected have a <i>less-tha</i> 008 Aviano Adul	ne BAAQMD for would the for the 2008 <i>an-significant</i> It Community
(6) Construction period activities during future development of the project site could generate significant dust, exhaust, and organic emissions.	LSM (p. 150)	No	No	Yes (analysis shows that original environmental conclusion of LSM remains the same)	 Impact on regional air quality, similar to the 2008 Aviano Adult Community Project. Similar to the 2008 Aviano Adult Community Project, the current prevould require excavation of soil from the site to prepare the site development, which has a high potential for creating air pollutants addition to the dust created during site preparation for construct substantial dust emissions could be created as debris and soil are loaded trucks for disposal. Construction activities from vehicles and equip would generate exhaust, fugitive particulate matter, and organic gas emist that would also affect local air quality. Solvents in adhesives, non-water-paints, thinners, and some insulating and caulking materials would evap into the atmosphere that would participate in the photochemical reaction creates urban ozone. Similar to the 2008 Aviano Adult Community Pro asphalt used in paving is also a source of organic gases for a short time its application. Effects of project-related construction activities would increased dust and locally elevated levels of PM₁₀ downwind of construction activity. Construction dust would be generated at levels that would created as the set of the struction activity. 					urrent project the site for pollutants. In construction, re loaded into id equipment gas emissions on-water-base uld evaporate l reaction that unity Project, nort time after ies would be f construction puld create an missions from

			Aviano Project En	vironmental Im	oacts Compa	rison				
Impact	2008 EIR Conclusion	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?]	Discussion			
					construction equipment. Utilizing CalEEMod, the current project's construction-related criteria air pollutant emissions were estimated and are presented in Table 2 below.					
					Table 2 Maximum Mitigated Project Construction Emissions					
						Project Emissions	BAAQMD Significance Threshold			
					Pollutant	(lbs/day)	(lbs/day)	Exceed?		
					ROG NO	48.72	54.0	No		
					\mathbf{PM}_{10}	3 43	82.0	No		
					PM ₂₅	7.18	54.0	No		
					Source: CalEE	Mod, July 2014.		110		
					It should be noted that the BAAQMD requirement regarding architectur coating volatile organic compound (VOC) content limits was used calculate the emissions for the current project. In addition, in accordance wi Mitigation Measure AIR-1 proposed in the 2008 EIR, Tier 2 engines we applied to all off-road equipment used in construction. Furthermore, dies oxidation catalysts were applied to all off-road equipment with an assum reduction of 20 percent. ³ The 2008 Aviano Adult Community Projec construction emissions were not quantified in the 2008 EIR given the the current BAAQMD guidance for construction emissions; therefore, the 20 construction emissions are not included in Table 2.					

³ Diesel oxidation catalyst (DOC) reduces the emissions of particulate matter (PM), carbon monoxide (CO) and gaseous reactive organic gas (ROG) from diesel engines by catalytic oxidation. The technology is only effective on the soluble organic faction of diesel PM, and therefore the overall reduction that can be achieved by a DOC is limited—the range of reduction is typically between 10 to 30 percent (Khair, 1999).

	Aviano Project Environmental Impacts Comparison									
Impact	2008 EIR Conclusion	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Discussion					
(7) Project's	LS	No	No	No	 PM₁₀, and PM_{2.5} emissions would be below the applicable thresholds of significance. It should be noted that the project is required to comply with all BAAQMD rules and regulations for construction, including implementation of the BAAQMD's recommended Basic Construction Mitigation Measures. The Basic Construction Mitigation Measures include, but are not limited to, watering exposed surfaces, covering all haul truck loads, removing all visible mud or dirt track-out, limiting vehicle speeds on unpaved roads, and minimizing idling time. The current project involves a change from age-restricted to non-age restricted and therefore the changes would not create new or more severe impacts related to air quality. Similar to the 2008 Aviano Adult Community Project, Mitigation Measure AIR-1 remains adequate in order to ensure that impacts related to construction-related emissions are <i>less than significant</i>. The 2008 EIR determined that the Aviano Farms Project would have a less- 					
criteria pollutants and public health.	(p. 151)				than-significant impact related to criteria pollutants and public health because of the overall improvement trend on air quality in the air basin. The project- specific analysis included in the 2008 EIR shows that emissions from the 2008 Aviano Adult Community Project would not worsen regional air quality or increase health risks in the area due to criteria pollutants. As shown in the project specific analysis above, the current project would not contribute significant regional emissions or create localized CO hot spots. Therefore, the current project would not be expected to result in substantial levels of localized CO at surrounding intersections or generate localized concentrations of CO that would exceed standards. Furthermore, because the current project would not exceed the applicable threshold of significance for construction-related emissions, the project could not violate construction- related air quality standards or contribute to the area's nonattainment status of ozone. The current project involves a change from age-restricted to non-age restricted and therefore the changes would not create new or more severe impacts related to criteria pollutants and air quality. Overall, the current					

	Aviano Project Environmental Impacts Comparison									
			Any New							
		Do Proposed	Circumstances							
		Changes	Involving New	Any New						
		Involve New	Significant Impacts	Information						
		or More	or Substantially	Requiring New						
	2008 EIR	Severe	More	Analysis or						
Impact	Conclusion	Impacts?	Severe Impacts?	Verification?	Discussion					
					project would result in a less-than-significant impact related to criteria					
					pollutants and public health, similar to the 2008 Aviano Adult Community					
					Project.					

2008 EIR Mitigation Measures:

<u>AIR-1</u>: Consistent with guidance from the BAAQMD, the following controls shall be implemented at all construction sites for the project to control dust production and fugitive dust.

- Water all active construction areas at least twice daily and more often during windy periods; active areas adjacent to existing sensitive land uses shall be kept damp at all times, or shall be treated with non-toxic stabilizers to control dust;
- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least 2 feet of freeboard;
- Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites; Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas at construction sites;
- Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets;
- Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more);
- Enclose, cover, water twice daily or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.);
- Limit traffic speeds on unpaved roads to 15 mph;
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways;
- Replant vegetation in disturbed areas as quickly as possible;
- On-site idling of construction equipment shall be minimized as much as feasible (no more than 5 minutes maximum);
- All construction equipment shall be properly tuned and fitted with manufacturer's standard level exhaust controls;
- Contractors shall consider using alternative powered construction equipment (i.e., hybrid, compressed natural gas, biodiesel, electric) when feasible;
- Contractors shall use add-on control devices such as diesel oxidation catalysts or particulate filters; and
- All contractors shall use equipment that meets California Air Resources Board's (ARB) most recent certification standard for off-road heavy duty diesel engines. (LTS)

Special Mitigation Measures: None required.

D. Noise

An updated Noise Analysis was prepared by j.c. brennan & associates in 2014 for the currently proposed project. The updated Noise Analysis evaluated changes in ambient noise levels in the vicinity of the project site since 2008, and the traffic noise level effects resulting from a non-age restricted project as compared to the original age-restricted project evaluated in the 2008 EIR.

				Aviano Project En	vironmental Imp	pacts Comparison
	Immost	2008 EIR	Do Proposed Changes Involve New or More Severe	Any New Circumstances Involving New Significant Impacts or Substantially More	Any New Information Requiring New Analysis or	Discussion
(1)	Existing	LS	No	No	No	The Southern Pacific Railroad line passes approximately two miles to the east
	railroad noise impacts.	(p. 160)				of the current project site. Due to the distance and location of the railroad line from the site, the 2008 EIR determined that ambient noise levels on the project site are not significantly affected by railroad operations. The current project involves a change from age-restricted to non-age restricted and therefore the changes would not create new or more severe impacts related to railroad noise. Therefore, a <i>less-than-significant</i> impact would occur, similar to the 2008 Aviano Adult Community Project.
(2)	Existing aircraft noise impacts.	LS (p. 160)	No	No	No	Byron Airport is located approximately nine miles southeast of the project site. Buchanan Field Airport is located approximately 15 miles west of the project site. Rio Vista Municipal Airport is located approximately 18 miles to the north of the project site. Travis Air Force Base is located approximately 22 miles to the northwest of the project site. The current project involves a change from age-restricted to non-age restricted and therefore the changes would not create new or more severe impacts related to aircraft noise. Due to the project site's distance from and the flight path orientation of these airports, the noise effect from aircraft noise sources is <i>less than significant</i> for the project site in terms of 24 hour averaged noise levels such as CNEL or L_{dn} , similar to the 2008 Aviano Adult Community Project.
(3)	Construction period activities could create significant short-term noise impacts on existing residential properties and on buildings that would become occupied within	LSM (p. 160)	No	No	Yes (analysis shows that original environmental conclusion of LSM remains the same)	The 2008 EIR concluded that impacts related to construction activities on existing residential properties would be less than significant with implementation of Mitigation Measures NOISE-1a through 1e. The current project would not generate new or more severe noise impacts associated with construction activities as compared to the 2008 Aviano Adult Community Project. In addition, out of an abundance of caution, j.c. brennan & associates recommends having a disturbance coordinator during project construction. Therefore, Mitigation Measures NOISE-1a through NOISE-1e remain adequate in order to ensure that impacts related to potential construction period noise impacts are <i>less than significant</i> . In addition, the updated Environmental Noise Analysis completed by j.c. brennan & associates suggests further mitigation related to construction noise for the current project. The additional mitigation measure (Mitigation Measure NOISE-1f) is

			Aviano Project En	vironmental Imp	pacts Comp	parison				
Impact	2008 EIR Conclusion	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Discussion					
the project site before completion of the entire project.					provided under the "Special Mitigation Measures" section below.					
(4) Local traffic would generate long-term exterior noise exceeding normally acceptable levels on the project site and could expose site uses to unacceptable noise levels.	LSM (p. 162)	No	No	Yes (analysis shows that original environmental conclusion of LSM remains the same)	Exterior Tra The Federa prediction m Project traff with the pr emission fa consideratio distance to FHWA mod traffic condi the traffic s speeds on th Table 3 sho uses adjace indicates th compliance	al Highway Adr nodel (FHWA RE fic noise levels at roject. The mode ctors for automol n given to veh the receiver, and del was developed itions. Traffic volu study prepared for le local area roadw ows the predicted nt to the major ne property line with an exterior ne	mpacts ministration (FH D-77-108) was use t the proposed re l is based upon biles, medium tru- ticle volume, sp the acoustical cl d to predict hourl umes for existing of or the project. The vays were estimated traffic noise level project-area arte noise barrier l oise level standard Table 3 the Levels at Proposition Outdoor	WA) highward to predict sidential land the Calveno acks, and he eed, roadward haracteristics y L_{eq} values conditions ward cuck percenta and from field als at the pro- rial roadwary heights require l of 60 dB Ch	ay traffic noise Cumulative Plus I uses associated reference noise avy trucks, with y configuration, of the site. The for free-flowing ere obtained from ages and vehicle observations. posed residential ys. Table 3 also tired to achieve NEL.	
					Noise Source	Receptor Description	Outdoor Activity Area (feet ¹)	Average Daily Trips	Predicted Noise Levels (dB CNEL ²)	

			Aviano Project En	vironmental Imp	oacts Comp	parison				
Impact	2008 EIR Conclusion	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?			Discussion			
						Traffic	Noise		No Wall	6-foot Wall
					Hillcrest Avenue	Prewett Ranch Drive to East Entrance	75	7,588	63	58
					Hillcrest Avenue	East Entrance to Sand Creek Road	75	6,400	62	57
					Sand Creek Road	Hillcrest Avenue to South Entrance	75	7,663	63	58
					Sand Creek Road	South Entrance to Future School Access	75	5,938	62	57
					¹ Setback dista residential bac ² The modeled elevations, and <i>Source: j.c. br</i>	ances are measured in kyards. noise barriers assume l building pad elevation ennan & associates, In	feet from the center flat site conditions w are approximately c. 2014	lines of the road where roadway el equivalent.	lways to the	e center of ase of wall
					The modeled noise barriers assume flat site conditions where road elevations, base of wall elevations, and building pad elevations approximately equivalent. The Table 3 data indicate that noise barriers feet in height would be required to reduce exterior noise levels to 60 CNEL or less at the sensitive receptors located closest to Hillcrest Ave and Sand Creek Road. Because grading plans are not currently availa noise barrier height and placement should be reviewed when such plans available.					
					In contrast, in height ale Sand Creek acceptable r	the 2008 EIR noise ong Hillcrest Aver Road, would re- ange of 60 dBA C	e analysis determ nue, and a sound duce traffic nois NEL for new res	ined that a so wall of 8 fe be levels to sidential outd	ound wall et in heig within theory activity	of 8 feet tht along the City's ty areas.

Aviano Project Environmental Impacts Comparison							
L ana A	2008 EIR	Do Proposed Changes Involve New or More Severe	Any New Circumstances Involving New Significant Impacts or Substantially More	Any New Information Requiring New Analysis or	Discussion		
Impact	Conclusion	Impacts:	Severe Impacts?	verification?	Discussion These sound wall heights are measured in feet above the finished roadway		
					These sound wall heights are measured in feet above the finished roadway elevation. As a result, Mitigation Measures NOISE-2a and 2b of the 2008 EIR require modifications to specify that the 2014 Noise Analysis has determined that a 6-foot tall sound wall would be adequate to reduce noise levels experienced at the project residences to a level below the City's exterior noise standard of 60 dB. The modified NOISE-2a and 2b measures have been included in the <i>Special Mitigation Measures</i> section below. In conclusion, with implementation of NOISE-2a and 2b (as modified), the currently proposed project would not result in a new or more severe exterior traffic noise impact than that which was identified in the 2008 EIR. <i>Interior Noise Impacts</i> Modern construction typically provides a 25 dB exterior-to-interior noise level reduction with windows closed. Therefore, sensitive receptors exposed to exterior noise of 70 dB CNEL, or less, will typically comply with the City's 45 dB CNEL interior noise level standard. Additional noise reduction measures, such as acoustically-rated windows are generally required for exterior noise levels exceeding 70 dB CNEL. Based upon the analysis shown in Table 3, the predicted noise levels will not exceed 60 dBA CNEL at the first floor facades, which are either shielded by existing residential buildings on the east, or sound walls along Hillcrest		
					Avenue and Sand Creek Road. Second floor facades along Hillcrest Avenue and Sand Creek Road will be less than 65 dBA CNEL. Therefore, typical interior noise levels are expected to be less than 40 dBA CNEL, and will comply with the interior noise level standard of 45 dBA CNEL. Notwithstanding this, j.c. brennan has recommended a mitigation measure to		
					require mechanical ventilation in all residential uses in order to allow residents to keep doors and windows closed. The additional mitigation		

Aviano Project Environmental Impacts Comparison							
		Do Proposed Changes Involve New	Any New Circumstances Involving New Significant Impacts	Any New Information			
	2008 EID	or More	or Substantially	Requiring New			
. ,	2008 EIK	Severe	More	Analysis or			
Impact	Conclusion	Impacts?	Severe Impacts?	Verification?	Discussion		
					measure (NOISE-2c) is provided under the "Special Mitigation Measures"		
					section below.		
					In conclusion, with implementation of NOISE-2c, the currently proposed		
					project would not result in a new or more severe interior traffic noise impact		
					than that which was identified in the 2008 EIR.		

2008 EIR Mitigation Measures:

<u>NOISE-1a</u>: The construction contractor shall limit all noise producing construction related activities, including haul truck deliveries or warming up and idling of heavy construction equipment, to the hours of 8:00 a.m. to 5:00 p.m. on weekdays. On Saturdays, noise producing construction activities shall be limited to 9:00 a.m. to 5:00 p.m., irrespective of the distance from occupied dwellings. No construction shall be allowed on Sundays and public holidays. All weekend noise producing construction activity is subject to approval by the City Engineer.

<u>NOISE-1b</u>: During all project site excavation and on-site grading, the construction contractor shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers' standards.

NOISE-1c: The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site.

<u>NOISE-1d</u>: The construction contractor shall locate equipment staging in areas that will create the greatest possible distance between construction related noise sources and noise-sensitive receptors nearest the project site during all project construction.

<u>NOISE-1e</u>: The construction contractor shall use temporary noise attenuation fences at least 6 feet in height to protect all sensitive receptors along the northern property line that are not currently protected by a sound wall of at least 6 feet in height. (LTS)

Special Mitigation Measures:

<u>NOISE-1f</u>: Designate a disturbance coordinator and conspicuously post this person's number around the project site and in adjacent public spaces. The disturbance coordinator will receive all public complaints about construction noise disturbances and will be responsible for determining the cause of the complaint, and implement any feasible measures to be taken to alleviate the problem. (LTS)

<u>NOISE-2a</u>: A sound wall barrier at least 6-feet-high (relative to the building pad elevation) shall be constructed along the project property line adjacent to Hillcrest Avenue to reduce traffic noise impacts to a less-than-significant level. The sound wall should be of solid construction without gaps (including at the bottom), and have a minimum surface weight of 4 pounds per square foot.

Aviano Project Environmental Impacts Comparison							
Impact <u>NOISE-2b</u> : A sound w reduce traffic noise im weight of 4 pounds per <u>NOISE-2c</u> : Mechanical	2008 EIR Conclusion vall barrier at le pacts to a less-t square foot. (L'	Do Proposed Changes Involve New or More Severe Impacts? ast 6-feet-high (re han- significant le ΓS)	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts? elative to the building p evel. The sound wall sh Il residential uses to allo	Any New Information Requiring New Analysis or Verification? bad elevation) shall b ould be of solid con	Discussion be constructed along the project property line adjacent to Sand Creek Road to struction without gaps (including at the bottom), and have a minimum surface doors and windows closed, as desired for acoustical isolation. This requirement		
	ing plans prior	to issuance of any	E. Cultura	al and Paleontolog	ical Resources		
(1) Site preparation, grading, and construction activities could adversely impact subsurface historic resources at site CA-CCO-682H.	LSM (p. 174)	No	No	No	According to the 2008 EIR, site CA-CCO-682H is partially located within the off-site Sand Creek Road (east) corridor. The site is described as a historic ranching outpost with five habitation-associated features consisting of an earthen loading ramp, a metal water tank made from an old truck bed, a kidney-shaped depression representing a possible foundation, a circular cistern, and a barbed-wire fence enclosure surrounding a well. Due to the potential for subsurface historic deposits that may produce information important to early development of the area on a local scale, ground disturbing activities could adversely impact site CA-CCO-682H. The current project involves a change from age-restricted to non-age restricted and therefore the changes would not create new or more severe impacts. Therefore, Mitigation Measure CULT-1 remains adequate in order to ensure that impacts related to CA-CCO-682-H are <i>less than significant</i> .		
(2) Site preparation, grading, and construction activities could adversely impact previously undiscovered archaeological resources.	LSM (p. 175)	No	No	No	Due to the proximity of recorded archeological sites, the potential exists for unknown archeological resources to occur on the project site. A review of the Sacred Lands File by the Native American Heritage Commission (November 1, 2006) did not identify any Native American cultural resources within the vicinity of the project area; however, the potential exists for undiscovered Native American resources to occur within the project area. The current project involves a change from age-restricted to non-age restricted and therefore the changes would not create new or more severe impacts realted to archaeological resources. Therefore, Mitigation Measure CULT-2 remains adequate in order to ensure that impacts related to archaeological resources are <i>less than significant</i> .		

Aviano Project Environmental Impacts Comparison							
Impact	2008 EIR Conclusion	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Discussion		
(3) Impacts to previously undiscovered paleontological resources.	LSM (p. 175)	No	No	No	Unique geologic features are not located within the project area. Although six fossil localities are located within four miles of the project area, none were identified within the same geologic setting as the project area. However, the possibility that construction activities could impact paleontological resources within the Pleistocene alluvium still exists. The current project involves a change from age-restricted to non-age restricted and therefore the changes would not create new or more severe impacts related to paleontological resources. Therefore, Mitigation Measure CULT-3 remains adequate in order to ensure that impacts related to paleontological resources are <i>less than significant</i> .		
(4) Disturbance of human remains, including those interred outside of formal cemeteries.	LSM (p. 176)	No	No	No	The potential to uncover Native American human remains exists in locations throughout California. Although not anticipated, human remains may be identified during site-preparation and grading activities, resulting in a significant impact to Native American cultural resources. The current project involves a change from age-restricted to non-age restricted and therefore the changes would not create new or more severe impacts related to human remains. Therefore, Mitigation Measure CULT-4 remains adequate in order to ensure that impacts related to the disturbance of human remains are <i>less than significant</i> .		

2008 EIR Mitigation Measures:

<u>CULT-1</u>: If feasible, the site shall be avoided. If avoidance is not feasible, an Archaeological Research Design and Testing Plan (ARDTP) shall be developed. Once the ARDTP is reviewed and approved by the City of Antioch, and testing is completed, a report shall be prepared detailing the methods and results, and the site shall be evaluated using the California Register of Historic Resources eligibility criteria. The report shall be submitted to the project applicant, the City of Antioch, and the Northwest Information Center (NWIC). If the site appears to be ineligible for the California Register, project construction activity within the area of the site may begin. If the site is found to be potentially eligible, a Cultural Resources Treatment Plan (CRTP) shall be developed to mitigate project effects. Once the program is approved by the City, and the work completed, project construction activities within the site area can begin. A Cultural Resources Treatment Report (CRTR) shall be prepared and submitted to the project applicant and the City for review and comment. Final copies of the CRTR shall be submitted to the project applicant, the City of Antioch, and the NWIC. (LTS)

Aviano Project Environmental Impacts Comparison							
Any New							
		Do Proposed	Circumstances				
		Changes	Involving New	Any New			
		Involve New	Significant Impacts	Information			
		or More	or Substantially	Requiring New			
	2008 EIR	Severe	More	Analysis or			
Impact	Conclusion	Impacts?	Severe Impacts?	Verification?	Discussion		

<u>CULT-2</u>: If deposits of prehistoric or historic archeological materials⁴ are encountered during project activities, all work within 25 feet of the discovery shall be redirected and a qualified archeologist shall be contacted to assess the deposit finds and make recommendations. While deposits of prehistoric or historic archeological materials should be avoided by project activities, if the deposits cannot be avoided, they shall be evaluated for their California Register eligibility. If the deposits are not eligible for the California Register, avoidance is not necessary. If the deposits are eligible for the California Register, they shall be avoided. If avoidance is not feasible, project impacts shall be mitigated in accordance with the recommendations of the evaluating archaeologist and CEQA Guidelines \$15126.4 (b)(3)(C), which requires implementation of a data recovery plan and avoidance of human remains. Upon completion of the archaeologist's assessment, the archaeologist shall prepare a report documenting the methods and results, and provide recommendations for the treatment of the discovered archaeological materials. The report shall be submitted to the project applicant, the City of Antioch, and the Northwest Information Center (NWIC). Once the report is reviewed and approved by the City, and any appropriate resource recovery completed, project construction activity within the area of the find may resume. (LTS)

<u>CULT-3</u>: If paleontological resources⁵ are encountered during site preparation or grading activities, all work within 25 feet of the discovery shall be redirected until a qualified paleontologist has assessed the discoveries and made recommendations. If the paleontological resources are found to be significant, adverse effects to such resources shall be avoided by project activities. If project activities cannot avoid the resources, the adverse effects shall be mitigated. Mitigation shall include data recovery and analysis, preparation of a final report, and the formal transmission or delivery of any fossil material recovered to a paleontological repository, such as the University of California Museum of Paleontology (UCMP). Upon completion of recovery activities, a final report documenting methods and findings of the mitigation shall be prepared and submitted to the project applicant, the City of Antioch, and a suitable paleontological repository. Once the final report is reviewed and approved by the City, project construction activity within the area of the find may resume. (LTS)

<u>CULT-4</u>: If human remains are encountered, work within 25 feet of the discovery shall be redirected and the Contra Costa County Coroner notified immediately. At the same time, an archaeologist shall be contacted to assess the situation and consult with the appropriate agencies. If the human remains are of Native American origin, the Coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods. Upon completion of the assessment, the archaeologist shall prepare a report documenting the methods and results, and provide recommendations for the treatment of the human remains and any associated cultural materials, as appropriate and in coordination with the recommendations of the MLD. The report shall be submitted to the project applicant, the City of Antioch, and the Northwest Information Center. Once the

⁴ Prehistoric materials include flaked-stone tools (e.g. projectile points, knives, choppers) or obsidian, chert, or quartzite toolmaking debris; culturally darkened soil (i.e., midden soil often containing heat affected rock, ash and charcoal, shellfish remains, and cultural materials); and stone milling equipment (e.g., mortars, pestles, handstones). Historical materials can include wood, stone, concrete, or adobe footings, walls and other structural remains; debris-filled wells or privies; and deposits of wood, glass, ceramics, and other refuse.

⁵ Paleontological resources include fossil plants and animals, and evidence of past life such as trace fossils and tracks. Ancient marine sediments may contain invertebrate fossils such as snails, clam and oyster shells, sponges, and protozoa; and vertebrate fossils such as fish, whale, and sea lion bones. Vertebrate land mammals may include bones of mammoth, camel, saber tooth cat, horse, and bison. Paleontological resources may also include plant imprints, petrified wood, and animal tracks.

Aviano Project Environmental Impacts Comparison							
Impact	2008 EIR Conclusion	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Discussion		
report is reviewed and a	approved by the	City, and any app	propriate treatment comp	pleted, project constru	action activity within the area of the find may resume. (LTS)		
Special Mitigation Me	asures: None re	equired.	F <i>G</i>				
			F. Ge	eology, Soils, and S	Seismicity		
(1) Fault rupture at the project site.	LS (p. 189)	No	No	No	Active faults which pose a hazard for surface rupture have not been mapped across the current project and no portion of the current project is located within an Alquist-Priolo Earthquake Fault Zone. The current project involves a change from age-restricted to non-age restricted and therefore the changes would not create new or more severe impacts related to fault rupture. Therefore, a <i>less-than-significant</i> impact would result, similar to the 2008 Aviano Adult Community Project.		
(2) Landslide hazards at the project site.	LS (p. 189)	No	No	No	The U.S. Geological Survey (USGS) maps the hillsides south of Sand Creek as Category 3: "generally to marginally stable" or Category 5: "unstable". The site-specific investigation has mapped a landslide on the northwest face of the hills south of Sand Creek. The area south of Sand Creek is not proposed for development as a part of the current project; however, the Sand Creek Focus Area of the General Plan designates the site for development. If a project is eventually developed south of Sand Creek, the issue of slope stability and determination of the appropriate level of environmental review under CEQA would need to be addressed at that time. Similar to the 2008 Aviano Adult Community Project, the portion of the current project to be developed north of Sand Creek is not subject to landslide hazards. The current project is not located on an unstable geologic unit, which if developed would be subject to, or contribute to, on- or off-site fault rupture, liquefaction, or lateral spreading. The current project involves a change from age-restricted to non-age restricted and therefore the changes would not create new or more severe impacts related to landslide hazards. Therefore, a <i>less-than-significant</i> impact would result, similar to the 2008 Aviano Adult Community Project.		
(3) Loss of known mineral resources.	LS (p. 189)	No	No	No	Implementation of the current project would not result in the loss of known mineral resources; as noted in the 2008 EIR, the project area is classified MRZ-1, "areas where available geologic information indicates that little		
			Aviano Project En	vironmental Im	pacts Comparison		
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Impact	2008 EIR Conclusion	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Discussion likelihood exists for the presence of significant mineral resources." ⁶ USGS mapping does not indicate any present or historical mines at the project site. ⁷		
(4) Seismically- induced ground shaking at the project site could result in injuries, fatalities, and property damage.	LSM (p. 190)	No	No	No	The current project involves a change from age-restricted to non-age restricted and therefore the changes would not create new or more severe impacts related to mineral resources. Therefore, a <i>less-than-significant</i> impact would result, similar to the 2008 Aviano Adult Community Project. The site-specific geotechnical feasibility investigation notes that the site is situated in the vicinity of the Mt. Diablo thrust fault, the Great Valley 5 fault, the Greenville fault, and the Concord-Green Valley fault. Because of the proximity to active faults, the project site, including the off-site areas, will likely be subjected to strong ground shaking from at least one moderate to severe earthquake during the life span of the project. The geotechnical feasibility investigation be prepared that would provide detailed recommendations on specific design and site layout parameters.		
					The adverse impacts of seismically-generated ground shaking on potential development infrastructure, structures, and people can be reduced to acceptable levels by completing the project seismic design and construction in conformance with, or by exceeding, current best standards for earthquake resistant construction per the California Building Code (CBC) as adopted and amended for the City of Antioch Building Code. ⁸ Appropriate grading and design elements prepared by a Certified Engineering Geologist or Geotechnical Engineer would also help reduce the potential impact to areas that have undergone extensive grading and are prone to the secondary effects of ground shaking, such as differential settlement or liquefaction. However, in the event of a major earthquake, some structural damage is likely to occur to some residences/structures and infrastructure. The current project involves a		

 ⁶ California Department of Conservation, 1987. Mineral Land Classification Special Report 146-II, updated with CDMG OFR 96-03, 1996.
 ⁷ U.S. Geological Survey, 2007. *Mineral Resources On-Line Spatial Data*. Website: mrdata.usgs.gov/index.html.
 ⁸ City of Antioch Municipal Code, Title 8: Building Regulations, Chapter 1: Building Code.

	pacts Comparison				
Impact	2008 EIR Conclusion	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Discussion
					change from age-restricted to non-age restricted and therefore the changes would not create new or more severe impacts related to seismically-induced ground shaking as the current project would be required to comply with the CBC. Therefore, Mitigation Measure GEO-1 remains adequate in order to ensure that impacts related to ground shaking are <i>less than significant</i> .
(5) Differential settlement at the project site could result in damage to project buildings and other improvements.	LSM (p. 191)	No	No	No	Grading of the project site, including off-site areas, in preparation for construction of buildings and utilities may result in areas of cut and fill. Fills of different thickness and fills adjacent to cut areas could create the potential for differential settlement. Construction on un-compacted and loose fill, if present, on the site would be subject to varying rates of settlement. If the settlement is not uniform, structural damage could occur. Buried utilities may also experience differential settlement along their alignments. The site-specific geotechnical feasibility investigation for the project site notes that undocumented artificial fill containing concrete rubble was placed along the eastern and northern property lines, and that in general, existing fill not removed by design cut should be over-excavated entirely and replaced with engineered fill. The geotechnical feasibility investigation recommends that a final design-level geotechnical investigation be prepared that would address these issues based on specific design and site layout parameters to be finalized as the part of the development process. The current project involves a change from age-restricted to non-age restricted and therefore the changes would not create new or more severe impacts related to differential settlement. Therefore, Mitigation Measure GEO-2 remains adequate in order to ensure that impacts related to differential settlement are <i>less than significant</i> .

Aviano Project Environmental Impacts Comparison							
Impact	2008 EIR Conclusion	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Discussion		
(6) Damage to structures or property could result from expansive or corrosive soils.	LSM (p. 192)	No	No	No	Similar to the 2008 Aviano Adult Community Project site, soils underlying the project site have been identified as having a high shrink/swell potential. ⁹ Structural damage of buildings or rupture of utilities may occur if the potentially expansive soils were not considered in the design and construction of the current project. The site-specific geotechnical feasibility investigation for the project site notes that to reduce the adverse effects of on-site surface soils with high expansion potential, post-tensioned concrete slab foundations should be considered. The investigation also noted that at the early stage of planning, determining what the actual foundations supporting materials can be difficult. The report recommended that additional study be carried out at the design-stage and, at that time, the geotechnical parameters for foundation design can be provided based on the soils conditions at different areas within the project site. The geotechnical feasibility investigation recommends that a final design-level geotechnical investigation be prepared that would provide detailed recommendations on specific design and site layout parameters. Therefore, Mitigation Measure GEO-3 remains adequate in order to ensure that impacts related to expansive or corrosive soils are <i>less than significant</i> .		
(7) The presence of improperly abandoned soil or gas wells at the project site could result in instability of surface soils.	LSM (p. 193)	No	No	No	The current project is located within the Brentwood Oil and Gas Field. Approximately eight wells are located within the project site area but all are mapped as plugged and capped by the State. ¹⁰ If any of the wells have not been properly capped and are exposed during grading, the wells could cause caving hazards and/or undermine project improvements. The City of Antioch General Plan states that the locations of all oil or gas wells on proposed development sites shall be identified on development plans including those of off-site improvements. Project sponsors of development containing existing or former oil or gas wells shall submit documentation demonstrating that all abandoned wells have been properly abandoned pursuant to the requirements of the California Department of Conservation, Oil, Gas, and Geothermal Resources Division. The site-specific geotechnical feasibility investigation		

 ⁹ Natural Resource Conservation Service, 2008. op. cit.
 ¹⁰ California Department of Conservation, 2006. Oil and Gas Well Map 608, Division of Oil, Gas and Geothermal Resources.

			Aviano Project En	vironmental Im	pacts Comparison
Impact	2008 EIR Conclusion	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Discussion
					does not make recommendations regarding the potential presence of oil or gas wells at the project site. A final design-level geotechnical investigation would address the issue based on specific design and site layout parameters to be finalized as the part of the development process. Due to the nature of the current project (i.e., non-age restricted compared to age-restricted), the current project would require the same mitigation measures identified in the 2008 EIR (Mitigation Measure GEO-4) in order to ensure that impacts related to abandoned soil or gas wells are <i>less than significant</i> .
(8) Personal injury could result during construction due to inadequately shored walls in trenches and excavations.	LSM (p. 193)	Νο	No	No	The California Division of Occupational Safety and Health (DOSH) (which acts to protect workers from safety hazards through the California OSHA (Cal/OSHA)) issues guidelines and regulations regarding worker safety and shoring methods for trenches and excavations. ¹¹ As previously discussed, soils in the project vicinity have a low potential for liquefaction, lateral spreading or landslide. However, based on NRCS mapping, the Capay and Altamont clays like those found on the project site have a high potential for caving at excavations and trenches. The current project involves a change from age-restricted to non-age restricted and therefore the changes would not create new or more severe impacts related to personal injury during construction. Therefore, Mitigation Measure GEO-5 remains adequate in order ensure impacts related to inadequately shored walls in trenches and excavation are <i>less than significant</i> .

2008 EIR Mitigation Measures:

<u>GEO-1</u>: Project design and construction shall be in conformance with, or exceed, current best standards for earthquake resistant construction in accordance with the California Building Code, applicable local codes, and in accordance with the generally accepted standards of geotechnical practice for seismic design in Northern California. In addition, project design for on- and off-site project elements shall follow the recommendations of a site-specific design-level geotechnical investigation report to be prepared by a Certified Engineering Geologist or Geotechnical Engineer. The City Engineer shall approve all final design and engineering plans. (LTS)

<u>GEO-2</u>: A site-specific design-level geotechnical investigation report for on- and off-site project elements shall be prepared by a licensed professional and submitted to the City Engineer for review and approval. The report shall include specific recommendations for mitigating potential settlement associated with native soil/fill boundaries and areas of different fill thickness, if any. The report shall specifically address treatment of test pit areas and trenches to ensure that differential settlement will not occur in those areas. (LTS)

¹¹ Title 8, California Code of Regulations, Sections 1539-1543. Construction Safety Orders can be reviewed at: www.dir.ca.gov/Title8/sub4.html.

Aviano Project Environmental Impacts Comparison									
			Any New						
		Do Proposed	Circumstances						
		Changes	Involving New	Any New					
		Involve New	Significant Impacts	Information					
		or More	or Substantially	Requiring New					
	2008 EIR	Severe	More	Analysis or					
Impact	Conclusion	Impacts?	Severe Impacts?	Verification?	Discussion				

<u>GEO-3</u>: A site-specific design-level geotechnical investigation report for both on- and off-site project elements, prepared by a licensed professional, shall be prepared. The report shall include recommendations for foundations and improvements, including sidewalks, paved paths, parking lots, and subsurface utilities, considering expansive soil conditions. Measures shall be incorporated into the report to ensure that potential damage due to shrink/ swell potential of soils is minimized. Corrective measures, as recommended by a licensed professional, may include removal and replacement of problematic soils with engineered and compacted fill, proper drainage design, or design and construction of improvements to withstand the forces exerted by expected shrink/ swell cycles. The report shall be submitted to the City Engineer for review and approval.

In addition, the design-level geotechnical study shall include an evaluation of the potential for corrosive soils. If the study results indicate corrosive soil conditions, appropriate measures to mitigate these conditions shall be incorporated into the design of project improvements that may come into contact with site soils. Wherever corrosive soils are found in sufficient concentrations, recommendations shall be made to protect iron, steel, metal, and concrete from long-term deterioration caused by contact with corrosive on-site soils. In general, these recommendations are expected to include, but not be limited to, the following provisions:

- Protect buried iron, steel, cast iron, ductile iron, galvanized steel, and dielectric coated steel or iron (including all buried metallic pressure piping) against corrosion from soil.
- Protect buried metal and cement structures in contact with earth surfaces from chloride ion concentrations.
- Use sulfate-resistant concrete mix for all concrete in contact with the ground.
- Consult a corrosion expert during the project's detailed design phase to design the most effective corrosion protection.

All design criteria and specifications set forth in the site-specific design-level geotechnical investigation report shall be implemented to reduce impacts associated with problematic soils to a less-than-significant level. (LTS)

<u>GEO-4</u>: Research and verification of closure records, as well as physical verification of well closure and capping shall be completed during preparation of the site-specific designlevel geotechnical investigation report for on- and off-site project elements. Any improperly abandoned wells within the project boundaries shall be brought into compliance with the requirements of California Department of Conservation and City of Antioch. The report shall be submitted to the City Engineer for review and approval. (LTS)

<u>GEO-5</u>: The applicant shall ensure that the requirements for worker health and safety as specified by Cal/OSHA are implemented. In particular, due to the caving proclivity of the soil types of the project site, shoring requirements of the California standards for workers dealing with and work in excavations as specified in the California Code of Regulations, Title 8, Section 1540 et. al., *Excavations*, shall be observed for all on- and off-site operations. This article applies to all open excavations made in the earth's surface. Excavations are defined to include trenches. (LTS)

Special Mitigation Measures: None required.

			Aviano Project En	vironmental Im	pacts Comparison
Impact	2008 EIR Conclusion	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Discussion
			G. Hy	drology and Storn	n Drainage
(1) Place housing within a 100- year flood hazard area.	LS (p. 202)	No	No	No	According to the most recent FEMA mapping, the portion of the project proposed for development, including off-site improvement areas, is not located within the 100-year flood hazard zone, and therefore, placement of housing or other structures in a flood hazard zone would not occur under the current project. The project site is roughly three miles from the coastline with a minimum elevation of 170 feet above mean sea level. Therefore, the 2008 EIR concluded that impacts related to flooding would be less than significant. The current project involves a change from age-restricted to non-age restricted and therefore the changes would not create new or more severe impacts related flooding. Therefore, impacts related to coastal hazards, such as extreme high tides, tsunami, or sea level rise, would be <i>less than significant</i> .
(2) Impacts of dam failure inundation.	LS (p. 202)	No	No	No	The current project is not located in any currently mapped dam failure inundation zones. ¹² The inundation zone ¹³ for the Upper Sand Creek Basin (USCB) may overlie a portion of the current project area. ¹⁴ Based on current plans, residential development of the current project is not anticipated to occur within the area that would be affected by inundation due to failure of the USCB. ¹⁵ Therefore, impacts related to dam failure inundation would be <i>less than significant</i> , similar to the 2008 Aviano Adult Community Project.
(3) Substantially deplete groundwater supplies or interfere substantially	LS (p. 202)	No	No	No	With the installation of new buildings, improved pavement surfaces, and a stormwater conveyance system, on-site recharge would likely be reduced relative to the existing condition. However, implementation of the current project is not expected to contribute to depletion of groundwater supplies because the current project would not use groundwater underlying the site. In addition, stormwater treatment best management practices (BMPs) that detain

 ¹² Association of Bay Area Governments, 2007. Interactive ABAG (GIS) Maps Showing Dam Failure Inundation Website: http://www.abag.ca.gov.
 ¹³ The inundation zone for the planned USCB has not yet been officially mapped.
 ¹⁴ Contra Costa County Flood Control District, 2008. op. cit.
 ¹⁵ City of Antioch, 2008. op. cit.

			Aviano Project En	pacts Comparison	
Impact	2008 EIR Conclusion	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Discussion
with groundwater recharge.					water on-site will include an infiltration component (detention basins) that will encourage recharge. The 2008 EIR conclusion is applicable to the current project because the overall amount of impervious surfaces would be similar to the 2008 Aviano Adult Community Project. Therefore, a <i>less-than-significant</i> impact related to groundwater supplies would occur, similar to the 2008 Aviano Adult Community Project.
(4) Increased runoff volume resulting from creation of new impervious surfaces resulting in hydromodifica- tion impacts.	LSM (p. 203)	No	No	No	Similar to the 2008 Aviano Adult Community Project, development of the project would result in more surface area covered by impervious surfaces (buildings, paved roadways and parking areas, paved pathways (Sand Creek trail), sidewalks) relative to existing conditions. The existing project site has a lower runoff coefficient than would occur under the current project, meaning that more water would leave the site as runoff under the developed site condition. Increased runoff volume and the increased rate of delivery of runoff to Sand Creek could result in hydromodification impacts to downstream creeks (Sand Creek and Marsh Creek). A preliminary stormwater control plan (stormwater plan) was prepared for the project site in 2008. ¹⁶ The stormwater plan proposes to use a three-tiered approach to address stormwater management (in accordance with the County National Pollutant Discharge Elimination System (NPDES) permit): 1) site design, 2) source control, and 3) treatment control. Properly designed, site design and treatment controls would serve the dual function of reducing runoff volumes/velocities and improving water quality. Under the stormwater plan, site design features that could reduce potential hydromodification impacts of the project include clustering development in the north to provide a buffer area along Sand Creek and to reduce the amount of directly-connected impervious surfaces. Of the total project site area of about 189 acres, approximately 70 acres would remain as pervious parks or undeveloped open space; including individual lot landscaping results in roughly 50 percent of the project site remaining nervious surfaces post-development.

¹⁶ Balance Hydrologics, Inc., 2008. Preliminary Stormwater Control Plan, Aviano Project, City of Antioch, California, May.

Aviano Project Environmental Impacts Comparison									
Impact	2008 EIR Conclusion	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Discussion				
		Impices			Creek trail would result in approximately one-half acre of additional impermeable surface in close proximity to the Creek, and needs to be included in the final design-level calculations for the site. The stormwater control plan provides an adequate conceptual strategy for complying with the County NPDES permit. In addition, the 2008 EIR Mitigation Measure HYD-1 requires a design-level stormwater management plan, which will be prepared consistent with the currently proposed non-age restricted Aviano Farms Project. Similar to the 2008 Aviano Adult Community Project, the stormwater management plan will ensure that the proposed detention basins for the 2014 project would adequately mitigate potential hydromodification impacts resulting from drainage into Sand Creek. Therefore, Mitigation Measure HYD-1 remains adequate in order to ensure that impacts related to hydromodification are <i>less than significant</i> .				
(5) Increased runoff resulting from creation of new impervious surfaces could potentially exacerbate downstream flooding problems.	LSM (p. 205)	No	No	No	Increased runoff volume and peak discharges to Sand Creek from the site would, if left unmitigated, increase under the current project, potentially exacerbating cumulative flooding impacts in downstream areas along Sand Creek that already are prone to flooding. Under the stormwater management plan required by Mitigation Measure HYD-1, project design would include features that would reduce peak flows and runoff durations relative to current site conditions. The features would also reduce potential impacts to downstream flooding. In addition, the 2008 EIR Mitigation Measure HYD-2 requires a detailed hydraulic analysis, which will be prepared consistent with the currently proposed non-age restricted Aviano Farms Project. Similar to the 2008 Aviano Adult Community Project, the hydraulic analysis will ensure that implementation of the current project will not impact flooding conditions or create potential flooding downstream. Therefore, Mitigation Measure HYD-2 remains adequate in order to ensure that impacts related to downstream flooding problems are <i>less than significant</i> .				
(6) Construction activities and post-	LSM (p. 205)	No	No	No	<i>Construction-Period Impacts.</i> During the construction period, grading and excavation activities, including those in the off-site improvement areas, would result in exposure of soil to runoff, potentially causing erosion and				

			Aviano Project En	vironmental Im	pacts Comparison
		Do Proposed Changes Involve New	Any New Circumstances Involving New Significant Impacts	Any New Information	
		or More	or Substantially	Requiring New	
	2008 EIR	Severe	More	Analysis or	
Impact	Conclusion	Impacts?	Severe Impacts?	Verification?	Discussion
construction site uses could result in degradation of water quality in the San Joaquin River by reducing the quality of stormwater runoff.					entrainment of sediment and contaminants in the runoff. Similar to the 2008 Aviano Adult Community Project, soil stockpiles and excavated areas on the project site and off-site improvements would be exposed to runoff and, if not managed properly, the runoff could cause erosion and increased sedimentation and pollutants in stormwater. <i>Operation-Period Impacts.</i> New construction and intensified land uses of the current project as well as the 2008 Aviano Adult Community Project would result in increased vehicle use and potential discharge of associated pollutants. Increased numbers of vehicles and outdoor parking facilities at the project site would likely result in increased leaks of fuel, lubricants, tire wear, and fallout from exhaust, which would contribute petroleum hydrocarbons, heavy metals, and sediment to the pollutant load in runoff being transported to receiving waters. Runoff from landscaped areas at the site may contain residual pesticides and nutrients. Long-term degradation of water quality runoff from the site could impact local water quality in the San Joaquin River. <i>Water Quality Impairment.</i> Runoff from the current project eventually enters the San Joaquin River, a water body the Central Valley Water Board has designated as water quality impaired for several pesticides (including DDT).
					designated as water quality impaired for several pesticides (including DD1), boron, electrical conductivity, mercury, and toxaphene. ¹⁷ All of these pollutants have an identified source of "agriculture" or "resource extraction." If the current project would increase the load of any of these pollutants discharged to the River, then a significant impact would occur (the Central Valley Water Board has determined that the assimilative capacity of the San Joaquin River for these pollutants has already been exceeded). However, none of the contaminants that have been identified as causing the water quality impairment of the River are likely to be used at the site (or to be generated in concentrations exceeding existing conditions)

¹⁷ Regional Water Quality Control Board, Central Valley Region, 2006, Proposed 2006 CWA Section 303(d) List of Water Quality Limited Segment, Approved by SWRCB, October 2006.

			Aviano Project En	vironmental Imj	pacts Comparison
Impact	2008 EIR Conclusion	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Discussion
(7) Water supply	LSM	No	No	No	The 2008 EIR requires preparation of a Stormwater Pollution Prevention Plan (SWPPP) (see Mitigation Measure HYD-3a and 3b) to ensure that impacts to surface water quality through the construction period are minimized. Mitigation Measures 3a and 3b would be required for the currently proposed non-age restricted project, which would not generate new or more severe impacts than the 2008 Aviano Adult Community Project due to the change from age-restricted to non-age restricted. Therefore, Mitigation Measures HYD-3a and 3b remain adequate in order to ensure that impacts related to downstream degradation of water quality in the San Joaquin River are <i>less</i> <i>than significant</i> .
well(s) at the project, if not properly managed or de- commissioned, could be damaged during construction, potentially resulting in impacts to groundwater quality.	(p. 208)				reconnaissance conducted in February 2007. However, the possibility exists that wells may be discovered during project site or off-site improvements, preparation, and grading. If any on-site wells are disturbed during grading, surface seals could be damaged and allow surface water (potentially containing pollutants) to preferentially seep into the well(s) and the underlying aquifer, causing water quality degradation. In addition, similar to the 2008 Aviano Adult Community Project, known abandoned oil and gas wells exist at the project site and in the vicinity. Therefore, Mitigation Measure HYD-4 remains adequate in order to ensure that impacts related to water supply wells are <i>less than significant</i> .

2008 EIR Mitigation Measures:

<u>HYD-1</u>: As a condition of approval of the final grading and drainage plans for the project, and prior to issuance of a grading permit the applicant shall demonstrate through detailed hydraulic analysis that implementation of the proposed drainage plans for all on-site and off-site improvements will not create potential hydromodification impacts downstream by implementing the following:

1. A qualified licensed engineering firm retained by the applicant shall develop final design-level drainage and C.3 compliant stormwater management plans for the current project including all on-site and off-site improvements. The project drainage plan shall include a design that, when implemented, would ensure that post-project runoff does not exceed estimated pre-project rates and/or durations, where the increased stormwater discharge rates and/or durations will result in increased potential for erosion.

Aviano Project Environmental Impacts Comparison									
			Any New						
		Do Proposed	Circumstances						
		Changes	Involving New	Any New					
		Involve New	Significant Impacts	Information					
		or More	or Substantially	Requiring New					
	2008 EIR	Severe	More	Analysis or					
Impact	Conclusion	Impacts?	Severe Impacts?	Verification?	Discussion				

2. Include drainage components that are designed in compliance with City of Antioch standards. The qualified licensed engineering firm preparing drainage plans shall consider the proximity of the proposed detention basins to Sand Creek and shall implement adequate design measures so as to not result in bank instability in Sand Creek. The grading and drainage plans shall be reviewed for compliance with these requirements by the City of Antioch.

3. Neither the City of Antioch nor any government agency shall be responsible for mMaintenance of C.3 compliance detention and water quality facilities shall be determined by the City Engineer. The project must include a self-perpetuating drainage system maintenance program (to be managed by a homeowners association, <u>LLD</u> or similar entity) that includes annual inspections and necessary maintenance of detention basins, sedimentation basins, drainage ditches, and drainage inlets. Any accumulation of sediment or other debris shall be promptly removed and damage to the drainage system repaired in a timely manner.

4. Storm Water Control Plans shall be in conformance with the engineering guidance and specifications provided by the Contra Costa County Flood Control and Water Conservation District. (LTS)

<u>HYD-2</u>: As a condition of approval of the final grading and drainage plans for the project, and prior to issuance of a grading permit the applicant shall demonstrate through detailed hydraulic analysis that implementation of the proposed drainage plans will not impact flooding conditions or create potential flooding impacts downstream, by implementing the following:

- 1. The qualified licensed engineering firm retained by the applicant shall analyze the potential for the project including all on-site and off-site improvements to contribute to downstream flooding impacts at the project limits, as well as downstream of the site, to the junction of Sand Creek and Marsh Creek. The project drainage plan shall include a design that, when implemented, would not increase peak flows above existing flows, or exacerbate downstream flooding.
- 2. Storm Water Control Plans, including underlying hydrology and hydraulic analysis, shall be submitted to the CCCFCD for review <u>and City for review and approval</u>. to ensure that the design is in conformance with CCCFCD engineering guidance and specifications and that the proposed design is compatible with the future plans for the USCB. The applicant shall work closely with the City of Antioch and the CCCFCD to ensure that the proposed uses within the on-site open space immediately downstream of the USCB dam structure are compatible with the dam inundation zone, emergency release route, and primary spillway alignment of the proposed USCB facility. (LTS)

<u>HYD-3a</u>: As a condition of approval of the final grading plans, the applicant shall prepare a SWPPP designed to reduce potential impacts to surface water quality through the construction period of the project including all on- and off-site improvements. The SWPPP shall be submitted for approval to the City of Antioch prior to issuance of a grading permit. The SWPPP must be maintained on-site and made available to City inspectors and/or San Francisco Bay or Central Valley Water Board staff upon request. The SWPPP shall include specific and detailed BMPs designed to mitigate construction-related pollutants. At a minimum, BMPs shall include practices to minimize the contact of construction materials, equipment, and maintenance supplies (e.g., fuels, lubricants, paints, solvents, adhesives) with stormwater. The SWPPP shall specify properly designed centralized storage areas that keep these materials out of the rain. An important component of the stormwater quality protection effort is the knowledge of the site supervisors and workers. To educate on-site personnel and maintain awareness of the importance of stormwater quality protection, site supervisors shall conduct regular tailgate meetings to discuss pollution prevention. The frequency of the meetings and required personnel attendance list shall be specified in the SWPPP.

Aviano Project Environmental Impacts Comparison									
			Any New						
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		Changes	Involving New	Any New					
		Involve New	Significant Impacts	Information					
		or More	or Substantially	Requiring New					
	2008 EIR	Severe	More	Analysis or					
Impact	Conclusion	Impacts?	Severe Impacts?	Verification?	Discussion				

The SWPPP shall specify a monitoring program to be implemented by the construction site supervisor, which must include both dry and wet weather inspections. In addition, in accordance with State Water Resources Control Board Resolution No. 2001-046,¹⁸ monitoring would be required during the construction period for pollutants that may be present in the runoff that are "not visually detectable in runoff."¹⁹ Water Board and/or City personnel, who may make unannounced site inspections, are empowered to levy considerable fines if it is determined that the SWPPP has not been properly implemented. BMPs designed to reduce erosion of exposed soil may include, but are not limited to: soil stabilization controls, watering for dust control, perimeter silt fences, placement of fiber rolls, and sediment basins. The potential for erosion is generally increased if grading is performed during the rainy season as disturbed soil can be exposed to rainfall and storm runoff. If grading must be conducted during the rainy season, the primary BMPs selected shall focus on erosion control; that is, keeping sediment on the site. End-of-pipe sediment control measures (e.g., basins and traps) shall be used only as secondary measures. Entry and egress from the construction site shall be carefully controlled to minimize off-site tracking of sediment. Vehicle and equipment wash-down facilities shall be designed to be accessible and functional during both dry and wet conditions.

<u>HYD-3b</u>: The design-level stormwater control plan shall demonstrate through detailed hydraulic analysis that implementation of the proposed drainage plan would result in treatment of the appropriate percentage of the runoff from the project including all on- and off-site improvements (in compliance with the County NPDES permit). The amount of runoff that is typically required to be treated is about 85 percent of the total average annual runoff from the site (depending on whether the volume-based or flow-based approach is used). The qualified professionals preparing the design-level stormwater control plan shall include as many of the BMPs identified in the preliminary stormwater plan as feasible and consider additional measures designed to mitigate potential water quality degradation of runoff from all portions of the completed development. The project's design-level stormwater control plan must meet the requirements of the Water Board and City of Antioch per the terms of the NPDES permit. City staff shall review and approve the SWPPP and design-level stormwater control plan prior to approval of the grading plan. (LTS)

<u>HYD-4</u>: Any existing water supply wells that may be discovered during site preparation shall either be:

- 1. Properly abandoned in compliance with the California Department of Water Resources, California Well Standards; or
- 2. Inspected by a qualified professional to determine whether the well is properly sealed at the surface to prevent infiltration of water-borne contaminants into the well casing or surrounding gravel pack. The California Well Standards require an annular surface seal of at least 20 feet for water supply wells. If any of the wells are found not to comply with this requirement, the applicant shall retain a qualified well driller to install the required seal. (LTS)

Special Mitigation Measures: None required.

¹⁸ State Water Resources Control Board, 2001. Modification of Water Quality Order 99-08-DWQ State Water Resources Control Board (SWRCB) National Pollutant Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction Activity.

¹⁹ Construction materials and compounds that are not stored in water-tight containers under a water-tight roof or inside a building are examples of materials for which the discharger may have to implement sampling and analysis procedures.

			Aviano Project En	vironmental Imp	pacts Comparison
Impact	2008 EIR Conclusion	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification? Public Health and	Discussion
(1) A gri grifternal	IC	Na	II.	I ubiic Health anu	A prior large of the project site and off site impact areas more have
(1) Agricultural and chemical- related hazards.	(p. 215)	NO	140	INO	Agricultural use of the project site and on-site impact areas may have involved the use of agricultural chemicals such as insecticides, herbicides, fertilizers, and/or fungicides. Based on soil sampling data from the Environmental Investigation prepared in 2004 for the project site, a review of historical land use information, a site reconnaissance, interviews with the property owner and persons familiar with the property, and a review of regulatory databases, agricultural chemical residues in shallow soils are determined not to be a potential issue at the project site or the off-site impact areas. ²⁰ The current project involves a change from age-restricted to non-age restricted and therefore the changes would not create new or more severe impacts related to agricultural and chemical-related hazards. Therefore, a <i>less-than-significant</i> impact would occur, similar to the 2008 Aviano Adult Community Project.
(2) School sites.	LS (p. 215)	No	No	No	Dozier-Libbey Medical High, at 4900 Sand Creek Road, is located immediately southwest of the project site. Other nearby schools, Diablo Vista Elementary, at 4791 Prewett Ranch Drive, Heritage Baptist Academy Christian School, at 5200 Heidorn Ranch Road, and Deer Valley High School, at 4700 Lone Tree Way, are located between one-quarter and one- half mile from the project site. As the current project would not emit hazardous emissions of significant risk or handle significant quantities of hazardous materials, substances, or waste, no significant impact to existing or proposed school facilities would occur at the aforementioned locations. Therefore, a <i>less-than-significant</i> impact would occur, similar to the 2008 Aviano Adult Community Project.

²⁰ Ingram Mason & Fairbairn, 2004. Environmental Investigation Report, Williamson Property, Antioch, Contra Costa County, California. November.

Aviano Project Environmental Impacts Comparison								
Impact	2008 EIR Conclusion	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Discussion			
(3) Government	LS	No	No	No	The project site is not located on or adjacent to a site that is included on a list			
Code sites.	(p. 215)				of hazardous materials sites compiled pursuant to Government Code section 65962.5. ²¹ Therefore, a <i>less-than-significant</i> impact would occur, similar to the 2008 Aviano Adult Community Project.			
(4) Airport/Airfield hazards.	LS (p. 215)	No	No	No	Airports or private air strips are not located in the project vicinity, and residents of the current project would not face any hazards regarding airfield hazards. Therefore, a <i>less-than-significant</i> impact would occur, similar to the 2008 Aviano Adult Community Project.			
(5) Emergency response / emergency evacuation.	LS (p. 215)	No	No	No	The internal roadways and intersections are nearly identical to the configuration proposed by the 2008 Aviano Adult Community Project Roadways and sidewalks at the project site would be constructed in accordance with City of Antioch requirements. All roadways and intersections would meet City design standards. The project would not restrict vehicular, pedestrian, or bicycle access within or in the vicinity of the project site. Development of the project would not be expected to interfere with the City's Emergency Plan. ²² Therefore, a <i>less-than-significant</i> impact would occur, similar to the 2008 Aviano Adult Community Project.			
(6) Wildland fire hazards.	LS (p. 215)	No	No	No	The project site is not in or adjacent to an area mapped as presenting a wildland fire hazard. ²³ Therefore, a <i>less-than-significant</i> impact would occur, similar to the 2008 Aviano Adult Community Project.			
(7) Electric and magnetic fields (EMFs).	LS (p. 216)	No	No	No	An approximately 200-foot wide Pacific Gas and Electric (PG&E) right-of- way with four 230-kilovolt (kV) electrical transmission lines runs from the southeast corner of the site to approximately the center of the northern property boundary. As no specific health effects of EMFs have been conclusively demonstrated, health-based or regulatory risk standards do not exist for EMF exposure. Therefore, describing impacts of the current or potential effects of EMFs would necessarily be speculative in nature. The <i>CEQA Guidelines</i> state that if, after thorough investigation, a lead agency			

²¹ IMFC, 2004. op cit.
 ²² City of Antioch, General Plan, 2003. Section 11.8, Disaster Response, November 24.
 ²³ California Department of Forestry and Fire Protection (CDF), 2000. Contra Costa County Natural Hazards Disclosure (Fire), Map ID NHD-07. January 6.

Aviano Project Environmental Impacts Comparison							
Impact	2008 EIR Conclusion	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Discussion		
					finds that a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact. ²⁴ As such, the 2008 EIR did not identify any impacts related to EMFs. The current project involves a change from age-restricted to non-age restricted and therefore the changes would not create new or more severe impacts related to EMFs. Therefore, a <i>less-than-significant</i> impact would occur, similar to the 2008 Aviano Adult Community Project.		
(8) Development of the project site and off-site areas could expose construction workers and future residents to hazardous materials from historic oil and gas exploration.	LSM (p. 216)	No	No	No	Although no obvious evidence of contamination is apparent at the project site or is anticipated at the off-site impact areas, the potential exists that areas of stained and/or odorous soils resulting from contamination from historic oil and natural gas exploration and production may be discovered during project construction. If present, this contamination could pose a human health risk to construction workers and future residents who may be directly exposed to contaminated soils and groundwater or to volatile contaminants that have migrated into indoor air. The current project would involve some level of disturbance similar to the 2008 Aviano Adult Community Project. Therefore, the change from age-restricted to non-age restricted would not create new or more severe impacts related to hazardous materials from historic oil and gas exploration. Therefore, Mitigation Measure HAZ-1 remains adequate in order to ensure that impacts related to historic oil and gas exploration are <i>less than</i> <i>significant</i> .		
(9) Development of the current project could expose future open space recreational users to hazardous materials and	LSM (p. 217)	No	No	No	Data is not available to evaluate whether the waters of Sand Creek near the project site have been affected by acid mine drainage within the regional watershed. Although the nearest source of the acid mine drainage is approximately two miles away, the potential exists for acidic water or metals leached into the water to migrate to the project site through Sand Creek. Any contaminated water could potentially pose a health risk to future users of the proposed open space areas and the Sand Creek trail, if the users were to have direct contact with the Creek waters. The current project still includes the proposed open space area and Sand Creek Trail. Therefore, the same potential		

²⁴ CEQA Guidelines, Section 15145.

			Aviano Project En	pacts Comparison	
Impact	2008 EIR Conclusion	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Discussion
corrosives that may be present in Sand Creek.					for contaminated waters to pose a health risk to future users of the open space areas still exists. Mitigation Measure HAZ-2 remains adequate in order to ensure that impacts related to hazardous materials and corrosives are <i>less than</i> <i>significant</i> .
(10) Oil and natural gas pipelines may create safety hazards for construction workers during development of the project.	LSM (p. 217)	No	No	No	Construction in the vicinity of the oil and natural gas pipelines during development of the current project has the potential to damage the pipelines, which could result in a significant release of hazardous materials that could affect construction workers and the environment. The current project involves the same level of development; therefore, the potential for exposure identified in the 2008 EIR still exists for the current project. The 2008 EIR required Mitigation Measure HAZ-3 to ensure that potential impacts from oil and natural gas pipelines would be reduced to a less-than-significant level. The current project does not involve changes that would create new or more severe impacts. Therefore, Mitigation Measure HAZ-3 remains adequate in order to ensure that impacts related to oil and natural gas pipelines are <i>less than significant</i> .
(11) Improper use, storage, or disposal of hazardous materials during construction activities could result in releases affecting construction workers, the public, and the environment.	LSM (p. 218)	No	No	No	Construction of residences, roadways, pedestrian paths, and landscaping features at the current project site would require the use and transport of hazardous materials. The materials would include fuels, oils, and other chemicals used during construction activities. Improper use and transportation of hazardous materials could result in accidental releases or spills, potentially posing health risks to workers, the public, and environment. The current project involves a change from age-restricted to non-age restricted and therefore the changes would not create new or more severe impacts related to the improper use, storage, or disposal of hazardous materials during construction. As such, all the mitigation measure requirements for the 2008 Aviano Adult Community Project are still applicable for the current project and would be implemented through the Mitigation Monitoring and Reporting Plan (MMRP). Therefore, Mitigation Measure HAZ-4 remains adequate to ensure that impacts related to the improper use, storage, or disposal of hazardous materials during construction.

Aviano Project Environmental Impacts Comparison								
	Any New							
		Do Proposed	Circumstances					
		Changes	Involving New	Any New				
		Involve New	Significant Impacts	Information				
		or More	or Substantially	Requiring New				
	2008 EIR	Severe	More	Analysis or				
Impact	Conclusion	Impacts?	Severe Impacts?	Verification?	Discussion			
					are less than significant.			

2008 EIR Mitigation Measures:

<u>HAZ-1</u>: Prior to the issuance of grading or construction permits for the project site and off-site impact areas, a Construction Risk Management Plan (CRMP) should be prepared to address potential hazardous material issues during construction of the project. The CRMP shall include provisions to protect construction workers and the nearby public from health risks from pipeline hazards and potential contaminated soils associated with oil and natural gas production in the project vicinity. The CRMP shall incorporate Best Practices defined by the Common Ground Alliance to ensure construction worker safety and prevent accidental releases from oil and natural gas pipelines. The CRMP shall also require site inspections during initial grading activities at the site; provide procedures to be undertaken in the event that previously unreported petroleum contamination or subsurface hazards are discovered during construction; incorporate construction safety measures for excavation and other construction activities; establish detailed procedures for the safe storage, stockpiling, use, and disposal of hazardous materials at the project site; provide emergency response procedures; and designate personnel responsible for implementation of the CRMP. Any areas of contamination that may be discovered during project development shall be immediately reported to the Hazardous Materials Program of Contra Costa Health Services (CCHS) and investigated and remediated under the oversight of CCHS or other appropriate agency in accordance with existing regulatory programs. The CRMP shall be submitted to the City of Antioch for review and approval. (LTS)

<u>HAZ-2</u>: Prior to the issuance of a certificate of occupancy at the site, a qualified environmental professional shall conduct a surface water quality investigation at the portion of Sand Creek within the project site. At least one surface water sample shall be collected from Sand Creek during three different quarters of the year to evaluate water quality at the start of, during, and at the end of the rainy season. The samples shall be analyzed for pH and California Title 22 heavy metals, and the laboratory results shall be compared to established residential health risk standards (RWQCB Environmental Screening Levels).²⁵ Water quality sampling results shall be provided to the Mining Section of the central Valley RWQCB, which is responsible for implementation of water quality regulations related to mining wastes, to aid their investigation and remediation of the source of the acid mine drainage. The surface water quality investigation shall also be submitted to the City of Antioch for review and approval. If acidic conditions are identified (pH lower than 6.5) and/or concentrations of metals in excess of residential water quality standards, warning signs shall be posted on both banks of Sand Creek warning open space users to avoid contact with Creek water. (LTS)

<u>HAZ-3</u>: Preparation and implementation of the CRMP in Mitigation Measure HAZ-1, which requires compliance with best management practices for construction safety in pipelines, would reduce this potential impact to a less than significant level. (LTS)

<u>HAZ-4</u>: Preparation and implementation of the CRMP in Mitigation Measure HAZ-1 as well as the required SWPPP for construction (see Mitigation Measure HYD-2) would reduce the potential impacts of hazardous materials releases during construction to a less-than-significant level. No additional mitigation is required. (LTS)

Special Mitigation Measures: None required.

²⁵ San Francisco Bay Regional Water Quality Control Board, 2005. Screening For Environmental Concerns at Sites with Contaminated Soil and Groundwater. February.

			Aviano Project En	vironmental Imj	pacts Comparison
	2008 EIR	Do Proposed Changes Involve New or More Severe	Any New Circumstances Involving New Significant Impacts or Substantially More	Any New Information Requiring New Analysis or	
Impact	Conclusion	Impacts?	Severe Impacts?	Verification?	Discussion
	· · · ·		I.	Biological Resor	urces
The following permits CDFW Section 2081 C USFWS and the USAC	and associated c California Endar <u>E; USACE Sec</u> t	consultation have ngered Species Ad tion 404 Clean Wa	been completed or will a created or will a created by the created	soon be completed by Incidental Take pern QCB Section 401 Cl	y the Aviano Farms Project: USFWS Biological Opinion; CDFW Section 1602; nit; Section 7 Federal Endangered Species Act (FESA) Consultations between lean Water Act.
(1) Wildlife movement corridors.	LS (p. 260)	No	No	No	The current project involves the same area of disturbance as the 2008 Aviano Adult Community Project. Similar to the 2008 Aviano Adult Community Project, the area proposed for development occurs to the north of Sand Creek and is comprised mainly of non-native grassland, which supports a diverse assemblage of native wildlife species. The non-native grassland portion of the site is adjacent to developed lands along both the western and northern boundaries, consisting of the Kaiser Hospital facility and residential development respectively. As such, the portion of the site proposed for development is unlikely to function as a significant movement corridor, although wildlife occurring on the site may move within the non-native grassland area. Sand Creek potentially functions as a movement corridor for native species; however, just as with the 2008 tentative map, the tentative map for the current project preserves a Sand Creek riparian corridor within a riparian buffer zone with a setback averaging 100 feet. The current project involves a change from age-restricted to non-age restricted and therefore the changes would not create new or more severe impacts related to wildlife movement corridors. Therefore, a <i>less-than-significant</i> impact would occur, similar to the 2008 Aviano Adult Community Project.
(2) Special-status plants.	LS (p. 260)	No	No	No	Although the proposed site provides potential habitat for several special- status plant species, protocol-level surveys for rare plants have determined that all but one, round-leaved filaree, are absent from the project site. The population of round-leaved filaree occurs within the area that has been designated as preserved open space and would be avoided during project development. The current project involves a change from age-restricted to non-age restricted and therefore the changes would not create new or more severe impacts related to special-status plants. Therefore, a <i>less-than-</i> <i>significant</i> impact would occur, similar to the 2008 Aviano Adult Community

			Aviano Project En	vironmental Imp	pacts Comparison
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Impact	Conclusion	impacts:	Severe impacts.	vermeation.	Project.
(3) Conflict with plans.	LS (p. 260)	No	No	No	The City of Antioch is not currently participating in a Habitat Conservation Plan (HCP), Natural Communities Conservation Plan (NCCP) or other such plan. East Contra Costa County does have an HCP/NCCP, however, and the mitigation measures proposed have been developed with consideration for that plan. Mitigation measures proposed are consistent with the City's General Plan policies with regard to preservation and management of biological resources. The current project involves a change from age-restricted to non-age restricted and therefore the changes would not create new or more severe impacts related to conflicts with plans. Therefore, a <i>less-than-significant</i> impact would occur, similar to the 2008 Aviano Adult Community Project.
 (4) Grading and construction of the current project would result in a loss of habitat for special-status grassland and vernal pool species including the vernal pool fairy shrimp, vernal pool tadpole shrimp, California tiger salamander, burrowing owl, and San Joaquin kit fox. 	LSM (p. 260)	No	No	No	The current project involves the same area of disturbance as the 2008 Aviano Adult Community Project. As such, the current project would disturb the same habitats identified in the 2008 EIR, with the exception of the adjacent school which is already built. Grasslands of the project site provide known nesting and foraging habitat for the burrowing owl, a State Species of Special Concern. Grasslands, agricultural fields, and ruderal areas of the Royal Formosa/Chen and Ginocchio/Nunn parcels also provide potential nesting and foraging habitat for the burrowing owl species. The aforementioned habitats also provide suitable foraging and denning habitat for the San Joaquin kit fox and suitable upland habitat for the California tiger salamander. Although neither of the latter two species has been observed on the site, protocol-level studies to confirm their absence have not been conducted and the species are assumed to be present. Grading and construction occurring on the project site to the north of Sand Creek would also result in the loss of approximately 0.32 acres of seasonal wetlands and 0.86 acres of manmade detention channel, while temporary impacts to seasonal wetlands occurring along the eastern boundary of the Ginocchio/Nunn parcel near Heidorn Ranch Road, estimated at less than 0.10 acre, may occur as a result of the installation of the sanitary sewer line. The

			Aviano Project En	pacts Comparison	
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		Impletov			seasonal wetlands of the site provide potential habitat for the vernal pool fairy shrimp and marginal habitat for the vernal pool tadpole shrimp. As protocol- level surveys have not been conducted, shrimp are assumed to be present on the sites. Seasonal wetlands of the Ginocchio/Nunn parcel are known to support populations of the vernal pool fairy shrimp. The seasonal wetlands of both the project site and the Ginocchio/Nunn parcel, as well as the manmade detention channel on the project site, may also provide marginal breeding habitat for the California tiger salamander. Therefore, Mitigation Measures BIO-1a through 1d remain adequate in order to ensure that impacts related to special-status grassland and vernal pool species are <i>less than significant</i> .
(5) Grading and construction of the current project may result in a loss of dispersal habitat for the California red- legged frog.	LSM (p. 270)	No	No	No	The California red-legged frog is known to be present on-site within Sand Creek, although breeding habitat for the species is considered absent on the site. The California red-legged frog species also may utilize the manmade detention channel on-site as a dispersal corridor, although they have never been observed in the channel. Grading and construction of the project would include placing the detention channel in an underground culvert, resulting in a loss of approximately 0.86 acres of potential dispersal habitat for the species. For the most part, red-legged frog habitat within the aquatic environs of the Sand Creek channel would not be impacted by the current project as the channel would be set aside within the Open Space Preserve area. However, both the 2008 Aviano Adult Community Project and the current non-age restricted project identify the construction of two outfalls on the northern bank of the creek channel that would drain the proposed detention basins, as well as a 12-foot wide paved trail along the northern edge of the creek channel just outside the riparian buffer. The 2008 EIR required Mitigation Measures BIO-2a and 2b in order to ensure that impacts related to California red-legged frog are less than significant. The current project would not involve changes that would create new or more severe impacts. Therefore, Mitigation Measures BIO-2a and 2b remain adequate in order to ensure that impacts related to California red-legged frog are less than significant.

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 (6) Grading and construction of the current project may result in harm or mortality to individual special-status animals including vernal pool fairy shrimp, vernal pool tadpole shrimp, California tiger salamander, California red- legged frog, western pond turtle, burrowing owl, American badger, and San Joaquin kit fox. 	LSM (p. 273)	No	No	No	Similar to the 2008 Aviano Adult Community Project, grading and construction activities within wetlands could result in mortality to vernal pool fairy shrimp and vernal pool tadpole shrimp. Grading and construction activities within grasslands of the site and adjacent properties could result in harm or mortality to California tiger salamanders, to nesting/roosting burrowing owls which are known to be using burrows on the site, to American badgers if they are denning on the site, and/or to San Joaquin kit foxes that may be denning or foraging on the site. Grading and construction activities within or in the immediate vicinity of Sand Creek and the manmade detention channel could result in harm or mortality to California red-legged frogs and/or western pond turtles if they are present in the wetlands during grading and construction activities. The 2008 EIR required implementation of Mitigation Measures BIO-3a through 3h in order to ensure that impacts to individual special-status animals would be less than significant. The current project involves a change from age-restricted to non-age restricted and therefore the changes would not create new or more severe impacts related to individual special-status animals. Therefore, Mitigation Measures BIO-3a and 3h remain adequate in order to ensure that impacts related to individual special-status animals. Therefore, Mitigation Measures BIO-3a and 3h remain adequate in order to ensure that impacts related to individual special-status animals are <i>less than significant</i> .		
(7) Grading and construction of the current project may result in destruction or abandonment of special-status	LSM (p. 278)	No	No	No	Riparian trees and shrubs occurring along Sand Creek, and oak trees occurring in the southern portion of the site, provide potential nesting habitat for several special-status bird species including the golden eagle, Swainson's hawk, white-tailed kite, and loggerhead shrike. While riparian vegetation would be preserved along Sand Creek within the riparian buffer zone, and trees occurring south of Sand Creek would be preserved in open space, project construction activities occurring in the vicinity of the Creek or other riparian habitat, such as the construction of the detention basins adjacent to		

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bird nests including golden eagle, Swainson's hawk, white- tailed kite, northern harrier, loggerhead shrike, and tricolored blackbird.					the riparian buffer zone, could result in disturbance that causes nest abandonment for the above species. In addition, similar to the 2008 Aviano Adult Community Project, grading and construction activities for the current project would result in the removal of grasslands that provide potential nesting habitat for the California horned lark, and of cattail stands within the manmade detention channel that provide potential nesting habitat for the tricolored blackbird. The 2008 EIR required implementation of Mitigation Measures BIO-4a through 4d in order to ensure that impacts to individual special-status birds' nests would be less than significant. The current project involves a change from age-restricted to non-age restricted and therefore the changes would not create new or more severe impacts related to special-status bird nests. Therefore, Mitigation Measures BIO-4a through 4d remain adequate in order to ensure that impacts related to special-status birds are <i>less</i> <i>than significant</i> .			
(8) Grading and construction of the current project would result in fill being placed within jurisdictional waters of the U.S. and State.	LSM (p. 279)	No	No	No	Similar to the 2008 Aviano Adult Community Project, project grading and construction on the north side of Sand Creek would result in the filling of approximately 0.09 acres of seasonal wetlands and 0.05 acres of other waters that have been claimed as jurisdictional Waters of the U.S. by USACE (totaling 0.14 acres). The 0.14 acres claimed by USACE, along with another 0.23 acres of isolated wetlands not claimed by USACE, would be considered jurisdictional Waters of the State by the RWQCB (totaling 0.37 acres). The 0.86-acre detention channel that would be filled has been disclaimed as jurisdictional by USACE and is also expected to be disclaimed by the RWQCB as a manmade feature that was constructed in upland habitat. It should be noted that the proposed project has obtained a Section 404 permit for discharge of dredge or fill material into waters of the U.S. In addition, a Streambed Alteration Agreement has been obtained by the CDFW. Furthermore, a Streambed Alteration Agreement and Section 401 permit is currently under review by the Central Valley RWQCB for the proposed project			

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					U.S. and State to the extent of the Ordinary High Water mark (OHWM) on opposing banks. The creek would also be considered jurisdictional by CDFW to the top of the bank or the dripline of riparian vegetation, whichever is greater. Installation of the two outfalls on the northern bank of the Sand Creek channel would impact areas of the creek under the jurisdiction of CDFW. The outfalls would also impact areas under the jurisdiction of the USACE and RWQCB if installed below the OHWM. However, the extent of the potential impact to jurisdictional waters within the creek channel would be minimal, estimated at approximately 0.03 acres. The current project involves a change from age-restricted to non-age restricted and therefore the changes would not create new or more severe impacts related to waters of the U.S. and State. Therefore, Mitigation Measures BIO-5a and 5b remain adequate in order ensure that impacts related to waters of the U.S. and State are <i>less than significant</i> .			
(9) Grading and construction activities associated with the project could harm or disturb nesting birds or destroy their nests.	LSM (p. 281)	No	No	No	All native resident and migratory birds are protected by the Migratory Bird Treaty Act of 1918 (Act; 16 U.S.C. 703-712), which makes the intentional take, harm, or harass of any migratory bird or their eggs illegal, except under the authority of an appropriate permit. Many common resident and migratory birds may potentially nest in on-site habitats such as within riparian trees and shrubs along Sand Creek, trees occurring south of Sand Creek, grasslands of the site, and the cattail stands occurring within the manmade detention channel. Similar to the 2008 Aviano Adult Community Project, grading and construction activities for the current project during the breeding season would impact those species that are nesting on the site. The current project involves a change from age-restricted to non-age restricted and therefore the changes would not create new or more severe impacts related to birds and nests. Therefore, Mitigation Measure BIO-6 remains adequate in order to ensure that impacts related to nesting birds are <i>less than significant</i> .			
(10) Grading and construction activities on the	LSM (p. 281)	No	No	No	Several trees, including a large blue gum (<i>Eucalyptus globulus</i>), occur along the southern and eastern boundaries of the Aera Energy property that would be considered either "mature" or "established trees" under the City's tree			

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Aera Energy parcel associated with the installation of the sewer pipeline would result in a loss of trees covered by the City of Antioch's tree					ordinance. Some of the trees occur within the footprint of the proposed sewer pipeline alignment. It should be noted that an EIR for the currently proposed Vineyards at Sand Creek Project, located adjacent to the current project site, is currently being drafted. The Vineyards at Sand Creek Project EIR will address impacts to trees on the Aera property as well. The current project involves a change from age-restricted to non-age restricted and therefore the changes would not create new or more severe impacts related to trees covered by the Antioch tree ordinance. Therefore, Mitigation Measure BIO-7 remains adequate in order to ensure impacts related to Antioch's tree ordinance are <i>less than significant</i> .		

2008 EIR Mitigation Measures:

<u>BIO-1a</u>: The project sponsor shall compensate for the permanent loss of 154 acres of suitable habitat for listed grassland and vernal pool species (vernal pool fairy shrimp, vernal pool tadpole shrimp, California tiger salamanders, and San Joaquin kit fox) at a ratio of 1:3 (e.g., for each acreage impacted, a minimum of 3 acres of suitable habitat will be preserved). The above ratio would result in a mitigation requirement of 462 acres of suitable habitat for listed grassland species. Mitigation for impacts to listed species habitat may be accomplished 1) through on and/or off-site preservation as described below or 2) through the purchase of habitat credits equivalent to preservation of habitat at a 1:3 ratio (loss:preserved) at an approved mitigation bank that includes the City of Antioch in its service area. Alternatively, the project sponsor may negotiate and pay development fees to the East Contra Costa County (ECC) HCP/NCCP Implementing Entity consistent with the applicable fee schedule for projects covered under the ECC HCP/NCCP (see Mitigation Measure BIO-1d).

To compensate for the permanent loss of habitat for grassland and vernal pool animals, the project sponsor shall be required to preserve and/or create suitable habitat on-site and/or off-site within eastern Contra Costa County. Habitat to be preserved on-site would partially compensate for impacts to San Joaquin kit fox and burrowing owl in the on-site preserve as described below. The remainder of the mitigation would be accomplished at off-site mitigation areas. Habitat to be preserved off-site must be grassland habitat possessing the following characteristics: 1) the site shall be located within the northern range of the San Joaquin kit fox in Contra Costa County and shall be contiguous with other suitable kit fox habitat, 2) the site shall provide suitable foraging and denning habitat for kit foxes; 3) the site shall encompass seasonal wetlands/vernal pools that support vernal pool fairy shrimp and/or vernal pool tadpole shrimp; 4) the site shall provide breeding and upland habitat for California tiger salamanders; 5) the site shall provide upland and migration habitat for California red-legged frogs, and 6) the site shall have supported breeding burrowing owls in the last three years.

The basis for the above required mitigation is as follows. While it is acknowledged that the project site is outside the area covered by the HCP/NCCP, and the HCP/NCCP does not set forth specific ratios for preservation or creation of habitat, the Plan does set a goal of the acquisition and preservation of 13,900 acres of grassland habitat. The acquisition and preservation of grassland habitat is to compensate for projected impacts to between 3,920 and 5,578 acres of such habitat in the plan area. Using these impacted and preserved acreage values roughly translates to a loss:preservation ratio between 1:2.5 to 1:3.5 for grassland species such as California tiger salamander and San Joaquin kit fox. Participants in

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the HCP/NCCP divide the responsibility for land acquisition and preservation to meet the HCP/NCCP goals between new development at 52 percent and existing development (i.e., the public) at 48 percent. Since cost sharing for projects not covered by HCP/NCCP does not exist, the entire responsibility to mitigate the impacts in a manner consistent with the regional HCP/NCCP would fall to new development (i.e., the project sponsor).

Consistent with the derived ratio above, the 1:3 (loss:preservation) ratio is the standard used by the USFWS and CDFW to determine appropriate compensation for impacts to listed grassland species' habitat (e.g., California tiger salamander, San Joaquin kit fox) for other projects in these species' ranges including those in eastern Contra Costa and Solano counties.²⁶ Given that both the derived ratio from the regional HCP/NCCP and the resource agencies' typical requirements are similar, the 1:3 (loss:preservation) ratio is justified for the current project. For mitigation purposes, the minimum loss:preservation ratio is 1:3, unless the applicable resource agencies determine a lower ratio to be acceptable.

Upland habitat mitigation for both San Joaquin kit fox and California tiger salamander may be accomplished on the same acreage provided that 1) the mitigation site is determined to be suitable for both of these species by a qualified biologist in consultation with USFWS and CDFW and 2) the management plan includes measures for conservation of both species and enhancement of habitat for both species. The additional acreage purchased by the project sponsor to mitigate habitat impacts for California tiger salamander must be grassland habitat that supports ground squirrels and either has known breeding habitat on-site or is within migration range of, and has preserved connectivity to, known breeding habitat for this species. The known breeding habitat must be located on a site that is preserved and managed for California tiger salamanders and other native wildlife and plants (i.e., regional or state park, mitigation or conservation bank, or other area preserved in a conservation easement). Additional acreage purchased by the project sponsor to mitigate for impacts for San Joaquin kit fox must be within the USFWS mapped range of the species, must have connectivity to areas where kit fox are known to occur, and provide suitable foraging and denning habitat. The project sponsor must either establish a conservation easement on the additional mitigation lands to preserve them in perpetuity as wildlife habitat or donate the additional mitigation lands acres to a qualified conservation organization. The project sponsor must also establish an endowment fund to provide for the long-term management, maintenance, and monitoring of the mitigation site. Requirements for each preservation/creation (on-site and off-site) are detailed below.

On-site Preservation. The project sponsor shall preserve 35.9^{27} acres as an Open Space Preserve at the south end of the project site. Approximately 4.7 acres of the preserved area are located north of the Sand Creek channel and would serve to buffer the Sand Creek riparian corridor from the development north of the creek. The on-site preserved area excludes 2.5 acres that have been set-aside for a potential future road extending from Sand Creek Road southwest through the Preserve, as well as another 1.0 acre which has been granted as an easement to PG&E for grading and landscaping associated with a new substation located at the eastern boundary of the preserve. On-site habitat preservation within the Preserve would provide habitat for San Joaquin kit fox and burrowing owl. The population of round-leaved filaree is located within the on-site preserve. The on-site preserve also would provide habitat for common wildlife and plant species that occur in the grasslands of the region.

²⁶ USFWS and CDFW. 2007. Personal communication with S. Larsen and L. Triffleman (USFWS) and J Gan (CDFW), Dec 2007. Personal communication with M. Tovar and A. Raabe (USFWS) and A. Holmes (CDFW), Nov. 2007.

²⁷ The area designated as Open Space Preserve differs slightly from the acreage described in Chapter III, Project Description, of the 2008 EIR. The difference (from 36.9 to 35.9 acres) is due to the deduction of the 1.0 acre easement adjacent to the PG&E Substation. This land is not suitable for inclusion in the Open Space Preserve as it will be graded and landscaped as part of the new substation.

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The Preserve would include a permanently protected riparian buffer along the north side of Sand Creek on the project site averaging 100 feet from the top-of-bank. The development plan for the project site shall include the transfer of the preserve averaging 100 feet from top-of-bank. The development plan for the project site shall include the transfer of the preserve into a dedicated parcel. A deed restriction shall be recorded over the parcel, ensuring that its ecological values would be maintained in perpetuity. An endowment fund shall be established by the project sponsor and held and administered by an appropriate public agency such as CDFW, to provide for the long-term maintenance, monitoring, and management of the on-site preserve including the plantings established in the Riparian Enhancement Plan (described in Mitigation Measure BIO-2b). As required by the City's General Plan, the site would be managed pursuant to a Resource Management Plan (a draft version of which is provided as Appendix K in the 2008 EIR).

Off-site Preservation. The project sponsor has purchased a 205.6-acre property known as the Ralph Property in eastern Contra Costa County as partial mitigation for impacts associated with the development of the project site. Approximately 166.6 acres would be used as off-site mitigation for biological impacts resulting from the current project. The Ralph property is located approximately two miles south of the Byron Airport, just outside the town of Byron, California, and is composed of two parcels: APN 001-031-018-3 (147.02 acres), and APN 001-031-019-1 (58.53 acres). Per an agreement with CDFW in 2006, 39 acres of the 205.6-acre Ralph property have already been designated as mitigation for impacts that occurred to burrowing owls at another of the project sponsor's project sites in Oakley. As mitigation compensation for the current project, the project sponsor shall donate the remaining 166.6 acres of the Ralph property to a qualified conservation organization to mitigate impacts to waters of the U.S. and State, and for habitat loss for the vernal pool fairy shrimp, vernal pool tadpole shrimp, California tiger salamander, western burrowing owl, and San Joaquin kit fox. The project sponsor shall establish an endowment fund to provide for the long-term maintenance and monitoring of the site. As required by the City's General Plan, the site shall be managed pursuant to a Resource Management Plan (Appendix K of the 2008 EIR). The 166.6 acres of the Ralph property that would be preserved as compensation for impacts to special-status grassland and vernal pool species is comprised of predominantly non-native grassland habitat (estimated at 136.6 acres), with the remaining acreage (estimated at 30 acres) supporting a mosaic of vernal pool, seasonal wetland channel, and seasonal alkali wetland habitats.

The Ralph site is within USFWS Critical Habitat for vernal pool crustaceans and within the mapped range of San Joaquin kit fox. The site also supports known populations of four species of vernal pool crustaceans including the vernal pool fairy shrimp; breeding and upland habitat for the California tiger salamander; and breeding and overwintering habitat for burrowing owls. Additionally, occurrences of California red-legged frog have been documented upstream of the site in a seasonal wetland channel that enters the site in the southwest corner. Adding to the resource value of the site, the Ralph property is located just outside the 2,000-foot protection zone established around the Byron Airport and therefore would remain part of a much larger preservation complex with regional importance as identified in the ECC HCP/NCCP. The HCP/NCCP indicates that there are already areas adjacent to the Ralph property that are preserved in perpetuity and whose resources will be managed for the benefit of native wildlife and plants (816 acres within the airport boundaries and 121 acres in a private mitigation bank). The Ralph property is immediately outside the indicated preserved areas and thus has regional significance as a property that can be added to existing preserved areas. Based on information provided by M&A, information contained in the HCP/NCCP, and on a reconnaissance-level site visit to the Ralph property by LOA staff in April 2007, the Ralph mitigation site appears to provide higher habitat value for special-status animals that occur on the site or its vicinity than the project site itself. Acreages of impacts and mitigations for the loss of habitat for individual special-status grassland and vernal pool species impacted by the project are provided in Table IV.I-3 of the 2008 EIR (page 265) and discussed in further detail in the text below.

Vernal Pool Crustaceans. The Ralph property occurs within vernal pool fairy shrimp critical habitat and, although no formal wetland delineation has been conducted on the site, the

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site contains a rough estimate of at least 9.0 acres of vernal pool habitat.²⁸ In 2006, M&A conducted wet season protocol-level surveys for federally-listed vernal pool crustaceans on the Ralph site. The site was found to support one listed fairy shrimp species – vernal pool fairy shrimp (*Branchinecta lynchi*), and three non-listed species – Lindahl's fairy shrimp (*Branchinecta mesovallensis*), and alkali fairy shrimp (*Branchinecta mackini*).²⁹ Vernal pool tadpole shrimp were not found to be present on the mitigation site. The current project would result in a loss of 0.32 acres of potential vernal pool crustacean habitat occurring on the project site, and would result in temporary impacts to another approximately 0.10 acres of such habitat occurring on the Ginocchio/Nunn site. The loss would be compensated by the preservation of an estimated 9.0 acres of occupied vernal pool crustacean habitat on the Ralph property, resulting in a loss: preservation ratio greater than 1:20 and well in excess of the 1:3 mitigation ratio generally required by the USFWS. Additionally, the project sponsor shall create another 0.91 acres of seasonal wetlands on the project site, resulting in a greater than 1:2 loss:creation ratio. The salvaging of topsoil from the seasonal wetlands is described in Mitigation Measure BIO-3.

California Tiger Salamander. The Ralph site is known to support breeding habitat for California tiger salamanders. On April 7, 2005, M&A staff observed numerous California tiger salamander larvae in one of the larger alkali wetlands located in the south central portion of the site confirming the presence of the species on the site.³⁰ The extent of the known breeding habitat on the site is estimated at approximately 6.0 acres, however, another large, approximately 4.0-acre wetland occurring in the northeastern portion of the site also supports proper hydrology for salamander breeding.³¹ Additionally, a CNDDB record from 1994 reports California tiger salamanders breeding in a stock pond located approximately 1,500 feet east of the Ralph site. As such, all 146.6 acres of the Ralph site are considered to be salamander breeding and upland habitat. Additionally, the Ralph site is surrounded by open rangeland, over 900 acres of which has already been preserved and is being managed for sensitive resources according to the HCP/NCCP, ³² which likely provides an additional significant amount of upland habitat for salamanders breeding on the Ralph site.

The project would result in a loss of 0.32 acres of seasonal wetland/vernal pool habitat, and 0.86 acres of manmade detention channel (totaling 1.18 acres) which provides low quality breeding habitat for salamanders as a result of the surrounding land uses (development, crop production); the shallow nature, small size and observed hydrologic regime of the seasonal wetlands; and the hydrologic regime and likely presence of predatory nonnative bullfrogs in the detention channel. Additionally, the current project would result in the loss of 149.6 acres of potential upland habitat on-site for tiger salamanders and the loss of another 4.4 acres of potential upland habitat on-site along with the loss of 1.18 acres of low quality potential tiger salamander breeding habitat on-site along with the loss of another 154 acres of upland habitat would be partially off-set by the preservation of 146.6 acres of combined breeding and upland habitat on the Ralph property, of which approximately 10 acres is wetland habitat that is either known to support breeding salamanders, or that has the proper hydrology to provide such habitat. Although 35.9 acres of grassland habitat

²⁸ Monk & Associates, 2007. *Biological Assessment, Aviano Project Site, City of Antioch, California.* July 5.

²⁹ Monk & Associates, 2006. Vernal pool crustacean surveys, Ralph property mitigation site, Contra Costa County, California. October 3, 2006. 19pp.

³⁰ Monk & Associates, 2007. op. cit.

³¹ Pers. comm. Geoff Monk. Monk & Associates, on July 11, 2007.

³² Jones & Stokes. 2006. Final East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan. October (J&S 01478.01) Prepared for the East Contra Costa County Habitat Conservation Plan Association. Prepared by Jones & Stokes, San Jose, CA.

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would be preserved on-site, the preserved acreage has not been considered in the mitigation of habitat impacts for tiger salamander species. The 39.5-acre area has been excluded because of the unlikely future preservation of off-site migration corridors to the Preserve area from known salamander breeding habitat in the site's vicinity, as well as the uncertainty that such off-site breeding habitat would be preserved in perpetuity.

The combination of breeding habitat in proximity to suitable upland habitat is most important for the ongoing viability of the tiger salamander populations. Breeding habitat on the Ralph property supports not just upland habitat on the site, but also many more acres of upland habitat on open rangeland surrounding the site. According to the HCP/NCCP, ³³ over 900 acres of such habitat is already preserved in the immediate vicinity of the Ralph property. However, given that the loss:preservation ratio for salamander habitat on the Ralph property alone is below the minimum by the resource agencies, or as derived from the HCP/NCCP, acreage on the Ralph property alone does not adequately mitigate this impact, and additional mitigation is required (see BIO-1b).

Burrowing Owl. As many as three pairs of burrowing owls have been observed to be present on the current project site; however, formal surveys for the burrowing owl species have not been conducted and, potentially, more individuals or pairs could be present. The project would result in the loss of 149.6 acres of known breeding and/or foraging habitat for burrowing owls on-site, as well as another 4.4 acres of potential breeding and/or foraging habitat off-site on the Royal Formosa/Chen and Ginocchio/Nunn properties. Typically, CDFW has required that 6.5 acres of habitat be preserved to compensate for each pair of owls, or each individual owl. Mitigation for the three pairs known to occur on the site based on this ratio would be 19.5 acres of preserved habitat.

Approximately 35.9 acres of grassland habitat would be preserved on-site, and another approximately 166.6 acres of combined breeding and foraging habitat would be preserved offsite on the Ralph property which is known to support breeding burrowing owls, totaling 202.5 acres, or more than 10 times the habitat preservation that would typically be required by CDFW for impacts to the three pairs of owls known to occur on the project site. Considered another way, preservation of approximately 202.5 acres of suitable foraging and nesting habitat would be adequate mitigation for up to 31 pairs of owls. M&A has confirmed the presence of at least three pairs of burrowing owls on the Ralph property over a twoyear period.³⁴ M&A staff has observed these owls on an on-going basis beginning in the fall of 2005 and continuing through the 2006 breeding season. Most recently the owls were observed in the non-breeding season in January 2007, which indicates that a burrowing owl population is firmly established on the Ralph property, and that they use the site both as breeding and wintering habitat. The entire Ralph site would be considered breeding and foraging habitat for the burrowing owl species.

San Joaquin Kit Fox. The site provides marginal habitat for San Joaquin kit fox because of surrounding land uses (i.e., residential, agricultural and commercial), and its location along the very northern edge of the USFWS mapped range for kit fox. The aforementioned factors make it unlikely that the project would directly impact the kit fox species. However, as the project sponsor has opted at this time not to conduct protocol-level studies to demonstrate that kit foxes do not occur on the site, presence is presumed. The project, therefore, would result in a loss of 154 acres of suitable foraging and denning habitat for kit foxes: 149.6 acres of grassland habitat on-site and another 4.4 acres of habitat off-site which is considered suitable kit fox habitat.

³³ Jones & Stokes. 2006. op. cit.
³⁴ Monk & Associates, 2007. op. cit.

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Although protocol-level studies for San Joaquin kit fox have not been conducted on the Ralph site, the site occurs well within the USFWS mapped range of the kit fox species, and the USFWS considers the site to be kit fox habitat based on M&A's informal consultation with USFWS in February 2006.³⁵ Additionally, eleven occurrences of kit fox have been documented in the vicinity of Byron in the period from 1987 to 2002, within one and six miles north and northwest of the Ralph site, with the latest of these sightings in 2002.^{36 37} Approximately 166.6 acres of grasslands and seasonal wetlands that provide habitat for the San Joaquin kit fox species would be preserved off-site on the Ralph property, and additionally, another 35.9 acres of grassland habitat would be preserved on-site, totaling 202.5 acres. Preservation of the on-site and off-site mitigation lands would result in a 1:1.3 (loss:preservation) ratio. The 1:1:3 ratio is below the minimum ratio of 1:3 (loss:preservation) required to mitigate this impact to a standards used by the USFWS, CDFW, and the ratio derived from the regional HCP/NCCP. Therefore, the preserved acreage on-site and off-site on the Ralph property would not adequately mitigate this impact, and additional mitigation is required (see BIO-1b).

Resource Management Plan (RMP). Pursuant to the City of Antioch's General Plan, Resource Management Section 10.3.2e and Section 10.4.2d, a Resource Management Plan (RMP) has been developed for the management of natural resources to be preserved both on-site within the open space and riparian buffer areas, and for the off-site mitigation lands (Ralph mitigation site and other lands that may be purchased by the project sponsor as mitigation pursuant to Mitigation Measure BIO-1b) (see Appendix K of the 2008 EIR). The project sponsor must be required to implement and adhere to all recommendations contained in the RMP.

<u>BIO-1b</u>: In order to achieve the 1:3 (loss:preservation) ratio for impacts to listed species grassland habitat on the project site (462 acres), the project sponsor shall purchase 315.4 acres of additional land that is suitable habitat for California tiger salamander. Additional mitigation lands must meet the criteria as described in Mitigation Measure BIO-1a. Of this additional 315.4 acres, at least 259.4 acres must also provide suitable foraging and denning habitat for San Joaquin kit fox as described in Mitigation Measure BIO-1a.

Alternatively, the sponsor may choose to purchase an equivalent amount of preservation credits in an accredited mitigation bank within eastern Contra Costa County that includes the City of Antioch in its service area. The alternative would result in a total of 462.00 acres of on-site and/or off-site habitat being preserved for these two species and a 1:3 (loss:preservation) ratio. Mitigation for both kit fox and California tiger salamander may be accomplished on the same acreage provided that 1) the mitigation site is determined to be suitable for both of these species by a qualified biologist in consultation with USFWS and CDFW and 2) the management and monitoring plan includes measures for conservation of both species and enhancement of habitat for both species. The additional acreage purchased by the project sponsor to mitigate habitat impacts for California tiger salamander must be grassland habitat that supports ground squirrels and either has known breeding habitat on-site or is within migration range of, and has preserved connectivity to, known breeding habitat for this species. The known breeding habitat must be located on a site that is preserved and managed for California tiger salamanders and other native wildlife and plants (i.e., regional or state park, mitigation or conservation bank, or other area preserved in a conservation easement). Additional acreage purchased by the project sponsor to mitigate for impacts for San Joaquin kit fox must be within the USFWS mapped range of the species, must have connectivity to areas where kit fox are known to occur, and provide suitable

³⁵ Monk & Associates, 2007. op. cit.

³⁶ Monk & Associates, 2007. op. cit.

³⁷ EDAW. 1998. op. cit.

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foraging and denning habitat. The project sponsor must either establish a conservation easement on the additional mitigation lands to preserve them in perpetuity as wildlife habitat or donate the additional mitigation lands acres to a qualified conservation organization. The project sponsor must also establish an endowment fund to provide for the long-term management, maintenance, and monitoring of the mitigation site.

<u>BIO-1c</u>: The installation of the sewer pipeline along the eastern boundary of the Ginocchio/Nunn property may result in temporary impacts to seasonal wetlands that provide habitat for special-status vernal pool crustaceans, estimated at less than 0.10 acres. To the maximum extent possible, wetlands on the Ginocchio/Nunn property shall be avoided during pipeline installation. A qualified biologist shall stake a minimum buffer of 25 feet along the edge of all wetlands adjacent to the pipeline corridor prior to ground disturbance and pipeline excavation activities. Exclusionary fencing shall be erected along the edge of the buffer to ensure wetlands are protected from construction related impacts. A biological monitor shall inspect the exclusionary fencing on a twice-weekly basis during the pipeline installation phase to ensure it remains in place and that no intrusion into the avoided wetlands occurs. Soil contours within the pipeline corridor shall be restored to pre-project conditions following installation of the pipeline.

If wetlands on the Ginocchio/Nunn property cannot be avoided during pipeline installation, then prior to any grading and excavation activities related to the installation, the topsoil of all wetland areas to be impacted shall be salvaged and stockpiled, and the configuration of the impacted wetlands shall be mapped so the wetlands can be re-contoured to preproject conditions after the completion of the pipeline installation. Once pipeline installation is completed, the wetlands shall be re-contoured on the site and salvaged topsoils shall be re-deposited in the wetlands.

<u>BIO-1d</u>: As an alternative to purchasing land or purchasing habitat credits at a mitigation bank, the project sponsor may negotiate to pay development fees to the ECC HCP/NCCP Implementing Entity. The individual project buy-in to the HCP/NCCP would provide mitigation fees for the purpose of implementing the ECC HCP/NCCP. Based on the 2008 fee schedule, assuming 154 acres of permanent disturbance and impacts to 0.42 acres of seasonal wetlands, the project would incur development fees and wetland fees of approximately \$3,797,000.00. However, as the project site falls outside the area covered by the HCP, the project sponsor would need to negotiate a fee which is mutually agreeable to the Implementing Entity, USFWS, and CDFW.³⁸ If the project sponsor chooses to pursue the negotiation mitigation option, the project sponsor shall provide the City with evidence that the project has been accepted for individual coverage under the ECC HCP/NCCP and evidence of payment of the applicable development and wetland mitigation fees prior to issuance of a grading permit. (LTS)

<u>BIO-2a</u>: To compensate for the loss of 0.86 acres of marginal dispersal habitat for the frog within the detention channel and approximately 0.03 acres of known frog dispersal habitat within the Sand Creek channel, approximately 1.0 acre of such habitat shall be preserved on-site within the Sand Creek riparian buffer area. Additionally, as part of the project sponsor's mitigation for the loss of jurisdictional waters of the U.S. and State on the project site, the project sponsor shall create 0.91 acres of seasonal pond habitat on the Ralph site within and/or adjacent to the seasonal wetland drainage on the site, which would be designed to provide suitable breeding habitat for red-legged frogs. The created pond habitat will be managed to support breeding habitat for red-legged frogs pursuant to the RMP (see Mitigation Measure BIO-1 and Appendix K). Management of the site must include such

³⁸ Kopchick, John, 2008. Senior Planner, Contra Costa County Conservation and Development Department. Personal communication with Sara Welch, Mark Thomas and Company, Contract Planner to the City of Antioch. September 2.

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measures as draining ponds as necessary to control predators such as fish and bullfrogs. This created wetland habitat would provide an opportunity for the red-legged frog to become established on the mitigation site and in its immediate vicinity.

<u>BIO-2b</u>: The project proponent shall provide the City with a map showing the extent of encroachment of project development, including the detention basins, landscaped areas, roads and trail, that occur within 100 feet of the dripline of riparian vegetation or the creek bank, whichever is greater, as well as the acreage of such encroachment. To compensate for such encroachment, the project proponent shall enhance riparian habitat on-site within the 4.7 acre riparian set-back area at a 1:1 (loss:enhancement) ratio. A Riparian Enhancement Plan shall be developed by a qualified Plant or Restoration Ecologist in consultation with the USFWS and CDFW. A copy of the Enhancement Plan shall be provided to the City. At a minimum, the Plan shall include:

- A Planting Plan which provides the location of on-site Enhancement Areas within the 4.7 acre designated riparian buffer and the number, location, planting container size, and species of trees and shrubs to be utilized in the enhancement effort.
- A Maintenance Plan which provides details on irrigation, weed abatement and other maintenance activities to be conducted in the Enhancement Area(s) during the monitoring period.
- A Monitoring Plan which provides specific measurable performance and final success criteria, and the methods that will be used to monitor these criteria. Performance criteria shall be monitored on an annual basis for a minimum of five years. The Monitoring Plan shall also include specific remedial actions to be taken should annual monitoring indicate that the Enhancement Area is not meeting the annual performance criteria during each annual monitoring period, or doesn't meet the final success criteria at the end of the minimum five-year monitoring period. One of the remedial actions will include an extension of the monitoring period until the final success criteria are met.

Results of the annual monitoring effort and any remedial actions to be taken to rectify situations where the Enhancement is not meeting the annual performance criteria or final success criteria shall be provided to the City by an annual monitoring report. (LTS)

<u>BIO-3a</u>: The project sponsor shall consult with the USFWS and CDFW regarding impacts to federal and State listed species from the current project. The project sponsor shall obtain the appropriate take authorization (Section 7 Biological Opinion and/or 2081 permit) from the USFWS and CDFW prior to initiation of construction activities. The project sponsor shall comply with all terms of the endangered species permits including any mitigation requirements and provide proof of compliance to the City prior to issuance of a grading permit.

<u>BIO-3b</u>: Project grading shall only occur during the dry season (April 15 – October 30) and only after a qualified biologist has determined that all wetland areas of the site providing potential habitat for vernal pool crustaceans are dry, and individuals of these species, if present, would be in cyst form. Prior to filling the wetlands, the topsoil of all permanently impacted wetlands shall be salvaged and deposited in appropriate seasonal wetland habitats to be created on the Ralph mitigation property. Additionally, should pipeline installation on the Ginocchio/Nunn parcel result in temporary impacts to wetlands on the site, prior to the installation, topsoils in areas of these wetlands to be impacted shall be salvaged and then redeposited in the wetlands have been re-sculpted on the site pursuant to Mitigation Measure BIO-1c.

BIO-3c: California tiger salamanders that are in burrows or soil cracks on the project site would be impacted by ground disturbing activities. California tiger salamanders may also

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become trapped in trenches excavated during project construction. In order to minimize and avoid mortality of California tiger salamanders on the site, as well as in the vicinity of off-site impacts occurring on the Royal Formosa/Chen and Ginocchio/Nunn parcels, the following measures shall be implemented:

- Prior to project-related ground disturbance activities occurring on-site or off-site, an employee training program for operators/contractors shall be conducted by a qualified biologist to explain the endangered species concerns at the project site and the measures being implemented to minimize and avoid mortality to the listed species.
- All project-related grading activities shall be conducted during the summer months after all potential breeding sites on and in the vicinity of the project site have dried and when California tiger salamanders are not be breeding or migrating.
- A qualified biologist shall be present at the locations of all on- and offsite project-related ground disturbance activities to monitor these activities and to salvage California tiger salamanders that may be unearthed during ground disturbing activities. Salvaged California tiger salamander may be turned over to CDFW personnel for relocation, or the relocation of the CTS may be handled by a 10(a)(1)(A) permitted biologist as approved and directed by the USFWS and CDFW. Terms of the salvage shall be established in consultation with USFWS and CDFW prior to initiation of construction activities.
- The sponsor shall develop and implement a plan to prevent salamanders from moving onto the construction areas during grading or construction activities and to monitor the site during construction. The plan shall be approved by the City, USFWS, and CDFW prior to the initiation of construction activities.
- Best Management Practices also shall be implemented to minimize the potential mortality, injury, or other impacts to California tiger salamanders. Erosion control materials shall not include small-mesh plastic netting, which could result in entanglement within the material and death of California tiger salamanders. All trash items shall be removed from the project site to reduce the potential for attracting predators of California tiger salamanders, such as crows and ravens which could scavenge uncovered salamanders.

<u>BIO-3d</u>: California red-legged frogs are known to be present on-site within Sand Creek and may also occur from time to time in the manmade detention channel. To avoid harm or mortality to California red-legged frogs to the greatest extent practicable, the following measures shall be implemented:

- Any construction-related activity that occurs within either the manmade detention channel or the Sand Creek channel, or within 300 feet of the top of the bank of either of these features, including project-related activities occurring on the Royal Formosa/Chen and Ginocchio/Nunn properties, shall only occur during the dry season (April 15 to October 30) when the frog would most likely have moved off-site to deeper pool habitats upstream of the site in Sand Creek.
- No more than 48 hours prior to such construction-related activities described above, a qualified biologist shall survey Sand Creek and the detention channel, including at least 100 feet upstream and downstream of the construction site to determine if frogs are present and may be impacted by the activities.
- Prior to any ground disturbance occurring within 300 feet of Sand Creek or the manmade detention channel, an employee training program for operators/contractors shall be conducted by a qualified biologist to explain the endangered species concerns at the project site. The education/training program must include a discussion of the general protection measures to be implemented to protect the frog and minimize take, and a delineation of the limits of the work area.
- The project sponsor shall isolate the work area with suitable amphibian exclusion fencing that would block the movement of California red-legged frogs from entering the work area. The fence shall be installed prior to the time any site grading or other construction-related activities are implemented. The fence shall remain in place during site grading or other construction-related activities to prevent frogs from entering the project site work areas. Exclusion fencing shall consist of a 4-foot wall of ¹/₄-inch mesh, galvanized wire (i.e., hardware cloth). Initially, staking would be installed along the route of the exclusion fencing in a 4-inch deep trench. Then, the bottom of the fence

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shall be firmly seated in the trench. The fencing above the ground shall be anchored to metal staking with wire. Finally, the top 10 inches or less shall be bent over in a semicircle towards the outside of the fence to ensure that the fence cannot be climbed.

• A qualified biologist possessing the proper authorizations from USFWS and CDFW shall be on-site during all construction and grading activities occurring within 300 feet of Sand Creek or the detention channel to conduct daily inspections of the fencing and to ensure that stranded frogs are relocated back to the stream channel. The biological monitor shall be responsible for ensuring that the frog fencing is not compromised, and shall notify both the on-site contractor and supervisor when fencing needs to be repaired.

• All trash that might attract predators to the project site shall be properly contained and removed from the site and disposed of regularly. All construction debris and trash shall be removed from the site when construction activities are complete. All fueling and maintenance of equipment and vehicles, and staging areas shall be at least 75 feet from the top of the bank of Sand Creek or the detention channel. The construction personnel shall ensure that contamination of California red-legged frog habitat does not occur and shall have a plan to promptly address any accidental spills.

<u>BIO-3e</u>: Within 24 hours of ground disturbance occurring within the manmade detention channel or the Sand Creek channel on the project site, or within 50 feet of the top of the banks of either of these areas, a qualified biologist shall survey the work area for western pond turtles. If turtles are found within the work area, they shall be relocated to other suitable habitat at least 300 feet up- or down-stream from the work area by a qualified biologist with the appropriate approvals from CDFW shall conduct all the relocations.

<u>BIO-3f</u>: Burrowing owls or their nests shall not be disturbed during the breeding season (February 1 through August 31). In the non-breeding season (September 1 to January 31), or at such time as all young owls have been determined by a qualified biologist to have fledged and be foraging independently, owls may be passively evicted from the project site's development area by a qualified biologist. Passive eviction methods shall be implemented pursuant to CDFW guidelines, and all eviction activities shall be coordinated with the CDFW prior to disturbance of active burrows. Once owls are evicted from the site, a qualified biologist shall develop a plan for management and on-going biological monitoring of the site to be implemented by the project sponsor to preclude owls from becoming re-established on the site. If construction or ground disturbance activities commence on the site prior to a passive eviction of owls, the CDFW shall be notified and a qualified biologist shall implement a routine monitoring program and establish a fenced exclusion zone around each occupied burrow in which no construction-related activity shall occur until the burrows are confirmed to be unoccupied. Disturbance shall not occur within 160 feet (50 meters) of an occupied burrow during the non-breeding season (September 1 through January 31) and within 250 feet (75 meters) of an occupied burrow during the breeding season (February 1 through August 31).

<u>BIO-3g</u>: To avoid harm or mortality to American badgers, a qualified biologist shall survey the site for denning badgers on the project site, and in areas of off-site temporary or permanent project impacts. The survey may be conducted at the same time that surveys for denning kit foxes are conducted (see Mitigation Measure BIO-3h below). If potential badger dens are found, they shall be monitored by the biologist to determine their status. If an active badger den is identified during pre-construction surveys within or immediately adjacent to the construction envelope, a no disturbance buffer zone consisting of a 300-foot circumference around the den (or distance specified by the CDFW) shall be established. Because badgers are known to use multiple burrows in a breeding burrow complex, a biological monitor shall be present on-site during construction activities to ensure the buffer is adequate to avoid direct impact to individuals or den abandonment. The monitor shall remain on-site until young are determined to be of an independent age and construction activities would not harm individual badgers.

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<u>BIO-3h</u>: Pre-construction surveys for kit fox dens shall be conducted no more than 30 days prior to any construction-related activities. A qualified biologist shall conduct preconstruction kit fox surveys on the project site, and in areas of off-site temporary or permanent project impacts. The primary objective is to identify kit fox habitat features (potential dens and refugia) on the project site and evaluate use by kit fox. If an active kit fox den is detected within (or immediately adjacent to) the area of work, the USFWS shall be contacted immediately to determine the best course of action. The project sponsor will implement all measures specified by the USFWS and CDFW in the Biological Opinion and 2081 permit. All potential dens shall be monitored prior to destruction according to the terms of the *Standardized Recommendations for Protection of the Kit Fox Prior to or During Ground Disturbance* (USFWS 1999). If no kit fox activity is detected during den monitoring and destruction then a written report shall be submitted to the USFWS within five days following completion of the surveys. The project sponsor shall follow the *Standardized Recommendations for Protection of the Kit Fox Prior to or During Ground Disturbance* (USFWS 1999).³⁹ The recommendations include the following:

- Preconstruction surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities or any project activity likely to impact the San Joaquin kit fox.
- All construction-related activities shall be preceded by a tail-gate session, the primary purpose of which is to describe the importance of implementing construction related activities that would minimize potential construction related impacts to kit foxes.
- Project-related vehicles shall observe a 20-mph speed limit in all project areas, except on city or county roads; this is particularly important at night when kit foxes are most active. To the extent possible, night-time construction and traffic should be avoided. Off-road traffic outside of designated project areas should be prohibited.
- To prevent inadvertent entrapment of kit foxes or other animals during the construction phase of the project, all excavated, steep-walled holes or trenches more than 2-feet deep shall be covered at the close of each working day by plywood or similar materials, or provided with one or more escape ramps constructed of earth fill or wooden planks. In addition, these structures shall be thoroughly inspected by properly trained construction personnel each morning for kit fox or other species. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals.
- All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods shall be thoroughly inspected by properly trained construction personnel for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in anyway. If a kit fox is discovered inside a pipe, that section of pipe shall not be moved until the USFWS has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved once to remove it from the path of construction activity.
- All food related trash items such as wrappers, cans, bottles, food scraps shall be disposed of in a closed container and removed at least once a week from a construction or project site and signs shall be placed at the construction site that prohibit feeding wildlife.
- Firearms shall not be allowed on the project site.
- To prevent harassment, mortality of kit foxes or destruction of dens by dogs or cats, pets shall not be permitted on project sites.
- Use of rodenticides and herbicides in project areas shall be restricted.
- A representative shall be appointed by the project sponsor who would be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped individual (the representative's name and address shall be provided to the USFWS).

³⁹ USFWS. 1999. Standardized Recommendations for Protecting Kit Fox Prior to or During Ground Disturbance Activities.

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• Upon completion of the project, all areas subject to temporary ground disturbance, including storage and staging areas, temporary roads, pipeline corridors, etc., shall be recontoured if necessary, and revegetated to promote restoration of the area to pre-project conditions.

- In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the USFWS should be contacted for advice.
- Any contractor, employee(s), or agency personnel who inadvertently kills or injures a San Joaquin kit fox shall immediately report the incident to their representative. The representative shall contact the CDFW immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916)445-0045.
- The Sacramento Field Office of the USFWS and CDFW shall be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, location of the incident or of the finding of a dead or injured animal and any other pertinent information. (LTS)

<u>BIO-4a</u>: A qualified biologist shall conduct a pre-construction survey for nesting special-status raptors and loggerhead shrikes within 30 days prior to the commencement of tree trimming, site preparation, or construction related activities on the project site or at off-site project areas. The survey shall include all impacted areas within 250 feet of riparian vegetation along Sand Creek or within 250 feet of trees occurring in the area south of the creek, if this disturbance is to occur during the breeding season (February 1 to August 31). If nesting birds are detected, an appropriate fenced construction buffer shall be established around the nest. The actual size of the buffer shall be determined by the biologist in consultation with CDFW and would depend on the species, topography, and type of construction activity that would occur in the vicinity of the nest. The fenced construction buffers shall be monitored weekly by the biologist and shall remain in effect until the young have fledged the nest and are foraging independently or the nest is no longer active. Construction surveys shall not be allowed with the buffer zones until the young have fledged from the nest and are foraging independently or the nest is no longer active. Preconstruction surveys shall be repeated at 30 day intervals until construction activities are initiated.

<u>BIO-4b</u>: A qualified biologist shall conduct pre-construction surveys for nesting tricolored blackbirds within the manmade detention channel within 30 days prior to the commencement of any activities occurring within or within 100 feet of the detention channel or within the grasslands of the site, if this disturbance would occur during the passerine (songbird) breeding season, March 1 to August 31. If nesting tricolored blackbirds are detected, an appropriate fenced construction buffer shall be established around the nest. The actual size of the buffer shall be determined by the biologist in consultation with CDFW depending on the species, topography, and type of construction activity that would occur in the vicinity of the nest. The fenced construction buffers shall be monitored weekly by the biologist and shall remain in effect until the young have fledged the nest and are foraging independently or the nest is no longer active. Preconstruction surveys shall be repeated at 30-day intervals until construction activities are initiated.

<u>BIO-4c</u>: A qualified biologist shall conduct pre-construction surveys for nesting northern harriers, and nesting or roosting burrowing owls, 30 days prior to the commencement of ground disturbance activities in all grassland habitats occurring within 250 feet of such disturbance. If nesting birds are detected, an appropriate fenced construction buffer shall be established around the nest. The actual size of the buffer shall be determined by the biologist in consultation with CDFW and would depend on the species, topography, and type of construction activity that would occur in the vicinity of the nest. The fenced construction buffers shall be monitored weekly by the biologist and shall remain in effect until the young have fledged the nest and are foraging independently or the nest is no longer active. Preconstruction surveys shall be repeated at 30 day intervals until construction

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activities are initiated. If roosting burrowing owls occur on the site outside the raptor breeding season (i.e. outside of the period from February 1 to August 31), the project proponent may proceed with a passive eviction as discussed in Mitigation Measure BIO-3f.

<u>BIO-4d</u>: The project sponsor shall consult with the CDFW regarding impacts to Swainson's hawk from the current project. The project sponsor shall obtain the appropriate take authorization (2081 permit) from the CDFW prior to initiation of construction activities. The project sponsor shall comply with all terms of the endangered species permits including any mitigation requirements and provide proof of compliance to the City prior to issuance of a grading permit. Implementation of Mitigation Measures BIO-4a, 4b, 4c, and 4d would reduce impacts as a result of destruction or abandonment of special-status bird nests to a less-than-significant level. (LTS)

<u>BIO-5a</u>: To mitigate for the loss of 0.17 acres of jurisdictional Waters of the U.S., 0.40 acres of jurisdictional Waters of the State, and approximately 0.03 acres of riparian areas under CDFW jurisdiction on the project site, the project sponsor shall preserve approximately 0.61 acres of jurisdictional tributary waters within the Sand Creek channel on-site, as well as preserve and create jurisdictional seasonal wetland habitat off-site on the 166.6-acre Ralph mitigation property. Although formal delineation has not been conducted on the Ralph property, the site supports an estimated 30 acres of combined vernal pool, seasonal wetland channel, and seasonal alkali wetland habitats that would be preserved in perpetuity on the site. Additionally, the project sponsor shall create 0.91 acres of seasonal wetland habitat on the Ralph site to mitigate at a 1:2.8 (loss:creation) ratio the loss of 0.32 acres of seasonal wetland habitat on the project site.

<u>BIO-5b</u>: Prior to issuing a grading permit, the project sponsor shall obtain the appropriate State and federal permits authorizing the fill of wetlands that are waters of the State and U.S. The project sponsor shall provide proof to the City of compliance with the terms and conditions of the permits, including all mitigation requirements, prior to issuance of the grading permit. (LTS)

<u>BIO-6</u>: If grading or construction begins within the breeding season for passerines (songbirds) and other common bird species (March – August), a qualified biologist shall conduct surveys of the grassland, ruderal and riparian habitats on-site and in all off-site impact areas to identify any bird species that are nesting in these areas. The surveys shall be carried out no sooner than two weeks prior to the start of construction. Impacts to active nests shall be avoided by establishing a fenced exclusion zone around all active nests, within which construction-related activities shall be prohibited until nestling birds have been determined to have fledged and be foraging independently or the until the nest is no longer active. Preconstruction surveys shall be repeated at 30-day intervals until construction activities are initiated. (LTS)

<u>BIO-7</u>: A formal tree survey shall be conducted by a qualified arborist or botanist to determine the sizes, locations, and species of all trees that would be impacted by the pipeline installation. Trees covered under the tree ordinance that would be removed as a result of pipeline construction shall be replaced at a 3:1 mitigation to loss ratio for "mature trees" and at a 2:1 mitigation to loss ratio for "established trees" to offset the temporal loss of these mature trees on the site. All mitigation trees shall consist of native trees indigenous to the region. Trees planted as mitigation can be incorporated into the landscape plans and/or the Riparian Enhancement Plan for the project site. (LTS)

Special Mitigation Measures: None required.
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				J. Public Servic	es
(1) Police services.	LS (p. 289)	Νο	No	No	The 2008 EIR determined that the proposed age-restricted project would have less-than-significant impacts to police services. The Antioch PD is responsible for providing law enforcement services within the City of Antioch. The Antioch PD operates out of the police headquarters at 300 L Street, and is currently budgeted for 124 sworn and 59 non-sworn employees, however, actual staffing levels are lower. ⁴⁰ As noted previously,
					Policy 3.5.3.1 states that the City strives to maintain a force level within a range of 1.2 to 1.5 officers, including community service officers assigned to community policing and prisoner custody details, per 1,000 population. The City of Antioch's current population is 107,100, ⁴¹ which results in a current staffing ratio for the Antioch PD of approximately 1.0 per 1,000 residents. According to the current Antioch General Plan EIR, population growth has created an increased demand for police-related services, and consequently a need for additional Antioch PD staff. The General Plan EIR identified that without new funding sources the changes in the staffing ratio is unlikely; however, as population increases, additional officers would be hired to maintain the required ratio. ⁴² In addition, the proposed project's Development Agreement would require a financing mechanism for the provision of police services to the project site.

 ⁴⁰ City of Antioch. About Antioch Police Department. Available at: http://www.ci.antioch.ca.us/CityGov/Police/about_apd.htm. Accessed on March 9, 2015.
 ⁴¹ United States Census Bureau. Antioch (city), California Quickfacts. Available at: http://quickfacts.census.gov. Accessed on March 10. 2015.
 ⁴² City of Antioch. City of Antioch General Plan EIR [pg. 4.11-1]. July 2003.

			Aviano Project En	vironmental Imp	pacts Comparison
	2008 EIR	Do Proposed Changes Involve New or More Severe	Any New Circumstances Involving New Significant Impacts or Substantially More	Any New Information Requiring New Analysis or	
Impact	Conclusion	Impacts?	Severe Impacts?	Verification?	Discussion
(2) Fire protection.	LS (p. 289)	No	No	No	current project and no new impacts would be generated. Similar to the 2008 Aviano Adult Community Project, the current project would result in an increased demand for fire protection and emergency medical services to accommodate the proposed residential development. The current average response time to the project site from Station 88 is approximately 6½ to 7½ minutes, which is within the National standard of eight minutes 80 percent of the time, but does not meet the City's General Plan standard of five minutes 90 percent of the time. In addition, a full alarm fire at the project site, requiring response from all five fire stations currently exceeds the 8-minute response time by one to 10 minutes. The current project would place an additional demand on the Contra Costa County Fire Protection District (CCCFPD) services and contribute to response times within southeast Antioch that would not meet established national or local standards.
					However, as development occurs within the Sand Creek Focus Area, the CCCFPD plans to construct a new fire station to serve the area. Construction of a new fire station is required to maintain acceptable response times within this area of the City. Development of the project site with up to 533 residential units would exacerbate the need for this new fire station. The CCCFPD levies a fire protection fee on new development to pay for the construction of new fire stations. The project applicant would be required to pay \$591 per residential unit, or approximately \$315,003 for development of 533 residential units on the project site. The fee would provide the project's pro-rata fair share towards the construction of the new fire station. Once this fire station is constructed, the CCCFPD would be able to maintain adequate response times to the project site; however the anticipated dates of construction and operation of this station are unknown at this time. Therefore, a <i>less-than-significant</i> impact would result, similar to the 2008 Aviano Adult Community Project
(3) Parks and recreation.	LS (p. 290)	No	No	No	Development of the 2008 Aviano Adult Community Project and the current project would result in the construction of up to 533 residential units. It

			Aviano Project En	vironmental Im	oacts Comparison
			Any New	-	
		Do Proposed	Circumstances		
		Changes	Involving New	Any New	
		Involve New	Significant Impacts	Information	
		or More	or Substantially	Requiring New	
	2008 EIR	Severe	More	Analysis or	
Impact	Conclusion	Impacts?	Severe Impacts?	Verification?	Discussion
					should be noted that the current project may increase park use with the change to non-age restricted homes. Similar to the 2008 Aviano Adult Community Project, each lot would have a private backyard and front landscaped area, which would be maintained by each individual homeowner Article 10, Regulations for the Dedication of Land, the Payment of Fees, or Both, for Park and Recreational Lands, of Chapter 4 of the Antioch Zoning Ordinance outlines the parkland dedication requirements for new residential subdivisions. According to the table in Section 9-4.1004 of the Zoning Ordinance, 0.015 acres of parkland are required for each single-family detached dwelling unit. Based on this requirement, the project would require 8.025 acres of parkland. It should be noted that Section 9-4.1010 of the Zoning Ordinance outlines potential credits for private open space within new developments which is usable for active recreational uses. The project will provide 16.9 acres of park, including basins.
					The current project provides parks, open space and landscaped areas. The additional residential population and parkland located on the project site would not substantially increase or decrease the current parkland/population ratio. The current project would pay the in-lieu fees to the City for any required parkland acreage. Residents of the current project would be expected to make some use of community and regional parks in the areas surrounding the project site. However, the increase in usage would not be such that physical deterioration of existing facilities would occur or be accelerated, given the abundance and proximity of intensive on-site recreational facilities tailored specifically for project residents. Therefore, a <i>less-than-significant</i> impact would result, similar to the 2008 Aviano Adult Community Project

			Aviano Project En	pacts Comparison	
Impact	2008 EIR Conclusion	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Discussion
(4) Libraries.	LS (p. 290)	No	No	No	The current project would add approximately 1,723 new residents to southeast Antioch, thereby increasing demand for library services. However, according to page 190 of the 2008 EIR, the demand for library services would be met by existing and planned library facilities. Similar to the 2008 Aviano Adult Community Project, the current project would not itself require the construction of new library facilities and would not cause or accelerate the physical deterioration of existing library facilities. Therefore, a <i>less-thansignificant</i> impact would result, similar to the 2008 Aviano Adult Community Project.
(5) Schools.	N/A	No	No	Yes	 Because the 2008 Aviano Farms Adult Community was an age-restricted development, the 2008 EIR did not include a discussion of school impacts. Using the Antioch Unified School District's student generation rates, the proposed project's single-family dwelling units would generate an estimated 166 new elementary school students, 80 new middle school students, and 112 new high school students for a total of 358 new students.⁴³ The new students generated by the proposed project would add additional students to schools capacity. It should be noted that the Antioch Unified School District currently owns property within the Sand Creek Focus Area for the development of a future school. The applicant is required to pay school impact fees. Proposition 1A/SB 50 prohibits local agencies from using the inadequacy of school facilities as a basis for denying or conditioning approvals of any "[] legislative or adjudicative actinvolvingthe planning, use, or development of real property" (Government Code 65996(b)). Satisfaction of the Proposition 1A/SB 50 statutory requirements by a developer is deemed to be "full and complete mitigation." Therefore, the project would have a <i>less-thansignificant</i> impact regarding the need for the construction of new school facilities which could cause significant environmental impacts.

⁴³ Antioch Unified School District, 2008.

			Aviano Project En	vironmental Im	pacts Comparison
Impact	2008 EIR Conclusion	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Discussion
2008 EIR Mitigation N	Measures: None	e required.	· •		
Special Mitigation Me	easures: None re	equired.			
			К. С	Itilities and Infras	tructure
(1) Water.	LS (p. 300)	No	No	Yes (analysis shows that original environmental conclusion of LS remains the same)	The City of Antioch's 2010 Urban Water Management Plan (UWMP) showed a water supply surplus in Normal and Single Dry Years through the year 2030, but shows a supply deficit during Multiple Dry Years. The Project's potable water demand is not specifically designated in the City's 2010 UWMP, but is included as a planned development area within the Sand Creek Focus Area. The projected water demand for the current project is based on the City's water demand factors for single family residences that were documented in the City's 2010 UWMP (Tables 3-8 and 3-9) and an estimate of the required irrigation demand based on the City's Water Efficient Landscape Ordinance. According to the Water Supply Assessment (WSA) performed for the current project, the total projected annual water demand for the current project is approximately 330 acre-feet per year (AFY), assuming an unaccounted for water value of three percent of total water produced. ⁴⁴ The 2008 EIR determined that the 2008 Aviano Adult Community Project would require approximately 240 AFY. Although the current project is not specifically identified in the City's 2010 UWMP, the Sand Creek Focus Area is included, and the City's growth projections (an additional 17,771 people from 2010 to 2035) and water demand projections (an additional 2,587 AFY from 2010 to 2035) accommodate the current project's potential population of 1,679 people and projected water demand of 330 AFY. It should be noted that, applying the City's 3.22 persons per household statistic to the current project's 533 units

⁴⁴ West Yost Associates. Water Supply Assessment for Aviano Farms. January 2015.

			Aviano Project En	pacts Comparison	
Impact	2008 EIR Conclusion	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Discussion
					 the current project would result in a service population of 1,723 persons. According to the WSA, the current project, if approved by the City, is capable of being served by the City from the City's existing and future portfolio of water supplies. The water supply for the project will have the same water supply reliability and water quality as the water supply available to each of the City's other existing and future water customers. A comparison of the City's projected water supplies and demands is shown in Table 7-1 of the WSA for Normal, Single Dry, and Multiple Dry Years. Table 7-1 is based on Tables 5-8, 5-9, and 5-10 from the City's 2010 UWMP. The positive difference between supply and demand in Table 7-1 indicates that, in average precipitation years, the City will have sufficient water to meet the customers' needs through 2035. As indicated in Table 7-1, a projected supply deficit may exist during the third year of a multi-year drought. The projected water supply deficit is approximately nine percent of supply in 2035. The deficit would be closed by the City's short-term water demand reduction measures. Therefore, a <i>less-than-significant</i> impact would result, similar to the 2008 Aviano Adult Community Project.
(2) Wastewater.	LS (p. 300)	No	No	No	The Delta Diablo WWTP NPDES Permit allows an average dry weather flow of 16.5 million gallons per day (MGD). An EIR for the expansion of the wastewater treatment plant capacity to an average dry weather flow of 22.7 MGD was completed in April 1988. During the most recent reporting period, 2012, the average dry weather flow influent to the treatment plant was 12.7 MGD. In 2000 and 2005, the average dry weather flow influent to the treatment plant was 13.5 MGD and 14.2 MGD, respectively. ⁴⁵ The Delta Diablo Sanitation District (DDSD) uses a wastewater generation rate of 200 gallons per day per residential unit. At this rate, the current project would generate 107 000 gallons (0 11 MGD) of wastewater per day. This represents

⁴⁵ According to Patricia Chapman, Associate Engineer, Delta Diablo Sanitation District. *Correspondence with Nick Pappani, Vice President of Raney Planning & Management, Inc.*, October 3, 2013.

Aviano Project Environmental Impacts Comparison								
	2008 EIR	Do Proposed Changes Involve New or More Severe	Any New Circumstances Involving New Significant Impacts or Substantially More	Any New Information Requiring New Analysis or				
Impact	Conclusion	Impacts?	Severe Impacts?	Verification?	Discussion			
					and less than one percent increase in the average dry weather how to the wwirP and less than one percent of the WWTP's existing capacity. It should be noted that the calculations in the 2008 EIR relating to sewer generation would still be applicable to the current project as the wastewater generation rate is based on standard residential units. The additional wastewater generated by the current project would not exceed the capacity of the WWTP. As a result, the current project would not cause any wastewater treatment requirements established by the RWQCB to be violated. In addition, the project sponsor would pay a sewer connection fee to DDSD for the current project. This fee would contribute to future WWTP expansions, as necessary to serve projected development.			
					The current project would connect to the existing 24-inch main sanitary sewer pipeline located in Heidorn Ranch Road, south of EBMUD. The pipe would be extended south along the future alignment of Heidorn Ranch Road and through the center of the Vineyards at Sand Creek project (Ginochio property) along the main promenade; then south in Hillcrest Avenue and west in Sand Creek Road. The new sanitary sewer line would serve both the project site as well as the AUSD Dozier/LibbeyMedical High School. It should be noted that the proposed Vineyards at Sand Creek Project, adjacent to the Aviano Farms site, also requires extension of the existing 24-inch sanitary sewer pipe, located at Heidorn Ranch Road. Therefore, this sewer improvement is also being evaluated in the Vineyards at Sand Creek EIR. Wastewater would be conveyed from the 24-inch main pipeline to either the Antioch or Bridgehead pump stations, in north Antioch. These pump stations are expected to have the capacity to meet the increased demand. Therefore, a <i>less-than-significant</i> impact would result, similar to the 2008 Aviano Adult Community Project.			
(3) Solid waste.	LS (p. 301)	No	No	No	According to the $\overline{\text{CIWMB}}$, the average single-family residence produces 10 pounds of solid waste per day. It should be noted that the solid waste generation rate would still be applicable to the current project as the generation rate is based on standard single-family residential units. As such,			

Aviano Project Environmental Impacts Comparison									
Impact	2008 EIR Conclusion	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Discussion				
					the proposed 533 residences would produce approximately 5,350 pounds (2.7 tons) of waste per day. The permitted daily throughput for the Contra Costa Transfer and Recovery Station is 1,900 tons per day and the permitted throughput for the Keller Canyon Landfill is 3,500 tons per day. The increase in waste associated with the current project would represent approximately one tenth of one percent of the daily permitted throughput for the Transfer Station and less than one tenth of one percent of the daily capacity of the landfill. The increase in solid waste generated by the current project would be minimal and would be accommodated by existing landfill capacity. Similar to the 2008 Aviano Adult Community Project, the addition of project waste would not diminish the anticipated life span of the landfill. In addition, Allied Waste Services would provide recycling services and yard waste provider to be out of compliance with applicable statutes and regulations related to solid waste, resulting in a <i>less-than-significant</i> impact related to solid waste generation, similar to the 2008 Aviano Adult Community Project.				
(4) Electricity, natural gas, and telecommuni- cations.	LS (p. 301)	No	No	No	Development of the current project would increase demand for electricity, natural gas and telecommunications services in order to serve the additional 533 project residences. However, new construction associated with the current project would take place adjacent to developed areas currently serviced by electricity, gas, and telecommunications providers. In addition, the recently constructed PG&E substation in Antioch would improve the reliability and safety of electric services within the project area. Therefore, the extension of utilities to serve new development would result in less-than- significant impacts to the aforementioned services. In addition, per City requirements, the City would review project development plans prior to project approval to ensure that Title 24 energy conservation and efficiency standards are met and incorporated into project				

Aviano Project Environmental Impacts Comparison								
Impact	2008 EIR Conclusion	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Discussion			
					2008 Aviano Adult Community Project.			
2008 EIR Mitigation N	Measures: None	e required.						
Special Mitigation Me	asures: None re	equired.						
				L. Visual Resour	ces			
(1) Scenic vistas.	LS (p. 309)	No	No	No	Important view corridors within the vicinity of the project site include Lone Tree Way, Hillcrest Avenue, Deer Valley Road, and SR 4. The roadways provide views to natural ridgelines and landmarks, such as Mount Diablo and the distant foothills and local ridgelines. Similar to the 2008 Aviano Adult Community Project, development of the project site with up to 535 residences would not adversely alter the views from any of the above-mentioned scenic view corridors. The General Plan includes policies to preserve public view corridors and seeks to minimize the loss of views from public places. The 2008 EIR concluded that impacts related to scenic vistas would be less than significant. The current project involves a change from age-restricted to non- age restricted and therefore the changes would not create new or more severe impacts related to scenic vistas. According to the current application, a significant portion of the project will still include single-story homes. Therefore, the findings in the 2008 EIR related to aesthetics remain applicable to the current project, and a <i>less-than-significant</i> impact would result, similar to the 2008 Aviano Adult Community Project.			
(2) Scenic resources within a State Scenic Highway.	LS (p. 315)	No	No	No	The only officially designated scenic highways within Contra Costa County are portions of Highway 24 and Interstate 680. ⁴⁶ The aforementioned highways are not located within the vicinity of the project site. The current project would not result in the removal of trees, rock outcroppings, or historic resources, nor would the project substantially damage scenic resources within a State scenic highway. Therefore, a <i>less-than-significant</i> impact would result, similar to the 2008 Aviano Adult Community Project.			

⁴⁶ California Department of Transportation, 2007. California Scenic Highway Program. Website: www.dot.ca.gov/hq/LandArch/scenic/schwy.html. April 9.

Aviano Project Environmental Impacts Comparison								
Impost	2008 EIR	Do Proposed Changes Involve New or More Severe	Any New Circumstances Involving New Significant Impacts or Substantially More	Any New Information Requiring New Analysis or Varification?	Discussion			
(3) Visual	LS	No	Severe Impacts:	No	Similar to the 2008 Aviano Adult Community Project the project site			
character.	(p. 315)				Similar to the 2008 Aviano Adult Community Project, the project site currently consists of open grassland and a north facing hillslope. The current project would develop the northern, grassland portion of the site with up to 533 residential units, along with associated landscaping and roadway improvements. Despite the removal of the age-restriction component of the project, a significant portion of the project will still include single story homes. The current project involves a change from age-restricted to non-age restricted and therefore the changes would not create new or more severe impacts related to the visual character of the area. Although the majority of the Sand Creek Focus Area is currently rural, the intent of the General Plan is for this area to transition to an urbanized area. The southern portions of the project site, including Sand Creek and the hillside area, would remain as open space. Landscaping along the trail would consist of native trees that would blend with the natural landscape along the creek. As such, the visual character of the area would remain essentially unchanged. Consistent with General Plan Buffering Policies, the current project would be appropriately buffered from adjacent uses at the Kaiser Medical Facility. Soundwalls and fencing would incorporate landscaping along the project boundary. The change in character of the project site, once developed, would be visually compatible with surrounding development, including existing residential neighborhoods to the north, resulting in a less-than-significant impact. In addition, the current project would be subject to the City of Antioch's Design Review process. Design review would ensure that the current project complies with the City's objectives and policies related to project design. Therefore, a <i>less-than-significant</i> impact would result, similar to the 2008 Aviano Adult Community Project.			
(4) The current project would create a new source of light and glare	LSM (p. 316)	No	No	No	Similar to the 2008 Aviano Adult Community Project, the proposed residential development would include indoor lighting and outdoor lighting for safety purposes. The proposed recreational facilities, parks and pathways, and parking area would also include outdoor lighting for safety purposes. These new sources of light would be visible from a distance at night;			

			pacts Comparison		
Impost	2008 EIR	Do Proposed Changes Involve New or More Severe Imposto?	Any New Circumstances Involving New Significant Impacts or Substantially More	Any New Information Requiring New Analysis or Verification?	Discussion
affecting day	Conclusion	impacts.	Severe impacts.	vermeation.	however the addition of new light sources associated with the current project
anecting day					nowever, the addition of new light sources associated with the current project
and ingrittime					would generally blend in with surfounding development. Surf reflecting off of the windows of the menocod development could create device along. The
views in the					the windows of the proposed development could create daytime glate. The
area.					2008 EIR required implementation of Mitigation Measure VIS-1 in order to
					ensure that the outdoor lighting would be designed to minimize glare and
					spillover to surrounding properties. Therefore, Mitigation Measure VIS-1
					remains adequate in order to ensure that impacts related to light and glare are
					less than significant. The current project involves a change from age-
					restricted to non-age restricted and therefore the changes would not create
					new or more severe impacts related to light and glare.

2008 EIR Mitigation Measures:

<u>VIS-1</u>: Outdoor lighting shall be designed to minimize glare and spillover to surrounding properties. The current project shall incorporate non-mirrored glass to minimize daylight glare. Proposed lighting and building materials shall be reviewed and approved by the City as part of the Design Review process prior to issuance of building permits for the current project. (LTS)

Special Mitigation Measures: None required.

M. Agricultural and Mineral Resources								
(1) Conversion of	LS	No	No	No	The project site and off-site impact areas are not designated by the Farmland			
Farmland.	(p. 324)				Mapping & Monitoring Program (FMMP) as Prime Farmland, Unique			
					Farmland, or Farmland of Statewide Importance. The FMMP designates the			
					northern portion of the project site as "Farmland of Local Importance" while			
					the southern hillside portion of the project site is designated as "Grazing			
					Land." The conversion of these lands to non-agricultural uses would not			
					result in significant impacts to FMMP-designated farmlands. Therefore,			
					similar to the conclusion of the 2008 EIR, the currently proposed project			
					would have a less-than-significant impact to the conversion of Farmland.			
(2) Conflict with	LS	No	No	No	Similar to the 2008 Aviano Adult Community Project, the project site and			
agricultural	(p. 325)				off-site impact areas are PD on the Antioch Zoning Map and are not under a			
zoning or					Williamson Act contract. ⁴⁷ Development of the current project would not			

⁴⁷ California, State of, 2002. Department of Conservation, Division of Land Resource Protection. Contra Costa County Williamson Act Lands 2002. March 6.

Aviano Project Environmental Impacts Comparison						
Impact Williamson Act	2008 EIR Conclusion	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Discussion	
contract.					contract. Therefore, a <i>less-than-significant</i> impact would result, similar to the 2008 Aviano Adult Community Project.	
(3) Loss of mineral resources.	LS (p. 325)	No	No	No	Coal mining activities west of the site have been abandoned and no coal has been extracted in the area since the early 1900s. All oil and gas production wells within the vicinity of the project site have been plugged and abandoned and the Brentwood oil field is not currently in active production. The General Plan does not designate the project site as suitable for mineral resource extraction, but rather for residential uses. Therefore, consistent with the conclusion of the 2008 EIR, development of the current project would not result in the loss of availability of a known mineral resource of value to the region or the State.	
(4) Construction of sewer extension associated with the current project would temporarily disturb approximately 5 acres of agriculturally productive farmland on the Ginocchio/Nunn property, within the adjacent off- site impact area.	LSM (p. 325)	No	No	No	In addition to the three acres of permanently converted land on the Ginocchio parcel as part of the Hillcrest Avenue extension, an additional approximately five acres (not 10 acres) of agriculturally productive farmland would be temporarily disturbed due to construction of the sewer extension across the Ginocchio property and north along the alignment of Heidorn Ranch Road Within the alignment of Heidorn Ranch Road, an approximately 112-foot wide, 2.3-acre area would be temporarily disturbed for these same activities. As noted previously, the Vineyards at Sand Creek Project also includes extension of the sanitary sewer pipe, located in Heidorn Ranch Road. The Vineyards at Sand Creek Project could possibly construct the sewer improvements before the current project; if so, Mitigation Measure AG-1 would not be necessary. Upon completion of construction activities associated with the sewer extension, agricultural activities may return to the disturbed areas of the project site. Similar to the 2008 Aviano Adult Community Project, Mitigation Measure AG-1 would remain adequate in order to ensure impacts related to farmland on the Ginocchio property are <i>less than significant</i> .	

Aviano Project Environmental Impacts Comparison						
			Any New			
		Do Proposed	Circumstances			
		Changes	Involving New	Any New		
		Involve New	Significant Impacts	Information		
		or More	or Substantially	Requiring New		
	2008 EIR	Severe	More	Analysis or		
Impact	Conclusion	Impacts?	Severe Impacts?	Verification?	Discussion	

2008 EIR Mitigation Measures:

<u>AG-1</u>: Under the direction and approval of the City, the project sponsor shall consult with adjacent property owners regarding construction of the sewer line extension through adjacent agriculturally productive parcels. Upon completion of the sewer line extension, the project sponsor shall retill disturbed areas to restore the field to previous conditions. This shall occur prior to issuance of a certificate of occupancy for the current project. (LTS)

Special Mitigation Measures: None required.

	M. Global Climate Change							
(1) Impacts to the current project from global climate change.	LS (p. 338)	No	No	No	Local temperatures could increase in time as a result of global climate change, with or without development as envisioned by the project. Based on the analysis contained in Section IV.G, Hydrology and Storm Drainage, of the 2008 EIR, the project site is not located in an area that would be subject to coastal or other flooding resulting from climate change. The current project site boundaries are the same as the 2008 Aviano Adult Community Project. Therefore, the potential effects of climate change (e.g., effects of flooding on the project site due to sea level rise) on the current project would be <i>less than significant</i> , similar to the 2008 Aviano Adult Community Project.			
(2) Implementation of the project could result in greenhouse gas emission levels that would conflict with implementation of the greenhouse gas reduction goals under AB 32 or other State regulations.	LSM (p. 339)	No	No	Yes (analysis shows that original environmental conclusion of LSM remains the same)	 It should be noted that an updated greenhouse gas emissions (GHG) analysis was prepared for the non-age restricted project by Raney Planning & Management, Inc. in July 2014. This GHG analysis was based upon BAAQMD methodology and thresholds of significance. GHG emissions generated by the current project would predominantly consist of CO₂. In comparison to criteria air pollutants (see Section IV.C, Air Quality), such as ozone and PM₁₀, CO₂ emissions persist in the atmosphere for a substantially longer period of time. While emissions of other GHGs, such as CH₄, are important with respect to global climate change, emission levels of other GHGs are less dependent on the land use and circulation patterns associated with the proposed land use development project than are levels of CO₂. <i>Construction Impacts.</i> Construction activities produce combustion emissions 			

Aviano Project Environmental Impacts Comparison							
Impact	2008 EIR Conclusion	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Discussion		
					from various sources such as site grading, utility engines, on-site heavy-duty construction vehicles, equipment hauling materials to and from the site, asphalt paving, and motor vehicles transporting the construction crew. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change. Development of the project site is anticipated to require site grading and preparation. Construction is anticipated to begin in 2015 and be completed in 2017. The only GHG with well-studied emissions characteristics and published emissions factors for construction equipment is CO_2 . According to the 2014 CalEEMod results, construction of the current project would result in the generation of 18.86 MTCO ₂ e/yr. The total construction emissions were amortized over the anticipated 25-year lifetime of the project (471.44 MTCO ₂ e / 25 years = 18.86 MTCO ₂ e/yr). The project would be required to implement the construction exhaust control measures listed in Mitigation Measure AIR-1 of Section IV.C, including minimization of construction equipment idling, proper engine tuning and exhaust controls, and the use of alternatively powered construction equipment when feasible. All of these measures would reduce GHG emissions during the construction period. The 2008 EIR required Mitigation Measure GCC-1a to further reduce GHG emissions impacts, specifically those associated with construction waste generation and vehicle miles traveled for delivery of materials and products to the project site. It should be noted that the construction emissions for the 2008 Aviano Adult Community Project were quantified using the URBEMIS 2007 model. According to page 340 of the 2008 EIR, the average daily CO ₂ emissions associated with construction equipment exhaust for the 2008 Aviano Adult Community Project would be approximately 900 tons per year, with total project construction-related CO ₂ emissions of 1,821 tons. Because the site plan, site conditions, and construction activities of the current project w		

	Aviano Project Environmental Impacts Comparison							
Impact Conclusion Any New Impact Do Proposed Circumstances Impact Changes Involving New Any New Information Impact Conclusion								
Impact Conclusion Impacts: Vermitation: be similar to the 2008 Aviano Adult Community Project, impacts reliconstruction GHGs would be similar for the current project as the Aviano Adult Community Project. Although the construction are quantified using CalEEMod are below the emissions quantified in 200 the URBENIS model, Mitigation Measure GCC-1a would further rediconstruction emission resulting from the current project. Operational Impacts. Long-term operation of the current project generate GHG emissions from stationary sources associated with energy consumption. The current project's emissions from stationary sources associated with energy consumption. The current project's emissions were quantified using the Call software version 2013.2.2. Results of the CallEEMod modeling are exin in Bs/day for construction and operational emissions of CD, NY, CH, emissions and may sourced by Raney Planning & Manager 2014 using CallEMod. According to the CallEEMod result in a service population of 1,723 persons. Accordingly, the project's operational GHG emissions would be 4.3 MTCO-2eq/SPyr, would be below BAAQMD's applicable GHG threshold of significance MTCO-2eq/SPyr. The current project's GHG emissions source applicable of S1 mitigation degree/SPyr. The current project's GHG emissions of GHG in the CalEEMod and are presented in Table 4 below.	related to the 2008 emissions 008 using educe the ct would indirect on. alEEMod expressed ons/yr for ne model le current issions of rsons per ect would e current yr, which nce of 4.6 ated using oject EIR terms of no Adult							

Aviano Project Environmental Impacts Comparison								
Impact	2008 EIR Conclusion	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?		Discu	ssion	
					result	t in 6,967.8 MTCO ₂ eq/yr. As suc	ch, the current project would result	i in
					380.2	$2 \text{ MTCO}_2 \text{eq}$ fewer annually. Neve	rtheless, mitigation measures includ	ded
					in the	e 2008 EIR would decrease the C	GHG emissions for the current proje	ect
					even		le 1	
						Unmitigated Project (2	2020) GHG Emissions	
							Annual GHG Emissions	
						Emission Source	(MTCO ₂ e/yr)	
						Construction Emissions ¹	66.10	
						Operational Emissions	6,901.70	
						Area	46.46	
						Energy	2,118.50	
						Mobile	4,323.66	
						Waste	292.33	
						Water	120.75	
						TOTAL ANNUAL GHG EMISSIONS	6,967.80	
						¹ Amortized total construction emis anticipated 25-year lifetime of the pro 66.10 MTCO ₂ <i>e</i> /yr). <i>Source: CalEEMod, July 2014.</i>	sions $(1,652.61 \text{ MTCO}_2 e)$ over the ject $(1,652.61 \text{ MTCO}_2 e / 25 \text{ years} =$	
					In add Mitig emiss GCC incret	dition, consistent with the 2008 El ation Measures GCC-1 and GCC sions attributable to the current pr -1a and 1b remain adequate in c mental contribution to global clima	R, the project would also be subject -1b, which would further reduce GF oject. Therefore, Mitigation Measur order to ensure impacts related to the ate change are <i>less than significant</i> .	t to HG res the

2008 EIR Mitigation Measures:

GCC-1a: To the extent feasible and to the satisfaction of the City, the following measures shall be incorporated into the design and construction of the project:

• Develop and implement a construction waste management plan that, at a minimum, identifies the materials to be diverted from disposal and whether the materials will be sorted on-site or co-mingled;

Aviano Project Environmental Impacts Comparison						
			Any New			
		Do Proposed	Circumstances			
		Changes	Involving New	Any New		
		Involve New	Significant Impacts	Information		
		or More	or Substantially	Requiring New		
	2008 EIR	Severe	More	Analysis or		
Impact	Conclusion	Impacts?	Severe Impacts?	Verification?	Discussion	

• Reuse and/or recycle at least 50 percent (as calculated by weight or volume) of non-hazardous construction debris (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard);

• Use building materials or products that have been extracted, harvested or recovered, as well as manufactured, within 500 miles of the project site, unless use of such products are demonstrated to the satisfaction of the City to be infeasible.

<u>GCC-1b</u>: To the extent feasible and to the satisfaction of the City, the following measures shall be incorporated into the design and construction of the project:

Energy Efficiency Measures

- Design all project buildings to exceed California Building Code's Title 24 energy standard, including, but not limited to any combination of the following:
 - Increase insulation to exceed minimum code requirements so that heat transfer and thermal bridging is minimized;
 - Construct all units to achieve the Home Energy Rating System (HERS) certification to minimize energy consumption by constructing "tight" building envelopes and HVAC systems;
 - o Install only EnergyStarTM or better rated space heating and cooling equipment, appliances or other applicable electrical equipment;
 - o Install EnergyStarTM approved lighting and lighting control systems and use daylight as an integral part of lighting systems in buildings; and
 - Install only EnergyStarTM approved or better Low-E windows.
- Provide a landscape and development plan for the project that takes advantage of shade, prevailing winds, and landscaping;
- Install light colored "cool" roofs and pavements;
- Install solar powered or light emitting diodes (LED) outdoor lighting systems.

Water Conservation and Efficiency Measures

- Devise a comprehensive water conservation strategy appropriate for the project and location. The strategy may include the following, plus other appropriate innovative measures:
 - Create water-efficient landscapes within the development (i.e., through the use of drought tolerant vegetation);
 - o Install water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls;
 - Use reclaimed water for landscape irrigation within the project. Install the infrastructure to deliver and use reclaimed water;
 - o Install water-efficient fixtures and appliances including low-flow faucets and shower heads and dual-flush toilets in all buildings; and
 - Restrict watering methods (e.g., prohibit systems that apply water to non-vegetated surfaces) and control runoff.

Solid Waste Measures

• Provide adequate recycling containers in all public areas of the project.

Transportation and Motor Vehicle Measures

- Provide transit facilities (e.g., bus bulbs/turnouts, benches, shelters);
- Provide bicycle lanes and/or paths, incorporated into the proposed street systems and connected to a community-wide network;
- Provide sidewalks and/or paths, connected to adjacent land uses, transit stops, and/or community-wide network;
- Size parking capacity to not exceed the City's zoning requirements; and

Aviano Project Environmental Impacts Comparison						
			Any New			
		Do Proposed	Circumstances			
		Changes	Involving New	Any New		
		Involve New	Significant Impacts	Information		
		or More	or Substantially	Requiring New		
	2008 EIR	Severe	More	Analysis or		
Impact	Conclusion	Impacts?	Severe Impacts?	Verification?	Discussion	
• To the extent t	• To the extent feasible, provide infrastructure and support programs to facilitate shared vehicle usage such as carpool drop-off areas, designated parking for vanpools, or car-					
share services, ride boards, and shuttle service to mass transit. (LTS)						
•						
Special Mitigation Me	asures: None re	equired.				