# 2 REPORT SUMMARY

This is a summary of the findings of the Draft and Final EIRs. This document has been reprinted from the Draft EIR with necessary changes made in this Final EIR shown in double underline and ~~strikethrough~~.

This summary presents an overview of the analysis contained in Chapter 4 of the Draft EIR: Environmental Evaluation. CEQA requires that this chapter summarize the following: 1) areas of controversy; 2) significant impacts; 3) unavoidable significant impacts; 4) implementation of mitigation measures; and 5) alternatives to the project.

## *A. Proposed Project*

This Draft Environmental Impact Report (EIR) provides an assessment of the potential environmental impacts of implementing the proposed General Plan and Energy and Conservation Action Strategy (ECAS). The proposed General Plan is intended to serve as the principal policy document to guide future conservation and development in the City of Vacaville. The proposed General Plan includes goals, policies, and actions that have been designed to implement the City's and community's vision for Vacaville. The policies and actions would be used by the City to guide day-to-day decision-making so there would be continuing progress toward attainment of the Plan's goals. The proposed General Plan is further detailed in Chapter 3, Project Description, of ~~this~~ the Draft EIR.

The proposed ECAS is intended to serve as a detailed long-range strategy to reduce greenhouse gas (GHG) emissions and achieve greater sustainability in the City of Vacaville. The proposed ECAS includes measures that will guide the City of Vacaville's actions to reduce its contribution to global climate change and achieve its State-mandated emission reduction target. The proposed ECAS would be used by the City for tiering and streamlining of future development within Vacaville, pursuant to CEQA Guidelines 15152 and 15183.5. Additionally, the proposed ECAS would serve as the CEQA threshold of significance within the city for climate change, by which all applicable developments within the city will be reviewed. The proposed ECAS is further detailed in Chapter 3, Project Description, of ~~this~~ the Draft EIR.

## *B. Areas of Controversy*

The following is a list of issues of concern raised by agencies and interested members of the public during the environmental review process. This list is based on the input received during the scoping process, and thus attempts to capture issues of greatest interest.

The City issued an official Notice of Preparation on February 10, 2011 and held a scoping meeting on March 10, 2011. The official Notice of Preparation for this Program EIR was issued to the Governor's Office of Planning and Research, and forwarded to federal, State, and local agencies, and interested parties. The official scoping period for this EIR was between February 11, 2011 and March 17, 2011, during which interested agencies and the public could submit comments about the proposed project. The Notice of Preparation, as well as the comments received on the NOP and at the scoping meeting, are contained in Appendix A of ~~this~~ the Draft EIR. The comments received focused primarily on the following:

- **Railroad Adjacency.** Because of the active railroad adjacent to the eastern boundary of the city, the EIR should analyze items such as the noise characteristics of long freight trains, the impact of potential future increases in railroad traffic, and safety issues including at-grade railroad crossing traffic safety.
- **Traffic and Transportation.** Traffic analysis should compare both industry-standard assumptions to City-generated assumptions and a transit-oriented development (TOD) scenario to a scenario without TOD. Other traffic and transportation-related comments noted that: the EIR should identify traffic impact fees; a traffic impact study should be coordinated between the City and the California Department of Transportation (Caltrans); the Napa-Solano Travel Demand Model should be used to analyze impacts on Routes of Regional Significance; the EIR should assume in its analysis that a high-occupancy vehicle (HOV) lane will be in place on Interstate 80 (I-80) from Red Top Road to the I-80/Interstate 505 interchange by 2018; the EIR should identify consistency with the Solano Transportation Authority's (STA's) Countywide Bicycle Master Plan and Countywide Pedestrian Master Plan; and the EIR should analyze the cost of developing and maintaining the transportation system necessary for existing and anticipated additional traffic related to the General Plan.
- **Airport Land Use Compatibility.** The General Plan should be compatible with Airport Land Use Commission criteria and the EIR analysis of airport land use compatibility issues should be aided by use of the California Airport Land Use Planning Handbook. The EIR should evaluate consistency with the Solano County Airport Land Use Compatibility Plan, including building and antenna height limits.
- **Native American Traditional Places or Sacred Lands.** The EIR should both conduct Native American Heritage Commission (NAHC) and California Historic Resources Infor-

mation System (CHRIS) records searches and consult with NAHC-identified Native American tribes, in order to ascertain whether there would be impacts on Native American traditional places or sacred lands.

- **Solano Irrigation District Impacts.** The EIR should take into account that the proposed General Plan may require modifications to the 1995 Solano Irrigation District (SID) – Vacaville Master Water Agreement and detachment from SID and payment of associated detachment fees, and proposed development may ~~have a significant~~ impact ~~on~~ SID facilities ~~from proposed development~~.
- **Development and Land Use Changes.** The EIR should identify any differences in the projected land development from the Association of Bay Area Governments (ABAG) projections and any areas that may be converted from open space or agriculture to urban uses.
- **Hazards Analysis.** The EIR should examine the sections of State planning law involving potential hazards the City of Vacaville may encounter.
- **Renewable Energy Strategies.** The EIR should include strategies to increase renewable energy generation within city boundaries.
- **TOD and Alternative Transportation Strategies.** The EIR should include strategies to increase public and alternative transportation usage through TOD and alternatively-fueled vehicle infrastructure. The EIR should evaluate impacts related to alternative transit infrastructure.
- **Alternatives Development and Analysis.** The EIR should analyze one alternative using focused growth with an emphasis on TOD.
- **Other Concerns.** Some comments addressed concerns about impacts related to air pollution; wildlife; hazards, including flooding; GHG emissions; and noise and safety generated by railroad and airplane traffic.

All of these issues were addressed in the General Plan Update process, which includes the creation of the proposed ECAS. To the extent that these issues have environmental impacts, they are also addressed in this EIR.

## *C. Significant Impacts*

Under CEQA, a significant impact on the environment is defined as a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic and aesthetic significance.

Implementation of the proposed General Plan and ECAS, in combination with long-term, region-wide growth and development, has the potential to generate environmental impacts in a number of areas. However, the proposed General Plan and ECAS have been developed to be largely self-mitigating, and as a result, there are few impacts that would occur solely on the basis of implementation of the proposed project.

Nonetheless, the implementation of the proposed General Plan and ECAS has the potential to generate 50 significant environmental impacts in a number of areas which are listed below:

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Greenhouse Gas Emissions
- Hydrology and Water Quality
- Noise
- Population and Housing
- Traffic and Transportation

As shown in Table 2-1, most the impacts listed would be considered significant and unavoidable, with the exception of the noise impact and 19 of the traffic and transportation impacts, which can be mitigated to a less-than-significant level.

## *D. Mitigation Measures*

~~This~~ The Draft EIR suggests mitigation measures that would reduce the significant noise impact and 19 of the significant traffic and transportation impacts to a less-than-significant level. These mitigation measures are summarized in Table 2-1 at the end of this chapter. They ~~will~~ form the basis of a Mitigation Monitoring and Reporting Program,[1] which ~~will be~~ is published in ~~the~~ this Final EIR in Chapter 6 and implemented in accordance with State law.

## *E. Unavoidable Significant Impacts*

Section 15126.2(b) of the CEQA Guidelines requires that an EIR describe any significant impacts that cannot be avoided, even with the implementation of feasible mitigation measures. As described in Chapter 4 of the Draft EIR, and shown in Table 2-1, 30 significant unavoidable impacts were identified in the areas of aesthetics, agriculture and forestry resources, air quality, bio-

[1] A Mitigation Monitoring and Reporting Program tracks (i.e. monitors and reports on) the progress of required mitigation measures for a project. CEQA Guidelines Section 15382.

logical resources, GHG emissions, hydrology and water quality, population and housing, and traffic and transportation.

## *F. Alternatives to the Project*

~~This~~ The Draft EIR analyzes alternatives to the proposed General Plan. Three alternatives to the proposed General Plan are considered and described in detail in Chapter 5 of the Draft EIR, Alternatives to the Proposed Project:

- No Project Alternative
- Focused Growth Alternative
- Town Grid Alternative

As shown in the alternatives analysis in Chapter 5 of the Draft EIR, Alternatives to the Proposed Project, the Focused Growth Alternative has the least environmental impact and is therefore the environmentally superior alternative. The Town Grid Alternative would also have reduced impacts in comparison to the proposed project, while the No Project Alternative would have greater impacts than the proposed General Plan and ECAS.

## *G. Summary Table*

Table 2-1 presents a summary of impacts and mitigation measures identified in this report. It is organized to correspond with the environmental issues discussed in Chapter 4 of the Draft EIR, Environmental Evaluation.

The table is arranged in four columns: 1) environmental impacts; 2) significance prior to mitigation; 3) mitigation measures; and 4) significance after mitigation. For a complete description of potential impacts, please refer to the specific discussions in Chapter 4 of the Draft EIR, Environmental Evaluation.

TABLE 2-1 **SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Significant Impact | Significance Before Mitigation | Mitigation Measures | Significance With Mitigation |
|---|---|---|---|
| **AESTHETICS** | | | |
| **AES-1:** The visual character in undeveloped portions of Vacaville would be substantially altered. | S | There are no available mitigation measures, and the impact would be significant and unavoidable. | SU |
| **AGRICULTURE AND FOREST RESOURCES** | | | |
| **AG-1:** Although the proposed General Plan includes policies and actions that would reduce and ~~partially~~ offset the conversion of farmland, it designates approximately 2,640 acres of farmlands of concern under CEQA for non-agricultural uses. | S | Because these farmland areas are located near existing urbanized areas, they may not be viable for agricultural operations due to conflicts with nearby urbanized areas. The only way to mitigate this impact would be to prohibit any development on farmland of concern, even within the UGB. The UGB identifies where future urban development is appropriate and was adopted as such by the City Council. CEQA does not require that the project be changed in order to avoid an impact, and no additional mitigation is available, resulting in a *significant and unavoidable* impact. | SU |
| **AG-2:** The proposed General Plan designates 206 acres of lands with active Williamson Act contracts for non-agricultural uses. | S | Because these parcels with Williamson Act contracts are located near existing urbanized areas, they may not be viable for agricultural operations due to conflicts with nearby urbanized areas. As discussed under Section D.1.a, Project Impacts, above, no additional mitigation is available, resulting in a *significant and unavoidable* impact. | SU |
| **AG-3:** Although the policies and actions in the proposed General Plan would reduce and ~~partially~~ offset regional agricultural impacts, the proposed project would contribute to cumulatively significant agricultural impacts in the region. | S | The amount of growth foreseen in the region and the decisions of surrounding counties regarding conversion of agricultural land are outside the control of Vacaville. Therefore, this impact is *significant and unavoidable.* | SU |
| **AIR QUALITY** | | | |
| **AIR-1**: Mobile-source air pollutant emissions associated with the proposed General Plan would exceed the significance criterion of 80 pounds per day of $PM_{10}$. This would be a significant project-level and cumulative impact. | S | Motor vehicle emissions are regulated by the California ARB and the federal EPA. Therefore, the proposed General Plan does not have the authority to reduce $PM_{10}$ tailpipe emissions. When considering regional emissions, a change to the General Plan land use map to restrict housing growth would not necessarily lead to a reduction in VMT to a level sufficient to avoid this impact, because people would still travel to and from Vacaville to work or shop and existing land use patterns would not change. In addition, the proposed ECAS includes many measures to reduce VMT in Vacaville, which would contribute to a reduction in $PM_{10}$ emissions. No additional mitigation is available to reduce this impact, resulting in a *significant and unavoidable* impact. | SU |

LTS = Less Than Significant S = Significant SU = Significant Unavoidable Impact

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| Significant Impact | Significance Before Mitigation | Mitigation Measures | Significance With Mitigation |
|---|---|---|---|
| **BIOLOGICAL RESOURCES** | | | |
| *Implementation of the Solano HCP and the proposed General Plan policies and actions, in combination with federal and State laws, would reduce potential impacts to a less-than-significant level. However, since the HCP is not currently adopted, in order to ensure that mitigation requirements consistent with the Solano HCP are enforced, Mitigation Measures BIO-1 through BIO-14 are included.* | LTS | BIO-1: Preservation and restoration of habitat for species identified in Tables 4.4-2 and 4.4-3 of the Draft EIR shall occur in the same level or higher level conservation area as the direct impact occurs (i.e. impacts to habitat in Medium Value Conservation Areas will be mitigated in Medium to High Value Conservation Areas, but impacts to habitat in Low Value Conservation Areas shall be mitigated in either Low or Medium Value Conservation Areas). Compensation for indirect impacts will be assessed on the location/conservation value of the habitat that is indirectly impacted and not the location of project activity (i.e. if a project activity will indirectly impact a habitat for species in a Medium Value Conservation Area but the project is located in a Low Value Conservation Area, compensatory mitigation shall be based on the type of habitat that is being indirectly impacted (in this case Medium Value Conservation Area) rather than the lower value project area. All mitigation ratios are based on impacts as assessed by acreage.<br>1. **Medium Value Conservation Areas** (see Subareas 2C, 2D, and 2N in Figure 4.4-3).<br>a. **Wetland Component Direct Impacts:** Preserve vernal pool and swale habitats at a ratio of 2:1, and restore vernal pool and swale habitats at a ratio of 1:1 if restored habitats are in place and functional at the time of impact or at a 2:1 ratio if habitats are restored concurrent with the impact.<br>b. **Wetland Component Indirect Impacts:** Preserve vernal pool and swale habitats at a ratio of 1:1 for avoided wetlands within 250 feet of proposed development.<br>c. **Upland Component Direct Impacts:** In Subarea 2C, preserve upland habitat at a ratio of 3:1. In the remaining subareas, preserve upland habitat at a ratio of 2:1.<br>d. **Upland Component Indirect Impacts:** Preserve avoided upland habitat at a ratio of 1:1 within 250 feet of proposed development.<br>2. **Low Value Conservation Areas and Seasonal Wetlands in Agricultural Areas Outside of a Medium Value Conservation Area** (see Subarea 3 in Figure 4.4-3). | LTS |

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| Significant Impact | Significance Before Mitigation | Mitigation Measures | Significance With Mitigation |
|---|---|---|---|
| | | a. **Wetland Component Direct Impacts:** Preserve vernal pool and swale habitats at a ratio of 1:1, and restore vernal pool and swale habitats at a ratio of 1:1 if restored habitats are in place and functional at the time of impact or at a 2:1 ratio if habitats are restored concurrent with the impact.<br>b. **Wetland Component Indirect Impacts:** Preserve vernal pool and swale habitats at a ratio of 1:1 within 100 feet of proposed development.<br>3. **Mitigation for Temporary Impacts to Seasonal Wetlands and Uplands in all Conservation Areas:** Temporary impacts to seasonal wetlands and uplands in all vernal pool conservation areas shall be subject to the mitigation and monitoring requirements described below. Temporary impacts to wetlands shall be calculated for the entire wetland in which the impact occurs and not just the portion disturbed by the temporary impact.<br>a. **Temporary and Short-Term Impacts:** All temporary impacts lasting no more than one growing season to seasonal wetlands and uplands in all vernal pool conservation areas shall be mitigated by restoring the existing wetlands and uplands and providing additional preservation of wetlands and uplands at a 1:1 ratio. Impacts lasting no more than two growing seasons shall be mitigated by restoring the existing habitats and providing additional wetland and upland preservation at a 1.5:1 ratio. Impacts lasting longer than two growing seasons shall be mitigated at the standard Conservation Area ratios described above under conditions BIO-1-1 and BIO-1-2.<br>b. **Restoration and Monitoring Plan:** The applicant shall provide a restoration plan consistent with the requirements in the Solano HCP or standardized policies developed by the City per proposed General Plan Action COS-A1.1 that shall be based on the principles found in the current working draft of the Solano HCP, including acceptable financial assurances, for review and approval by the City and other applicable regulatory agencies, to ensure successful implementation of the habitat restoration. All temporarily impacted wetlands shall be monitored for a minimum of two wet seasons to document that hydrology has been restored to pre-project conditions. Additional monitoring and | |

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TABLE 2-1 **SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Significant Impact | Significance Before Mitigation | Mitigation Measures | Significance With Mitigation |
|---|---|---|---|
| | | remedial measures may be required if hydrology is not reestablished.<br>The mitigation ratios described above are applicable to all seasonal wetlands (i.e. saturated, seasonally flooded, and areas subject to temporary flooding sufficient to create wetlands). Conservation actions for streams and semi-permanently to permanently flooded wetlands in the valley floor grassland and vernal pool natural community are addressed under Mitigation Measures BIO-5, BIO-6, BIO-7, and BIO-9. | |
| | | BIO-2: All impacted seasonal wetlands shall be characterized according to the types below and mitigated by preservation of the same category of wetland according to the ratios in Mitigation Measure BIO-1.<br><br>Seasonal wetland categories are as follows:<br>♦ **Pools:** Greater than 1 inch of standing water for more than ten continuous days with short (less than three weeks) to long (more than three weeks) durations of standing water, clear to moderate turbidity, and exhibiting significant vegetation cover.<br>♦ **Playa Pools:** Greater than 1 inch of standing water for more than ten continuous days with long (more than three weeks) to very long durations of standing water, moderate to high turbidity, and exhibiting sparse vegetation cover (typically found in association with Pescadero Series Soils; often referred to as playa-type pools).<br>♦ **Swales or Mesic Grassland:** Shallow, standing water (generally less than 1 inch) present for fewer than ten continuous days.<br>♦ **Alkaline Flats and Meadows:** Shallow, standing water (generally less than 1 inch) present for fewer than ten continuous days and exhibiting indicators of high alkalinity (salt deposits on soil surface, presence of salt-tolerant plants).<br><br>Deviations in the required mitigation acreage by type or category may be permitted by the City and other applicable regulatory agencies.<br><br>Under Mitigation Measure BIO-1, conservation habitats shall be proportional to impacts to the species and their associations (e.g. impacts to pool-dependent species such as vernal pool fairy shrimp shall not be mitigated by preservation of more abundant swale or mesic grasslands that do not support the species). | LTS |
| | | BIO-3: All direct impacts to extant stands of Contra Costa goldfields shall be mitigated by establishing new, self-reproducing populations of | LTS |

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| Significant Impact | Significance Before Mitigation | Mitigation Measures | Significance With Mitigation |
|---|---|---|---|
| | | Contra Costa goldfields at a ratio of 4:1 (acres protected to acres impacted). This restoration requirement may be met by establishing new Contra Costa goldfield populations at a single-project mitigation site or by purchasing credits at an approved mitigation bank authorized to sell credits for this species in an amount equal to the 4:1 mitigation ratio. Guidelines for establishing Contra Costa goldfields and the release schedule for mitigation credits at the commercial mitigation banks will be specified in the bank-enabling agreements. Mitigation at single-project mitigation sites would be subject to the same conditions as the commercial mitigation banks. Establishment criteria shall also adhere to all the following conditions:<br>1. Impacted habitat area for which mitigation is required shall be equal to the entire occupied pool/swale area, and shall not just be limited to the area with Contra Costa goldfield cover in the impacted pool.<br>2. Contra Costa goldfield populations and other species identified in Tables 4.4-2 and 4.4-3 of the Draft EIR (including vernal pool fairy shrimp, conservancy fairy shrimp, vernal pool tadpole shrimp, and mid-valley fairy shrimp) shall be established in constructed, restored, and enhanced wetlands in the known range of these species in Solano County.<br>3. Seed used to establish new populations of Contra Costa goldfields may be obtained from any Core Population Area, as defined in the Solano HCP or in areas identified in standardized policies developed by the City per proposed General Plan Action COS-A1.1 that shall be based on the principles found in the current working draft of the Solano HCP. Seed collection shall not affect more than 10 percent of an individual preserved population. Seed and top soils shall be salvaged from occupied vernal pools and other wetlands in an impacted area prior to initiation of ground-disturbing activities.<br>4. Restoration may occur in existing preserved pools currently lacking Contra Costa goldfields or in restored pools and swales in other Core Areas as defined in the Solano HCP or in areas identified in standardized policies developed by the City per proposed General Plan Action COS-A1.1 that shall be based on the principles found in the current working draft of the Solano HCP. New populations must be established in currently unoccupied habitat.<br>5. Re-established populations will be considered self-reproducing | |

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| | | when:<br>a. Plants re-establish annually for a minimum of five years with no human intervention such as supplemental seeding, and habitat areas contain an occupied area and flower/plant density comparable to existing occupied habitat areas in similar pool types and Core Areas.<br>If Contra Costa goldfields cannot be established at the mitigation site within five years according to the conditions above, the preserved wetland restoration acreage shall be increased by 50 percent. The applicant shall provide bonds or other acceptable financial assurances, subject to approval by the City and USFWS, to ensure implementation of such measures. | |
| | | BIO-4: Mitigation shall be required for any impacts in the known or potential range of the California tiger salamander (see Figure 4.4-4). Mitigation shall include preservation, enhancement, and restoration/establishment of suitable upland habitat, and preservation and construction/creation of new breeding habitat consistent with the mitigation requirements specified in Mitigation Measure BIO-1, subject to the following additional requirements.<br>1. **Breeding Habitat Mitigation:** Direct and indirect impacts to all suitable California tiger salamander breeding habitat in the known or potential range of the species (Figure 4.4-4) will be mitigated by preserving known breeding habitat at a 3:1 ratio and creating new breeding habitat at a ratio of 2:1 or 0.35 acres, whichever is greater.<br>All preserved and created/established breeding habitat shall be contiguous to at least 350 acres of preserved upland habitat, and created breeding habitat shall be located within 2,100 feet of known breeding habitat.<br>a. All new breeding habitat shall be located within 2,100 feet of a known breeding site and be situated in a contiguous reserve/preserve area of 350 acres or more of suitable habitats. This may include other parcels if the lands are protected by conservation easements and are managed consistent with the Solano HCP Reserve Criteria or standardized policies developed by the City per proposed General Plan Action COS-A1.1 that shall be based on the principles found in the current working draft of the | LTS |

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| | | Solano HCP. For some existing preserved areas/mitigation sites, this may require that management agreements and endowments be extended to these sites.<br>b. New breeding habitat can consist of multiple sites within 1,300 feet of each other. All new created breeding habitats shall be 0.2 acres to 0.35 acres in size unless otherwise approved by the City, USFWS, and CDFW.<br>2. **Upland Habitat Mitigation:** Impacts to uplands and other movement habitats (i.e. seasonal wetland swales and meadows) in the known or potential range of the California tiger salamander (Figure 4.4-4) shall be mitigated at the ratios as described in Mitigation Measure BIO-1 for Subarea 2C (Figure 4.4-3, 2:1 ratio), subject to the following additional conditions:<br>a. All upland mitigation preservation shall be within 2,100 feet of known breeding habitat or within 1,300 feet of constructed breeding habitat if the constructed breeding habitat is within 2,100 feet of known breeding habitat.<br>b. New breeding habitat shall be established at a ratio of 0.001 acres per acre of upland directly and indirectly impacted by a project.<br>c. Preserves established for California tiger salamander mitigation shall include measures for restoration of upland mounds, where applicable, in order to provide increased burrowing habitat for fossorial rodents and California tiger salamanders above the shallow, rainy-season water table. | |
| | | BIO-5: Mitigation for permanent impacts to riparian, stream, and freshwater marsh habitat associated with riverine systems in the EIR Study Area shall be provided through restoration of in-kind habitat. Restoration of riparian habitat or creation of new habitat must occur either on site, at an approved mitigation bank, or at another high-quality site, and must be capable of supporting similar quality and species as the impacted site. All Riparian Restoration Plans shall be reviewed and approved by the City and CDFW. Restoration and enhancement activities shall be directed toward severely degraded stream segments in Priority Drainages and Watersheds (Figure 4.4-5). Basic mitigation requirements are based on impact area, vegetation replacement, and designated conservation | LTS |

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| Significant Impact | Significance Before Mitigation | Mitigation Measures | Significance With Mitigation |
|---|---|---|---|

values of the riparian, stream, and freshwater marsh habitat as assessed in the Solano HCP or standardized policies developed by the City per proposed General Plan Action COS-A1.1 that shall be based on the principles found in the current working draft of the Solano HCP.

1. **Vegetation**. All native, woody vegetation greater than 1 inch in diameter shall be replaced by planting native woody vegetation to at the following minimum ratios and performance standards:

| Vegetation Replacement Size (inches)[a] | Native Species (Except Oaks and Elderberry)[b] | Oak Species[c] | Nonnative Species |
|---|---|---|---|
| **Priority Drainages** | | | |
| ≤12 | 3:1 | 5:1 | 1:1 |
| 12–24 | 6:1 | 7:1 | 2:1 |
| ≥24 | 10:1 | 12:1 | 3:1 |
| **Non-Priority Drainages** | | | |
| ≤12 | 3:1 | 5:1 | 1:1 |
| 12–24 | 4:1 | 7:1 | 1.5:1 |
| ≥24 | 6:1 | 12:1 | 3:1 |

Note: *Performance Criteria* – The number of native riparian plants that become established at the end of the five-year monitoring period shall equal a minimum of 80 percent of total required plantings. Established plants may include natural regeneration and volunteer plants.

[a] Trees shall be measured at diameter at breast height (dbh); multiple trunked trees shall be reported as the cumulative total of all trunks. Shrubs shall be measured at the midpoint of the main trunk (the ground and the first major branch).

[b] Elderberry replacement ratios and other associated mitigation requirements are prescribed in Mitigation Measure BIO-9. Tree and shrub replacement requirements under this mitigation measure may be used to fulfill all or contribute to the associated native woody riparian vegetation requirements prescribed under Mitigation Measure BIO-9.

[c] Because of slow growth rates, oak species require higher replacement ratios. If acorns are used instead of seedlings (at least one year old), planting ratios shall be doubled.

[d] The five-year monitoring period for documenting successful establishment may be extended if the mitigation is not performing adequately. At a mini-

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mum, the determination of success monitoring shall require at least two years without significant intervention (e.g. additional plantings or irrigation). Vegetation may need to be planted at higher ratios, depending on site conditions, in order to account for mortality of planted material.

The goal of the riparian vegetation replacement is to contribute to the establishment of a multi-story riparian community with a variety of native riparian species appropriate for the mitigation site. Plantings are not required to directly replace impacts on a species-by-species basis.

2. **Area.** Riparian mitigation planting shall also achieve the following area criteria based on whether the mitigation is achieved through enhancement (e.g. supplemental planting of existing riparian habitats) or through establishment of woody riparian habitats (e.g. existing or created channel lacking native woody riparian vegetation):

| | Priority Drainages | | Non-Priority Drainages | |
|---|---|---|---|---|
| | Enhance-ment | Created/ Restored | Enhance-ment | Created/ Restored |
| Area Ratios | 4:1 | 2:1 | 3:1 | 2:1 |

3. **Hydrological and Biological Connectivity:** Mitigation for permanent impacts to third and higher order streams and second order streams with riparian vegetation shall maintain the hydrologic and biological connectivity between downstream and upstream areas. Facilities such as bridges, culverts, outfalls, and grade control structures shall not create cumulative gaps in the channel or riparian corridor greater than 300 feet. Bypass or rerouted channels shall be constructed where necessary to replace impacted habitats and to limit gaps between existing riparian habitats.

Note: The intent of requiring mitigation for removal of nonnative trees and shrubs is to protect riparian habitat. It is not intended to require mitigation for the removal of nonnative trees or shrubs as a part of riparian restoration or enhancement projects.

The above measure applies to waterways subject to State regulation

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| | | under Section 1602 of the Fish and Game Code and Porter-Cologne Water Quality Act and waters of the United States subject to regulation under the federal Clean Water Act. | |
| | | BIO 6: Mitigation for direct impacts to pond or freshwater marsh habitat not hydrologically connected to streams shall be provided at a 2:1 ratio. This mitigation may be achieved by creating/restoring on-site open space areas with a minimum 100-foot-wide buffer, establishing an endowment or other suitable funding source for long-term management of the mitigation habitat, or purchasing credits at an approved mitigation bank. | LTS |
| | | BIO 7: Mitigation for direct impacts to seasonal wetlands in the Inner Coast Range shall be provided at a 2:1 ratio. | LTS |
| | | BIO-8: Compensatory mitigation for unavoidable impacts to suitable breeding and non-breeding aquatic habitat (e.g., riparian, stream, pond, and freshwater marsh habitats) outside of the California Red-legged Frog Conservation Area shall be provided through the construction and/or restoration of similar habitats at a prescribed ratio (acres restored to acres impacted) consistent with Mitigation Measure BIO-5, and provide an endowment fund or other approved funding source to implement management plans for preserved lands in perpetuity consistent with the requirements in the Solano HCP or standardized policies developed by the City per proposed General Plan Action COS-A1.1 that shall be based on the principles found in the current working draft of the Solano HCP. | LTS |
| | | BIO 9: Where removal of elderberry shrubs or their stems measuring 1 inch in diameter or greater is unavoidable, these impacts shall be mitigated. Removal of elderberry shrubs or stems 1 inch in diameter or greater and associated riparian vegetation shall not create gaps in a riparian corridor greater than 300 feet. Mitigation will include salvaging and replanting affected elderberry shrubs and planting additional elderberry shrubs and associated native riparian plants according to the following criteria:<br>1. **Transplanting Removed Elderberry Shrubs.** Transplant removed elderberry shrubs to an approved, secure site, such as an approved mitigation bank location in Solano County or non-bank relocation site to be approved by the City and USFWS. All non-bank relocation sites shall meet the minimum reserve standards identified in the Solano HCP or standardized policies developed by the City per proposed General Plan Action COS-A1.1 that shall be based on the principles found in the current working draft of the Solano HCP | LTS |

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TABLE 2-1 **SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Significant Impact | Significance Before Mitigation | Mitigation Measures | Significance With Mitigation |
|---|---|---|---|
| | | (e.g. site shall be protected by a conservation easement or other applicable protection measure, and funding shall be provided for long-term monitoring and maintenance). Transplanting shall occur between June 15 and March 15 (November through February is the optimal period for transplanting). Elderberry may not be transplanted between March 16 and June 14 except where isolated bushes are located more than 0.5 miles from other suitable valley elderberry longhorn beetle habitat and no signs of use (e.g. exit holes) have been identified.<br>2. **Mitigation for Whole Shrub Removal.** For each removed elderberry bush, plant a minimum of five elderberry seedlings or rooted cuttings and five associated native, woody riparian plants in the mitigation area, or purchase applicable credits from a mitigation bank approved under the Solano HCP or standardized policies developed by the City per proposed General Plan Action COS-A1.1 (that shall be based on the principles found in the current working draft of the Solano HCP) to sell valley elderberry longhorn beetle credits.<br>3. **Mitigation for Trimming/Removal of Stems 1 Inch in Diameter or Greater.** For every ten elderberry stem 1 inch in diameter or greater that are trimmed/removed, plant two elderberry seedlings and two associated native, woody riparian plant seedlings.<br>Mitigation plantings shall occur, to the maximum extent practicable, in areas adjacent to the impact area and/or in existing gaps in riparian corridors. Priority areas for riparian revegetation and planting of elderberry include Alamo and Ulatis Creeks. The requirements for associated native, woody riparian plant establishment may be fulfilled in combination with the woody riparian vegetation replacement requirements prescribed under Mitigation Measure BIO-5. | |
| | | BIO-10: Long-term impacts to Swainson's hawk foraging habitat in the irrigated agriculture conservation area (Figure 4.4-6) shall be mitigated through the preservation (conservation easement) and management of foraging habitat at a ratio of 1:1 (mitigation-to-impact). All mitigation areas shall remain in "agricultural production" provided these activities are consistent with the economics of agricultural operations. The following activities[34] shall also be prohibited on the mitigation area in order to promote value for Swainson's hawk foraging:<br>♦ Permanent plantings of orchards and/or vineyards for the produc- | LTS |

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TABLE 2-1 **SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Significant Impact | Significance Before Mitigation | Mitigation Measures | Significance With Mitigation |
|---|---|---|---|
| | | tion of fruits, nuts, or berries.<br>♦ Cultivation of perennial vegetable crops such as artichokes and asparagus, as well as the annual crops cotton and rice.<br>♦ Commercial feedlots, which are defined as any open or enclosed area where domestic livestock are grouped together for intensive feeding purposes.<br>♦ Horticultural specialties, including sod, nursery stock, ornamental shrubs, ornamental trees, Christmas trees, and flowers.<br>♦ Commercial greenhouses or plant nurseries.<br>♦ Commercial aquaculture of aquatic plants and animals and their by-products.<br>♦ Commercial wind energy development.<br><br>Mitigation shall be provided in the Irrigated Agriculture Potential Reserve Area (as depicted in the Swainson's Hawk Potential Reserve Areas figure in the Solano HCP) or in areas identified in standardized policies developed by the City per proposed General Plan Action COS-A1.1 that shall be based on the principles found in the current working draft of the Solano HCP. | |
| | | BIO-11: Long-term impacts to Swainson's hawk foraging habitat in the valley floor grassland conservation area (Figure 4.4-6) shall be mitigated through the preservation and management of foraging habitat at a ratio of 1:1 (mitigation-to-impact) and subject to species management requirements specified in the Solano HCP or standardized policies developed by the City per proposed General Plan Action COS-A1.1 that shall be based on the principles found in the current working draft of the Solano HCP. Mitigation shall be provided in the Irrigated Agriculture or Valley Floor Grassland Potential Reserve Areas (see the Vernal Pool Potential Preserve and Reserve Areas figure in the Solano HCP) or in areas identified in standardized policies developed by the City per proposed General Plan Action COS-A1.1 that shall be based on the principles found in the current working draft of the Solano HCP. Preservation of valley floor grassland habitat may be satisfied through Mitigation Measure BIO-1 if the minimum 1:1 ratio for foraging habitat is achieved. | LTS |
| | | BIO-12: Long-term impacts to grassland and oak savanna habitat in the Inner Coast Range conservation area (Figure 4.4-6) shall be mitigated through the preservation and management of foraging habitat at a ratio of 1:1 (mitigation-to-impact) and subject to species management requirements specified in the Solano HCP or standardized policies devel- | LTS |

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TABLE 2-1 **SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Significant Impact | Significance Before Mitigation | Mitigation Measures | Significance With Mitigation |
|---|---|---|---|
| | | oped by the City per proposed General Plan Action COS-A1.1 that shall be based on the principles found in the current working draft of the Solano HCP. Mitigation shall be provided in the Irrigated Agriculture, Valley Floor Grassland, or Inner Coast Range Potential Reserve Areas (see the Vernal Pool Potential Preserve and Reserve Areas figure in the Solano HCP) or in areas identified in standardized policies developed by the City per proposed General Plan Action COS-A1.1 that shall be based on the principles found in the current working draft of the Solano HCP.<br><br>*Exceptions:* Impacts that are likely to have minimal effects on the extent and quality of Swainson's hawk foraging habitat are exempt from Swainson's hawk foraging habitat mitigation requirements. Such activities include: projects affecting less than one year of forage production, activities related to establishment of natural habitats (e.g. aquatic, riparian, and grassland habitats), construction of infill developments that are less than 5 acres in size and surrounded by urban development, and other minor public and private facilities accessed via existing roads or that impact less than 0.5 acres of potential Swainson's hawk foraging habitat (e.g. pump stations, antennae sites, new irrigation canals, buried pipelines, or utilities). | |
| | | BIO-13: Mitigation for the permanent (i.e. more than one season) disturbance, destruction, or conversion of burrowing owl habitat for urban development or other permanent facilities shall be provided at a 1:1 ratio. Project sites that have been occupied during the nesting season at any time during the past three years or found to be nesting at the time of pre-construction surveys will be considered occupied by owls and require additional nesting habitat mitigation (described in the Solano HCP) or standardized policies developed by the City per proposed General Plan Action COS-A1.1 that shall be based on the principles found in the current working draft of the Solano HCP). All burrowing owl habitat affected either directly, indirectly, or cumulatively by the project will be subject to the compensation requirement. Mitigation lands used to satisfy mitigation measures for other natural communities and/or species identified in Tables 4.4-2 and 4.4-3 of the Draft EIR (i.e. valley floor grassland and vernal pool natural community [excluding the wetland restoration/construction component], coastal marsh natural community, Swainson's hawk, California red-legged frog, and callippe silverspot butterfly) can be used to satisfy burrowing owl conservation if the reserve area meets the basic burrowing owl reserve management standards and | LTS |

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TABLE 2-1 **SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Significant Impact | Significance Before Mitigation | Mitigation Measures | Significance With Mitigation |
|---|---|---|---|
| | | criteria specified in the Solano HCP or standardized policies developed by the City per proposed General Plan Action COS-A1.1 that shall be based on the principles found in the current working draft of the Solano HCP.<br><br>*Exemptions:* Infill projects less than 5 acres in size and surrounded by urban development would have minimal effects on the extent and quality of burrowing owl habitat and are exempt from burrowing owl foraging habitat mitigation requirements unless a known or active nest is present. Additionally, project proponents are obligated to avoid destruction of active burrowing owl nests and take of burrowing owls in compliance with the federal Migratory Bird Treaty Act (MBTA) and California Fish and Game Code Section 3503.5 and to meet the requirements specified in the Solano HCP or standardized policies developed by the City per proposed General Plan Action COS-A1.1 that shall be based on the principles found in the current working draft of the Solano HCP. | |
| | | BIO-14: If construction of pump stations, antennae sites, new irrigation canals, buried pipelines, or utilities (but excluding restoration and reserve management activities) will result in temporary impacts to occupied burrowing owl habitat (e.g. closure, collapse due to ground disturbance, or disturbance in the construction zone), shall be mitigated according to the following criteria at all times of the year:<br><br>1. **Temporary Impacts Less Than or Equal to 1 Acre in Size:** Install five burrows within 330 feet of the edge of the construction area if suitable contiguous habitat remains and no more than one pair of owls without eggs or young in the nest is displaced. This condition may be waived if an approved biologist, the City, and CDFW determine that the contiguous area already contains suitable donor burrows. Maintain vegetation height at 6 inches or less around the mitigation burrows to encourage use by owls.<br><br>a. A monitoring program will be implemented to track and document the use of nearby natural or artificial burrows by evicted owls. Monitoring will be funded by the applicant conducting the project. Monitoring results will be reported to the City and CDFW at the end of the project.<br><br>b. Artificial burrows will be maintained by the applicant who owns the project that results in burrow or habitat destruction. Artificial burrows shall be maintained for a minimum of two years fol- | LTS |

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TABLE 2-1 **SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Significant Impact | Significance Before Mitigation | Mitigation Measures | Significance With Mitigation |
|---|---|---|---|
| | | lowing completion of the project that resulted in the temporary impact. The construction site will be monitored annually to ensure that natural burrows have been re-established on the construction site.<br>1) If burrows have not been re-established on the construction site within two years but owls are using other ground squirrel burrows on or adjacent to the site, then the artificial burrows will not require maintenance beyond the two-year period and no additional mitigation will be required.<br>2) If the burrows have not been re-established in the construction area and owls are not using other natural burrows on or adjacent to the construction site within two years, then the impact will be considered permanent and mitigation will be required according to Mitigation Measure BIO-13.<br>c. The disturbed area shall also be monitored the following breeding season to determine if the owls return to the area to nest. If the owls do not return or relocate to a nearby site, impacts will be required to provide additional mitigation per the Solano HCP or standardized policies developed by the City per proposed General Plan Action COS-A1.1 that shall be based on the principles found in the current working draft of the Solano HCP.<br>d. If the above measures cannot be implemented because adequate habitat is not present in surrounding, contiguous lands, impacts shall be mitigated per the requirements of the Solano HCP or standardized policies developed by the City per proposed General Plan Action COS-A1.1 that shall be based on the principles found in the current working draft of the Solano HCP.<br>2. **Temporary Impacts Greater Than 1 Acre in Size:** Install ten burrows/acre within 330 feet of the construction area if at least 7 acres of contiguous habitat remains and no more than one pair of owls without eggs or young in the nest is displaced. Also maintain vegetation height at 6 inches or less around the mitigation burrows to encourage use by owls. This condition may be waived if an approved biologist, the City, and CDFW determine that the contiguous area already contains suitable donor burrows. A monitoring program will be implemented to track and document the use of | |

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TABLE 2-1 **SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Significant Impact | Significance Before Mitigation | Mitigation Measures | Significance With Mitigation |
|---|---|---|---|
| | | nearby natural or artificial burrows by evicted owls. Monitoring will be funded by the applicant conducting the project. Monitoring results will be reported to the City and CDFW at the end of the project.<br><br>a. Artificial burrows will be maintained by the applicant that owns the project that results in burrow or habitat destruction. Artificial burrows shall be maintained for a minimum of two years following completion of the project that resulted in the temporary impact. The construction site will be monitored annually to ensure that natural burrows have been re-established on the construction site.<br><br>1) If burrows have not been re-established on the construction site but owls are using other ground squirrel burrows on or adjacent to the site, then the artificial burrows will not require maintenance beyond the two-year period and no additional mitigation will be required.<br><br>2) If the burrows have not been re-established in the construction area and owls are not using other natural burrows on or adjacent to the construction site within two years, then the impact will be considered permanent and mitigation will be required according to Mitigation Measure BIO-13.<br><br>b. Temporary impacts that cannot be mitigated with mitigation burrows due to the lack of suitable burrowing owl habitat on a project site or contiguous ownership parcels shall be mitigated by preserving burrowing owl habitat off site at a ratio of 1:1. Sites subject to temporary impacts that are occupied by more than one pair of owls likewise will be mitigated at a 1:1 ratio. All habitat areas disturbed, destroyed, or converted to non-habitat uses directly, indirectly, or cumulatively will be subject to the mitigation requirement.<br><br>Compliance with this mitigation measure does not allow for the destruction or disturbance of an active nest site. | |

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TABLE 2-1 **SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Significant Impact | Significance Before Mitigation | Mitigation Measures | Significance With Mitigation |
|---|---|---|---|
| **BIO-1:** The proposed General Plan, in combination with the Northeast Fairfield Specific Plan, could preclude retention of an important wildlife corridor. | S | ~~BIO-1~~**:** The area designated as Public/Institutional by the proposed General Plan in this wildlife corridor is owned by the Solano Irrigation District (SID), a public entity. While there are no formal plans in place, due to the nature of this agency, future land use would likely include facilities that support SID's water service. Because SID would not be able to use this land for other purposes that would be compatible with a wildlife corridor, no mitigation is available, and the impact is *significant and unavoidable*. | SU |
| **CULTURAL RESOURCES** | | | |
| *Since there are no significant impacts related to cultural resources as a result of the proposed General Plan and ECAS, no mitigation measures are required.* | | | |
| **GEOLOGY, SOILS, AND MINERAL RESOURCES** | | | |
| *Since there are no significant impacts related to geology and soils as a result of the proposed General Plan and ECAS, no mitigation measures are required.* | | | |
| **GREENHOUSE GAS EMISSIONS** | | | |
| **GHG-1:** The proposed General Plan and ECAS would conflict with Executive Order S-03-05's goal to reduce GHG emissions by 80 percent below 1990 levels by 2050. | S | The majority of the reductions needed to reach the 2050 target will likely come from State measures (e.g. additional vehicle emissions standards), but the City does not have authority over such measures. The State has not identified plans to reduce emissions beyond 2020. In addition, as part of the ECAS process, the City considered a wide range of GHG emission reduction measures, and all feasible measures are included in the proposed ECAS. No additional mitigation is available, and the impact is considered *significant and unavoidable*. | SU |
| **HAZARDS AND HAZARDOUS MATERIALS** | | | |
| *Since there are no significant impacts related to hazards and hazardous materials as a result of the proposed General Plan and ECAS, no mitigation measures are required.* | | | |
| **HYDROLOGY AND WATER QUALITY** | | | |
| **HYDRO-1:** Although the proposed General Plan's policies and actions reduce risks associated with dam or levee failure, they do not eliminate risks to people and property. | S | As discussed above, it is not within Vacaville's power to require or complete maintenance and improvements to dams or levees around Vacaville that are owned and maintained by other agencies. Therefore, this impact is considered *significant and unavoidable*. | SU |

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TABLE 2-1 **SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Significant Impact | Significance Before Mitigation | Mitigation Measures | Significance With Mitigation |
|---|---|---|---|
| **HYDRO-2:** The proposed General Plan would contribute to development in dam and levee inundation areas, resulting in a significant cumulative impact. | S | It is not within Vacaville's power to require or complete maintenance and improvements to dams or levees around the city owned and maintained by other agencies. Therefore, the impact is considered *significant and unavoidable*. | SU |
| **LAND USE AND PLANNING** | | | |
| *Since there are no significant impacts related to land use as a result of the proposed General Plan and ECAS, no mitigation measures are required.* | | | |
| **NOISE** | | | |
| **NOI-1:** Increased traffic from projected development allowed by the proposed General Plan would result in a significant increase in traffic noise levels of more than 5 dBA compared to existing conditions along the following roadway segments:<br>♦ Vaca Valley Parkway from the Interstate 505 northbound ramps to Leisure Town Road<br>♦ Leisure Town Road from Alamo Drive to Vanden Road<br>♦ Ulatis Drive from Nut Tree Road to Leisure Town Road | S | NOI-1: The project applicant shall ensure that the following roadway segments shall be re-surfaced with a quiet pavement, such as Rubberized Hot Mix Asphalt – Open Graded (RHMA-O):<br>♦ Vaca Valley Parkway from the Interstate 505 northbound ramps to Leisure Town Road<br>♦ Leisure Town Road from Alamo Drive to Vanden Road<br>♦ Ulatis Drive from Nut Tree Road to Leisure Town Road | LTS |
| **POPULATION AND HOUSING** | | | |
| **POP-1:** The proposed General Plan would induce substantial population growth within the EIR Study Area. | S | In order to reduce the anticipated population growth by 2035 to an "insubstantial" level that would not exceed ABAG's current projections, the City would have to limit housing development opportunities to less than half of what this EIR projects. This could drive up home prices in Vacaville, reducing housing options for Vacaville residents and changing the character of the city. In addition, much of the 2035 projection accounts for development that has already been approved by the City, including projects like the North Village Specific Plan and Lagoon Valley Specific Plan. In total, these approved projects account for approximately 4,900 new units in Vacaville, which alone would exceed ABAG's projections. Since the City cannot take back development permits that have already been approved, it would be infeasible to reduce the development capacity in the city to ABAG's projections. Furthermore, the City projected development needs in 2035 based on a careful review of past development trends, as explained in Chapter 3, Project Description of the Draft EIR. The proposed General Plan land use map represents a land use plan that the City believes is most appropriate to accommodate growth projected for 2035 and beyond. It is not feasible to mitigate pop- | SU |

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TABLE 2-1 **SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Significant Impact | Significance Before Mitigation | Mitigation Measures | Significance With Mitigation |
|---|---|---|---|
| | | ulation growth to a level that is less than "substantial," this impact is considered *significant and unavoidable.* | |
| **POP-2:** The proposed General Plan would induce substantial population growth within Vacaville and the region. | S | It is not feasible to mitigate population growth to a level that is less than "substantial," and this impact is considered *significant and unavoidable.* | SU |
| **PUBLIC SERVICES AND RECREATION** | | | |
| *Since there are no significant impacts related to public services and recreation as a result of the proposed General Plan, no mitigation measures are required.* | | | |
| **TRAFFIC AND TRANSPORTATION** | | | |
| **TRAF-1:** The Alamo Drive at the Marshall Road intersection (4) would degrade to LOS D during both peak hours. | **S** | TRAF-1: The City of Vacaville shall implement the following measures:<br>♦ Southbound approach: Convert the southbound through-right shared lane in order to a through lane and add a southbound right-turn lane to provide an exclusive right-turn lane, a through lane, a left-turn lane.<br>♦ Westbound approach: Add a left-turn lane on the westbound to provide dual left-turn lanes, two through lanes and a through-right shared lane. | SU |
| **TRAF-2:** The Alamo Drive at Merchant Street intersection (5) would degrade to LOS D in the PM peak hour. | S | TRAF-2: The City of Vacaville shall implement the following measure:<br>♦ Westbound approach: Convert the westbound outer through lane to a through-right shared lane to provide a through lane, a through-right shared lane, a right-turn lane, and two left-turn lanes. | LTS |
| **TRAF-3**: The Allison Road at Nut Tree Parkway intersection (10) would degrade to LOS F during the PM peak hour. | S | TRAF-3: The City of Vacaville shall implement the following measure:<br>♦ Northbound approach: Convert the northbound through-right shared lane to a through lane and add a right-turn lane to provide three through lanes and a right-turn lane.<br>♦ Southbound approach: Convert the southbound left-through lane to an exclusive left-turn lane to provide two left-turn lanes and two through lanes.<br>♦ Modify the traffic signal phasing to provide a protected left-turn phase on the southbound approach. | SU |
| **TRAF-4**: The Leisure Town Road at Alamo Drive intersection (32) would degrade to LOS E during the PM peak hour. | S | TRAF-4: The City of Vacaville shall implement the following measure:<br>♦ Eastbound approach: Add an eastbound left-turn lane to provide dual left-turn lanes, a through lane, and a right-turn lane. | SU |
| **TRAF-5:** The Leisure Town Road at Elmira Road intersection (33) would degrade to LOS F in during both peak hours. | S | TRAF-5: The City of Vacaville shall implement the following measures:<br>♦ Northbound approach: Add one left-turn lane and one right-turn lane, and convert the through-right shared lane to a through lane to | SU |

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TABLE 2-1 **SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Significant Impact | Significance Before Mitigation | Mitigation Measures | Significance With Mitigation |
|---|---|---|---|
| | | provide two left-turn lanes, two through lanes, and a right-turn lane.<br>♦ Southbound approach: Add one left-turn lane and one right-turn lane, and convert the through-right lane shared to a through lane to provide two left-turn lanes, two through lanes, and a right-turn lane.<br>♦ Eastbound approach: Add a left-turn lane and one through lane, and convert the through-left shared lane to a through lane to provide one left turn lane, two through lanes, and a right-turn lane.<br>♦ Westbound approach: Add a right-turn lane and convert the through-right shared lane to a through lane to provide one left-turn lane, two through lanes, and a right-turn lane. | |
| **TRAF-6**: The Leisure Town Road at Interstate 80 Eastbound Ramps (35) would degrade to LOS D during both peak hours. This location is a freeway ramp intersection and is under Caltrans jurisdiction. | S | TRAF-6: The City of Vacaville, in coordination with Caltrans, shall implement the following measure:<br>♦ Eastbound approach: Add a right-turn lane to the eastbound off-ramp approach to provide a left-turn lane, a left-through shared lane, and a right-turn lane. | SU |
| **TRAF-7**: The Leisure Town Road at Orange Drive intersection (39) would degrade to LOS D during both peak hours. | S | TRAF-7: The City of Vacaville shall implement the following measures:<br>♦ Southbound approach: Add a southbound left-turn lane to provide two left-turn lanes, two through lanes, and a right-turn lane; and prohibit the southbound U-turn movement.<br>♦ Westbound approach: Modify the traffic signal to provide overlap right-turn phasing for the westbound right-turn movement. | LTS |
| **TRAF-8**: The Monte Vista Avenue at Allison Drive intersection (57) would degrade to LOS F during the PM peak hour. | S | TRAF-8: The City of Vacaville shall implement the following measures:<br>♦ Northbound approach: Convert a northbound through lane to a right-turn lane to provide two left-turn lanes, one through lane, and two right-turn lanes; and modify the traffic signal phasing to provide overlap northbound right-turn movement.<br>♦ Westbound approach: Prohibit westbound U-turn movements; convert a westbound through lane to a left-turn lane to provide two left-turn lanes, one shared through-right turn lane. | LTS |
| **TRAF-9:** The Nut Tree Road at Elmira Road intersection (67) would degrade to below LOS mid-D during both peak hours. | S | TRAF-9: The City of Vacaville shall implement the following measure:<br>♦ Southbound approach: Convert a southbound through lane to a left-turn lane to provide two left-turn lanes, one through lane, and one through-right shared lane. | LTS |

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|---|---|---|---|
| **TRAF-10:** The Orange Drive at Nut Tree Road intersection (76) would degrade to LOS F in the PM peak hour. | S | TRAF-10: The City of Vacaville shall implement the following measures:<br>♦ Northbound approach: Add a northbound right-turn lane and convert the through-right shared lane to a through lane to provide one left-turn lane, two through lanes, and a right-turn lane; provide lagging left-turn signal phasing.<br>♦ Southbound approach: Add a southbound right-turn lane and convert the through-right shared lane to a through lane to provide two left-turn lanes, two through lanes, and a right-turn lane; provide lagging left-turn signal phasing.<br>♦ Westbound approach: Convert a westbound through lane to a left-turn lane to provide three left-turn lanes, two through lanes, and one right-turn lane. | LTS |
| **TRAF-11:** The Peabody Road at Cliffside Drive intersection (80) would degrade to LOS E during the PM peak hour. | S | TRAF-11: The City of Vacaville shall implement the following measure:<br>♦ Eastbound approach: Add an eastbound left-turn lane to provide two-left turn lanes, a through-left shared lane, and a right-turn lane, and modify the lane alignment of the east-west movements. | SU |
| **TRAF-12**: The Peabody Road at CSF intersection (81) would degrade to LOS F in the AM peak hour. | S | TRAF-12: The City of Vacaville shall implement the following measures:<br>♦ Southbound approach: Add a southbound right-turn lane and convert the through-right shared lane to a through lane to provide a left-turn lane, a through-left shared lane, and a right-turn lane.<br>♦ South leg: Add a corresponding receiving lane on the south leg of the intersection. | LTS |
| **TRAF-13**: The Peabody Road at Elmira Road intersection (82) would degrade to LOS E during the PM peak hour. | S | TRAF-13: The City of Vacaville shall implement the following measures:<br>♦ Eastbound approach: Add an eastbound left-turn lane to provide two left-turn lanes, two through lanes, and one right-turn lane; modify the traffic signal to provide overlap eastbound right-turn phasing.<br>♦ Northbound approach: Prohibit northbound U-turn movement.<br>♦ Westbound approach: Convert a through lane to a left-turn lane to provide two left-turn lanes, one through lane, and a through-right shared lane. | SU |
| **TRAF-14**: The Peabody Road at Foxboro Parkway intersection (83) would degrade to below LOS mid-D during the PM peak hour. | S | TRAF-14: The City of Vacaville shall implement the following measure:<br>♦ Northbound approach: Convert the northbound through-right shared lane to a through lane and add a right-turn lane to provide two through lanes and a right-turn lane. | LTS |

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|---|---|---|---|
| **TRAF-15**: The Peabody Road at Hume Way intersection (84) would degrade to LOS D during the PM peak hour. | S | TRAF-15: The City of Vacaville shall implement the following measures:<br>♦ Eastbound approach: Convert the westbound through lane to a left-through shared lane to provide a left-turn lane, a left-through shared lane, and a right-turn lane; and modify the traffic signal to provide overlap right-turn phasing.<br>♦ Northbound approach: Prohibit northbound U-turn movement. | LTS |
| **TRAF-16**: The Vaca Valley Road at Crescent Drive intersection (92) would degrade to LOS F during the AM peak hour and LOS E during the PM peak hour. | S | TRAF-16: The City of Vacaville shall implement the following measure:<br>♦ Southbound approach: Convert the through-right shared lane to a left-through-right shared lane to provide a left-turn lane and a left-through-right shared lane; modify the traffic signal to provide split phase operation on the north-south approaches. | LTS |
| **TRAF-17:** The Vaca Valley Road at East Akerly Drive intersection (93) would degrade to LOS F during both peak hours. | S | TRAF-17: The City of Vacaville shall implement the following measures:<br>♦ Northbound approach: Convert the northbound through lane to a through-right shared lane to provide a left-turn lane, a through-right shared lane, and a right-turn lane; modify the traffic signal to provide split phase operations on the north-south approaches.<br>♦ Westbound approach: Convert the westbound through lane to a left-turn lane to provide two left-turn lanes and a through-right shared lane. | LTS |
| **TRAF-18**: The Vaca Valley Road at New Horizons Way intersection (98) would degrade to LOS F during the PM peak hour. | S | TRAF-18: The City of Vacaville shall implement the following measures:<br>♦ Eastbound approach: Add an eastbound left-turn lane to provide two-left turn lanes, a through lane, and a through-right shared lane.<br>♦ Northbound approach: Convert the northbound through lane to a left-turn lane to provide two left-turn lanes and a through-right shared lane. | LTS |
| **TRAF-19**: The Leisure Town Road at Midway Road intersection (38) would degrade to LOS E during the PM peak hour. | S | TRAF-19: The City of Vacaville shall implement the following measure:<br>♦ Install a traffic signal at the intersection as the peak hour traffic signal warrant would be met. | LTS |
| **TRAF-20**: The unsignalized Monte Vista Avenue at Airport Road intersection (56) would degrade to LOS F in the PM peak hour. | S | TRAF-20: The City of Vacaville shall implement the following measure:<br>♦ Install a traffic signal at the intersection as the peak hour traffic signal warrant would be met in the PM peak hour. | LTS |
| **TRAF-21:** The unsignalized Cherry Glen Road at Interstate 80 Eastbound Ramp intersection (19) would degrade to LOS F in the PM peak hour. This location is a freeway ramp intersection and is under Caltrans jurisdiction. | S | TRAF-21: The City of Vacaville, in coordination with Caltrans, shall implement the following measure:<br>♦ Install a traffic signal at the intersection as the peak hour traffic signal warrant would be met. | SU |

LTS = Less Than Significant S = Significant SU = Significant Unavoidable Impact

TABLE 2-1 **SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Significant Impact | Significance Before Mitigation | Mitigation Measures | Significance With Mitigation |
|---|---|---|---|
| **TRAF-22**: The unsignalized Cherry Glen Road at Interstate 80 Westbound Ramp intersection (20) would degrade to LOS E in the AM peak hour and LOS F in the PM peak hour. This location is a freeway ramp intersection and is under Caltrans jurisdiction. | S | ♦ TRAF-22: The City of Vacaville, in coordination with Caltrans, shall implement the following measure:<br>♦ Install stop signs on the northbound and southbound approaches to provide all-way stop control at the intersection. | SU |
| **TRAF-23**: The unsignalized Leisure Town Road at Gilley Way intersection (34) would degrade to LOS F on the worst minor street approach during both peak hours, while the overall intersection would deteriorate to LOS F in the PM peak hour. | S | TRAF-23: The City of Vacaville shall implement the following measure:<br>♦ Install a traffic signal at the intersection as the peak hour traffic signal warrant would be met. | SU |
| **TRAF-24**: The Leisure Town Road at Marshall Road intersection (37) would degrade to LOS F during both peak hours. | S | TRAF-24: The City of Vacaville shall implement the following measure:<br>♦ Install a traffic signal at the intersection as the peak hour traffic signal warrant would be met. | LTS |
| **TRAF-25**: The unsignalized Leisure Town Road at North-South Arterial intersection (43) would degrade to LOS E with an average delay of 49 seconds on the worst minor street approach during the PM peak hour, while the overall intersection would operate at LOS A. | S | TRAF-25: The City of Vacaville shall implement the following measure:<br>♦ Provide a storage pocket on the south leg to allow a two-stage, eastbound, left-turning movement. | LTS |
| **TRAF-26**: The unsignalized Midway Road at I-505 Northbound Ramp intersection (52) would degrade to LOS F on the worst minor street approach during both peak hours, while the overall intersection would operate at LOS A in the AM peak hour and LOS F in the PM peak hour. This location is a freeway ramp intersection and is under Caltrans jurisdiction. | S | TRAF-26: The City of Vacaville, in coordination with Caltrans, shall implement the following measures:<br>♦ Install a traffic signal at the intersection as the peak hour traffic signal warrant would be met.<br>♦ Eastbound approach: Convert the eastbound through-left shared lane to a through lane, and add a left-turn lane to provide a left-turn lane and a through lane. | SU |
| **TRAF-27**: The unsignalized Midway Road at I-505 Southbound Ramp intersection (53) would degrade to LOS F during both peak hours. This location is a freeway ramp intersection and is under Caltrans jurisdiction. | S | TRAF-27: The City of Vacaville, in coordination with Caltrans, shall implement the following measure:<br>♦ Install a traffic signal at the intersection as the peak hour traffic signal warrant would be met. | SU |
| **TRAF-28**: The unsignalized Nut Tree Road at Burton Drive intersection (66) would degrade to LOS F during the PM peak hour. | S | TRAF-28: The City of Vacaville shall implement the following measure:<br>♦ Install a traffic signal at the intersection as the peak hour traffic signal warrant would be met. | LTS |
| **TRAF-29**: The unsignalized Vaca Valley Road at Allison Drive intersection (90) would degrade to LOS F on the worst minor street approach during the AM peak hour. | S | TRAF-29: The City of Vacaville shall implement the following measure:<br>♦ Install stop signs on the eastbound and westbound approaches to provide all-way stop control at the intersection. | LTS |
| **TRAF-30**: The Monte Vista Avenue at Depot Road intersection (61) would degrade to LOS E during the PM peak hour. This intersection is located within the Downtown Urban High Density Residential Overlay District. | S | TRAF-30: The City of Vacaville shall implement the following measures:<br>♦ Northbound approach: Modify the traffic signal to allow an overlapping right-turn movement.<br>♦ Westbound approach: Prohibit westbound U-turn movements. | LTS |

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TABLE 2-1 **SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Significant Impact | Significance Before Mitigation | Mitigation Measures | Significance With Mitigation |
|---|---|---|---|
| **TRAF-31**: The Interstate 80 Eastbound Ramps at North Texas Street intersection (29) in Fairfield would degrade to LOS F during both peak hours. This location is a freeway ramp intersection and is under Caltrans jurisdiction. | S | TRAF-31: The City of Vacaville, in coordination with Caltrans and the City of Fairfield, shall implement the following measures:<br>♦ Eastbound approach: Convert the eastbound through-left shared lane to a left-through-right shared lane and add a right lane to provide one left-through-right shared lane, two exclusive right lanes.<br>♦ Southbound approach: Add one southbound through lane to provide one left-turn lane and two through lanes. | SU |
| **TRAF-32:** The Interstate 80 Westbound Ramps at North Texas Street intersection (30) in Fairfield would degrade to LOS F in the AM peak hour. This location is a freeway ramp intersection and is under Caltrans jurisdiction. | S | TRAF-32: The City of Vacaville, in coordination with Caltrans and the City of Fairfield, shall implement the following measure:<br>♦ Northbound approach: Restripe the northbound approach lanes on North Texas Street to provide two right-turn lanes, a through lane, and one left-turn lane. | SU |
| **TRAF-33**: The Peabody Road at Air Base Parkway intersection (78) in Fairfield would degrade to LOS E in the AM peak hour and LOS F in the PM peak hour. | S | TRAF- 33: The City of Vacaville, in coordination with the City of Fairfield, shall implement the following measures:<br>♦ Eastbound approach: Add an eastbound left-turn lane to provide three left-turn lanes and two through lanes.<br>♦ Westbound approach: Add a westbound right-turn lane to provide two right-turn lanes and two through lanes; modify traffic signal to allow right-turn overlap phasing.<br>♦ Southbound approach: Prohibit southbound U-turn movement. | SU |
| **TRAF-34**: The Peabody Road at Jepson Parkway intersection (85) in Fairfield would degrade to LOS F during both peak hours. | S | TRAF-34: The City of Vacaville, in coordination with the City of Fairfield, shall implement the following measures:<br>♦ Northbound approach: Add one northbound left-turn lane, one through lane, and one right-turn lane to provide two left-turn lanes, three through lanes, and two right-turn lanes.<br>♦ Southbound approach: Add two southbound through lanes and one right-turn lane to provide one left-turn lane, three through lanes and two right-turn lanes.<br>♦ Eastbound approach: Add one eastbound left-turn lane, one through lane, and one right-turn lane, and convert the through-right shared lane to an exclusive right-turn lane to provide two left-turn lanes, three through lanes, and two right-turn lanes.<br>♦ Westbound approach: Add one westbound left-turn lane and one through lane to provide two left-turn lanes, two through lanes, and one through-right shared lane. | SU |

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TABLE 2-1 **SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Significant Impact | Significance Before Mitigation | Mitigation Measures | Significance With Mitigation |
|---|---|---|---|
| **TRAF-35**: The eastbound segment of Interstate 80 west of Lagoon Valley Road would degrade to LOS F during the PM peak hour. | S | TRAF-35: Implementation of the policies and implementing actions in the proposed General Plan would potentially improve the freeway operation and reduce the project impact. However, the effectiveness of the policies and actions could not be clearly demonstrated to fully mitigate the project impact and improve the freeway operations to LOS E or better. Therefore, the project impact is *significant and unavoidable.* | SU |
| **TRAF-36**: The eastbound segment of Interstate 80 east of Leisure Town Road would degrade to LOS F during the PM peak hour. | S | TRAF-36: Implementation of the policies and implementing actions in the proposed General Plan would potentially improve the freeway operation and reduce the project impact. However, the effectiveness of the policies and actions could not be clearly demonstrated to fully mitigate the project impact and improve the freeway operations to LOS E or better. Therefore, the project impact is *significant and unavoidable.* | SU |
| **TRAF-37**: The project would result in deterioration of level of service at a number of intersections below acceptable standards that may not be able to be mitigated when the improvements are needed. | S | TRAF-37: Intersection level of service impacts would be addressed by Mitigation Measures TRAF-1 through TRAF-34. No additional mitigation measures are available to address this impact. Therefore, the project impact is *significant and unavoidable.* | SU |
| **TRAF-38**: The proposed General Plan would allow for development to occur in areas not currently served by public transit at equal service levels to the rest of the Local Tax Base Area. This would be in conflict with the accessibility and geographic coverage goals of the Vacaville City Coach Short Range Transit Plan. | S | TRAF-38: Implementation of the policies and implementing actions in the proposed General Plan, in particular Policies TR-P7.3 and TR-P7.4 and Action TR-A7.3, would establish policies and procedures to evaluate transit demand generated by new development and means to provide for transit demand beyond what can be expected from other established funding sources. New or extended transit service must comply with the established 20 percent farebox recovery mandate. | LTS |
| **UTILITIES AND SERVICE SYSTEMS** | | | |
| *Since there are no significant impacts related to utilities and service systems as a result of the proposed General Plan and ECAS, no mitigation measures are required.* | | | |

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