DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 60TH AIR MOBILITY WING (AMC)

MEMORANDUM FOR SEE DISTRIBUTION

FROM: 60 AMW/CV
400 Brennan Circle
Travis AFB CA 94535

SUBJECT: Public Notice of Draft Environmental Assessment (DEA) and Finding of No Significant Impact (FONSI) for Family Camp Expansion Project (FamCamp) at Travis Air Force Base (AFB), California

1. The U. S. Air Force is preparing a DEA and FONSI as part of a proposal to expand the Family Camp Trailer Park on Travis AFB. The DEA evaluated two alternatives, the Proposed Action Alternative and the No Action Alternative.

2. The Proposed Action would expand the FamCamp by constructing and managing 10 additional full-service RV camping sites adjacent to the current facility. The action would result in a 1.3-acre increase in impervious surface due to the additional 10 concrete camping pads and a new asphalt road. The expansion project would also extend utilities (i.e., water, sewer, cable television, and 50 Amp electrical service) from the current FamCamp site, and a memorial kiosk to commemorate the on-site August 5, 1950 crash of a B-29 aircraft would be constructed.

3. There is a potential for occurrence of a federally listed species (i.e., California tiger salamander [CTS], Ambystoma californiense) in the project vicinity and there were inquiries regarding cultural resources from the Yocha Dehe Wintun Nation.

4. In compliance with the National Environmental Policy Act 42 U.S.C. §4321 et seq, the Council of Environmental Quality Regulation, 40 CFR 1500-1508 and the U.S. Air Force Regulations, 32 CFR 989, the enclosed Public DEA and FONSI has been made available for a 30-day review and comment period. Comments may be faxed to (707) 424-5127 or mailed to:

Department of the Air Force
Attention: Mr. Matthew Blazek
60th Civil Engineer Squadron
411 Airman Drive
Travis AFB CA 94535

5. All comments must be received by 30 days from signature of this letter. If members of your staff have any questions on this Public DEA or FONSI, please contact Mr. Blazek at (707) 424-5127 or via email at matthew.blazek@us.af.mil.

TCP

THOMAS C. PAULY, Colonel, USAF
Vice Commander

Attachment:
Public DEA and FONSI for FamCamp

Distribution:
Mitchell Memorial Library
Attn: Reference Librarian—Adult Reference Desk
510 Travis Boulevard
Travis AFB, CA 94535

Fairfield Civic Center Library
Attn: Reference Librarian—Adult Reference Desk
1150 Kentucky Street
Fairfield, CA 94533

Suisun City Library
Attn: Reference Librarian—Adult Reference Desk
601 Pintail Drive
Suisun City, CA 94585

Vacaville Public Library and Cultural Center
Reference Librarian—Adult Reference Desk
1020 Ulatis Drive
Vacaville, CA 95688

California State Clearinghouse
P.O. Box 3044
Sacramento, CA 95812

DRAFT
FINDING OF NO SIGNIFICANT IMPACT FOR THE PROPOSED EXPANSION OF THE FAMILY CAMP TRAVIS AIR FORCE BASE, CALIFORNIA

Description of Proposed Action: An Environmental Assessment (EA) has been developed in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality (CEQ) regulations, and implementing regulations set forth in 32 Code of Federal Regulations (CFR) §989 (*Environmental Impact Analysis Process*), as amended, to evaluate a proposal to expand the Family Camp (FamCamp) at Travis Air Force Base (AFB), California. The attached EA is incorporated by reference into this document.

The Proposed Action includes expanding the FamCamp by constructing and managing 10 additional full-service RV camping sites adjacent to the current facility. The proposed limits of disturbance would encompass approximately 2.4 acres, and would result in a 1.3-acre increase in impervious surface. Construction would likely occur in 2017 between the months of June and October. Components of the Proposed Action are shown on Figure 3 of the EA and include the following:

- Construction of ten 50-foot × 15-foot full service concrete camping pads with 50-Amp electrical service,
- Construction of an asphalt road network that would connect the new sites with the existing FamCamp and provide pull-through access to the sites, and
- Construction of two gravel overflow parking areas.

The proposed expansion site is located on the site of the August 5, 1950 crash of a B-29 aircraft. The crash resulted in 19 fatalities, including then base commander Brigadier General Robert Travis. The base, known at that time as the Fairfield-Suisun AFB, was subsequently named in his honor. The Proposed Action includes a memorial kiosk to commemorate this defining tragedy for Travis AFB. Final placement of the memorial has not been determined.

The Proposed Action would require the extension of utilities (i.e., water, sewer, cable television, and 50-Amp electrical service). These utilities would be extended from the current FamCamp, and are located near the proposed expansion site. Some minor disturbance to the existing FamCamp road near the proposed expansion site would likely be required to connect and extend utilities. All utilities would be underground and would be routed within the limit of disturbance shown on Figure 3 in the EA. Stormwater would likely be allowed to flow overland to the drainage ditch located approximately 100 feet west of the proposed site. Construction activities would not be expected to impact existing camping sites.

The Air Force estimates that the Proposed Action would generate approximately $40,000 in additional annual revenue. Those funds would be used to support Team Travis outdoor recreation programs.

Description of Alternatives Analyzed: In addition to the Proposed Action, the No Action Alternative was carried forward for analysis in the EA.

The ***No Action Alternative*** would not expand the FamCamp. Campers would continue to be turned away during peak times, and revenue that could be used to enhance recreation opportunities for military personnel would be lost.

Summary of Findings: Direct, indirect, and cumulative impacts regarding Air Installation Compatible Use Zones and land use, air quality, noise, water resources, safety and occupational health, hazardous materials and waste, biological resources, cultural resources, geology and soils, socioeconomics and environmental justice, and infrastructure and utilities were analyzed for the Proposed Action and No Action Alternative.

Any plans, standards, or practices required by local, state, or federal law or USAF regulation will be observed in an effort to avoid or minimize impacts to the resources including BMPs commonly required in construction contracts for resource protection at Travis AFB. Therefore, the analysis in the EA concluded the following:

There will be no significant impact from the Proposed Action to Air Installation Compatible Use Zones and land use, air quality, water resources, safety and occupational health, hazardous materials and waste, biological resources, cultural resources, geology and soils, socioeconomics and environmental justice, or infrastructure and utilities.

The Proposed Action is not expected to contribute appreciably to cumulative environmental impacts when considered in the context of other projects that have recently been completed, are currently underway, or are anticipated in the near future.

Finding of No Significant Impact: Based on information and analysis presented in the EA and review of public and agency comments submitted, I conclude that implementation of the Proposed Action will not constitute an action that significantly affects the quality of the human environment due to the findings listed above and expanded upon in the EA. Accordingly, a finding of no significant impact is made for this project and an Environmental Impact Statement is therefore not necessary.

JOHN M. KLEIN, JR., Colonel, USAF

Commander, 60th Air Mobility Wing

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2

Draft
Environmental Assessment

Proposed Expansion of the Family Camp
Travis Air Force Base, California

Prepared for:

Department of the Army, Corps of Engineers
Omaha District

Travis Air Force Base
60 Civil Engineer Squadron

United States Air Force Civil Engineer Center
National Environmental Policy Act Division

November 2016

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Draft
Environmental Assessment

Proposed Expansion of the Family Camp
Travis Air Force Base, California

November 2016

Prepared for:

Department of the Army, Corps of Engineers
Omaha District

and

Travis Air Force Base
60 Civil Engineer Squadron

and

United States Air Force Civil Engineer Center
National Environmental Policy Act Division

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ORGANIZATION OF THE DOCUMENT

The following is an Environmental Assessment (EA) for the proposed expansion of the Family Camp Trailer Park on Travis Air Force Base, California. The EA is organized into the following sections:

- **Section 1 – Purpose, Need, and Scope:** Describes the purpose of and need for the project, as well as the general extent of proposed project activities.

- **Section 2 – Description of Proposed Action and Alternatives:** Provides a more detailed description of the Proposed Action. This section also includes a description of the alternatives that were considered for achieving the stated purpose, as well as selection standards that were developed to guide the selection of alternatives.

- **Section 3 – Affected Environment:** Provides a description of existing resources that have the potential to be affected by the alternatives.

- **Section 4 – Environmental Consequences:** Describes the environmental effects of implementing the Proposed Action and the No Action Alternative. The effects of the No Action Alternative provide a baseline for evaluation and comparison. Any Best Management Practices that would be implemented to reduce impacts to resources are identified in this section.

- **Section 5 – List of Preparers:** Provides information regarding the interdisciplinary staff involved in preparing the EA.

- **Section 6 – References:** Provides citations for documents and other materials used to prepare the EA.

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FIGURES

TABLES

APPENDICES

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ACRONYMS AND ABBREVIATIONS

AAQS	ambient air quality standards
AFB	Air Force Base
AFI	Air Force Instruction
AICUZ	Air Installation Compatible Use Zones
Amp	ampere
APCD	Air Pollution Central District
APE	Area of Potential Effect
APZ	Accident Potential Zone
AQMD	Air Quality Management District
BMP	Best Management Practice
CAA	Clean Air Act
CAEAQ	California Almanac of Emissions and Air Quality
CalEEMod	California Emission Estimator Model
Cal-IPC	California Invasive Plant Council
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resource Board
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CH_4	methane
CNEL	Community Noise Equivalent Level
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CTS	California Tiger Salamander
CWA	Clean Water Act
CZ	Clear Zone
dB	decibel
dBA	decibel A-weighted
DGMC	David Grant USAF Medical Center
DNL	day-night average sound level
DoD	Department of Defense

DOPAA	Description of Proposed Action and Alternatives
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
EISA	Energy Independence Security Act
EO	Executive Order
EPA	U.S. Environmental Protection Agency
EPAct	Energy Policy Act
ERP	Environmental Restoration Program
ESA	Endangered Species Act
°F	degrees Fahrenheit
FAA	Federal Aviation Administration
FamCamp	Family Camp Trailer Park
FEMA	Federal Emergency Management Agency
FONPA	Finding of No Practicable Alternative
FONSI	Finding of No Significant Impact
FY	fiscal year
GHG	greenhouse gas
GIS	Geographic Information System
GWR	Ground Water Rule
HAP	hazardous air pollutant
HFC	hydrofluorocarbon
HUD	Department of Housing and Urban Development
ICRMP	Integrated Cultural Resources Management Plan
IICEP	Intergovernmental and Interagency Coordination for Environmental Planning
INRMP	Integrated Natural Resources Management Plan
IRP	Installation Restoration Program
MBTA	Migratory Bird Treaty Act
mph	miles per hour
MS4	Municipal Separate Storm Sewer System
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standard
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NEI	National Emissions Inventory

NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NF_3	nitrogen trifluoride
NHPA	National Historic Preservation Act
NLAA	Not Likely to Adversely Affect
NO_2	nitrogen dioxide
NOA	Notice of Availability
NOx	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O_3	ozone
OSHA	Occupational Safety and Health Act
PFC	perfluorocarbon
PG&E	Pacific Gas and Electric Company
PM2.5	particulate matter – fine
PM10	particulate matter – respirable
ppb	parts per billion
PPE	personal protective equipment
ppm	parts per million
PSD	Prevention of Significant Deterioration
PVA	Project Validation Assessment
ROG	Reactive Organic Gases
ROI	Region of Influence
RONA	Record of Non-Applicability
RV	recreational vehicle
SF	sulfur hexafluoride
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SLF	Sacred Lands File
SO_2	sulfur dioxide
SOP	standard operating procedure
SWPPP	Storm Water Pollution Prevention Plan
TAC	toxic air contaminant
$\mu g/m^3$	micrograms per cubic meter
USACE	U.S. Army Corps of Engineers

USAF	United States Air Force
USC	United States Code
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VOC	volatile organic compound

1. PURPOSE AND NEED FOR ACTION

1.1 Introduction

The United States Air Force (USAF or Air Force) is required to consider the environmental consequences of proposed actions in the decision-making process under the following regulations:

- The National Environmental Policy Act (NEPA) of 1969 (42 United States Code [USC] § 4321 to 4370d),
- Council on Environmental Quality (CEQ) implementing regulations (40 Code of Federal Regulations [CFR] Parts 1500–1508), and
- Department of the Air Force Environmental Impact Analysis Process (EIAP) (32 CFR Part 989).

This Environmental Assessment (EA) examines the potential environmental impacts resulting from the proposed expansion of the Family Camp Trailer Park (FamCamp) on Travis Air Force Base (AFB). The expansion would increase capacity at the trailer park by 14%, and would allow the FamCamp to accommodate larger recreational vehicles (RVs) than will fit in existing spaces.

Travis AFB is located in northern California, within the city limits of Fairfield, which is the county seat of Solano County (**Figure 1**). In addition to Fairfield, local communities in the vicinity of the base include Vacaville to the north and Suisun City to the south. Fairfield and Suisun City lie at the northern end of the Suisun Slough Channel, an arm of Suisun Bay, which is a reach of San Francisco Bay.

The Base is located approximately 50 miles northeast of San Francisco and 40 miles southwest of Sacramento, the state capital. Although the eastern portions of Solano County are part of the Sacramento Valley, the western portions adjoin the San Francisco Bay system; therefore, Solano County is considered part of the greater San Francisco area.

The FamCamp is situated on approximately 7.5 acres immediately south of the main gate (**Figure 2**). It has been located at this site since the late 1940s. The FamCamp includes 70 full hookup (i.e., electrical, water, sewer, and cable TV) RV sites, four dry camping sites, and four tent sites. Onsite amenities include a camp office and manager, laundry, showers, restrooms, dump station, dumpsters, guest parking, and a dog walk. Nearby amenities include a car and RV wash (500 feet to the south), the Base Exchange (500 feet to the south-southeast), the commissary (1,500 feet to the east), and the David Grant USAF Medical Center (DGMC) (3,000 feet to the west). The FamCamp serves the traditional RV camping community, as well as active and retired military personnel that require medical care at the nearby DGMC.

1.2 Purpose of the Action

The purpose of the Proposed Action is to provide adequate camping sites on Travis AFB to meet current demand, and to facilitate the needs of campers requiring larger sites and 50-ampere (Amp) electrical service.

1.3 Need for the Action

The Proposed Action is needed to address capacity deficiencies at the FamCamp, which is currently operating at 90% of capacity on an annual basis, and has to turn away many potential campers during peak times. Additionally, longer RVs and RVs requiring 50-Amp electrical service cannot be accommodated at the currently available full hookup sites.

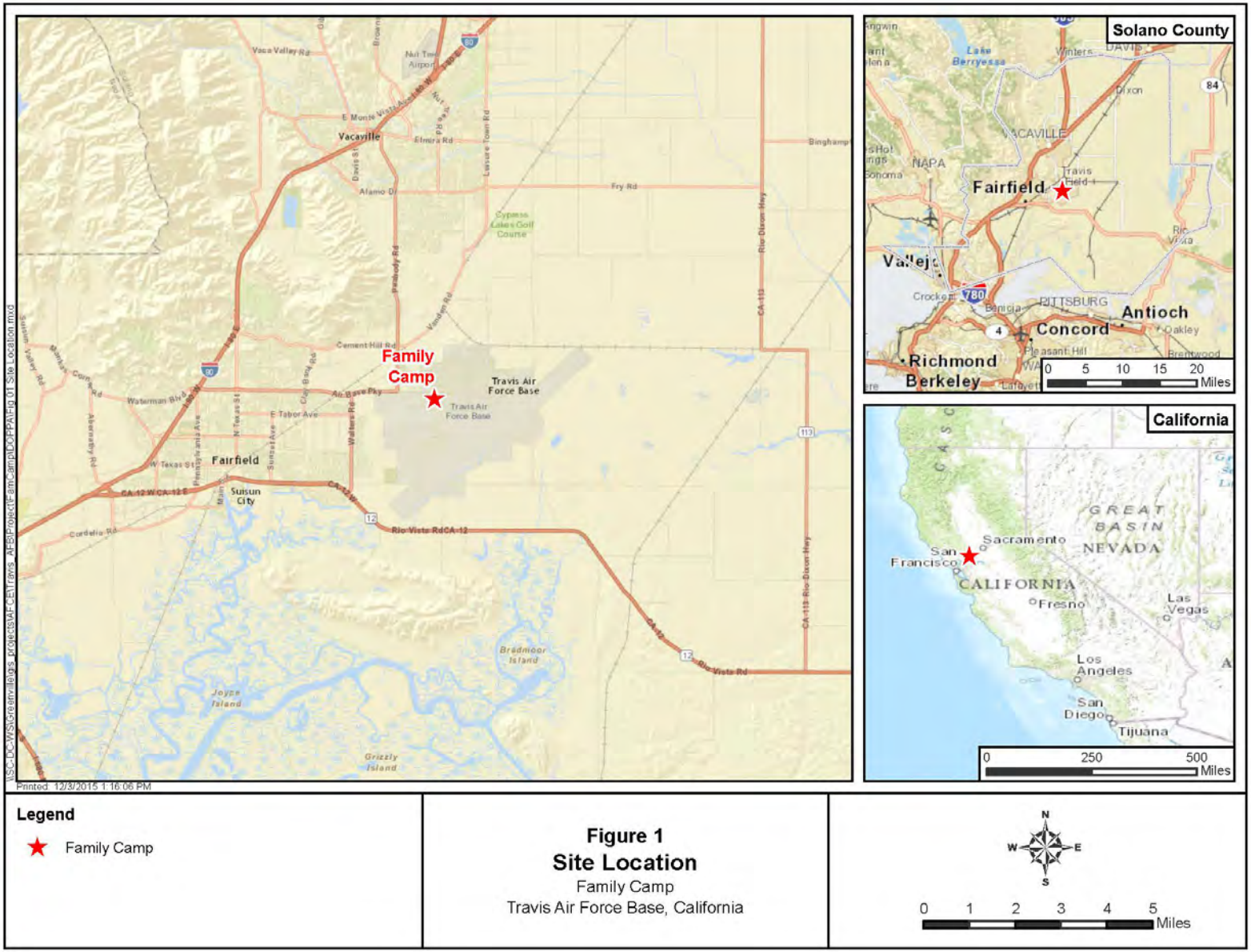

Figure 1. Site Location Map.

Figure 2. Current Extent of the Family Camp Trailer Park.

The USAF prepared a report to assess the validity of the proposed expansion (USAF 2013). A major component of the report was a Project Validation Assessment (PVA) study (**Appendix A**). The PVA study was prepared in accordance with Congressional guidance to demonstrate that the Proposed Action meets a documented market demand and operational need. The report determined that "The PVA study was able to document a valid need for additional full-service, pull-through RV parking spaces based on the condition of existing facilities, documented un-met demand, and poorly configured excess space that inherently limits the revenue generating capabilities of the FamCamp."

1.4 Decision To Be Made

NEPA requires consideration of environmental issues in federal agency planning and decision making. Under NEPA, federal agencies must prepare an EA or environmental impact statement (EIS) for any major federal action, except those actions that are determined to be "categorically excluded" from further analysis. An EA is a concise public document that provides sufficient analysis for determining whether the potential environmental impacts of a Proposed Action are significant, resulting in the preparation of an EIS; or if not significant, resulting in the preparation of a Finding of No Significant Impact (FONSI), and where applicable, a Finding of No Practicable Alternative (FONPA). This EA was prepared in accordance with NEPA (42 USC 4321-4317), and implemented through the CEQ regulations of 1978 (40 CFR § 1500-1508), and the Department of the Air Force EIAP (32 CFR §989).

The decision to be made is whether, having taken potential physical, environmental, cultural, and socioeconomic effects into account, the USAF should implement the Proposed Action and, as appropriate, carry out mitigation measures to reduce effects on resources. The Air Force will ultimately decide if the action is funded and constructed.

1.5 Regulatory Framework

This EA has been developed in accordance with NEPA, the CEQ's NEPA implementing regulations, and 32 CFR Part 989 (see Section 1.1). Federal, state, and local laws and regulations potentially applicable to the Proposed Action are specified within this EA, where appropriate. They include, but are not limited to:

- Migratory Bird Treaty Act (MBTA); 16 USC 703-712, 3 July 1918; as amended 1936, 1960, 1968, 1969, 1974, 1978, 1986, and 1989).
- National Historic Preservation Act (NHPA) of 1966, as amended (36 CFR Part 800).
- Federal Clean Air Act (CAA) (42 USC §7401 et seq., and amendments).
- Native American Graves Protection and Repatriation Act, as amended (NAGPRA) (25 USC 3001 et seq.).
- Federal Water Pollution Control Act, or Federal Clean Water Act (CWA) of 1972 (as amended), Sections 401 and 404.
- Endangered Species Act (ESA) of 1973 (7 U.S.C. § 136, 16 U.S.C. § 1531 et seq.).
- Executive Order (EO) 13175, "Consultation and Coordination with Indian Tribal Governments" (6 November 2000).
- EO 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" (11 February 1994).
- EO 13045, "Protection of Children from Environmental Health Risks and Safety Risks" (21 April 1997), as amended by EO 13296 (23 April 2003).

- EO 13423, "Strengthening Federal Environmental, Energy, and Transportation Management" (24 January 2007).
- EO 13514, "Federal Leadership in Environmental, Energy, and Economic Performance" (5 October 2009).
- Section 438 of the Energy Independence Security Act (EISA; 3 March 2007).
- Energy Policy Act of 2005 (EPAct; 8 August 2005).
- California Water Resources Board National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges of Storm Water Associated with Construction Activity (General Permit Order 2009-0009-DWQ [as amended by 2010-0014-DWQ and 2012-0006-DWQ]), including the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) for stormwater discharges from small Municipal Separate Storm Sewer Systems (MS4) order number 2013-0001-DWQ General Permit.
- Wastewater Discharge Permit number SIU 07/NSCIU 433-02.
- California Code of Regulations: also known as the California Building Standards Codes, administered by the Building and Safety Division of the County of Solano.

1.6 Public and Agency Involvement

The Air Force invites public participation in their decision-making through the NEPA process. Consideration of the views and information of all interested persons promotes open communication and enables better planning. Agencies, organizations, and members of the public having a potential interest in the proposed actions, including minority, low-income, and disadvantaged persons and Native American Tribes, are invited to participate in the decision-making process.

1.6.1 Public Involvement

A Notice of Availability (NOA) for the Draft EA and FONSI will be published in the *Daily Republic* (www.dailyrepublic.com), *The Reporter* (www.thereporter.com), and the *Tailwind* (www.tailwind.dailyrepublic.net) on TBD. This will initiate the 15-day public review period. The NOA will be issued to solicit comments on the Proposed Action and involve the local community in the decision making process. Copies of the Draft EA and FONSI will be made available for review at the Fairfield Civic Center Library (http://solanolibrary.com/fairfield-civic-center/), the Suisin City Library (www.solanolibrary.com/suisun), the Vacaville Public Library Cultural Center (www.solanolibrary.com/vacaville-cultural-center/), and the Mitchel Memorial Library (www.mitchellmemoriallibrary.org). Electronic copies of the documents will be posted at www.travis.af.mil/enviro/TBD.

1.6.2 Agency Coordination

Intergovernmental and Interagency Coordination for Environmental Planning (IICEP) is a federally mandated process for informing and coordinating with Tribal and other governmental agencies regarding a Federal Proposed Action. CEQ regulations require intergovernmental notifications prior to making any detailed statement of environmental impacts. Through the IICEP (i.e., scoping) process, the Air Force notifies relevant federal, state, and local agencies and allows them sufficient time to make known their environmental concerns specific to a proposed action. Comments and concerns submitted by these agencies during the IICEP process are subsequently incorporated into the analysis of potential environmental impacts conducted as part of this EA. This coordination fulfills requirements under EO

12372 (superseded by EO 12416, and subsequently supplemented by EO 13132), which requires federal agencies to cooperate with and consider state and local views in implementing a federal proposal. It also constitutes the IICEP process for this EA. Agencies with whom the Air Force has consulted as part of this EA to date include:

- The Native American Heritage Commission (NAHC),
- The California State Historic Preservation Office (SHPO), and
- The United States Fish and Wildlife Service (USFWS).

Copies of sent and received correspondence are provided in **Appendix B**. Responses have been received from the following agencies, either identifying potential environmental concerns or issues, or stating that they did not identify any such issues associated with the Proposed Action:

- The NAHC responded in a letter dated 09 November 2015. In their response, the NAHC stated that a Sacred Lands File (SLF) search failed to indicate the presence of Native American cultural resources in the project area. However, they did identify the Cortina Band of Indians and the Yocha Dehe Wintun Nation as Native American organizations that may have knowledge of cultural resources in the area.
- The SHPO responded in a letter dated 11 May 2015. They determined that the site of a 1950 B-29 crash, which is located within the proposed project footprint, is not eligible for inclusion in the National Register of Historic Places. They also stated that the Proposed Action would not affect any historic properties. The Air Force concurred with the SHPO findings in a letter dated 21 October 2015.
- The USFWS responded to an Air Force determination that the Proposed Action is not likely to adversely affect threatened or endangered species on 11 January 2016. Their response requested clarification of species determinations and additional information regarding the Proposed Action. The Air Force responded to the request on 14 January 2016. The USFWS concurred with the NLAA determination on 22 March 2016.

1.6.3 Native American Consultation

Based on the response from the NAHC, Travis AFB initiated government-to-government consultations with the Cortina Band of Indians and the Yocha Dehe Wintun Nation on 10 February 2016. The consultations are documented in Section 4.5.

2. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

2.1 Description of the Proposed Action

Travis AFB proposes to expand the FamCamp by constructing and managing 10 additional full service RV camping sites adjacent to the current facility (**Figure 3**). Section 2.4.1 provides details regarding the components of the Proposed Action.

2.2 Selection Standards

The NEPA, CEQ Regulations, and 32 CFR Part 989 require the Air Force to evaluate reasonable alternatives to the Proposed Action. Alternatives that are eliminated from detailed analysis must be identified along with a brief discussion of the reasons for eliminating them. For purposes of analysis, an alternative is considered "reasonable" only if it enables Travis AFB to alleviate the shortage of camping spaces on the installation in an efficient and cost-effective manner. "Unreasonable" alternatives would not enable Travis AFB to meet the purpose of and need for the Proposed Action and were not retained for further analysis.

The USAF developed the following selection standards to determine whether an alternative would be reasonable:

1. The additional sites must be constructed adjacent to the existing FamCamp so that management functions and campsite amenities would not need to be duplicated at another location (duplication of management functions and amenities would not be practicable nor financially feasible[1]).

2. The additional sites must be located in an area of a size and configuration that would allow the FamCamp to be relocated and/or further expanded in the future. The 90% Installation Development Plan (Travis AFB 2015) identifies the Main Gate Expansion as a medium range project that could be constructed within 6 to 10 years. Because the Air Force does not own or control the land immediately north of the Main Gate, any expansion of the main gate would need to be to the south. Therefore, an expansion of the Main Gate would probably require the relocation of at least the northern portion of the current FamCamp.

[1] In accordance with Congressional guidance, Nonappropriated Funds (NAF) construction projects must meet a documented market demand and operational need, and for Category C MWR activities, be financially viable in order to be considered for funding. The Proposed Action is a Category C activity and is required to meet a financial hurdle rate of seven percent for return on revenue (ROR) on investment. The PVA included a pro forma financial analysis for the Proposed Action that calculated a 10.08 percent ROR. Although the PVA did not include financial analyses for the alternatives, it is unlikely that they would meet the required financial hurdle rate (due to additional amenity construction and staffing requirements for a separate site).

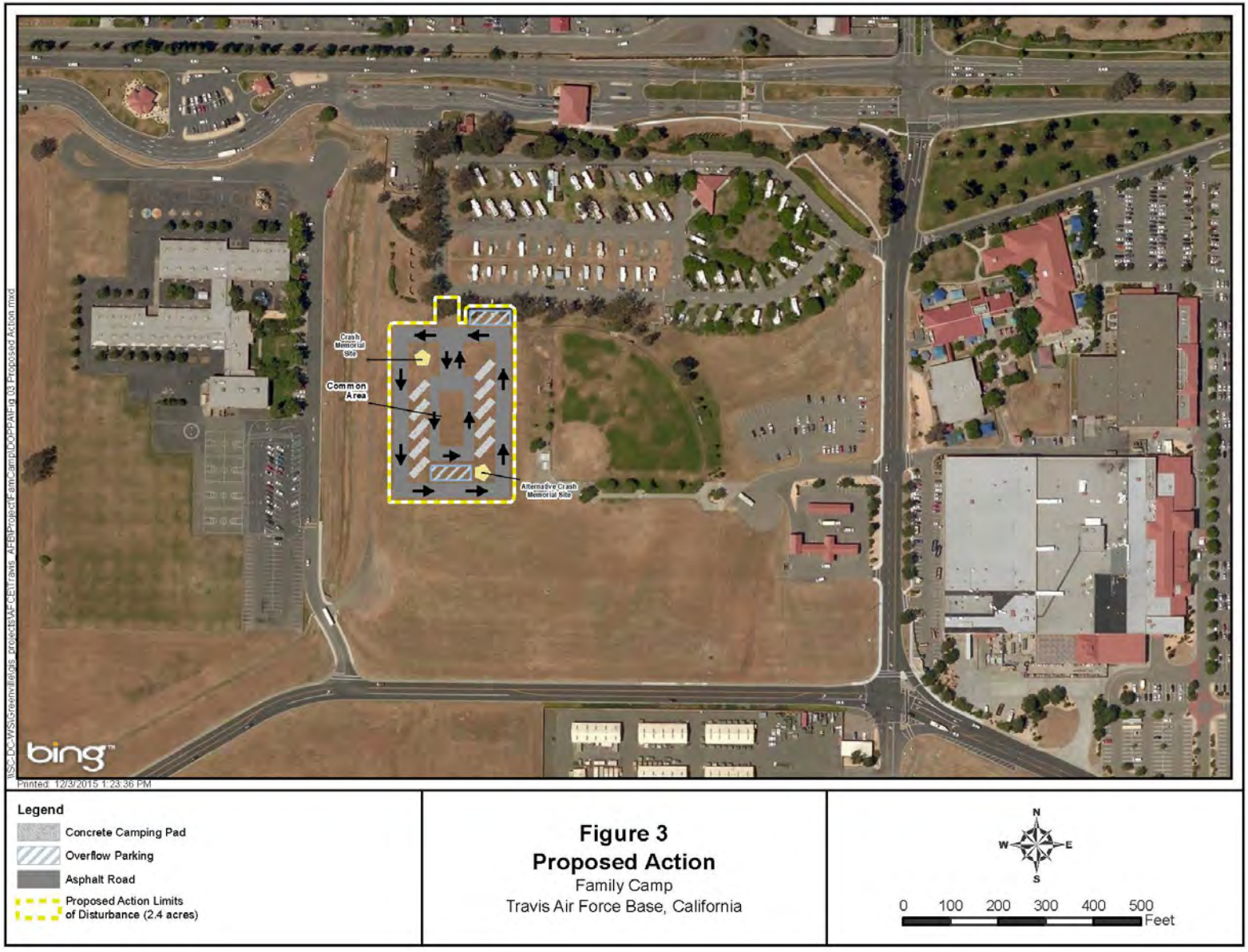

Figure 3. Proposed Action for the Family Camp Trailer Park.

2.3 Application of Selection Standards

The considered alternatives are evaluated against the selection standards in Sections 2.3.1 through 2.3.6. **Table 1** (located after Section 2.3.6) provides a summary of the evaluation.

2.3.1 Alternative 1 — Proposed Action

Under the Proposed Action alternative, Travis AFB would expand the FamCamp by constructing and managing 10 additional full-service RV camping sites with 50-Amp service at the 2.5-acre site located immediately south of the current facility. This alternative satisfies Selection Standard 1 because it would not require the duplication of management functions and campground amenities, and is located close to offsite amenities such as the Base Exchange, Commissary, and DGMC. A vacant 5-acre parcel is situated immediately south of the Proposed Action site. This parcel is of a size and configuration very similar to the current FamCamp, and could be used if future relocation of existing sites is required. Therefore, this alternative also satisfies Selection Standard 2, and will be carried forward for full analysis.

2.3.2 Alternative 2 — No Action

Under the No Action Alternative, Travis AFB would not expand the FamCamp. Campers with larger RVs, as well as others during peak seasons, would continue to be turned away due to a lack of adequate campsites. Therefore, the No Action Alternative does not satisfy the purpose of and need for the Proposed Action.

2.3.3 Alternative 3 — Construct Expansion at the Twin Peaks Site

Under Alternative 3, Travis AFB would construct 10 full service camp sites with 50-Amp service at the 5-acre Twin Peaks Site (**Figure 4**). The site is located approximately 1,300 feet northwest of the current FamCamp; therefore, management functions and basic amenities would need to be duplicated. Therefore, this alternative does not satisfy Selection Standard 1 and will not be further evaluated. There does, however, appear to be ample land for future relocation of the FamCamp at this site. Therefore, this alternative does satisfy Selection Standard 2, and may be considered if relocation is required in the future. However, the 2013 USAF report found that, due to the proximity of this location to the Child Development Center and Youth Center (**Figure 4**), which are planned to be constructed in the next 2 to 5 years, the site "would draw significant RV traffic into [and through] an area frequented by children and youth, setting up a potential safety concern."

2.3.4 Alternative 4 — Construct Expansion at the Arnold Estates Site

Under Alternative 4, Travis AFB would construct 10 full service camp sites with 50-Amp service at the 5-acre Arnold Estates Site (**Figure 4**). The site is located adjacent to the east gate, approximately 1.25 miles northeast of the current FamCamp. The 2013 USAF report determined that the site "…was too small for any future expansion and the elevated terrain was uneven, requiring extensive earthwork, with significant relocation or removal of existing utilities…". Therefore, this alternative does not satisfy Selection Standards 1 or 2 and will not be further evaluated.

2.3.5 Alternative 5 — Construct Expansion at the Vandenburg Drive Site

Under Alternative 5, Travis AFB would construct 10 full service camp sites with 50-Amp service at the 18-acre Vandenburg Drive Site (**Figure 4**). The site is located adjacent to the barracks approximately 1.5 miles east-northeast of the current FamCamp. Due to the distance from the current facility and amenities, this alternative does not satisfy Selection Standard 1, and will not be further evaluated. The site would provide ample space for relocation of the FamCamp. Therefore, this alternative does satisfy Selection Standard 2, and may be considered if relocation is required in the future.

2.3.6 Alternative 6 — Reconfigure Existing FamCamp Sites

The 2013 USAF report considered the conversion of 24 existing limited service sites on the existing FamCamp to create 14 full-service parking spaces. Although this option would accommodate much of the demand for larger RV sites, it was removed from consideration because the renovation would not be financially feasible (it would cost 42% more than new construction). Additionally, this alternative would result in a net decrease of 10 sites, and would not help to alleviate the overall shortage of camping spaces. Therefore, this alternative will not be further evaluated.

Table 1. Evaluation of Initial Alternatives Against Selection Standards.

	Alternative 1 Proposed Action	Alternative 2 No Action	Alternative 3 Twin Peaks Site	Alternative 4 Arnold Estates Site	Alternative 5 Vandenburg Drive Site	Alternative 6 Reconfigure Existing Sites
Selection Standard 1	Y	N	N	N	N	Y
Selection Standard 2	Y	N	Y	N	Y	N
Reasonable?	Y	N	N	N	N	N

Key:
These selection standards are required to meet the project purpose and need. Otherwise, the alternative is considered unreasonable.
Y = Yes (meets selection standard or is reasonable).
N = No (does not meet selection standard or is not reasonable).

2.4 Evaluated Alternatives

Based upon the selection standards and the purpose and need, the Proposed Action and No Action Alternative are evaluated in this EA.

2.4.1 Alternative 1 – Proposed Action

The USAF proposes to expand the FamCamp by constructing and managing 10 additional full-service RV camping sites adjacent to the current facility. The proposed limits of disturbance would encompass approximately 2.4 acres, and would result in a 1.3-acre increase in impervious surface. Construction would likely occur in 2017 between the months of June and October. Components of the Proposed Action are shown on **Figure 3** and include the following:

- Construction of ten 50-foot × 15-foot full service concrete camping pads with 50-Amp electrical service,
- Construction of an asphalt road network that would connect the new sites with the existing FamCamp and provide pull-through access to the sites, and
- Construction of two gravel overflow parking areas.

The proposed expansion site is located on the site of the August 5, 1950 crash of a B-29 aircraft. The crash resulted in 19 fatalities, including then base commander Brigadier General Robert Travis. The base, known at that time as the Fairfield-Suisun AFB, was subsequently named in his honor. The Proposed Action includes a memorial kiosk to commemorate this defining tragedy for Travis AFB. Final placement of the memorial has not been determined. Figure 3 includes a primary and alternate location for the memorial.

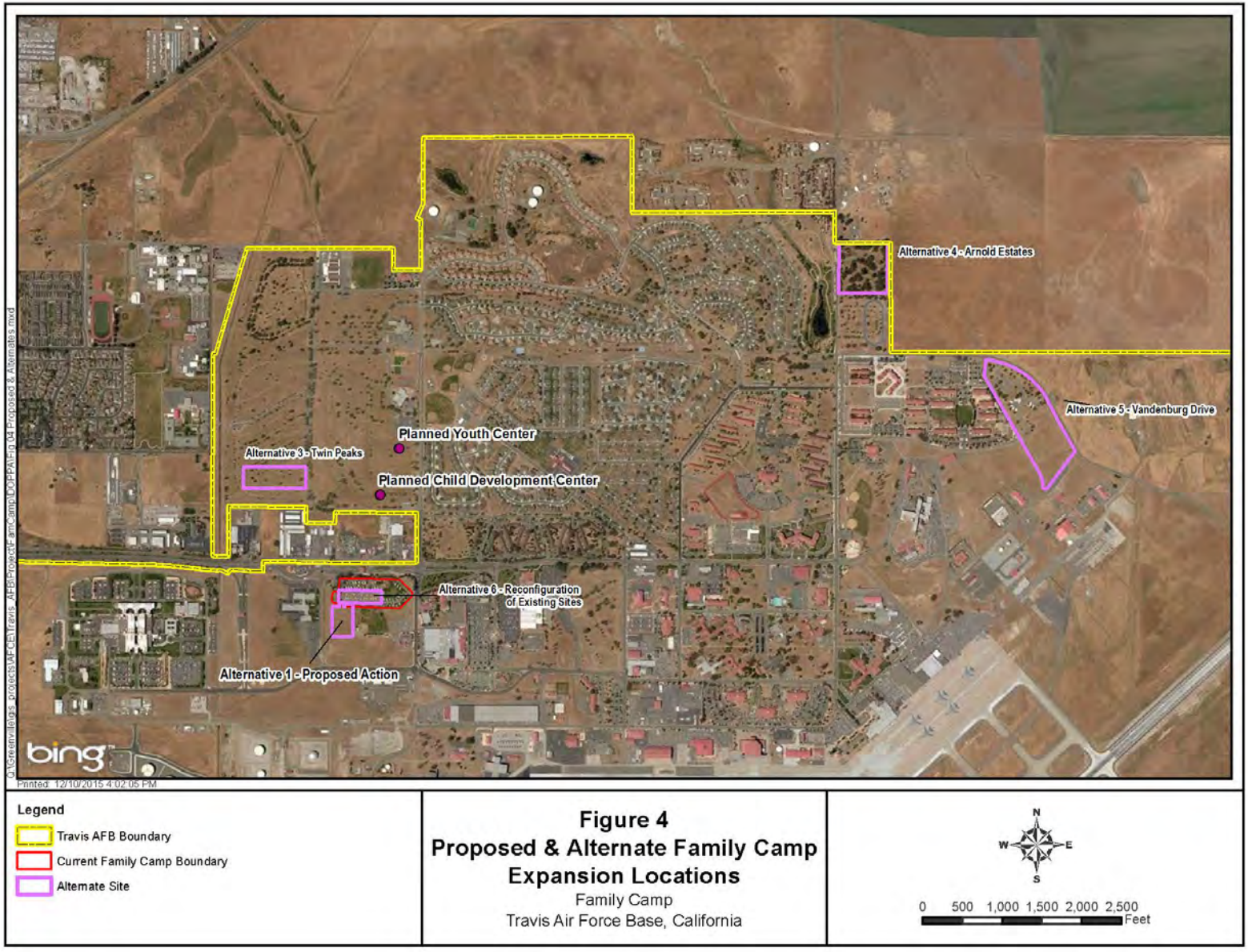

Figure 4. Proposed and Alternate Family Camp Trailer Park Expansion Locations.

The Proposed Action would require the extension of utilities (i.e., water, sewer, cable television, and 50-Amp electrical service). These utilities would be extended from the current FamCamp, and are located near the proposed expansion site. Some minor disturbance to the existing FamCamp road near the proposed expansion site would likely be required to connect and extend utilities. All utilities would be underground and would be routed within the limit of disturbance shown on **Figure 3**. Stormwater would likely be allowed to flow overland to the drainage ditch located approximately 100 feet west of the proposed site. Construction activities would not be expected to impact existing camping sites.

The Air Force estimates that the Proposed Action would generate approximately $40,000 in additional annual revenue. Those funds would be used to support Team Travis outdoor recreation programs.

2.4.2 Alternative 2 – No Action

Under the No Action Alternative, Travis AFB would not expand the FamCamp. Campers would continue to be turned away during peak times, and revenue that could be used to enhance recreation opportunities for military personnel would be lost. While the No Action Alternative would not meet the purpose of or need for the Proposed Action, it is analyzed in this EA to provide a comparative baseline, as required under USAF and CEQ regulations (32 CFR Part 989.8(a) and (d), and 40 CFR Part 1502.14, respectively).

2.5 Summary of Anticipated Environmental Impacts

Table 2 provides a brief summary of the anticipated impacts to resource areas that would result if the USAF implements the Proposed Action or No Action Alternative. As indicated in the table, impacts would not be expected to approach the significance threshold for any resource area.

Table 2. Summary of Anticipated Environmental Impacts.

Resource	Proposed Action	No Action Alternative
Air Installation Compatible Use Zones (AICUZ) and Land Use	No impact.	No impact.
Geologic Resources	Insignificant impact. The Proposed Action does not include significant alteration to geologic resources.	No impact.
Biological Resources	Insignificant impact. Conservation measures and best management practices (BMPs) will be implemented to avoid potential impacts to the federally threatened California Tiger Salamander (CTS; *Ambystoma californiense*).	No impact.
Noise	Minor, localized, short-term impact during construction.	No impact.
Air Quality	Less than significant impact. Short-term impact during construction.	No impact.
Water Resources	Very minor, short-term impact during construction; insignificant long-term impact.	No impact.
Safety and Occupational Health	No impact. Contractor would be required to take measures to protect worker health and safety.	No impact.
Hazardous Materials and Waste	No impact.	No impact.
Cultural Resources	No impact. There are no National Register of Historic Places (NRHP) eligible structures in the vicinity or viewshed of the project site. This is considered to be a low probability area for archaeological resources (Travis AFB 2010). Tribal input not yet received.	No impact.
Socioeconomics and Environmental Justice	Less than significant beneficial impact.	No impact.
Infrastructure and Utilities	Less than significant impact.	No impact.

3. AFFECTED ENVIRONMENT

The potentially affected human environment is interpreted comprehensively to include natural and physical resources and the relationship of people with those resources (40 CFR 1508.14). Information presented in this section serves as a baseline from which to identify and evaluate any individual or cumulative environmental and socioeconomic changes likely to result from implementation of the Proposed Action and the No Action Alternative. In compliance with NEPA, CEQ regulations, and 32 CFR 989, the description of the affected environment focuses on those resources and conditions potentially subject to effects, thus laying the groundwork for discussions of potential environmental impacts to each resource. As such, relevant natural and physical resources were selected for analysis in this section.

The affected environment includes existing environmental, cultural, and socioeconomic conditions within the Region of Influence (ROI) for proposed and alternative actions. For the purposes of this analysis, the ROI is generally defined as the proposed expansion area (i.e., the Site) and the surrounding local area. The exception to this generality is air quality, for which the ROI is the San Francisco Bay Area air basin.

The sections for each resource topic begin with an introduction that defines the resources addressed in the section. Following the introduction for each resource topic, information is presented about any federal, state, or local regulatory requirements related to the resource and relevant to the proposed and alternative actions. Finally, existing environmental conditions in the ROI are described. This information provides a frame of reference about conditions that prevail currently or existed in the recent past.

Resource information for this EA was obtained through review of existing environmental documents, available Geographic Information System (GIS) data, field observations, and communications with Travis AFB staff, regulatory agencies, and other agencies and organizations. Information is presented to the level of detail necessary to support the analysis of potential direct and indirect impacts in Section 4, Environmental Consequences. Qualified technical subject matter experts examined each action component for potential effects on each technical resource area considering the scope of the action and available resource information. The examination resulted in certain resources being dismissed from detailed analysis. Those resources that were dismissed are addressed below in Section 3.1.

3.1 Resources Eliminated From Further Analysis

The Air Force, in accordance with CEQ regulations (40 CFR 1500.1(b) and 1500.4(b)), endeavors to keep NEPA analyses as concise and focused as possible: "…NEPA documents must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail…prepare analytic rather than encyclopedic analyses."

Resource areas that were eliminated from further analysis for this EA include AICUZ and land use (with the exception of the noise component), geology and soils, socioeconomics and environmental justice, and utilities and infrastructure. These resource areas are discussed briefly in Sections 3.1.1 through 3.1.4. Included for each is the rationale as to why the resource was not retained for further analysis.

3.1.1 Air Installation Compatible Use Zone and Land Use

Travis AFB has designated AICUZ to provide recommendations for compatible uses in areas subject to accident hazards (Travis AFB 2011). Travis AFB has established Clear Zones (CZs), Accident Potential Zones (APZs), and safety zones around the airfield to minimize the results of a potential accident

involving aircraft operating from the base. In developing these zones, Travis AFB utilizes two Class B runways. Within clear and safety zones, construction is either prohibited (CZs) or limited in terms of placement and height (safety zones). Areas around the airfield where experience has shown most aircraft accidents occur are designated as APZs. Both the current FamCamp and proposed expansion site are well removed from any CZs, APZs, and safety zones.

The local communities or county governments are responsible for adopting appropriate land use controls to prevent incompatible development. Solano County adopted a land use compatibility plan in 2002 (Shutt Moen Associates 2002), and a revised plan is currently being developed (Eberling 2014). The City of Fairfield has developed a Municipal Service Review Update (City of Fairfield 2012), which includes planning goals to reduce conflicts with Travis AFB.

The Proposed Action is consistent with current base planning, and would not require changes to the AICUZ. The land on which the proposed expansion would occur is not currently in use. Conversion of this land to FamCamp camping sites would not be a significant change in land use. Therefore, AICUZ and land use are not further evaluated in this EA.

3.1.2 Geology and Soils

Geologic resources include topography, geology, and soils. Protection of unique geological features, minimization of soil erosion, and the siting of facilities in relation to potential geologic hazards are considered when evaluating potential effects of a proposed action on geological resources. Generally, adverse effects can be avoided or minimized if proper construction techniques, erosion control measures, and structural engineering design are incorporated into project development. Effects on geology and soils could be significant if any of the following occur:

- Alteration of the lithology, stratigraphy, and geological structures that control groundwater quality;
- Alteration of the distribution of aquifers and confining beds, and groundwater availability; and
- Changes in the soil composition, structure, or function (including prime farmland and other unique soils) within the environment.

The geologic resources within proposed project areas were studied to determine the potential impacts of implementing the proposed and alternative actions. The soil survey, previous EAs, and topographic maps were reviewed to characterize the existing environment. Construction activities that could influence geologic resources were evaluated to predict the type and magnitude of potential impacts. For example, grading, excavating, and compaction would disturb soils during construction activities. Concrete camping pads and asphalt roads would result in the conversion of approximately 1.3 acres of surface soil to impervious surface. The predicted post construction environment was compared to the existing environment and the change was evaluated to determine if significant changes in any existing conditions would occur.

Travis AFB lies along the western margin of the Sacramento River drainage of the Central Valley. The soils have weathered under a distinctive climatic cycle characteristic of the Pacific coast soil region. The Antioch San Ysidro Complex is the only soil type on the subject property (Web Soil Survey 2016). The Antioch series consists of moderately well drained soils on terraces. These soils formed in alluvium from sedimentary sources. Slopes are 0 to 2 percent (%). In a representative profile, the surface layer is mottled, light brownish gray, brown, and light gray loam 19-inches thick. The subsoil is mottled, light yellowish brown, yellowish brown, and pale brown clay 41-inches thick. The substratum is pale brown loam extending 60 inches or more. Permeability is very slow. This complex is approximately 50%

Antioch loam and 35% San Ysidro sandy loam. The remaining 15% includes small areas of Solano loam and Pescadero clay loam. The Antioch soil has slightly concave slopes, and the San Ysidro soil has slightly convex slopes (Web Soil Survey 2014). There are no bedrock outcrops on the site, and based on the soils present, there is no bedrock near the surface.

The San Francisco Bay Area is an area of historical and recent seismic activity, primarily due to the presence of the San Andreas, the Hayward, and the Calaveras fault zones. These faults are all more than 20 miles from the base. A smaller potentially active fault, the Green Valley fault, is about 10 miles west of the base. The Vaca Fault System, consisting of a number of separate lineaments, has been inferred from photo lineaments, but no surface evidence has been identified in the field. This system is generally east and northeast of TAFB, although the Vaca Fault probably traverses the base to the east (Travis AFB 2013).

No vertical construction would be included in the Proposed Action, and no bedrock would be disturbed. The only potential impacts to geology and soils from implementing the Proposed Action would be from grading, compacting, and paving approximately 1.3 acres of previously disturbed, slightly sloping ground. The Antioch San Ysidro Complex is the most prevalent soil type on the installation, encompassing approximately 38 percent (1,900 acres) (Web Soil Survey 2016). The total 2.7-acres of disturbance would equal approximately 0.1 percent of that soil type on the Base, and the replacement of surface soils with 1.3 acres of concrete or asphalt would be approximately 0.06 percent. These impacts would be negligible and not significant. Therefore, this resource area is not further evaluated in this EA.

3.1.3 Socioeconomics

Socioeconomic resources are defined as the basic attributes associated with the human environment, and generally include factors associated with population, housing, education, and economic activity. Economic activity is typically described in terms of employment, personal income, and regional industries. Changes to these fundamental components can influence other community resources, such as housing availability, utility capabilities, and public services. The socioeconomic conditions of a ROI could be affected by changes in the rate of population growth, changes in the demographic characteristics of a ROI, or changes in employment within the ROI caused by the implementation of the Proposed Action.

The proposed FamCamp expansion would result in a minor short-term increase in construction jobs over a two-year period. Current FamCamp staff would provide management services to the proposed additional camping sites so no additional permanent staff would be required. Considering that Travis AFB's economic impact to the economy was $1.62 billion in Fiscal Year (FY) 2013 (the most recent year for which such data are available), and the installation employed over 13,000 people during that time (Travis AFB 2014a), any changes to socioeconomic conditions attributable to the Proposed Action would be negligible, and clearly not significant. Therefore, socioeconomics are not further evaluated in this EA.

3.1.4 Environmental Justice

The U.S. Environmental Protection Agency (EPA) defines environmental justice as "the fair treatment and meaningful involvement of all people regardless of race, color, sex, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations, and policies." EO 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," requires federal agencies to consider disproportionately high adverse effects on the human or environmental health to minority and low-income populations resulting from implementation of a proposed action.

The Proposed Action would not disproportionately and adversely impact low-income and minority populations. It would not result in changes to the demographic composition of the area. Air quality and noise impacts would not affect low-income and minority populations during construction activities because there are no such communities within at least 1.8 miles, and those impacts would not be discernable at that distance. The Proposed Action would occur completely within Travis AFB boundaries. Therefore, no impacts to environmental justice would be anticipated, and this resource is not further evaluated in this EA.

3.1.5 Protection of Children

EO 13045, "Protection of Children from Environmental Health Risks and Safety Risks," states that each federal agency "(a) shall make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children; and (b) shall ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks." The Proposed Action would not cause adverse health and safety impacts to children. Although the Proposed Action occurs near a baseball field, construction areas would be fenced to limit entry to authorized personnel. Therefore, no impacts to children would be anticipated, and this resource is not further evaluated.

3.1.6 Infrastructure and Utilities

Infrastructure consists of the systems and physical structures that enable a population in a specified area to function. Infrastructure is wholly human-made, with a high correlation between the type and extent of infrastructure and the degree to which an area is characterized as "urban" or developed. Infrastructure and utilities include transportation, water supply, sanitary sewage/wastewater natural gas, electrical, communications, and liquid fuels. Stormwater management is addressed in Section 3.2.3, Water Resources.

All required utilities are present at the existing FamCamp and can easily be extended to the Proposed Action site. The Pacific Gas and Electric Company (PG&E) provides electricity and natural gas. Potable water is supplied by the Travis AFB Treatment Plant, which is owned by the City of Vallejo. The property is included in the Travis AFB wastewater system. The sanitary sewer system collects permitted industrial and all sanitary wastewater and discharges it by permit from the local wastewater treatment authority (the Fairfield-Suisun Sewer District) to the local, publicly-owned treatment plant. All required utilities have ample capacity (Travis AFB 2015).

Utility demand increases that would result from proposed construction and use of 10 additional camping sites would be extremely minor. Therefore, infrastructure and utilities would not be significantly impacted and are not further evaluated in this EA.

3.1.7 Safety and Occupational Health

Safety and occupational health requirements are codified in the Occupational Safety and Health Act of 1970 (PL 91-596, December 29, 1970, with amendments through January 1, 2004) and are regulated by the Occupational Safety and Health Act (OSHA). The stated purpose of the law is to "assure safe and healthful working conditions for working men and women; by authorizing enforcement of the standards developed under the Act; by assisting and encouraging the states in their efforts to assure safe and healthful working conditions; by providing for research, information, education, and training in the field of occupational safety and health; and for other purposes."

During construction, workers would be provided with appropriate personal protective equipment (PPE), which would include, but not be limited to, approved hard hats, safety shoes, gloves, goggles, eye/face

protection, hearing protection, and traffic safety vests. The Proposed Action does not include demolition or renovation of existing facilities, and does not include vertical construction components. No asbestos containing material or lead-based paint is present on the site. Adverse impacts on safety and occupational health are not expected. Therefore, safety and occupational health is not further evaluated in this EA.

3.1.8 Hazardous Materials and Waste

Hazardous materials are substances that are considered severely harmful to human health and the environment. Many are commonly used substances that are harmless in their normal uses but are quite dangerous when released. They are defined in terms of those substances specifically designated as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as the Superfund law (42 USC § 9601 et seq.). The use or release of hazardous materials usually results in the generation of hazardous waste. The Proposed Action would not use, store, or generate hazardous materials or waste. No hazardous materials or waste are known or expected to be present on or near the proposed expansion site. During construction, all equipment would be inspected daily to ensure that any fluid leaks are promptly repaired. Therefore, hazardous materials and waste would not be impacted and are not further evaluated in this EA.

3.2 Resources Retained For Further Analysis

3.2.1 Air Quality

Air quality is described in terms of the type and amount of pollutants that are present in the local atmosphere. The amount of air pollutant in the ambient air is generally expressed as a concentration in units of parts per million (ppm), parts per billion (ppb), or micrograms per cubic meter ($\mu g/m^3$). The significance of a pollutant concentration is determined by comparing it to federal and state ambient air quality standards (AAQS). These standards represent the maximum allowable concentrations that may occur while still providing protection to public health and welfare, with a reasonable margin of safety.

Factors that contribute to air quality are local and regional air emissions, geographic size of the air basin, topography, and prevailing meteorological conditions. Features such as mountains or valleys may inhibit the dispersion of pollutants. Meteorological conditions (e.g., temperature, wind speed, wind direction, amount of sunshine, and temperature inversions) influence the extent to which pollutants are dispersed and transported both vertically and horizontally within the atmosphere. Pollutant concentrations in the atmosphere near emission sources are generally highest with calm winds or strong temperature inversions, both of which limit the transport and dispersion of pollutants away from the emission source.

The State of California is divided into 15 geographical regions, referred to as "air basins," for the purpose of managing air resources on a regional basis. The similarity of meteorological and geographic conditions defines the boundaries of these regions. In addition to the air basins, the California Air Pollution Control Act authorized creation of Air Pollution Control Districts (APCDs) or Air Quality Management Districts (AQMDs) that collectively include every county of the state. These districts established the governing authorities responsible for controlling air pollution in the respective regions. Currently, there are 23 APCDs and 12 AQMDs for a total of 35 districts. Individual air basins and air districts range in size from single-county to nine-county areas.

Travis AFB is located within the San Francisco Bay Area air basin and the Bay Area AQMD, both of which include the following nine counties: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, the western portion of Solano, and the southern portion of Sonoma. This region covers approximately 5,340 square miles and 19% of California's population.

All air emissions within the air basin, both manmade and naturally occurring, influence the air quality in the region. Emissions from sources like industrial facilities, fuel combustion, motor vehicles, and marine vessels are examples of manmade emissions. Examples of naturally occurring emissions include wildfires and windblown dust. This section provides an overview of the existing air resource for the Bay Area, including regional climate, air quality (as defined by state-monitored air pollutant levels), and baseline air emission levels.

3.2.1.1 Regulations and Requirements

Regulatory requirements at the federal, state, and local levels associated with air quality include air quality standards, state implementation plans, permitting programs, emissions monitoring programs, protection of environmentally sensitive areas, and greenhouse gases (GHGs).

Federal Air Quality Standards

All emissions from stationary and mobile sources of air pollutants within a region affect the overall air quality of that area. Air quality is a measure of the cleanliness of the ambient air, which can be characterized in terms of whether it complies with the National Ambient Air Quality Standards (NAAQS). The Clean Air Act and amendments (collectively referred to here as the CAA), requires the EPA to review and set NAAQS for pollutants considered harmful to public health and the environment. NAAQS have been established for principal pollutants, called "criteria pollutants" (40 CFR 50 and Section 108 of the CAA) and various averaging periods. The EPA is tasked with continual review and recommendations regarding revisions to the NAAQS based on new information on health effects related to air pollution. The EPA is also responsible for characterizing and designating a region's air quality status with respect to the NAAQS. A regional designation is made for each pollutant based on ambient air monitoring data collected and verified by the state environmental agencies:

- Attainment – in compliance with the NAAQS.
- Non-attainment – the NAAQS is not being met.
- Maintenance – a region that was previously classified as "nonattainment" but is now in compliance with the NAAQS may be redesignated as "maintenance" if the state has completed an air quality maintenance plan and has successfully demonstrated that the plan is effective in producing necessary emission reductions along with air quality improvements.
- Unclassified – no monitoring data are available. By default, these areas are considered to be in attainment.

The current NAAQS and EPA's attainment status for the Bay Area AQMD are presented in **Table 3**. Short-term standards (24-hour or shorter periods) were established for pollutants with acute health effects. Long-term standards (i.e., annual periods) were established for pollutants with chronic health effects.

State Air Quality Standards

In addition to the NAAQS, the federal CAA allows individual states and local regulatory agencies to establish their own AAQS and regulations as long as the State standards are not less stringent than the NAAQS. The State of California has established standards similar to the federal NAAQS and has added standards for other averaging periods and four other pollutants not included in the NAAQS (i.e., sulfates, visibility reducing particulates, hydrogen sulfide, and vinyl chloride). Similar to the NAAQS attainment designations by the EPA, the California Air Resource Board (CARB) designates the attainment status of the California AAQS, which are also summarized in **Table 3**.

770 Table 3. Ambient Air Quality Standards and Attainment Status.

Pollutant	Averaging Time	NAAQS (A, C)		California AAQS (B, C)	
		Federal Standard	Bay Area AQMD Attainment Status	State Standard	Bay Area AQMD Attainment Status
Carbon Monoxide (CO)	1-hour 8-hour	35 ppm 9 ppm	Attainment	20 ppm 9 ppm	Attainment
Nitrogen Dioxide (NO_2)	1-hour Annual	100 ppb 53 ppb	Unclassifiable/ Attainment	180 ppb 30 ppb	Attainment
Ozone (O_3)	1-hour 8-hour	- 0.070 ppm	**Non-attainment (marginal)**	0.09 ppm 0.07 ppm	**Non-attainment**
Particulate Matter (PM2.5) Fine	24-hour Annual	35 µg/m^3 12 µg/m^3	**Non-attainment (moderate)**	- 12 µg/m^3	**Non-attainment**
Particulate Matter (PM10) Respirable	24-hour Annual	150 µg/m^3 -	Unclassifiable/ Attainment	50 µg/m^3 20 µg/m^3	**Non-attainment**
Sulfur Dioxide (SO_2)	1-hour 3-hour 24-hour	0.075 ppm 0.5 ppm -	Attainment	0.25 ppm - 0.04 ppm	Attainment
Lead	30-day 3-month Quarter 3-month Rolling	- - 0.15 µg/m^3	Unclassifiable/ Attainment	1.5 µg/m^3 - -	Attainment
Visibility Reducing Particulates	8-hour	-	-	0.23 per km extinction	Unclassified
Hydrogen Sulfide	1-hour	-	-	42 µg/m^3	Unclassified
Sulfates	24-hour	-	-	25 µg/m^3	Attainment
Vinyl Chloride	24-hour	-	-	26 µg/m^3	Unclassified

(A) NAAQS and attainment status designations as of December 2015. Listed non-attainment designations for ozone and PM2.5 are associated with older previously defined NAAQS.
(sources: 40 CFR 81.305, http://www.epa.gov/air/criteria.html, and http://www.epa.gov/oar/oaqps/greenbook/ancl.html).
(B) California AAQS and area designations as of June 2013 (most current available from CARB)
(sources: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf and (http://www.arb.ca.gov/desig/desig.htm)
(C) µg/m^3 = micrograms per cubic meter, ppm = parts per million, ppb = parts per billion.

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State Implementation Plan (SIP)

Under the federal CAA, each state must develop a general air quality plan to manage air quality and compliance with NAAQS within their state. In addition, a specific air quality plan is required for each area that does not meet the NAAQS. The plans, called State Implementation Plans (SIPs), are the primary means for implementing and enforcing the measures needed to attain and maintain the NAAQS within the state, and must be federally approved. General SIPs contains information about air quality goals, measurements of air quality, emission inventories, pollutant modeling demonstrations, emission control and reduction strategies, and evidence of public participation. Area-specific SIPs define methods for eliminating or reducing the severity and number of NAAQS violations and for setting timelines to bring air quality back into compliance with the NAAQS.

Stationary Source Operating Permits

As a means of tracking and limiting air pollutant emissions, federal, state, and local air quality regulations require any new or modified stationary source (i.e., facility) to obtain a permit to construct and operate if its emissions will be above certain thresholds of criteria and non-criteria pollutants. This includes federally-defined hazardous air pollutants (HAPs) and California-defined toxic air contaminants (TACs). The purpose of air permitting is to establish regulatory control over both small and large industrial activities, providing a means for monitoring their impact on air quality. An air permit identifies the facility's air emission sources, allowable emission levels, and conditions of operation. However, the regulations also provide exemptions from air permitting requirements for certain types and sizes of emission activities.

The Travis AFB FamCamp is not included in the Travis AFB air operating permit, and is not required to have its own air permit since it does not include any stationary emission sources. The only sources of air emissions at the FamCamp are the mobile sources (RVs and passenger cars) that are not subject to air operating permit requirements.

National Emissions Inventory (NEI)

An air emissions inventory quantifies the total amount of emissions from an individual facility or from all emission sources within a region (i.e., individual counties or an entire air basin). Inventories generally cover a period of 1 year, and provide information on the location, type, and size of the emission sources.

The EPA maintains a national database of air pollutant emissions using data provided by each state on a county-by-county basis. The NEI is used for monitoring emission trends and evaluating the effectiveness of emission reduction strategies. It includes reported criteria pollutant and HAP emissions from permitted stationary sources and estimated emissions from a wide range of non-permitted sources and mobile sources. Although the EPA conducts a comprehensive emissions inventory every 3 years, developing and updating the inventory is time-consuming. The most recent NEI data available to the public are for the year 2011 (http://www.epa.gov/ttn/chief/eiinformation.html).

California Almanac of Emissions and Air Quality (CAEAQ)

The State of California maintains its own statewide air emissions inventory, which is used to quantify the total amount of emissions from sources within the state and within air basins. Similar to the NEI, the CAEAQ inventory is used for monitoring 20-year emission and air quality trends and for evaluating the effectiveness of emission reduction strategies. It includes the criteria pollutants and several toxic air contaminants. The emissions are summarized for a wide range of source categories, including permitted stationary sources, non-permitted sources, mobile sources, and natural sources. Each air district estimates

emissions for the stationary sources within its jurisdiction based on information provided by those sources. CARB estimates emissions from the other source types, including mobile sources and natural sources. These state-wide inventories are provided for annual periods by CARB (http://www.arb.ca.gov/aqd/almanac/almanac.htm), with the most recent data published for year 2013. Individual air quality districts in California also maintain and provide GHG inventories for their region.

General Conformity Rule

The General Conformity Rule was established under the CAA § 176(c)(4) to ensure that actions taken by federal agencies in NAAQS nonattainment and maintenance areas do not interfere with a state's plans for bringing these areas back into attainment with the air quality standards. Unlike the air permitting programs that only consider emissions from stationary sources, the General Conformity Rule requires federal agencies to consider emissions from all activities associated with the proposed federal action, including new or modified stationary, mobile, and fugitive emission sources. The requirements of the General Conformity Rule do not apply to federal actions located in NAAQS attainment areas. The purpose of the rule is to ensure that federal actions do not cause or contribute to:

- New violations of the NAAQS;
- Additional or worsening of existing violations of the NAAQS; and
- Delays in attaining the NAAQS.

This rule requires Federal Government agencies to prepare written conformity determinations for federal actions located in or affecting NAAQS nonattainment areas or maintenance areas. A determination begins with an estimate of air emissions that would be generated by the Proposed Action and comparing these to threshold levels defined in the rule. If the emission levels are below the threshold levels, a Record of Non-Applicability (RONA) is prepared. If the emission levels are above the threshold levels, an in-depth conformity analysis is required.

Federal Class I Areas

A provision of the Prevention of Significant Deterioration (PSD) permitting program grants special protection to air resources in Class I Areas. Class I Areas include large national parks (> 6,000 acres) and wilderness areas (> 5,000 acres). The express purpose is to preserve, protect, and enhance the air quality in these environmentally sensitive locations by establishing limits on additional pollution in these clean air areas. The PSD permitting program also establishes site-specific tests to determine whether emissions from major new and modified sources will cause air quality related "adverse impacts" on scenic, cultural, biological, and recreational resources at nearby Class I Areas, including visibility. Of primary concern are increased emissions of particulate matter, nitrogen oxides (NOx), and SO_2. Federal Land Managers have the authority to monitor air permitting activities near Class I Areas and make recommendations to deny issuance of permits if site-specific tests indicate that adverse impacts may occur. However, the permitting authority makes the final decision to issue or deny the permit.

Throughout the United States, there are 158 Class I Areas designated by the Federal Government; 29 of which are in California. The nearest Class I areas to Travis AFB are the Point Reyes National Seashore approximately 50 miles to the west, and the Mokelumne Wilderness approximately 100 miles to the east (http://www.epa.gov/region9/air/maps/ca_clss1.html).

Greenhouse Gases (GHGs)

GHGs have the ability and tendency to affect the earth's atmospheric temperature through physical processes involving light and thermal energy. GHGs exist in the atmosphere as a result of both natural processes and human activity. Among the most prominent GHGs associated with human activities are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). These gases are a combustion byproduct of fossil fuel (i.e., gasoline, diesel, oil, coal, and natural gas) and other organic matter such as wood. Other pollutants that are considered by EPA to be GHGs, but which are much less prevalent in the atmosphere, include hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF), and nitrogen trifluoride (NF_3). In recent years, GHG emissions from human activity have become a focus of concern and scrutiny as they relate to climate change.

In September 2009, the EPA issued a final rule for mandatory GHG reporting from large GHG emissions sources in the United States (40 CFR 98). The purpose of the rule is to collect comprehensive and accurate data on CO_2 and other GHG emissions that can be used for future policy decisions.

In general, the facility-wide threshold for reporting is 25,000 metric tons or more of CO_2 equivalent[2] per year. Although GHGs are not currently regulated under the CAA, the EPA has clearly indicated that GHG emissions and climate change are issues that need to be considered in future planning.

The CEQ recently issued revised draft guidance (CEQ 2014) regarding GHG emissions and the NEPA process. Specifically, the guidance is intended to assist federal agencies (and federal decision-makers) in evaluating or describing the environmental effects of GHG emissions from all proposed federal agency actions. The guidance advises federal agencies preparing a NEPA document to consider whether the decision-makers would benefit from the inclusion of an analysis of GHG emissions and climate change issues relating to a proposed action. Specifically, if the proposed action is anticipated to have direct emissions of 25,000 metric tons or more of CO_2-equivalent GHG emissions on an annual basis, the federal agency should consider this as an indicator that a quantitative and qualitative assessment may be meaningful to decision-makers and the public.

The recent passage of the California Assembly Bill AB 32, the California Global Warming Solutions Act of 2006, provides a state law requiring sharp reductions of GHG emissions. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020; a reduction of approximately 15% below emissions expected under a "business as usual" scenario. Reductions in GHG emissions will come from virtually all sectors of the economy. It will be accomplished by a combination of policies, planning, direct regulations, market approaches, incentives, and voluntary efforts. These efforts target GHG emission reductions from cars and trucks, electricity production, fuels, and other sources. CARB has been designated as the lead agency to implement this law and maintains a statewide Greenhouse Gas Emission Inventory (http://www.arb.ca.gov/cc/inventory/inventory.htm). California's Mandatory Reporting of Greenhouse Gas Emissions regulation requires industrial sources, fuel suppliers, and electricity importers to report their annual GHG emissions to CARB.

[2] Greenhouse gases are typically presented as Carbon Dioxide equivalent = (1 × Carbon Dioxide emissions) + (25 × Methane emissions) + (298 × Nitrous Oxide emissions). The three main GHGs are carbon dioxide, methane, and nitrous oxide. Methane and nitrous oxide have a 25 and 298 times higher, respective, global warming potential than carbon dioxide. The other four GHGs have very high global warming potentials; however, these are generally countered by much lower levels of emissions.

3.2.1.2 Existing Conditions

Climate

The San Francisco Bay Area air basin along coastal central California has a Mediterranean climate generally characterized by temperate wet falls/winters and dry springs/summers. The coastal mountains and valleys create microclimates in this region. Mountains parallel to the coast produce rain shadows and drier interior valleys. During the summer, gaps in the coastal ranges permit ocean fog to penetrate inland, providing some relief from summer heat and drought (NPS 2015).

Travis AFB is located near the town of Fairfield, which has an annual mean temperature of 59 degrees Fahrenheit (°F) and average daily temperatures ranging from 45°F in January to 72°F in July, with temperature extremes of 0°F (1969) and 110°F (1961). Total precipitation averages 17 inches per year, with autumn and winter months being the wettest (WRCC 2015).

Relative humidity daily averages range from 62% in September to 78% in January, with an annual average of 69% (these values are based on the average of San Francisco and Sacramento) (NOAA 2012).

The winds are predominantly from the west-southwest during the spring, summer, and fall between 7 and 14 miles per hour (mph). During the winter, the predominant winds are from the north between 6 and 7 mph (NOAA 1998).

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Regional Air Quality

The Bay Area AQMD is currently designated as non-attainment for three pollutants (see **Table 3**):

- Ozone – for NAAQS and State AAQS,
- PM2.5 – for NAAQS and State AAQS, and
- PM10 – for State AAQS only.

For all other pollutants, the area is considered to be in attainment.

Baseline Air Emissions

The current level of air emissions within a region represents the baseline emissions. For Solano County and the Bay Area AQMD, baseline emissions levels were obtained from:

- CARB Almanac of Emissions for Calendar Year 2012 (CARB 2013 and CARB 2015), and
- Bay Area AQMD GHG inventory for Calendar Year 2011 (BAAQMD 2015).

These represent the most recent published data available for this area. The baseline emissions are shown in **Table 4** (tons per day) and **Table 5** (tons per year). Note that ozone (O_3) is not shown in these tables. This is because O_3 is generally not emitted directly into the atmosphere. Instead, it is formed in the lower atmosphere by chemical reactions between precursor pollutants in the presence of sunlight. NOx and volatile organic compounds (VOCs) are the main precursors of O_3. Control of the precursor pollutants is the primary method of reducing O_3 concentrations in the atmosphere.

924 Table 4. Baseline Emissions –Local and Regional (tons per day).

Location	Emissions (ton/day – annual average)						
	CO	**NOx**	**PM10**	**PM2.5**	**SO_2**	**VOC**	**GHGs (C)**
Solano County (A)	96.10	32.01	15.55	4.73	0.80	15.09	9,466
Bay Area AQMD (B)	1,277.38	356.09	120.43	47.05	29.13	611.62	237,224

(A) Local emission totals reported in tons per day from the 2013 California Almanac of Emissions (CARB 2015).
(B) Regional emission totals reported in tons per day from the 2013 California Almanac of Emissions (CARB 2015).
(C) GHG emissions reported as CO_2 equivalent from the Bay Area Emissions Inventory Summary Report: Greenhouse Gases Base Year 2011- Table L (BAAQMD 2015). Values shown are metric tons per day (i.e., based on reported values in metric tons per year divided by 365 days per year).

925 Table 5. Baseline Emissions –Local and Regional (tons per year).

Location	Emissions (ton/year)						
	CO	**NOx**	**PM10**	**PM2.5**	**SO_2**	**VOC**	**GHGs (C)**
Solano County (A)	35,077	11,684	5,676	1,726	292	5,508	3,455,250
Bay Area AQMD (B)	466,244	129,973	43,957	17,173	10,632	223,241	86,586,599

(A) Local emission totals from the 2013 California Almanac of Emissions (CARB 2015) scaled to tons per year.
(B) Regional emission totals from the 2013 California Almanac of Emissions (CARB 2015) scaled to tons per year.
(C) GHG emissions reported as CO_2 equivalent from the Bay Area Emissions Inventory Summary Report: Greenhouse Gases Base Year 2011- Table L (BAAQMD 2015). Values reported in metric tons per year.

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927 Within the Bay Area AQMD, the baseline emissions occur from a variety of stationary and mobile
928 emission source categories, including:

929 • Fuel Combustion – electrical generation, industrial, food processing, residential;

930 • Industrial Process;

931 • Mobile Sources – automobiles, buses, trucks, locomotives, boats, aircraft, off-road vehicles, etc.;

932 • Petroleum Refining, Storage, and Marketing;

933 • Surface Coating and Cleaning;

934 • Waste Disposal; and

935 • Other Miscellaneous Sources – farming, fires, fugitive dust, etc.

936 Although the emissions data shown in these tables are for years 2012 (criteria pollutants) and 2011
937 (GHGs), the levels of emissions do not change significantly from year to year and can be used to provide
938 approximate baseline emission levels for comparison purposes. Solano County contributes to
939 approximately 7% of the total Bay Area criteria pollutant emissions and 4% of the GHG emissions.

3.2.2 Noise

Noise is defined as any unwanted sound that interferes with normal activities, is intense enough to damage hearing, or in some way reduces the quality of the environment. Noise can be intermittent or continuous, steady or impulsive, and can involve any number of sources and frequencies. It can be readily identifiable or generally nondescript. Human response to increased sound levels varies according to the source type, characteristics of the sound source, distance between source and receptor, receptor sensitivity, and time of day. How an individual responds to the sound source determines whether the sound is viewed as a pleasant or annoying noise. Affected receptors can be specific (e.g., schools, churches, or hospitals) or broadly defined areas in which occasional or persistent sensitivity to noise above ambient levels exists (e.g., nature preserves or designated districts).

A decibel (dB) is the physical unit commonly used to describe instantaneous sound levels. Sound measurement is further refined by using an "A-weighted" decibel (dBA) scale, which emphasizes the audio frequency response curve audible to the human ear. Thus, the dBA measurement more closely describes how a person perceives sound. Human response to increased sound levels varies according to the source type, characteristics of the sound source, distance between source and receptor, receptor sensitivity, and time of day. Decibels are measured on a logarithmic scale, and therefore noise sources do not add together in a linear fashion.

Community Noise Equivalent Level (CNEL) is the predominant noise rating scale used in California for land use compatibility. The CNEL represents the average of equivalent noise levels at a location for a 24-hour period, based on a dBA, with upward adjustments added to account for increased noise sensitivity in the evening and night periods to account for the lower tolerance of individuals to noise during those periods. The CNEL is expressed as a single dB value which takes into account the total sound energy over the period of time of interest.

Sound energy levels resulting from multiple single events are used to characterize community noise effects from aircraft or vehicle activity and can be measured in day-night average sound level (DNL). Similar to the CNEL, the DNL noise metric incorporates a "penalty" for nighttime noise events to account for increased annoyance. DNL is the energy-averaged sound level measured over a 24-hour period, with a 10-dBA penalty assigned to noise events occurring between 10:00 p.m. and 7:00 a.m. DNL values are obtained by averaging single event values for a given 24-hour period. DNL is the preferred sound level metric used to characterize noise impacts of the Federal Aviation Administration (FAA), U.S. Department of Housing and Urban Development (HUD), EPA, and the Department of Defense (DoD) for modeling airport environments. Most people are exposed to DNL sound levels of 50 to 55 dBA (or higher) on a daily basis. The CNEL differs from DNL in two ways: (1) it assigns a penalty for evening noise events that occur from 7:00 p.m. and 10:00 p.m., and (2) it provides corrections for outdoor residual noise level, previous exposure and community attitudes, and whether the noise is a pure tone or exhibits an impulsive character.

The ambient acoustic environment refers to the outdoor noise levels within a given area. Ambient noise levels vary greatly in magnitude and character from one location to another depending on the normal activities conducted in the area. Studies conducted to determine noise effects on various human activities show that approximately 13% of the population can be "highly annoyed" by outdoor sound levels of 65 dBA DNL (FICON 1992).

3.2.2.1 Requirements

According to USAF, FAA, and HUD criteria, residential units and other noise-sensitive land uses are "clearly unacceptable" in areas where the noise exposure exceeds a DNL of 75 dBA, "normally unacceptable" in regions exposed to noise between 65 dBA and 75 dBA, and "normally acceptable" in

areas exposed to noise levels less than 65 dBA. The Federal Interagency Committee on Noise developed land use compatibility guidelines for noise in terms of DNL noise levels (FICON 1992). For outdoor activities, the EPA recommends a DNL sound level of 55 dBA as the sound level below which there is no reason to suspect that the general population would be at risk from any of the effects of noise (USEPA 1974). The California Code of Regulations has guidelines for evaluating the compatibility of various land uses as a function of community noise exposure. The guidelines indicate that the noise levels below 60 dBA CNEL are "normally acceptable" for noise sensitive uses (i.e., schools, hospitals, churches, libraries, and nursing homes). Conventional construction is sufficient for normally acceptable sites.

3.2.2.2 Existing Condition

The Proposed FamCamp expansion site is located over 3,000 feet from the nearest aircraft parking area, and over 6,600 feet from the nearest runway. The property is situated in an open/outdoor recreation area, and is surrounded by military family housing. The site is located outside of the 60 dB CNEL contour for aircraft operations (i.e., aircraft noise levels are below 60 dB CNEL). The FamCamp currently allows enclosed inverter generators in RV camping spaces. Generators cannot be operated between 10 p.m. and 8 a.m.

3.2.3 Water Resources

Water resources analyzed in this section include potable water, wastewater, stormwater, and groundwater. Floodplains and wetlands are discussed in Section 3.2.4, Biological Resources.

EO 13514, "Federal Leadership in Environmental, Energy, and Economic Performance" sets a policy that federal agencies "…conserve and protect water resources through efficiency, reuse, and stormwater management." AFI 32-7041, *Water Quality Compliance*, instructs the Air Force on how to assess, attain, and sustain compliance with federal, state, and local environmental regulations. Requirements for potable water and stormwater are described below.

3.2.3.1 Drinking Water and Ground Water

Drinking water is regulated under the Safe Drinking Water Act (42 U.S.C. §300f et seq.) and the California Safe Drinking Water Act (Health and Safety Code Section 116270-116293). EO 13514 requires agencies to reduce their potable water consumption 2% per year, through FY 2020, based on a FY 2007 baseline. In addition, EO 13514 requires agencies to reduce industrial, landscaping, and agricultural (nonpotable) water consumption 2% per year, through FY 2020, based on a FY 2010 baseline.

The EPA issued the Ground Water Rule (GWR) (71 Federal Register 65574, November 8, 2006) to improve drinking water quality and provide protection from disease-causing microorganisms. The purpose of the GWR is to reduce disease incidence associated with harmful microorganisms in drinking water. The GWR applies to public water systems that use ground water as a source of drinking water. The rule also applies to any system that delivers surface and ground water to consumers where the ground water is added to the distribution system without treatment.

Travis Air Force Base is participating in the Environmental Restoration Program (ERP), formally the Installation Restoration Program (IRP), a specially funded program established by the DoD in 1978 to identify, investigate, and control the migration of hazardous contaminants at military and other DoD facilities.

The California Water Code (Division 6, Part 2.75, Chapters 1-5, Sections 10750 through 10755.4) outlines the state's Groundwater Management Act. The primary intent of the Groundwater Management Act is to encourage local agencies to work cooperatively to manage groundwater resources within their jurisdictions.

3.2.3.2 Wastewater and Stormwater

Wastewater is water that has been used and contains dissolved or suspended waste materials. Wastewater can originate from a combination of domestic, industrial, commercial or agricultural activities, surface runoff or stormwater, and from sewer inflow or infiltration. Wastewater Effluent Guidelines are national wastewater discharge standards that are developed by EPA on an industry-by-industry basis. These are technology-based regulations, and are intended to represent the greatest pollutant reductions that are economically achievable for an industry.

Stormwater is water that originates during precipitation events. Stormwater runoff flows over land or impervious surfaces, such as paved streets, parking lots, and building rooftops, and does not soak into the ground.

National Pollutant Discharge Elimination System (NPDES)

The CWA establishes federal limits, through the NPDES, on the amounts of specific pollutants that are discharged to surface waters in order to restore and maintain the chemical, physical, and biological integrity of the water. The NPDES program regulates the discharge of point (end of pipe) and nonpoint sources (stormwater) of water pollution. Section 404 of the CWA regulates the discharge of fill material into waters of the United States. Waters of the United States include lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, natural ponds, and all tributaries and impoundments of waters. Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA, are not waters of the United States. The EPA and the U.S. Army Corps of Engineers (USACE) have jurisdiction of waters of the United States.

In 2010, the EPA issued a Final Rule for the CWA concerning technology-based Effluent Limitations Guidelines and New Source Performance Standards for the construction and development point source category. A Construction General Permit from EPA Region IX would be required for any activities disturbing more than 1 acre of land. The permit outlines provisions construction operators must follow to comply with the requirements of NPDES regulations. Site-specific SWPPPs may need to be developed.

Travis AFB does not have an approved Storm Water Management Plan for the Municipal Separate Stormwater Sewer Systems (MS4) Phase II permit. The Base adheres to the guidance document for non-traditional permittees. The MS4 Phase II permit is publically available at the following: http://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.shtml.

All NPDES stormwater permits issued by the EPA or states must incorporate requirements established in the Final Rule. All new construction sites that disturb greater than one acre of land are required to meet the non-numeric effluent limitations and to have effective erosion and sedimentation controls in place that are designed, installed, and maintained to:

- Control stormwater volume and velocity to minimize erosion;
- Control stormwater discharges, including peak flow rates and total stormwater volume;
- Minimize the amount of soil exposed during construction activities;

- Minimize the disturbance of steep slopes;
- Minimize sediment discharges from the site using controls that address factors such as the amount, frequency, intensity, and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site;
- Provide and maintain natural buffers around surface waters, direct stormwater to vegetated areas to increase sediment removal, and maximize stormwater infiltration where feasible;
- Minimize erosion at outlets and in downstream channels and stream banks; and
- Minimize soil compaction and preserve topsoil where feasible.

3.2.3.3 Existing Condition

Drinking Water

The Travis AFB Cypress Lakes Golf Course is located approximately 4 miles north of the Base and contains several drinking water wells that provide drinking water for the installation. The water is pumped to the main cantonment area and is treated at the Travis AFB Treatment Plant, which is owned by the City of Vallejo (Travis AFB 2015). The capacity of the plant is 7.5 million gallons per day. Available average surplus per day is 4.5 million gallons per day during the winter, and 6.3 million gallons per day in summer.

The Treatment Plant meets all water quality requirements under the Safe Drinking Water Act Amendments (Travis AFB 2006). The water supply at Travis AFB is sampled at nine sites on a weekly basis (Travis AFB 2006). The most recent water quality report (Travis AFB 2014b) stated that Travis AFB water meets all EPA and California state drinking water standards.

Ground Water

No groundwater wells are present on the property. Based on a comparison of the most recent groundwater elevations on Travis AFB (CH2M Hill 2014) and topographic maps, groundwater levels on the subject property are approximately 20 feet below ground surface. Groundwater on the base generally flows to the south and south-southeast.

Wastewater

The property is included in the Travis AFB wastewater system. The sanitary sewer system collects permitted industrial and all sanitary waste water and discharges it by permit from the local wastewater treatment authority (the Fairfield-Suisun Sewer District) to the local publicly-owned treatment plant.

Stormwater

Stormwater drainage from the FamCamp and proposed expansion area is connected to the Travis AFB stormwater drainage system, which consists of a series of underground storm drains and open ditches. The system is designed to handle a 10-year, 24-hour storm. The majority of stormwater from the Base discharges into Union Creek, which flows southeast of and approximately parallels the southern half of the runway. Union Creek discharges into Hill Slough, a wetland located 1.6 miles from the Base boundary. Surface water from Hill Slough flows into Suisun Slough, which in turn empties into Suisun Bay approximately nine linear miles southwest of the base. Suisun Bay is associated with the San Francisco Bay National Estuarine Research Reserve.

Based on the current SWPPP (Travis AFB 2007), the subject property is located in Drainage Area II, which discharges to Union Creek at Outfall II. The drainage area contributing to this outfall encompasses approximately one quarter of the total base acreage and originates in the military family housing area on the north side of the base. This drainage system collects runoff from multiple impervious areas, including aircraft and fuel truck parking, aboveground storage tanks, aircraft fueling, the hospital, and outside storage areas.

3.2.4 Biological Resources

The following sections describe the biological resources on the proposed FamCamp expansion site. The information in this section was obtained from the current Travis AFB Integrated Natural Resources Management Plan (INRMP) (Travis AFB 2013), as well as a site investigation conducted in October 2015. Wetlands, floodplains, vegetation, wildlife, invasive species, and state and federally threatened and endangered species are discussed below, and represent the current conditions in the Proposed Action area.

Biological resources include wetlands, floodplains, vegetation, wildlife, and state and federally threatened and endangered species. Potential impacts to biological resources are based on:

- Importance of the resource (i.e., legal, commercial, recreational, ecological, or scientific);
- Proportion of the resource potentially affected relative to its occurrence in the region;
- Sensitivity of the resource to the Proposed Action's activities; and
- Duration of ecological ramifications.

Impacts to resources are significant if habitats of high concern are adversely affected over relatively large areas; if disturbances to small, essential habitats would lead to landscape-levels effects on the ecology; or if disturbances impact the abundance or distribution of federally or state-listed species. Permanent habitat loss and temporary disturbance due to construction are specific issues and concerns for biological resources.

3.2.4.1 Regulations and Requirements

Wetlands

Wetlands are defined by the USACE as those areas inundated or saturated by surface or groundwater at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. In addition to providing habitat for many plants and animals, wetlands provide flood control and water quality functions in support of ecosystem integrity. The presence of hydrophytic vegetation, hydric soils, and wetland hydrology were used to determine the existence and extent of wetland areas. The overall management objective for this resource, as required by Section 404 of the CWA and EO 11990, is that there be "no net loss of wetlands."

Floodplains

Floodplains are topographically low areas along rivers, stream channels, or coastal waters that are subject to periodic or infrequent inundation due to rain or melting snow. Floodplain ecosystem function to moderate, store, and convey floodwaters; recharge groundwater; facilitate nutrient cycling; maintain water quality; and provide habitat for a diversity of plants and animals. Flood potential is evaluated by the Federal Emergency Management Agency (FEMA), which defines the 100-year floodplain as an area within which there is a 1% chance of inundation by a flood event in a given year. Risk of flooding is influenced by local topography, the frequency of precipitation events, the size of the watershed above the

floodplain, and upstream development. Federal, state, and local regulations often limit floodplain development to passive uses, such as recreational and preservation activities, to reduce the risks to human health and safety. EO 11988, "Floodplain Management," (1977) directs federal agencies to avoid siting within floodplains unless the agency determines that there is no practicable alternative. EO 13690, "Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input," (2015) amends E.O. 11988. The amendments require federal agencies to use natural systems, ecosystem processes, and nature-based approaches to identify alternatives and require federal agency regulations or procedures to be consistent with the FFRMS. The FFRMS provides three approaches that federal agencies can use to establish the flood elevation and hazard area for consideration in their decisionmaking for federally funded projects: climate-informed science approach, freeboard approach (adding 2-3 feet of elevation to the 100-year floodplain), and using the 500-year floodplain.

Threatened, Endangered, and Sensitive Species

The ESA establishes a federal program to conserve, protect, and restore threatened and endangered plants and animals and their habitats. Under the ESA, an "endangered species" is defined as any species in danger of extinction throughout all or a significant portion of its range. A "threatened species" is defined as any species likely to become an endangered species in the foreseeable future. Under the ESA, federal agencies are required to provide documentation that ensures that agency actions will not adversely affect the existence of any federally threatened or endangered species. The ESA requires that all federal agencies avoid "taking" (as discussed in the subsection below) threatened or endangered species (which includes jeopardizing threatened or endangered species habitat).

Section 7 of the ESA establishes a consultation process with USFWS that ends with concurrence on a determination of the risk of jeopardy from a federal agency project.

The USFWS also maintains a list of species considered to be candidates for possible listing under the ESA. Although candidate species receive no statutory protection under the ESA, the USFWS has advised government agencies, industry, and the public that these species are at risk and might warrant protection under the Act. All federal agencies must ensure any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a threatened and endangered species or result in the destruction of critical habitat for these species, unless the agency has been granted an exemption. AFI 32-7064, *Integrated Natural Resource Management*, provides the Air Force with guidance on compliance with the ESA and federal, state, and local environmental regulations.

The California Endangered Species Act (CESA) is enforced by the California Department of Fish and Wildlife. The CESA provides legal protection for all designated threatened or endangered native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, as well as their habitats.

Migratory Birds and Eagles

The MBTA governs the taking, killing, possession, transportation, and importation of migratory birds, in addition to their eggs, parts, and nests. The MBTA regulates the taking of migratory birds for educational, scientific, and recreational purposes and requires harvest to be limited to levels that prevent overuse. The MBTA prohibits the take, possession, import, export, transport, selling, purchase, barter, or offering for sale, purchase, or barter, any migratory bird, their eggs, parts, and nests, except as authorized under a valid permit (50 CFR 21.11).

50 CFR 21.15 specifically addresses the take of migratory birds by the Armed Forces. It allows the Armed Forces to take migratory birds incidental to military readiness activities. It also requires the

Armed Forces to develop and implement appropriate conservation measures if a proposed action may have a significant adverse effect on a migratory bird population.

The Bald and Golden Eagle Protection Act (Eagle Act) (16 U.S.C. 668-668c), enacted in 1940, prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald eagles, including their parts, nests, or eggs. The Eagle Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb."

EO 13186, "Responsibilities of Federal Agencies to Protect Migratory Birds" outlines the responsibilities of federal agencies to protect migratory birds, in accordance with the MBTA, the Eagle Act, the Fish and Wildlife Coordination Act, ESA, and NEPA. This order specifies the following:

- The USFWS (or Service) is the lead agency for coordinating and implementing EO 13186;
- Federal agencies are required to incorporate migratory bird protection measures into their activities; and
- Federal agencies are required to obtain permits from the USFWS before any "take" occurs, even when the agency intent is not to kill or injure migratory birds.

Invasive Species

Invasive species are alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health. Executive Order 13112 of February 3, 1999 – *Invasive Species*, prevents federal agencies from authorizing, funding, or carrying out actions "that it believes are likely to cause or promote the introduction or spread of invasive species in the United States or elsewhere unless, pursuant to guidelines that it has prescribed, the agency has determined and made public its determination that the benefits of such actions clearly outweigh the potential harm caused by invasive species; and that all feasible and prudent measures to minimize risk of harm will be taken in conjunction with the actions."

AFI 32-7064, *Integrated Natural Resource Management*, provides the Air Force with guidance to reduce the occurrence of invasive species on Air Force installations.

The California Invasive Plant Council (Cal-IPC) (2008) maintains an inventory that categorizes non-native invasive plants that threaten the state's wildlands. Categorization is based on an assessment of the ecological impacts of each plant. The inventory represents the best available knowledge of invasive plant experts in the state. It categorizes plants as high, moderate, or limited, reflecting the level of each species' negative ecological impact in California

3.2.4.2 Existing Condition

A site investigation was conducted on the property in October 2015. The entire site is regularly mowed, and much of the land is bare ground.

Vegetation and Wildlife

Vegetation is limited to grasses (i.e., fescue and rye) and very few forbs. A few specimens of yellow starthistle (*Centaurea solstitialis*), an invasive species rated as high impact[3] (Cal-IPC 2008) were observed on the property. A number of ground squirrel burrows, gopher mounds, and soil cracks are present within the proposed expansion area. The proposed 0.3-acre contractor staging area is located on a paved parking area approximately 500 feet east of the site.

Wetlands

No wetlands or other surface waters were identified on the subject site. The nearest wetland is a drainage ditch located approximately 100 feet west of the proposed expansion area.

Floodplains

No portions of the proposed expansion site are located within the 100-year floodplain. Only a small portion of the base west of the main gate (approximately 1,600 feet west-northwest of the site) is within the 100-year floodplain (FEMA 2009). Based upon United States Geological Survey (USGS topographic maps, the elevation of the 100-year floodplain is approximately 55 feet above mean sea level (USGS 1980). The lowest elevation at the proposed expansion site is approximately 63 feet above mean sea level.

Threatened, Endangered, and Sensitive Species

The 2013 INRMP identified a number of threatened, endangered, and sensitive species that occur, or could potentially occur, on Travis AFB (see **Table 6**). In addition to the species included in **Table 6**, Travis AFB consulted current Solano County lists of federal-and state-listed special status species, including threatened, endangered, and candidate species, as well as species protected by other regulations (e.g., the Bald and Golden Eagle Protection Act). Those lists, which were obtained from a query of the USFWS Information, Planning, and Conservation System and California Natural Diversity Databases, are included in **Appendix C**.

Based on the site investigation, no threatened, endangered, or sensitive species are present on the proposed expansion site. However, the site does provide suitable upland habitat for the California tiger salamander (CTS). There are known breeding ponds to the north, northeast, and northwest of the project area. The nearest known CTS breeding pond is located approximately 5,085 feet north of the site. Neither the proposed expansion site nor adjacent lands provide suitable habitat for any other threatened, endangered, or sensitive species. The federally-threatened vernal pool fairy shrimp (fairy shrimp) occurs in downstream portions of the drainage ditch approximately 1,700 feet southwest of the proposed expansion site. Known locations of protected species in the vicinity of the site are shown on **Figure 5**.

CTS can migrate over 1 mile from upland habitat to breeding ponds. No small mammal burrows (which are often used by CTS in upland habitats) were observed on the property during the site visit.

[3] High impact species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.

Table 6. Federal and State Listed Species that Occur or Could Potentially occur on Travis AFB.

Species		Status	Known on-base?
Common Name	**Scientific Name**		
Plants:			
Contra Costa Goldfields	*Lasthenia conjugens*	FE	Yes
Boggs Lake hedge-hyssop	*Gratiola heterosepala*	SE	No
Crampton's tuctoria	*Tuctoria mucronata*	FE/SE	No
Colusa grass	*Neostapfia colusana*	FT/SE	No
Amphibians:			
California red-legged frog	*Rana aurora draytonii*	FT	No
California tiger salamander (CTS)	*Ambystoma californiense*	FT/ST	Yes
Birds:			
Tricolored Blackbird	*Agelaius tricolor*	SE	Yes
Swainson's Hawk	*Buteo Swainsonii*	ST	Yes
Western Burrowing Owl	*Athene Cunicularia ssp. hypugea*	SSC	Yes
Invertebrates:			
Delta Green Ground Beetle	*Elaphrus viridis*	FT	No
Vernal Pool Fairy Shrimp	*Branchinecta lynchi*	FT	Yes
Vernal Pool Tadpole Shrimp	*Lepidurus packardi*	FE	Yes
Conservancy Fairy Shrimp	*Branchinecta conservatio*	FE	No

Source: Travis AFB INRMP (Travis AFB 2013).

FE = Federally Endangered
FT = Federally Threatened
SE = State Endangered
SSC = State Species of Concern
ST = State Threatened

Migratory Birds

The property provides very little habitat for migratory birds. The grass is regularly mowed and no trees are located on the site.

3.2.5 Cultural Resources

Cultural resources include any prehistoric or historic district, site, building, structure, or object considered important to a culture, subculture, or community for scientific, traditional, religious, or other purposes. They include archaeological resources, historic properties, and traditional resources. Archaeological resources are found at locations where prehistoric or historic activity measurably altered the earth or produced deposits of physical remains (e.g., arrowheads, bottles, etc.). Historic properties (as defined in 36 CFR 60.4) are significant archaeological, architectural, or traditional resources eligible for listing, or listed in, the NRHP. Traditional resources are associated with cultural practices and beliefs of a living community that are rooted in its history and important in maintaining the community's continuing cultural identity.

Section 106 of the NHPA of 1966 requires that federal agencies consider what effects their actions, funding, permit, or license may have on historic properties, and that they give the Advisory Council on Historic Preservation a "reasonable opportunity to comment" on such actions. Actions in areas outside of a Historic District also need to be reviewed for their potential visual impact on the Historic District.

CEQ regulations (40 CFR 1501.2) require consultation with "...Indian tribes and with interested private persons and organizations when its own involvement is reasonably foreseeable." In 1999, the DoD promulgated its American Indian and Alaska Native Policy, which emphasized the importance of respecting and consulting with tribal governments on a government-to-government basis. The policy requires an assessment, through consultation, of the effect of proposed DoD actions having the potential to significantly affect protected tribal resources, tribal rights, and Indian lands before decisions are made by the services.

Cultural resource management at USAF installations is established in AFI 32-7065, *Cultural Resources Management*. AFI 32-7065 details compliance requirements for protecting cultural resources through an Integrated Cultural Resources Management Plan (ICRMP).

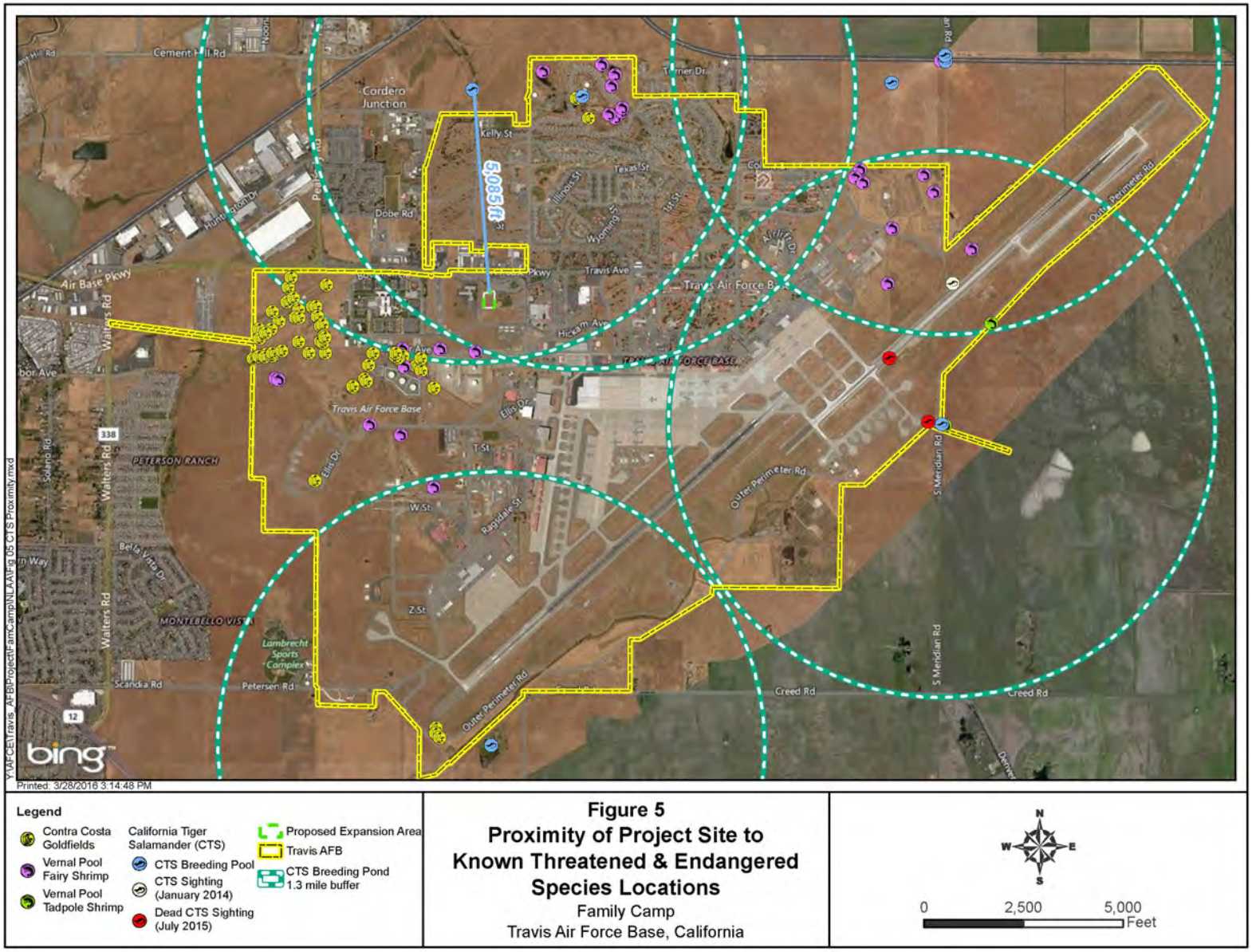

Figure 5. Proximity of Project Site to Known Threatened and Endangered Species Locations.

3.2.5.1 Existing Condition

Travis AFB completed an ICRMP (Travis AFB 2010) in consultation with the California SHPO. The ICRMP includes an inventory and evaluation of all known cultural resources; identification of the likely presence of other significant cultural resources; description of installation strategies for maintaining cultural resources and complying with related resource statutes, regulations, policies, and procedures; standard operating procedures (SOPs) and action plans that include budget, staffing, and scheduling activities; clear identification and resolution of the mission impact on cultural resources; and conformance with local, state, and federal preservation programs. It is designed to serve as a management plan for FYs 2010 through 2015.

With few exceptions (the subject property not being one of those exceptions), Travis AFB is considered to be a low probability area for archaeological resources. No human remains, associated grave goods, unassociated grave goods, sacred objects, or objects of cultural patrimony have been recovered on base or during base-associated undertakings. Travis AFB policy is to initiate consultation with the SHPO prior to any proposed undertakings in archaeologically sensitive areas to determine whether additional studies are warranted (Travis AFB 2010). Due to the low probability for archaeological resources on the site, a Phase I Archaeological Survey has not been conducted.

The most recent study of historic structures and resources on Travis AFB (ERDC 2013) did not recommend any buildings, structures, or landscapes for nomination to the NRHP. There are no structures on the subject property.

The proposed expansion site includes a portion of the "General Travis B-29 Crash Site". On 5 August 1950, a USAF B-29 Superfortress bomber crashed and burned approximately five minutes after taking off from an airfield in northern California. The aircraft had a complement of 20 airmen, which included the crew of the B-29 and a number of passengers. Twelve men were killed, either in the crash or later when they succumbed to their injuries. All 10 passengers and crew riding in the rear compartment of the bomber died, as well as two men in the forward compartment. At the time of the accident, the airfield was known as Fairfield-Suisun Air Force Base. One of the men killed in the crash was Brigadier General Robert F. Travis, for whom the base would later be renamed.

A substantial portion of the proposed expansion area was impacted by the B-29 crash. The entire site and surrounding area was included in the crash debris field. Approximately 36% of the site was disturbed by the impact of the aircraft, and approximately 16% of the site was cratered (two to three meters deep) by the explosion of an on-board bomb casing. This area has been backfilled with gravel and soil. A pedestrian metal detector survey for surface and near-surface artifacts using metal detectors was conducted over the proposed expansion site in 2014 by members of the Aviation Archaeology and Heritage Association, a non-professional volunteer organization affiliated with the Travis AFB Heritage Center (the base aviation museum). Ten crash-related artifacts were recovered. Additional artifacts were recovered from the ball field when that facility was constructed in approximately 1996. All artifacts associated with the crash are curated at the Travis AFB Heritage Center.

4. ENVIRONMENTAL CONSEQUENCES

The level of analysis needed to determine environmental consequences for individual resource areas is based upon the anticipated impact that would result from implementation of the Proposed Action. Resources from which impacts were not readily apparent were analyzed in greater detail than those that would obviously be less than significant.

4.1 Air Quality

The potential impacts to air quality associated with the Proposed Action are presented in this section. As stated in Section 3, air quality is quantified in terms of pollutant concentrations in the atmosphere relative to air quality standards. However, in an environmental assessment, the impacts of a proposed project are generally evaluated in terms of the change in annual air emissions that would be caused by project, where the change in emissions is an indicator of the possible change in local pollutant concentrations. By comparing the proposed change in emissions to the current level of emissions from all other sources in the area, a statement can be made regarding the significance of any proposed emission changes.

The impact of the Proposed Action (both directly and indirectly) is evaluated by comparing the emission increases that would occur from this action to the baseline emissions levels. Baseline emissions for both Solano County and the Bay Area AQMD are presented in **Tables 4 and 5**. Air emissions from construction activities are considered a temporary or short-term impact since these would be associated with a one-time construction event. Air emissions from operational activities are considered a long-term impact because these are associated with recurring activities that would continue for the foreseeable future.

4.1.1 Propose Action Alternative

The Proposed Action would have the potential to directly and indirectly increase air emissions. Direct emissions would occur at the proposed action site due to the construction and operational activities at the expanded Family Camp Trailer Park. These activities include:

- Expansion of the RV camping site;
- Construction of 10 additional concrete pad full-service RV camping sites;
- Construction of an asphalt road network for access to the camping sites;
- Construction of two gravel overflow parking areas; and
- Additional RV and passenger car traffic.

Construction would occur in year 2017. Any increases in emission associated with construction activities would be temporary and short-term, and would primarily result from fuel combustion within construction power equipment used for grading, trenching, and material hauling. The trailer park expansion would then open for use in late 2017, with the year 2018 being the first full year of operation. Increases in emissions associated with operational activities at the proposed action site would be recurring throughout the year, and would result from fuel combustion in motor vehicles travelling to and from the family camping sites.

Indirect emissions would occur from increased maintenance of the park and from additional public utilities and services that would be required to support the additional tenants at the expanded trailer park. Maintenance could include the use of consumer products (i.e., cleaners and paints) and landscaping activity. The additional demand for utilities and service would indirectly increase emissions due to additional electric power generation, waste hauling, and waste composting. These emissions are not generated at the proposed action site but would be generated from the supporting facilities and activities at other locations (e.g., municipal power plant, water treatment facility, landfill, etc.) within the regional air basin. An example is combustion of fossil fuels (i.e., coal) at a municipal power plant for generating additional electricity.

4.1.1.1 Emission Calculation Methodology – CalEEMod

The construction and operational emissions were estimated with the California Emission Estimator Model (CalEEMod version 2013.2.2). This model was developed for the California Air Pollution Control Officers Association (CAPCOA) as a statewide land use emissions computer model. It is designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operations from a variety of land use projects throughout California. CalEEMod quantifies direct emissions from construction and operations (including vehicle use), as well as indirect emissions of GHGs associated with electrical energy production, solid waste disposal, vegetation planting and/or removal, and water use. The model can be used for a variety of situations where an air quality analysis is necessary or desirable, such as for California Environmental Quality Act (CEQA) documents, NEPA documents, pre-project planning, compliance with local air quality rules and regulations, etc.

User input to the model includes a project description and location, land use type, aerial coverage of project components, construction phases/scheduling, operational activity, and mitigation measures. The model then assigns default values for the types, quantities, and operating times of construction equipment and operational vehicles based on the entered project details. It also assigns default values for on-road vehicle miles travelled. The user can then override the model default values to tailor the model setup to the specific project being analyzed. All overridden values require the user to enter comments to provide justification for using non-default values.

Due to the small size of the proposed project and use of the expanded facility by transient tenants, the model was run without mitigation measures. Mitigation measures might include constructing new facilities with energy efficient appliances and water conserving fixtures. Since the expanded facility would be used by transient tenants with privately-owned RVs, it would not be plausible to either require or enforce these types of mitigation measures.

CalEEMod was instructed to calculate "annual" emissions based on construction year 2017 and operational year 2018. The output report from the CalEEMod model run for the proposed action is provided in **Appendix D**. This report contains all project details that were entered into the model (i.e., input data) and tables of the resulting emissions calculated by the model (i.e., output data). The project characteristics, including comments and assumptions supporting the project setup and non-default data, are provided in Section 1 of the CalEEMod output report. Summaries of project emissions (as unmitigated emissions) are included in Section 2 of the output report for both construction and operation of the proposed action. Sections 3 through 10 of the output report present the project data and emissions for the various construction phase and operational activities. The emission calculation equations used by the model are not included in the output report but are available as part of the CalEEMod user's guide (available at http://www.caleemod.com/).

4.1.1.2 Proposed Action – Construction Emissions

Construction activities that would generate emissions include construction vehicle traffic (e.g., commuting workers, haul trucks, etc.), off-road power equipment, paving, and fugitive dust. These emissions would occur both on-site and off-site and would contribute to the total emissions in Solano County and the Bay Area AQMD.

Exhaust from the construction vehicles and off-road equipment would consist of the pollutants CO, NOx, PM2.5, PM10, SO_2, VOCs, and CO_2. Fugitive dust emissions would be generated from site grading and trenching activities. The construction emissions would occur within the year 2017 dry season (June-October) per the requirement of the USFWS. This would minimize potential effects to salamander dispersal. **Table 7** presents the approximate areal coverage of the construction activities.

Table 7. Proposed Action Construction Area Data.

Construction Year	Total Affected Area (sq ft) [A]			
	Total Site Area	Concrete Parking Pads	Asphalt Road Network	Gravel Overflow Parking Areas
2016	104,544 (2.4 acres)	7,500	45,400	4,800

Table 8 presents the construction activity emissions that would occur in year 2017. These emissions were calculated by CalEEMod and are listed in Sections 3.1 through 3.6 of the CalEEMod output report in **Appendix D**. The total construction emissions are then compared in **Table 9** to the local (Solano County) and regional (Bay Area AQMD) baselines in terms of ton per year and percent of baseline.

Table 8. 2017 Proposed Action Construction Emissions.

Construction Phase (for year 2017)		Emissions (ton/yr)						
		CO	NOx	PM10	PM2.5	SO_2	VOC[A]	GHGs[B]
Site Grading	On-Site	0.0549	0.0799	0.0210	0.0127	< 0.0001	0.0077	5.7119
	Off-Site	0.0182	0.0183	0.0017	0.0006	< 0.0001	0.0017	4.7947
Trenching Underground Utilities	On-Site	0.0070	0.0118	0.0009	0.0009	< 0.0001	0.0013	0.8084
	Off-Site	0.0003	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0595
Asphalt Paving Road System	On-Site	0.0301	0.0406	0.0025	0.0023	< 0.0001	0.0053	4.1042
	Off-Site	0.0148	0.0144	0.0014	0.0005	< 0.0001	0.0014	3.8525
Concrete Paving RV Pads	On-Site	0.0071	0.0090	0.0006	0.0006	< 0.0001	0.0024	0.8987
	Off-Site	0.0030	0.0024	0.0004	0.0001	< 0.0001	0.0003	0.7342
Gravel Paving Overflow Parking	On-Site	0.0054	0.0074	0.0005	0.0005	< 0.0001	0.0021	0.6578
	Off-Site	0.0017	0.0015	< 0.0001	< 0.0001	< 0.0001	0.0002	0.4359
TOTAL		0.1426	0.1853	0.0293	0.0182	0.0002	0.0225	22.0576

(A) VOCs are shown in the CalEEMod model output as Reactive Organic Gases (ROG).
(B) GHGs are shown in the CalEEMod model output as carbon dioxide equivalent (CO_2e) in units of Metric Tons.

Table 9. 2017 Proposed Action Construction Emissions Compared to Baselines.

	Total Emissions (ton/yr)						
	CO	**NOx**	**PM10**	**PM2.5**	**SO_2**	**VOC**	**GHGs**
Construction (Year 2017)	0.1426	0.1853	0.0293	0.0182	0.0002	0.0225	22.0576
Local Baseline	35,077	11,684	5,676	1,726	292	5,508	3,455,250
Regional Baseline	466,244	129,973	43,957	17,173	10,632	223,241	86,586,599
Percent of Local	0.0004%	0.0016%	0.0005%	0.0011%	0.0001%	0.0004%	0.0006%
Percent of Regional	< 0.0001%	0.0001%	0.0001%	0.0001%	< 0.0001%	< 0.0001%	< 0.0001%

4.1.1.3 Proposed Action – Operational Emission Increases

Operational activities that would generate emissions include an increase in trailer park tenant vehicle traffic (RVs and automobiles) and use of municipal services (i.e., energy, maintenance, water, and waste). These emissions would occur both on-site and off-site, and would contribute to the total emissions in Solano County and the Bay Area AQMD.

Direct emissions would occur as exhaust from the tenant vehicles, and would consist of the pollutants CO, NOx, PM2.5, PM10, SO_2, VOCs, and CO_2. Indirect emissions would be generated from increased park maintenance and an increased demand for municipal services associated with the trailer park expansion. The operational emissions would occur near the end of year 2017, with the first full year of operation in 2018.

Table 10 presents the annual emission increases that would occur from the expanded operational activities in year 2018. These were calculated by CalEEMod and are listed in Sections 4.0 through 10.0 of the CalEEMod output report in **Appendix D** (Note – *For indirect emissions associated with energy, water, and waste, CalEEMod only reports GHG emissions*). The total increase in operational emissions are then compared in **Table 11** to the local (Solano County) and regional (Bay Area AQMD) baselines in terms of ton per year and percent of baseline.

Table 10. 2018 Proposed Action Operational Emission Increases.

Operational Activity (for year 2018)	**Emissions (ton/yr)**						
	CO	**NOx**	**PM10**	**PM2.5**	**SO_2**	**VOC [A]**	**GHGs [B]**
Mobile Sources – Vehicles	0.0667	0.0066	0.0186	0.0050	0.0002	0.0062	13.7353
Energy – Electricity	---	---	---	---	---	---	38.3729
Area – Maintenance	0.0006	< 0.0001	0	0	0	0.7183	0.0011
Water	---	---	---	---	---	---	2.9640
Waste	---	---	---	---	---	---	0.6505
Off-Road Equipment	---	---	---	---	---	---	---
Vegetation	---	---	---	---	---	---	---
TOTAL	0.0673	0.0066	0.0186	0.0050	0.0002	0.7245	55.7239

(A) VOCs are shown in the CalEEMod model output as Reactive Organic Gases (ROG).
(B) GHGs are shown in the CalEEMod model output as carbon dioxide equivalent (CO_2e) in units of Metric Tons.

Table 11. 2018 Proposed Action Operational Emissions Compared to Baselines.

	Total Emissions (ton/yr)						
	CO	**NOx**	**PM10**	**PM2.5**	**SO_2**	**VOC**	**GHGs**
Operation (Year 2018)	0.0673	0.0066	0.0186	0.0050	0.0002	0.7245	55.7239
Local Baseline	35,077	11,684	5,676	1,726	292	5,508	3,455,250
Regional Baseline	466,244	129,973	43,957	17,173	10,632	223,241	86,586,599
Percent of Local	0.0002%	0.0001%	0.0003%	0.0003%	0.0001%	0.0132%	0.0016%
Percent of Regional	< 0.0001%	0.0001%	0.0001%	0.0001%	< 0.0001%	0.0003%	0.0001%

4.1.2 No Action Alternative

For the No Action alternative, FamCamp would continue to operate at its current capacity without any changes. Construction would not occur for additional roads, RV parking pads, or overflow parking areas, and there would be no increase in family camp tenant motor vehicle traffic. There would be no new air emissions associated with construction, and operational emissions would not change from current levels. No additional air quality impacts would occur under this alternative.

4.1.3 Summary

For the Proposed Action, air emissions would increase from construction activities and the expanded operation. Therefore, there would be potential impacts to air quality from both the construction activities and the expanded operation. These impacts would occur at different times and would be of different durations as summarized below.

Construction-related air emissions associated with the Proposed Action would be a temporary short-term impact during the year 2017. The local impact to air quality would be 0.0016% (or less) of the impact resulting from the Solano County baseline emissions. The regional impact would be 0.0001% (or less) of the impact resulting from the Bay Area baseline emissions. This level of construction emissions would result in less than a significant impact to the local and regional baseline emissions.

Operational-related air emission increases associated with the Proposed Action would be a recurring impact in year 2018 and beyond. The local impact to air quality would be 0.0132% (or less) of the impact resulting from the Solano County baseline emissions. The regional impact would be 0.0003% (or less) of the impact resulting from the Bay Area baseline emissions. This level of operational emission increases would result in less than a significant impact to the local and regional baseline emissions.

4.2 Noise

Noise generated from the Proposed Action would have short-term effects to the existing noise environment due to construction activities. Long-term impacts would be limited to vehicular traffic and occasional inverter generator operation at the campsites.

Construction and renovation activities generate noise by their very nature and are highly variable, depending on the type, number, and operating schedules of equipment. Construction projects are usually executed in stages, each having its own combination of equipment and noise characteristics and magnitudes. The proposed activities would include mobilization, site preparation, placing forms and foundations, heavy equipment movement to facilitate paving, and concrete pouring. The most prevalent noise source at typical construction sites is the internal combustion engine. General engine powered construction equipment include, but are not limited to:

- Heavy, medium, and light equipment (i.e., excavators);
- Roller compactors;
- Front-end loaders;
- Bulldozers;
- Graders;
- Backhoes;
- Dump trucks;
- Water trucks;
- Concrete trucks;
- Pump trucks;
- Utility trucks;
- Forklifts; and
- Lube, oil, and fuel trucks.

Peak noise levels would be variable and intermittent because each piece of equipment would only be operated when needed. However, peak construction noise levels would be considerably higher than current noise levels. Relatively high peak noise levels in the range of 93 to 108 dBA would potentially occur on the active proposed expansion site, decreasing with distance from the construction areas. **Table 12** presents peak noise levels that could be expected from a range of construction equipment during proposed construction activities.

The nearest residences are located approximately 1,600 feet northeast of the proposed project area (**Figure 4**). Other noise-sensitive facilities in the vicinity of the Proposed Action site include Travis Elementary School (300 feet west) and a child development center (870 feet east). Generally speaking, peak noise levels within 50 feet of active construction areas and material transportation routes would most likely be considered "striking" or "very loud," comparable to peak crowd noise at an indoor sports arena. At approximately 200 feet, peak noise levels would be loud – approximately comparable to a garbage disposal or vacuum cleaner at 10 feet. At 1,000 feet, construction noise levels would generally be quiet enough so as to be considered background noise, although transient noise levels may be noticeable at times.

Although noise levels would be quite loud in the immediate area, the intermittent nature of peak construction noise levels would not create the steady noise level conditions for an extended duration that could lead to hearing damage. In addition, construction equipment would be operating between June and October, so the majority of the construction activities would occur during summer break. Construction workers would follow standard OSHA requirements to prevent hearing damage.

Construction would increase noise levels in the immediate vicinity of the project; however, impacts would be minor because these activities would be temporary, would be limited to daylight hours, and would not extend to sensitive receptors beyond Travis AFB boundaries.

Areas that would be most affected by noise from the proposed construction include those closest to the construction footprint, specifically Travis Elementary School. Indoor noise levels would be expected to be 15 to 25 dBA lower than outdoor levels. As such, effects to the school would be reduced, with maximum interior noise levels of less than 60 dBA. These peak levels would not be typical during construction, and

would be expected for only very short time frames. The potential for adverse noise impacts would be less than significant, and limited to the duration of construction activities.

Table 12. Peak Noise Levels Expected from Typical Construction Equipment.

Source	Peak Noise Level (dBA, attenuated)					
	Distance from Source (feet)					
	0	50	100	200	400	1,000
Heavy Truck	95	84-89	78-83	72-77	66-71	58-63
Dump Truck	108	88	82	76	70	62
Concrete Mixer	108	85	79	73	67	59
Jackhammer	108	88	82	76	70	62
Scraper	93	80-89	74-82	68-77	60-71	54-63
Bulldozer	107	87-102	81-96	75-90	69-84	61-76
Generator	96	76	70	64	58	50
Crane	104	75-88	69-82	63-76	55-70	49-62
Loader	104	73-86	67-80	61-74	55-68	47-60
Grader	108	88-91	82-85	76-79	70-73	62-65
Pile driver	105	95	89	83	77	69
Forklift	100	95	89	83	77	69

Source: Tipler 1976.

Long-term noise impacts would be limited to the occasional use of generators at the camping sites. The FamCamp allows the use of enclosed inverter generators between 8:00 a.m. and 10:00 p.m. Although there are no industry standards for generator noise levels, a review of manufacturers' specifications indicated a range of 53 to 67 dB(A). Additionally, most campers would not use generators because of the 50-Amp electrical service that is included in the camping fee. Therefore, long-term noise impacts would be less than significant.

4.3 Water Resources

The Proposed Action would have no impact on groundwater, and would result in minor, less than significant impacts on potable water supplies and wastewater and stormwater demands.

4.3.1 Potable Water

As of FY 2012 (the latest year for which data are available), Travis AFB consumes approximately 448.3 million gallons of potable water per year. This represents an 18.1% decrease from FY 2007 levels

(Travis AFB 2015). Assuming that the proposed 10 additional camping spaces are occupied 100% of the time by four individuals, and applying the Travis AFB planning factor of 46.4 gallons of potable water consumption per person per day, the Proposed Action would increase potable water demand by approximately 68,000 gallons per year. This increase would represent an approximately fifteen-hundredths of one percent increase in potable water demand. This slight increase would not be significant, and would not hinder the installation's goal of a 26% reduction in potable water consumption by 2020. Additionally, all disturbed areas that are not paved will be xeriscaped, and will not add to potable water demands.

4.3.2 Wastewater

Travis AFB discharges an average of approximately 380 million gallons per year, and has the capacity to discharge 580 million gallons per year (Travis AFB 2015). Assuming that the proposed 10 additional camping spaces are occupied 100% of the time by four individuals, and applying the Travis AFB planning factor of 56.7 gallons of generated wastewater per person per day, the Proposed Action would increase wastewater discharge by approximately 83,000 gallons per year. This increase would represent approximately four-hundredths of one percent of the 200 million gallons per day available capacity. This increase would be less than significant.

4.3.3 Stormwater

Construction of the FamCamp expansion would result in an approximately 1.3-acre increase in impervious surface. Due to the gently sloping topography to the west/southwest, stormwater would be allowed to sheet-flow overland to the drainage ditch located approximately 100 feet west of the site. The contractor would be required to comply with all required BMPs contained in the SWPPP (Travis AFB 2007). The Water Program Manager would be consulted during contract preparation to ensure that all appropriate BMPs are included in the contract as requirements. Post-construction runoff would be allowed to sheet flow to the ditch located west of the site. According to the current Travis AFB Installation Development Plan (Travis AFB 2015), the stormwater system is adequate. The small increase in impervious surface that would result from implementation of the Proposed Action would not have a significant impact on stormwater quantity or quality.

4.4 Biological Resources

This section analyzes the potential for adverse impacts on biological resources from implementation of the Proposed Action and the No Action Alternative.

4.4.1 Proposed Action

4.4.1.1 Vegetation and Wildlife

Implementation of the Proposed Action would result in the removal of vegetation (primarily turfgrass), and wildlife residing within the proposed expansion area primarily ground squirrels and gophers) would be displaced. However, the grasses present are ubiquitous on the base, and ground squirrels and gophers are considered wildlife pests (Travis AFB 2013). Additionally, land within the project area that is not paved would be xeriscaped with drought tolerant California native plants. Therefore, impacts to vegetation and wildlife as a result of implementation of the Proposed Action would be less than significant.

4.4.1.2 Wetlands

There are no wetlands located on the proposed expansion project site. Erosion control BMPs, in accordance with the Travis AFB SWPPP, would be implemented as required, including, but not limited to grading during the dry season, compaction of upland spoils, and seeding and mulching areas of exposed soil, as determined necessary by the Travis AFB Storm Water Manager. Therefore, impacts to wetlands as a result of implementation of the Proposed Action would not be expected.

4.4.1.3 Floodplains

None of the subject property is located within the 100-year floodplain, and is situated approximately eight feet above the level of the nearest 100-year floodplain. Therefore, there would be no impacts to floodplains as a result of implementation of the Proposed Action.

4.4.1.4 Threatened, Endangered, and Sensitive Species

Of the species identified in **Table 6** and **Appendix C**, the state and federally threatened CTS has the potential to be affected by the Proposed Action. There are known CTS breeding ponds to the north, northeast, east, and south of the project area. The nearest known breeding pond is located just under 1 mile (5,085 feet) north of the proposed expansion site (**Figure 5**). CTS can migrate over 1 mile from upland habitat to breeding ponds.

Travis AFB submitted a Not Likely to Adversely Affect (NLAA) determination for the CTS related to the Proposed Action to the USFWS on 17 December 2015 (**Appendix B**). The NLAA determination was part of the IICEP process, and initiated informal consultation in accordance with legal requirements set forth under regulations implementing Section 7 of the Endangered Species Act (50 CFR 402; 16 U.S.C. 1536). The NLAA determination was based on the presence of significant artificial physical barriers to CTS migration/dispersal (i.e., curbs, residential housing, wooden fencing, and other buildings) that exist between breeding ponds and the project site. The vernal pool fairy shrimp was included in the NLAA determination due to their presence on the installation downgradient of the site. The USFWS responded on 11 January 2016 with a request for additional information. Travis AFB provided the requested information on 14 January 2016. The USFWS concurred with the NLAA determination, as stated in a letter dated 22 March 2016 (**Appendix B**). The concurrence was contingent upon implementation of the following avoidance and minimization measures (i.e., BMPs) that Travis AFB routinely implements (and includes as a requirement in applicable contracts) for all construction projects located within 1.3 miles of CTS breeding ponds:

1. Prior to the start of construction activities, a Service-approved biologist will provide education and training sessions for all individuals that will be involved with site preparation or construction. The training will focus on habitat sensitivity and identification of vernal pools and CTS. The training will include a description of the CTS and fairy shrimp, a description of their behavior, general measures to be taken to protect these species, the penalties for non-compliance, and the boundaries of the project area. A fact sheet or other supporting materials containing this information will be prepared and distributed. Upon completion of training, employees will sign a form stating that they attended the training and understand all the avoidance and minimization measures.

2. Construction activities will be timed to occur during the dry season (June-October) to minimize potential effects to CTS dispersal.

3. Within 14 days of the start of construction activities, a Service-approved biologist will perform a pre-construction survey and identify potential refuge habitats (i.e., burrows) suitable for the CTS. In the unlikely event that a CTS is encountered, the Service-approved biologist will contact the Service for instructions.

4. A Service-approved biologist will be on-site during all activities that could result in the take of listed species. The qualifications of the Service approved biologist(s) will be presented to the Service for review and approval at least 10 working days prior to any groundbreaking at the project site. If any of the requirements associated with these measures are not being fulfilled, the Service-approved biologist will have the authority to stop project activities through communication with the Project Manager.

5. Before work begins, the contractor will clearly delineate (e.g., stake, chalk, or flag) the disturbance boundaries and prohibit any off-road traffic outside of these boundaries.

6. The contractor will confine all equipment to designated work zones (including access roads and laydown) within the area to be disturbed.

7. Construction personnel will be instructed to exercise caution when commuting within the area to be disturbed, and a 15 mph speed limit will be observed on all unpaved surfaces.

8. All project related vehicle traffic will be restricted to established roads and other designated areas.

9. Orange barrier material will be used for wetlands near to the project site. The location of the orange barrier fencing will be determined by the Service-approved biologist prior to the start of work. Orange barrier fencing will be installed 2 inches off the ground to ensure CTS or other wildlife to not become entangled. The need for other wetland protections (i.e., coconut coir wattles and/or silt fencing) will be determined by the onsite Service-approved biologist or Natural Resource Management staff. Vehicles, equipment, and personnel will be restricted from these areas. All stakes and flagging will be removed within 60 days of completion of construction.

10. All trenches or holes will be covered at the end of the workday or provided with earthen escape ramps.

11. All trash (i.e., food related items such as wrappers, bottles, cans, food scraps, etc.) will be placed in closed containers and removed from the project site on a daily basis.

12. If there is a 50% or greater probability of rain forecasted by the National Weather Service by 7:00 a.m. the day prior to a scheduled workday, then all work activities are cancelled for the next 24 hours. If any measurable amount of rainfall occurs (including trace amounts), work may not resume for 24 hours from rain cessation. The weather forecast and hourly weather data for Travis AFB can be found by entering the zip code 94535 at http://www.srh.noaa.gov/forecast.

13. All Service-approved biologists and or biological monitors are required to check the entire project site thoroughly, including all equipment every morning before work begins. The Service-approved biologist should do a more extensive and thorough pre-construction check for CTS at and within 250 feet of the project site on days where the relative humidity the previous night was above 80% or if soil saturation occurs from the unseasonable application of water within the project site.

14. Water shall not be pumped, sprayed, or allowed to flow over undisturbed uplands that can support CTS as part of planned project activities outside of pre-approved requirements (i.e., dust control). Water applied for pre-approved requirements shall be applied in the minimum quantities necessary, and only to disturbed soils. If excess water accumulates as the result of construction activity, water may be pumped through a screened pump and removed from the construction area as deemed necessary by the on-site Service-approved biologist in coordination with Travis AFB staff. If water inadvertently or purposefully enters construction trenches, pits, or excavations, a Service-approved

biologist will remain on site until water is pumped from the trench, pit, or excavation. Following pumping, the Service-approved biologist shall inspect the trench, pit, or excavation area, and the surrounding uplands, to determine if disturbance to the CTS has occurred and implement any other measures necessary (e.g., placement of cover boards, exclusionary fencing, etc.) to protect individuals that may emerge due to the wet soil.

15. Pipes laid underground or stored on the ground shall be capped, covered, or taped in a manner that excludes CTS from entering the pipe prior to the completion of the construction project. Long-term storage of pipes and other construction material will be placed on asphalt and raised above the ground by no less than 1.5 inches (e.g., on top of 2 x 4 supports).

16. Trenches, pits, and excavations shall be covered in a manner that exclude a CTS from entering these areas during weekends, holidays, humid days, rain events, etc. Specifically, gaps no greater than 1 inch shall be allowed within cover materials if the Service-approved biologist(s) will not be present the following day or if rain events or high humidity days are expected to occur.

17. The USFWS will be notified verbally immediately, and with a written notification within 5 days, if any worker inadvertently kills or injures a listed species, or finds one injured or trapped, on the project site or during work. Work will stop immediately if an incident occurs until corrective actions are provided by Service, which will then be implemented.

18. Erosion control BMPs, in accordance with the Travis AFB SWPPP, will be implemented as required, including, but not limited to grading during the dry season, compaction of upland spoils, and seeding and mulching areas of exposed soil, as determined necessary by the Travis AFB Storm Water Manager.

19. Disturbed areas will be re-seeded with a native seed mix approved by the Travis AFB Natural Resources Management Team. Unpaved areas within the proposed FamCamp expansion area will be xeriscaped.

20. A Service-approved biologist will perform construction site inspections to ensure the contractor completes the proposed action as described and complies with all proposed minimization measures.

21. All fencing, flagging, debris, trash, and materials from work areas will be removed following completion of construction and habitat restoration activities.

22. Contractors and equipment operators will be responsible for spill prevention and emergency spill response measures, as required, including clean-up. Appropriate materials (i.e., emergency response plans) will be on site at all times.

23. Concrete waste and water from curing operations will be collected in washouts and disposed of properly and not allowed into water courses or upland habitat.

4.4.1.5 Migratory Birds and Eagles

Because of the semi-improved condition of the project site and the fact that it is regularly mowed and surrounded by human activity, nesting habitat for migratory birds is very limited. Therefore, implementation of the Proposed Action would have no effect on migratory birds.

It is highly unlikely that bald or golden eagles would utilize the project site for hunting prey due to the fact that it is situated within a developed portion of the installation. None of the trees located near the proposed expansion site are large enough to support a bald or golden eagle nest. Therefore, implementation of the Proposed Action would have no effect on bald or golden eagles.

4.4.2 No Action Alternative

Under the No Action Alternative, the FamCamp would continue to operate under current occupancy levels on existing camping sites, and the facility would not be expanded. No impacts to biological resources would occur under this alternative.

4.5 Cultural Resources

Travis AFB initiated the IICEP process with the SHPO on 15 April 2015 (**Appendix B**). The initial letter requested that the SHPO concur with Travis AFB's finding that the General Travis B-29 Crash Site is eligible for listing on the NRHP. The Base also requested that the SHPO concur with their delineation of the Area of Potential Effect (APE) for the undertaking (i.e., implementation of the Proposed Action), and with their finding that the proposed undertaking would constitute an adverse effect. The Air Force also stated in the letter that they planned to erect a crash site monument within the proposed expansion area as mitigation for impacts to the site. In the SHPO's response on 11 May 2015, they concurred with Travis AFB's delineation of the APE. However, the SHPO did not concur that the crash site is eligible for NRHP inclusion nor that implementation of the Proposed Action would adversely affect historic properties. The SHPO did state their support for the Air Force's decision and effort to memorialize the crash site. Travis AFB concurred with the SHPO's findings in a letter dated 21 October 2015.

Travis AFB consulted with the California NAHC on 29 October 2015. The consultation was to request that the NAHC search their SLF to determine whether any sacred lands have been identified on the base, and to request contact information for any federally recognized tribe that may have ancestral ties to the land upon which Travis AFB is situated. In their 09 November 2015 response, the NAHC stated that an SLF search failed to indicate the presence of Native American cultural resources in the project area. They did, however, identify the Cortina Band of Indians and the Yocha Dehe Wintun Nation as Native American organizations that may have knowledge of cultural resources in the area. Travis AFB leadership initiated government-to-government consultations with both of these Native American organizations on 10 February 2016. Travis AFB spoke with the Cortina Band of Indians Chairperson on 23 March, and sent follow up letters on 23 March and 13 April. No response was received from the Cortina Band of Indians. The Yoche Dehe Wintun Nation responded in a letter dated 03 March 2016. They expressed concern that the Proposed Action could impact known archaeological/cultural sites, and requested the cultural resource study for the project. Representatives of the Yoche Dehe Wintun Nation visited the proposed expansion site on 10 August 2016. The tribal representatives indicated verbally that they concurred with the government determination that the Proposed Action would not impact cultural resources. Travis AFB provided additional materials to the tribe on 18 August. On 21 October 2016 Travis AFB sent a letter to the Yocha Dehe Cultural Resources Manager that reviewed the consultations to date and indicated that Travis AFB planned to proceed with the public review and comment period in early November. No response was received from the Yocha Dehe Wintun Nation.

4.5.1 Proposed Action

If any Native American human remains or other archaeological resources are encountered during any kind of excavation associated with the Proposed Action, excavation would stop and the base cultural resources manager would be notified immediately. A list of points of contact can be found in Section 4.4.2 of the Travis AFB ICRMP (Travis AFB 2010). The base cultural resources manager would follow the procedures in the Unplanned/Unanticipated Events SOPs (Section 5.3 of the ICRMP) for notification of the SHPO and appropriate Native American groups.

Based on the fact that the proposed expansion site is considered a low probability area for archaeological resources (and much of the land was seriously impacted by the B-29 crash), the negative result of the

NAHC SLF search, the SHPO determination that implementation of the Proposed Action would not adversely affect historic properties, and the SOPs in place, there would be no significant impacts to cultural resources under this alternative.

4.5.2 No Action Alternative

For the No Action Alternative, the FamCamp would continue to operate under current conditions, and no expansion would occur. No impacts to cultural resources would occur under this alternative.

4.6 Cumulative Impacts

In accordance with the NEPA, any past, present, and reasonably foreseeable future actions with the potential to cumulatively affect the same resources as the alternatives presented in Section 2 are presented below, followed by an analysis of cumulative effects. Future actions proposed in the area may require site-specific NEPA analysis prior to implementation.

Cumulative effects on environmental resources result from incremental impacts of an action, when combined with other past, present, and reasonably foreseeable future projects in the area. Cumulative effects may arise from single or multiple actions and may result in additive or interactive effects. Cumulative effects can result from minor, but collectively substantial, actions undertaken over time by various agencies (i.e., federal, state, and local) or individuals.

Past Actions:

- Repair of Airfield Pavements, Runway 03R/21L,
- Construction of Taxiway M Bypass Road,
- Construction of C-17 Articulated Concrete Blocks,
- Repair 300 Ramp West End (Phase 2), and
- Repair 200 Ramp.

Current/Planned Actions for Fiscal Years 2016 – 2018:

- Repair pavement on Taxiway Hotel (repair by replacement of 61,341 square feet of concrete in section T36C);
- Construct access road to Fire Station 3 (pave access road with concrete from Collins Drive to Fire Station #3);
- Construct wheel and tire shop for Storage Building 812 (2,000-square foot connected storage facility);
- Repair 400 Ramp (phases 1-5) and parking spot 510 (repair by replacement of approximately 300,000 square yards of existing concrete and asphalt, including stormwater drainage improvements);
- Construct covered addition to Building 971 and repair parking (3,000-square foot partially enclosed connected metal covered storage building and repair approximately 8,600 square feet of pavement to support heavy equipment);
- Construct youth center (school age facility);

- Construct contingency response wing hardside expandable light air-mobile shelters parking lot, Building 924;
- Upgrade youth center playground;
- Demolish Building 144;
- Demolish reserve facilities (Buildings 893 and 894); and
- Reconstruction of runway paved shoulders and lighting system

Although not currently planned, Travis AFB could potentially initiate additional base development to support the mission.

4.6.1 Air Quality

The Proposed Action and other planned actions would conform to the SIP and would not be regionally significant. Neither the Proposed Action nor the other past, present, or planned future actions would contribute to long-term impacts on air quality, because there would be no significant increase in traffic or operational emissions. Therefore, no significant cumulative impacts on air quality are anticipated.

4.6.2 Noise

The majority of the actions included in the Cumulative Impacts analysis occurred, are occurring, or would occur, in in the airfield area, nearly 3,500 feet from the Proposed Action Site. The noise in the airfield area is highly influenced by flight activities, and the minor, short-term construction noise from the proposed FamCamp expansion would have no impact on the airfield environment. The actions not in the airfield area would result in only short-term construction-related noise impacts that would affect only the area surrounding the project areas. Therefore, no significant cumulative impacts to noise would be anticipated.

4.6.3 Water Resources

The Proposed Action is expected to have negligible, less than significant impacts on water resources. None of the past, current, or planned activities would result in significant impacts to water resources, and would not impede Travis AFB's water resource reduction goals. All landscaping associated with other actions would incorporate xeriscaping to reduce watering requirements. Therefore, no significant cumulative impacts to water resources would be anticipated.

4.6.4 Biological Resources

The Proposed Action and other actions listed above are not expected to adversely affect biological resources. Most of the past and planned projects are located on or near the airfield. The others are sited in previously developed areas that are currently improved or semi-improved. These areas will require evaluation to determine whether they harbor or provide suitable habitat for threatened, endangered, or sensitive species. Any potential impacts to threatened, endangered, or sensitive species would require consultation with the USFWS and potential mitigation. Therefore, no significant cumulative impacts to biological resources would be anticipated.

4.6.5 Cultural Resources

The Proposed Action and other actions listed above are not likely have any effect on cultural resources. In the event of an unanticipated discovery of archaeological resources during any project on Travis AFB,

actions detailed in the ICRMP (Travis AFB 2010) and summarized in Section 4.7.1 would be initiated to minimize impacts. All of the past, current, or planned activities would take place in low probability areas for cultural resources. Additionally, consultations with the SHPO, NAHC, and potentially affected tribes would be initiated for all projects that could affect cultural resources. Therefore, no significant cumulative impacts to cultural resources would be anticipated.

4.7 Natural or Depletable Resource Requirements and Conservation Potential

The Proposed Action requires no use of natural or depletable resources, other than the use of materials during construction of the road, camping sites, and infrastructure extensions.

4.8 Irreversible or Irretrievable Commitment of Resources

Under the Proposed Action, irretrievable commitments of resources would occur from the negligible consumptive use of electrical energy and fuel during construction operations. None of those commitments would be made before the FONSI is signed.

4.9 Relationship Between Short-Term Uses of the Human Environment and the Maintenance and Enhancement of Long-Term Productivity

The Proposed Action would take advantage of existing infrastructure to the maximum extent possible; however, in many cases, highly efficient systems and structures would replace older, inefficient systems. The productivity and future use of the land would benefit from long-term use and productivity.

4.10 Conditions Normally Requiring an EIS

The potential impacts arising from the Proposed Action were evaluated specifically in the context of the criteria for actions requiring an EIS, as described in the 1979 DoD Directive 6050.1, *Environmental Effects in the United States of Department of Defense Actions*, and 32 CFR 989.

Specifically, the Proposed Action was evaluated for the potential to:

- Significantly affect environmental quality or public health and safety;
- Establish a precedent for future actions;
- Adversely interact with other actions resulting in cumulative environmental effects; and
- Involve the use, transportation, storage, and disposal of hazardous or toxic materials that may have significant environmental impacts.

Neither the Proposed Action nor the No Action Alternative would result in significant impacts to the environment. Therefore, an EIS is not required, and an EA and FONSI are the proper level of NEPA documentation for this action.

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APPENDIX A

FamCamp Expansion Project Validation Assessment

Final Report
Air Force Base Capital Improvement Fund (AFBCIF)
Project #160011
Add/Alter FAMCAMP
Travis AFB CA
AMC

Methodology

This study was prepared in accordance with established procedures outlined in AFI 34-205, *Services Nonappropriated Fund Facility Projects,* Chapter 3, dated 5 July 2011.

The Base Proposal to add 10 full service RV parking spaces to the existing FAMCAMP is classified as major construction in accordance with AFI 32-1032. Total construction cost is estimated at $510K, with a total NAF investment of $600K. As proposed this project does require a report to Congress. The Air Force Services Directorate conducted the PVA using in-house resources. The site visit was conducted 9 – 12 Sep 13. List of participants is at **Attachment 5**.

Procedures used with respect to cash flow analysis are in accordance with current guidelines published on the USAFServices.com financial management tools web page using the most current Proforma Analysis tool. These procedures do not constitute an examination of prospective financial statements in accordance with standards established by the American Institute of Certified Public Accountants, and are used solely for the purpose of evaluating the projected Rate of Return, Payback, and financial viability of the project.

PVA Executive Summary

Executive Summary

In accordance with Congressional guidance, NAF construction projects must meet a documented market demand and operational need, and for Category C MWR activities, be financially viable in order to be considered for funding. The FAMCAMP program is a Category C activity and is required to meet a financial hurdle rate for ROR on investment. The PVA team provided a proforma financial analysis for presentation to the NAF Panel and inclusion in the annual NAF Construction Report to Congress.

The PVA study was able to validate operational need for additional full-service, pull-through RV parking spaces based on the condition of existing facilities, documented un-met demand, and poorly configured excess space that inherently limits the revenue generating capabilities of the FAMCAMP.

The PVA study recommends extension of the FAMCAMP to construct 10 new full-service, pull-through RV parking spaces to accommodate 38 foot and larger vehicles. Construction cost is estimated at $510,000, with a Total NAF Investment (TNI) of $600,000. The proforma financial analysis for new construction generates a 10.08% ROR and 12 year Payback with a NPV of $173.1.

The PVA study was able to validate a consistent market for full-service RV parking spaces supported by both the traditional RV community and those military and retirees requiring medical care at the David Grant USAF Medical Center (DGMC) facility in close proximity to the FAMCAMP. Travis FSS was able to provide reservation requirements for DGMC patients and un-met demand statistics for customers needing 50 amp electrical hook-ups for RVs larger than 38 feet in length.

While overall annualized occupancy rates consistently average 74%, occupancy rates for the larger, full-service sites are between 83% and 91% during off-peak and peak seasons, respectively. Over 48% of the demand for larger RVs is now accommodated in 94 unimproved sites that average only 57% occupancy.

Rather than the base request to add 10 sites, the PVA team considered conversion of 24 unimproved sites to create 14 full-services parking spaces. This option would not increase the footprint of the FAMCAMP, reduce the vacancy rate for unimproved sites, and accommodate approximately 75% of the current demand for larger RVs. However, the cost of renovation of the existing parking spaces with utilities was 42% higher than the cost of new construction. Consequently, the PVA recommendation is the original Base Request.

IAW AFI 32-1022, this project is considered major construction and must be included in the FY16 Air Force NAF Construction Report to Congress.

Contents

Project Validation Assessment Study Summary

PROJECT VALIDATION ASSESSMENT STUDY SUMMARY			
Base/Location	Travis AFB CA	AFBCIF#:	160011
Project Title:	Add/Alter FAMCAMP	Geographic Location:	Type E

ORIGINAL PROJECT PROPOSAL (Plain text: What the base proposed)

Construct 10 additional RV parking spaces south of existing FAMCAMP. Construction includes asphalt paved roadway, concrete pads for RVs, water, sewer, and 50 amp electrical hookups for large RVs.

PVA PROPOSAL (Recommended Option) (Plain text: What the PVA proposed)

The PVA recommends a modified base request to construct 10 new parking spaces to allow larger RVs, 38 foot and longer, pull-through access to parking with full utility hook-ups, including sewer, water, and 50-amp electrical connections. Parking spaces should be constructed of concrete with paved drives and roads.

AUTHORIZED SCOPE		PROJECT SCOPE	BASE REQUEST	PVA PROPOSAL
AUTHORIZED SCOPE PER AFMAN 32-1084:				
PARAGRAPH:	7.5.18	ADDITIONS:		
TABLE:	N/A	RENOVATIONS:		
SF/SM/UNITS:	N/A	NEW:		
PROJECT SCOPE (SF/SM/UNITS):			10-spaces	10-Spaces
EXISTING SCOPE DEFICIENCY %:		14.82%		

PROJECT COST	BASE REQUEST	PVA PROPOSAL
CONSTRUCTION (INCLUDING RPIE, ATFP, LEED):	$ 441,000	$ 455,370
CONTINGENCY: ☑ 5% New ☐ 10% Repair/Alter	$ 22,000	$ 22,769
SUBTOTAL CONSTRUCTION AND CONTINGENCY:	$ 463,000	$ 478,139
SIOH: (6.5% OF CONSTRUCTION AND CONTINGENCY)	$ 30,000	$ 31,079
SUBTOTAL CONSTRUCTION, CONTINGENCY, SIOH:	$ 493,000	$ 509,218
REPORTABLE COSTS: (CONSTRUCTION, CONTINGENCY, SIOH)	$ 500,000	$ 510,000
DESIGN FEES: (10% OF CONSTRUCTION AND CONTINGENCY)	$ 50,000	$ 47,814
DESIGN MGT FEES: (2.5% OF CONSTRUCTION AND CONTINGENCY)	$ -	$ 11,953
FURNITURE, FIXTURE, EQUIPMENT (FF&E):	$ -	$ 28,500
ENVIRONMENTAL STUDIES:	$ -	$ -
TOTAL NAF INVESTMENT (TNI):	$ 550,000	$ 598,267
ATPF Costs (Non-Add):	$ -	$ -
LEED Costs (Non-Add):	$ -	$ -
TOTAL NAF INVESTMENT (TNI) ROUNDED:	$ 600,000	$ 600,000
APF COMPANION PROJECT COST:	0	$0

	CATEGORY B	CATEGORY C	LODGING
RATE OF RETURN(ROR):		10.08%	
PAYBACK:		12 Years	
NET PRESENT VALUE (NPV):		$173.10	
COST PER CUSTOMER:		$30.80	

Existing Facility Description/Size	Building #	Type Construction	Age	CE Condition Code
FAMCAMP	n/a	Perm		CC-1

EXISTING FACILITY CONDITION CODE:	CC-1 Adequate
FACILITY AGE:	
Energy Deficiency % Compliant IAW UFC 3-4000-01	N/A
NUMBER OF COMPETITORS: (within 30 minutes driving time)	3
CE WORK CLASSIFICATION:	Minor Construction
NEAREST CITY/POPULATION:	Sacramento, CA/ 475,516 (2012)
MAJCOM PRIORITY:	None

CONGRESSIONAL REPORTING REQUIREMENTS					
Program:	MWR	**State/Country:**	California	**Service:**	USAF
Installation:	Travis AFB				
Project Title:	Add/Alter FAMCAMP				

PROJECT NARRATIVE (FROM PVA EXECUTIVE SUMMARY)
The PVA study recommended extension of the FAMCAMP on the south side of the existing site. Construction includes all work required to construct 10 new RV parking spaces, including water and sewer lines, and 50-amp electrical supply and connections. Construct gravel roadways and concrete parking pads. Total NAF Investment is estimated at $600,000 with a 10.08% ROR, 12 year Payback, adn $173.1 NPV.

PROJECT COST PVA PROPOSAL		
CONSTRUCTION (INCLUDING CONTINGENCY & SIOH):		$ 510,000
DESIGN COSTS: (INCLUDING DESIGN MGT & ENVIRONMENTAL):		$ 59,767
COLLATERAL EQUIPMENT COST (FF&E):		$ 28,500
TOTAL:		$ 598,267
TOTAL NAF INVESTMENT (TNI) ROUNDED:		$ 600,000
ATPF Costs (Non-Add):		
LEED Costs (Non-Add):		
APF COMPANION PROJECTS:	SCOPE:	APF COSTS:
None		

PPV ASSESSMENT
A PPV was not economically feasible for the Air Force or private industry.

PVA POPULATION DATA AND PROSPECTIVE CUSTOMERS			
Active Duty Air Force:	9786	Current Customers:	19,427
Active Duty Other Services:	0	Prospective Customers:	22,148
Guard and Reserve:	271	Cost per Customer (TNI):	$ 30.80
Active Duty Dependents:	24465	Youth (6 mo. To 5 yrs. old):	N/A
DOD Employees:	1540	Youth (6 - 18 yrs. old):	N/A
Contractors:	n/a	On-Base Housing Population:	4202
Retirees:	59118	Off-Base Housing Population:	5051
Avg Annual Transient Population:	n/a	Dormitory Population:	n/a
TOTAL AUTHORIZED POPULATION BASE:		95,180	
Number of Competitors: (Within 30 minutes driving time)		3	

PVA Recommendation (Base Request)

Add/Alter FAMCAMP

The PVA study was able to validate operational need for additional full-service, pull-through RV parking spaces based on the condition of existing facilities, documented un-met demand, and poorly configured excess space that inherently limits the revenue generating capabilities of the FAMCAMP. The PVA study recommends extension of the FAMCAMP to construct 10 new full-service, pull-through RV parking spaces to accommodate 38 foot and larger vehicles. Construction cost is estimated at $510,000, with a Total NAF Investment (TNI) of $600,000. The proforma financial analysis for new construction generates a 10.08% ROR and 12 year Payback with a NPV of $173.1.

Proforma Financial Analysis is at Attachment #1.

Other Options Considered

Modified Base Request (Not Recommended)

The base proposal was to construct 10 new parking spaces with full utilities including 50-amp electrical connections south of the existing FAMCAMP. The modified base request differs from the base request in recommending gravel drives and road ways rather than the requested asphalt.

Renovation (Not Recommended)

Rather than the base request to add 10 sites, the PVA team considered conversion of 24 unimproved sites to create 14 full-services parking spaces. This option would not increase the footprint of the FAMCAMP, reduce the vacancy rate for unimproved sites, and accommodate approximately 75% of the current demand for larger RVs. However, the cost of renovation of the existing parking spaces with utilities was 42% higher than the cost of new construction.

Relocation/Expansion (Not Recommended)

Due to a proposed, but not yet funded, future Main Gate Development Plan at Travis AFB, the base proposed separate construction of 10 additional sites at one of two proposed locations for expansion and future FAMCAMP relocation. One location was near the East Gate of the base on the site of former base housing; and the second North of the Main Gate near the Child Development Center, Youth Center, and youth ball fields. The East Gate was too small for any future expansion and the elevated terrain was uneven, requiring extensive earth work, with significant relocation or removal of underground utilities, an APF expense. The North site would draw a significant amount of large recreational vehicle traffic into an area frequented by children and youth, setting up a potential safety concern. Neither site is ideal operationally in requiring additional manpower to secure and maintain service to customers. There is sufficient land available south of the existing FAMCAMP to allow for near term construction of 10 additional sites, as well as relocation of any camp sites displaced by the Main Gate Development Plan. Use of this real estate would allow for relocation of the FAMCAMP entrance away from Air Base Parkway, relieving traffic congestion at the intersection of the Parkway and Ragsdale Street. **Site plans included at attachment #3.**

With the concurrence of 60 FSS and 60 CES, the PVA team did not recommend this option.

Status Quo (Not Recommended)

The Travis FAMCAMP could operate for many years with the current configuration and continue to generate significant NIAD to the MWRF. Although customer demand is not projected to increase greatly, there is a known demand for additional full-service parking spaces for larger RVs requiring 50-amp electrical connections. Currently 48% of those customers must use smaller parking spaces with only 30-amp connections. These customers, many of whom are patients

or family members of active and retired military utilizing DGMC, are forced to use parking spaces with inadequate electrical support for communications, comfort, and entertainment.

Public-Private Venture (PPV) (Not Recommended)

A PPV was not considered economically feasible for the Air Force or private industry.

Operational and Financial Assumptions

Information and assumptions contained in the Executive Summary and following report are predicated on a business case analysis to determine the market demand and operational need for an addition/alteration of the Travis FAMCAMP, an MWR Category C activity. Per AFI 65-106, NAF is the correct fund source for Minor Construction of Category C facilities. The proposed project to construct an additional 10 full-service RV parking spaces at the site of the existing FAMCAMP is classified as Major Construction IAW AFI 32-1022. Category C activities are required to meet or exceed the Air Force financial hurdle rate of 7% ROR on investment with a payback of less than 20 years. The PVA team provided a proforma financial analysis for presentation to the NAF Panel and inclusion in the annual NAF Construction Report to Congress. As proposed the $600K investment is projected to generate 10.08% ROR with a 12-year Payback and a NPV of $173.1.

Significant Operational Assumptions:

- FAMCAMP occupancy rates will continue to trend upward at a rate of approximately 10% annually through FY16.
- All projected increases in fees and charges will be implemented as programmed in the financial assumptions package provided by 60 FSS.

Significant Financial Assumptions:

As proposed the $600K investment is projected to generate a 10.08% ROR, with a 12 year Payback and NPV of $173.1K. The PVA proforma projections are predicated on a business case analysis based on the following financial assumptions:

- All projected increases in fees and charges will be implemented as programmed in the financial assumptions package provided by 60 FSS.
- Proforma analysis revenue projections were calculated using a very conservative 64% occupancy rate following the first full year of construction.
- The PVA team used a very conservative estimate for projected revenues and expenses in developing the proforma analysis. We assumed a limited growth scenario in regards to occupancy rate, activity fees and charges. Should the base meet their projections for revenue and expenses, the ROR and Payback are expected to be greater than the PVA estimates.

Recommended Facility Option

PVA Recommended Option

Add/Alter FAMCAMP

The PVA study was able to validate operational need for additional full-service, pull-through RV parking spaces based on the condition of existing facilities, documented un-met demand, and poorly configured excess space that inherently limits the revenue generating capabilities of the FAMCAMP. The PVA study recommends extension of the FAMCAMP to construct 10 new full-service, pull-through RV parking spaces to accommodate 38 foot and larger vehicles. Construction cost is estimated at $510,000, with a Total NAF Investment (TNI) of $600,000. The proforma financial analysis for new construction generates a 10.08% ROR and 12 year Payback with a NPV of $173.1.

Rationale for Recommended Option

Existing Facility Condition

The existing FAMCAMP is well maintained and adequate for the current and projected level of usage for customers with RVs less than 30' in length and not requiring 50 amp electrical services. While overall annualized occupancy rates consistently average 74%, occupancy rates for the larger, full-service sites are between 83% and 91% during off-peak and peak seasons, respectively. Over 48% of the demand for larger RVs is now accommodated in 94 unimproved sites that average only 57% occupancy. The PVA team considered conversion of 24 unimproved sites to create 14 full-services parking spaces. This option would not increase the footprint of the FAMCAMP, reduce the vacancy rate for unimproved sites, and accommodate approximately 75% of the current demand for larger RVs. However, the cost of renovation of the existing parking spaces with utilities was 42% higher than the cost of new construction.

Market Demand

Known market demand based on historical occupancy rates has increased about 5% on an annualized basis. FY13 occupancy rates for parking spaces with full utility hook-ups rose to 87% from 83% the previous year. During peak season the occupancy rate for these sites was over 91%. Currently, over 48% of campers with RVs larger than 38' cannot be accommodated in full-service sites. Many of these choose the unimproved sites available rather than park off-base due to the proximity of the DGMC. Although market surveys are not conducted for FAMCAMP projects, historical trend data indicates a continued need for full service parking, and the opportunity for increased usage and revenue if full service sites are available.

Recommended APF Components/Companion Projects

There are no AFP companion projects.

Recommended NAF Funded Facility Components

More detailed design criteria are included in Attachment #2, *Recommended Facility Scope.*
Design concept drawing is located at Attachment #3.
Proposed Front Page NAF DD1391 is Attachment #4.

Attachments

Attachment #1 – Pro forma Financial Analysis

AFPC PVA Proforma Travis FamCamp Dec

Attachment #2 – Recommended Facility Scope/Design Objectives

Travis FC Design Objectives 12 Dec 13

TRAVIS FC Space program.docx

Attachment #3 – Concept Drawing

Travis FC vicinity map aerial.docx

IMG_20130911_121952128.jpg

Attachment #4 –Proposed New DD1391 Front Page

PVA Draft Front Page DD1391 Tavis F

Attachment #5 – List of PVA Study Participants

Travis POC List.xlsx

Attachment #6 – Draft Report Review Comment Matrix

60 FSS CES Comment Sheet.docx

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APPENDIX B

Public, Agency, and Native American Correspondence

DEPARTMENT OF THE AIR FORCE
60TH CIVIL ENGINEER SQUADRON (AMC)

Lieutenant Colonel Patrick J. Carley
Commander, 60th Civil Engineer Squadron
411 Airmen Drive, Building 570
Travis AFB, CA 94535-2001

15 APR 2015

Dr. Carol Roland-Nawi
State Historic Preservation Officer
Department of Parks and Recreation
Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento CA 95816-7100

Dear Dr. Roland-Nawi:

In accordance with Section 106 of the National Historic Preservation Act (NHPA) and 36 CFR Part 800, the Department of the Air Force, Travis Air Force Base (AFB), is advising you of an undertaking that has the potential to affect historic properties. The proposed undertaking, "Expansion of the Family Camp Trailer Park (FamCamp)", and Construction of a Crash Site Memorial" will impact potential undiscovered residue of a 1950 B-29 airplane crash site, which is thus far unevaluated. These two related actions will occur within the boundaries of Travis AFB in Solano County. Historical analysis and surficial surveys of the crash site have concluded that the archaeological property is eligible for listing on the National Register of Historic Places (NRHP).

This consultation combines a discussion of the Area of Potential Effect (APE) for the proposed undertaking (pursuant to 36 CFR § 800.4) with our evaluation of the B-29 crash site, and our analysis of the project impacts. We request your concurrence with our definition of the APE, and our NRHP evaluation of the historic property. If you agree with our determination that the "General Travis B-29 Crash Site" is eligible for the NRHP, then the proposed undertaking will constitute an Adverse Effect for which mitigation is necessary. If you agree the B-29 Crash Site is NRHP-eligible, we will provide you with a draft Memorandum of Agreement (MOA) at a future date.

Background Information

Travis AFB occupies 6,383 acres within the city limits of Fairfield, and is located 50 miles northeast of San Francisco and about 40 miles southwest of Sacramento (Attachment 1). The base is just north of Suisun Bay and marsh, northeast of San Pablo Bay, on the northeastern boundary of the San Francisco Bay region. In the late prehistoric and early contact periods, this area was occupied by the Southern Patwin, native speakers of the Wintu language.

Known as the Gateway to the Pacific, Travis AFB is among the largest and busiest military air terminals in the country. More than 14,000 military and civilian personnel work on the base, which is under the operational control of the Air Mobility Command. The 60th Air Mobility Wing (AMW) is the host unit, and is responsible for providing strategic airlift and air refueling missions around the world.

The 60 AMW also supports air logistics needs for other services and agencies, moving cargo, patients, and passengers to nearly any place on the planet that is accessible by aircraft.

Travis AFB engineers determined the expansion and redesign of the FamCamp trailer park is necessary to enhance services. Specific engineering and construction details for the project are still being determined. The general siting for the FamCamp expansion and crash site memorial are described below.

800.4(a)(1) - Description of the Area of Potential Effects

A notional FamCamp plan for the undertaking is illustrated in Attachment 2. The project includes the expansion of an existing trailer park by adding 10 new "pull-through" camping sites accommodating larger recreational vehicles, and the construction of a small memorial marking the vicinity of the B-29 crash site in conjunction with educational materials. The exact location for the memorial will depend on artifact density and other planning considerations related to traffic flow and visitor parking. Engineers intend to locate the memorial in an area near parking.

In general, the project is sited just south of the existing FamCamp, between a baseball diamond on the east, and an elementary school on the west. The ground surface is flat and slopes gently from the north down to the south. The area is grassy, with interspersed weeds and non-native invasive volunteer species. There are roads on the periphery and associated drainage ditches, curbs, and other civil improvements. Within this larger setting, the APE shall be limited to the footprint of the new FamCamp campsites and access roads, plus a buffer zone around each work area that shall contain all impacts from grading, construction, and landscaping activities. The campsite expansion measures about 75 meters east-west by 60 meters north-south. The crash site memorial will likely occupy a circular area of no more than 5 meters. During construction, a minimum 15-meter buffer shall extend around all work areas, and the entire APE shall be the Area of Direct Impact (ADI) plus the surrounding buffers. The APE shall include all new roadway work, all new concrete work, grading, landscaping, installation of lights, trenching for electrical utility connections, and other support activities that physically impact the ground or the existing built environment.

All component activities of the proposed undertaking shall be accomplished in existing developed areas. Staging, equipment maintenance activities, and materials storage areas shall also be part of the project APE and shall have defined ADI locations with surrounding buffers. In general, all staging, maintenance, and materials handling shall take place on existing gravel, concrete or asphalt roads or parking areas. Stockpiling of debris and waste materials and staging of construction supplies shall occur on existing hard surfaces and will not affect undisturbed soils.

800.4(c)(2) - Determination of Eligibility

Within the vicinity of the undertaking, there are no roads, structures, landscape elements, or other facilities that are eligible or may be eligible for listing on the NRHP. However, the site of the B-29 crash that killed General Travis is adjacent to the FamCamp, and expansion of the park facilities plus the construction of crash site monument or memorial will affect the setting and any remaining historic archaeological materials at the site.

The crash site is both a location and an historic archaeological site. On the 5th of August 1950, a United States Air Force B-29 Superfortress bomber crashed and burned about five minutes after taking off from an airfield in northern California. At the time of the accident, the airfield was known as

Fairfield-Suisun Air Force Base, but one of the men killed in the crash was Brigadier General Robert F. Travis, for whom the base would be renamed.

The aircraft was carrying 20 airmen, which included the crew of the B-29 and a number of passengers. Twelve men were killed, either in the crash or later when they succumbed to their fatal injuries. All ten passengers and crew riding in the rear compartment of the bomber died, as well as two men in the forward compartment. One of the fatalities from the front of the plane was General Travis.

The B-29 crashed after experiencing mechanical difficulties, and while the pilot was trying to return to the base. The aircraft carried a larger crew than normal, and also had on board the non-nuclear portion of an atom bomb it was transporting to the Korean War Theater. The other part of the weapon, the dense uranium core, was being transported to the area separately using a different aircraft, route, and schedule.

The fully-fueled plane struck left-wing first at approximately 120 mph and gouged a curved path in the ground surface. It burst into flames and came to a stop about 300 meters from where it first hit the ground. About twenty minutes after the crash and initial fire erupted, and while ground safety personnel and fire fighters were attempting to assist, the high explosives in the atom bomb casing detonated. The huge blast was felt and heard over a wide area reportedly breaking windows in the city of Vallejo 30 miles away. Near the site of the blast, 16 trailers were completely destroyed, many others were heavily damaged, and 180 military, dependents, and civilians were physically affected in some way. The explosion killed an additional seven persons and seriously wounded 49.

In 2011, the base historian called the fatal B-29 crash "the worst disaster in the history of Travis" (Attachment 3). Hundreds of pages of Air Force reports, study documents, photographs, and local news articles also exist that attest to the lasting impacts of the deadly accident. Based in part on these documents, we conclude that the crash site location is eligible for listing on the NRHP under Criteria A, B, and D.

800.11(e)(1) - Description of the Undertaking

This project expands the existing trailer park, and provides 10 new camping sites large enough to accommodate recreational vehicles (RVs) longer than 38 feet, with full utilities to support the needs, comfort, and communication requirements of campers. The additional trailer sites are placed south of the existing RV parking area. Work includes installation of new utility lines, including water, sewer, and 50-amp electrical hook-ups. Asphalt drives, parking areas, and access roads will be constructed.

In addition, Travis AFB proposes the construction of a physical memorial or monument marking the crash site vicinity. Exact placement of the monument depends on artifact density and other design requirements. In general, the monument will be positioned so it will have as little physical impact as possible.

At all times, existing gravel and asphalt roads, parking areas, and hardstands shall be used for staging and for the storage of building materials. After construction, any areas of bare soil will be seeded to control post-construction erosion. If compactable soil, topsoil, gravel, or other materials are needed for fill, they will be borrowed from off-base locations or from approved borrow sites on base. If on-base sources are used, and if such use may impact known or potential historic properties, the Air Force will reopen this consultation and seek comments from the California State Historic Preservation Officer (SHPO).

800.11(e)(2) - Identification of Historic Properties

As noted above, there are no structures or elements of the built environment within the APE that are eligible or potentially eligible for the NRHP. There is only the B-29 crash site, which has been evaluated by Dr. James Carucci, an archaeologist and a qualified Cultural Resource Manager pursuant to the Secretary of the Interior's Standards Published in 36 CFR Part 61.

Previously, large-area surveys at Travis AFB found little evidence of prehistoric archaeological sites, and only a small number of historic archaeological sites. The only two prehistoric sites recorded were both located near vernal pools in the northwest portion of the base. Evaluation of the sites determined that one was ineligible; archaeological data recovery was accomplished at the other site, and both sites were subsequently destroyed by construction of the medical center some years ago. Because of the relatively small size of Travis AFB and the massive physical impacts related to runway construction and other activities, probability analysis suggests that intact prehistoric archaeological deposits would be extremely rare.

A field survey in 1995 located evidence for seven historic archaeological sites on Travis AFB, but later consultation with the SHPO determined that none were NRHP-eligible. At the time of that survey, the General Travis B-29 Crash Site would have been 45 years old, but the crash location was not identified as a potential historic archaeological site. Either the area was not included in the survey, or the field personnel were unaware of the potential historic value of the site.

800.11(e)(3) - Description of the Affected Historic Properties

Details of the crash event and a description of the archaeological site are given in Attachment 4, a set of Department of Parks and Recreation (DPR) site forms. The crash site was surveyed for surface artifacts on April 27, 2014. Based on that field survey, DPR site forms 523a, 523c, 523j, 523k, and 523l were completed. Page seven of Attachment 4 is an overview map of the General Travis B-29 Crash Site, which is based on Air Force aerial photography and Travis AFB Geographic Information System (GIS) data. The primary crash site is the oblong, curved area (red outline) that measures about 215 meters by 40 meters. At the end of the arc is a yellow circle marking the location of the massive explosion from the bomb casing. The crater caused by the blast was filled in with gravel and borrowed soil as part of the post-accident clean up in the 1950s. The larger blue outline marks the debris field from the crash. In about 1996, when the baseball diamond east of the impact zone was constructed, numerous artifacts were unexpectedly encountered. More than 45 years after the crash, the artifacts recovered included a fire-scorched parachute, personal items, buckles and metal debris, and a broken binocular. These items were recovered by construction workers and are curated at the Travis Heritage Center (the base aircraft museum), but no details or records of the recovery effort exist.

During the more recent site survey, a large number of aircraft related parts and hardware was recovered in the central area of the site (Attachment 5). Metal detectors were used to find the items, and then their locations were mapped by hand-held GPS instruments. If the items were on or very near the surface, they were removed and photographed, then cleaned and catalogued. All materials recovered from the site have been curated at the Travis AFB Heritage Center.

Local and regional newspaper accounts offer additional documentary evidence describing the B-29 crash and its aftermath (Attachment 6). The first 12 pages from the official Air Force accident report are included here as Attachment 7, and biographical information describing the career of General Travis is contained in Attachment 8. Together, these documents sufficiently describe the NRHP-eligible property, which is both the location of an important event and an historic archaeological site. The documentary

evidence indicates that the crash site is eligible under Criterion A for the event, because the scale of the accident reached beyond the Air Force installation, affecting surrounding communities and the region. It was also a memorable event in terms of damage caused, deaths, and Air Force safety policy.

The surface survey of the crash site illustrated that the property is also eligible for the NRHP under Criterion D, for its information potential. Even after debris from the crash was removed from the site, and after landscaping and later construction of a nearby elementary school, baseball diamond, and a rebuilt FamCamp, there is still a considerable amount of artifacts and other archaeological materials on site. Intact archaeological deposits could help answer important questions about the cause of the crash and what armaments the aircraft was carrying.

To a lesser extent it is likely that the crash site is eligible under Criterion B, because of the death of Brigadier General Robert F. Travis, who was the base commander at the time. General Travis was a highly decorated Air Force officer, he was part of the Army Air Corps, and he was also involved in the build-up for the Korean conflict, a pivotal event in the early Cold War years. In addition, Travis and his wife are buried together at Arlington National Cemetery, a final significant honor.

800.11(e)(4) - Effects of the Proposed Undertaking

Final design plans for the FamCamp expansion and the crash site memorial are still in development, and the exact measurements of impacts and the extent of effects are only broadly known at this time. However, it is important to note that the construction of a physical monument on the site is intended as partial mitigation, even though it will be a limited adverse effect as well.

Prehistoric archaeological sites, visual resources, and architectural resources have all been considered, and none will be impacted in any way by this proposed undertaking. Only the newly identified and evaluated B-29 Crash Site will be affected. It is unlikely that Native Americans will be concerned by this undertaking because no undisturbed areas are involved and most of the project activities involve the expansion of an existing trailer park and installation of utility service hookups. Further, since Travis AFB lacks prehistoric resources, consultations with federally-recognized tribal groups have been rare and sporadic in the past. However, if any Native Americans express any concerns or critical interest in this undertaking, Travis AFB shall contact the SHPO, relay the concerns, and reopen this consultation as appropriate.

800.11(e)(5) - Finding of Adverse Effect and Mitigation Actions to be Taken

Final agreement between the SHPO and Travis AFB on mitigation measures shall be completed using the required MOA, which will be submitted at a later date. However, it is likely that the following actions will be taken to mitigate adverse effects to the General Travis B-29 Crash Site:

a. Construction of monument. While the construction of a monument within the crash site boundary is itself a small physical impact, the establishment of the memorial to the victims of the accident is considered to be mitigation. Also, once the monument is established, the crash site will be more visible, the details of the event will be more accessible to the general public, and the remainder of the crash site will be more easily maintained and protected.

b. Production of informational brochure for public consumption. Within two years of the completion of the monument on the crash site, Travis AFB Cultural Resource Managers will work with Air Force History Office personnel and produce a brochure describing the B-29 crash and its effects on the installation, the local community, and the Air Force in general.

c. Before construction work begins, contractors shall be trained and instructed to report any unexpected discoveries. Examples of unexpected buried anomalies include: historic bottles, china fragments, metal artifacts or other objects, glass beads, protohistoric ceramics, prehistoric stone tool fragments, arrowheads, shells, bones or bone fragments, and fossils. If any anomalies are discovered during construction, all work will stop in the vicinity and the Contracting Officer, project manager, Travis AFB Installation Management personnel, and the regional Cultural Resource Manager shall be contacted to make an evaluation and determination of additional necessary measures.

800.11(e)(6) - Views of the Public / Consulting Parties

Views of the public, Native Americans, and other interested parties will be considered regarding this undertaking and its potential impacts, although public knowledge of the crash site is generally limited to Air Force personnel, local residents, historians, and aviation buffs. The commemoration of the crash event could cause substantial local interest, if construction of the monument and its dedication are covered by local media. Current Air Force personnel, and the employees and volunteers who work at the Travis AFB Heritage Center generally believe that the preservation of the crash site and construction of a monument is a positive management action. However, construction projects like the expansion of the trailer park generally do not attract a lot of media attention on active military installations, and there could be very little local coverage for this project. But, if there is any public response or any media discussion about the components of this undertaking, all substantial comments related to the protection of historic properties will be shared with the SHPO and this consultation will be reopened.

800.11(f) - Memorandum of Agreement

A two-party MOA will be prepared for transmission to the SHPO at a later date. That document shall list the measures proposed by Travis AFB that will mitigate the Adverse Effects of the undertaking.

800.13(b)(3) - Treatment of Unexpected, Post-Review Discoveries

During the execution of this undertaking, if new or unexpected discoveries are made that are related to any known or unknown prehistoric or historic cultural properties, Travis AFB personnel shall conform to the requirements of 36 CFR Part 800.13. Within 48 hours of the discovery, Travis AFB personnel shall contact the SHPO, the Advisory Council, and any other interested parties to solicit their comments and recommendations and to determine the appropriate actions.

Summary

Travis AFB is proposing an expansion project in the vicinity of the Main Gate and nearby FamCamp. Adjacent to the FamCamp is an open area that was impacted by the crash of a B-29 in 1950 that killed, among others, Brigadier General Robert F. Travis. The B-29 Crash Site is eligible for listing on the National Register under Criteria A and D and likely Criterion B as well. Since the expansion of the FamCamp and the proposed construction of a crash site memorial constitute an Adverse Effect, a draft MOA will be prepared.

Based on the preceding, Travis AFB requests SHPO concur with our finding that the General Travis B-29 Crash Site is eligible for listing on the NRHP. Further, we ask that you concur with our delineation of the APE for the undertaking, "Expansion of the FamCamp Trailer Park, and Construction of a Crash Site Memorial." Finally, we ask that you concur with our finding that the proposed undertaking constitutes and Adverse Effect, and that an MOA will be necessary.

If you do not concur with our findings or requests, we understand that further consultation on those specific issues will be necessary. If you have any questions about the undertaking discussed in this letter, please contact Dr. James Carucci (707-424-8625; James.Carucci@us.af.mil) or Mr. Brian Sassaman (707-424-8225; brian.sassaman.1@us.af.mil).

Sincerely

PATRICK J. CARLEY, Lt Col, USAF, P.E.
Commander

8 Attachments:
1. Project Locator Map
2. Notional Project Plan
3. Historian's Description of the Crash
4. DPR Site Forms
5. Photographs of Recovered Artifacts
6. Newspaper Accounts of the Crash
7. Excerpt from Air Force Accident Report
8. General Travis Biographic Information

STATE OF CALIFORNIA – THE NATURAL RESOURCES AGENCY EDMUND G. BROWN, JR., *Governor*

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
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(916) 445-7000 Fax: (916) 445-7053
calshpo@parks.ca.gov
www.ohp.parks.ca.gov

May 11, 2015

Reply in Reference To: USAF_2015_0420_002

Brian L. Sassaman
Flight Chief, Installation Management
411 Airmen Drive
Travis Air Force Base, CA 94535

Re: Section 106 Consultation for Family Camp Trailer Park Expansion and General Travis Crash Site Memorial Installation, Travis Air Force Base, Solano County

Dear Mr. Sassaman:

Thank you for initiating consultation regarding the United States Air Force's (USAF) efforts to comply with Section 106 of the National Historic Preservation Act of 1966 (16 U.S.C. 470f), as amended, and its implementing regulation found at 36 CFR Part 800.

The USAF has identified the undertaking as the expansion of the Family Camp trailer park at Travis Air Force Base. The installation of utilities and parking area and access road construction will be required to support ten new camp sites. The USAF is also proposing to erect a crash site memorial in an adjacent parking area.

The results of a records search did not identify any NRHP eligible historic properties however the USAF has identified and evaluated a 1950 airplane crash site within the area of potential effects. The crash site is composed of an infilled crater and miscellaneous debris from the remains of a B-29 Superfortress carrying General Robert F. Travis in whose honor the base was later renamed. The USAF is requesting my concurrence that the site is eligible under NRHP criterion A, B and D and with their delineation of the undertaking's area of potential effect. After reviewing the information provided, I have the following comments:

1) Pursuant to 36 CFR Part 800.4(a)(1), the APE appears sufficient to take the undertaking's effects on historic properties into account.

2) The USAF's informative crash site evaluation does not fully establish whether the event and/or site meet NRHP eligibility requirements. For example, the evaluation notes the crash was a *Broken Arrow* incident but a developed context and supporting documentation as to why the event (and similar events) rises to local or national significance has not been provided. It is possible that upon further consultation the site could be determined NRHP eligible however it is my opinion that the proposed undertaking would not constitute an adverse effect to the characteristics that would render the site eligible were it determined as such.

3) Although its NRHP eligibility is uncertain, CA SHPO supports the USAF's decision and effort to memorialize the crash site.

4) At this time CA SHPO does not concur that the crash site is eligible for NRHP inclusion and therefore does not concur that the proposed undertaking will adversely affect historic properties. Should they choose to do so, the USAF may develop and submit additional information in support of their NRHP eligibility determination. The USAF may also accept my recommended finding of no historic properties affected pursuant to 36 CFR Part 800.4(d). Please notify my office of the USAF's preferred course of action prior to proceeding with the undertaking.

Thank you for seeking my comments and considering historic properties. If you have any questions or concerns, please contact Ed Carroll of my staff at (916) 445-7006 / Ed.Carroll@parks.ca.gov.

Sincerely,

Carol Roland-Nawi, Ph.D.

Carol Roland-Nawi, PhD
State Historic Preservation Officer

DEPARTMENT OF THE AIR FORCE
60TH CIVIL ENGINEER SQUADRON (AMC)

21 OCT 15

Lieutenant Colonel Duke
Commander, 60th Civil Engineer Squadron
411 Airmen Drive, Building 570
Travis AFB, CA 94535-2001

Ms. Julianne Polanco
State Historic Preservation Officer
Department of Parks and Recreation
Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, CA 95816-7100

Dear Ms. Polanco:

Please reference your file USAF_2015_0420_002, and your letter of May 11, 2015 regarding our "Section 106 Consultation for Family Camp Trailer Park Expansion and General Travis Crash Site Memorial Installation, Travis Air Force Base, Solano County." Your letter agreed with our definition of the Area of Potential Effect for the Undertaking, and commended our plans to erect a small memorial marking the vicinity of the General Travis B-29 crash site, but you disagreed with our finding of historic eligibility. Your recommendation was that the crash site did not qualify as a historic property eligible for listing on the National Register of Historic Places.

We are writing this letter to establish closure for this consultation, and to formally acknowledge that we agree with your recommended finding of no historic properties affected pursuant to 36 CFR Part 800.4(d). If you have any questions about the undertaking in question, please contact Mr. Brian Sassaman by phone (707- 424-8225) or Dr. James Carucci by phone or email (707-424-8625; James.Carucci@us.af.mil).

Sincerely

JAMES S. DUKE, Lt Col, USAF
Commander

Attachment:
1. SHPO Consultation Request April 15, 2015
2. SHPO Consultation Response May 11, 2015

DEPARTMENT OF THE AIR FORCE
60TH CIVIL ENGINEER SQUADRON (AMC)

10-29-2015

Mr. Matthew F. Blazek
NEPA Program Manager
411 Airmen Drive, Building 570
Travis AFB CA 94535

Native American Heritage Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691

SUBJECT: Request for Sacred Lands File Search on Travis AFB, California

Dear Sir or Madam

North Wind Inc. has been contracted to prepare an Environmental Assessment of the proposed expansion of the Family Camp Trailer Park on Travis Air Force Base (AFB). The expansion would provide ten additional full-service, pull-through recreational vehicle parking areas that are needed to meet current and anticipated demand.

In accordance with Executive Order 13175 and Section 106 of the National Historic Preservation Act (NHPA) (36 CFR Sections 800.2, 800.3, and 800.4), the Air Force would like to initiate government-to-government consultation regarding this proposed action with potentially interested federally recognized tribes.

We are requesting that you conduct a search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) for Travis AFB, and notify us of any SLFs that are located on the Base. We are also requesting that you provide contact information for any federally recognized tribes that may have ancestral ties to the land upon which Travis AFB is situated. This information will be used to facilitate Native American Consultations for the current project as well as future proposed actions on Travis AFB.

As shown on the enclosed figure, Travis AFB is located in Solano County, and is found on the USGS Elmira and Denverton, California 7.5-minute topographic quadrangles. It encompasses the following Sections (Sections are completely in the Elmira quadrangle unless otherwise noted):

- Township 5 North, Range 1 East: Sections 17, 18, and 19
- Township 5 North, Range 1 West: Sections 13, 14, 15, 21, 22, 23, 24, 25, 26 (Denverton), 27 (Denverton), 28, 34 (Denverton), and 35

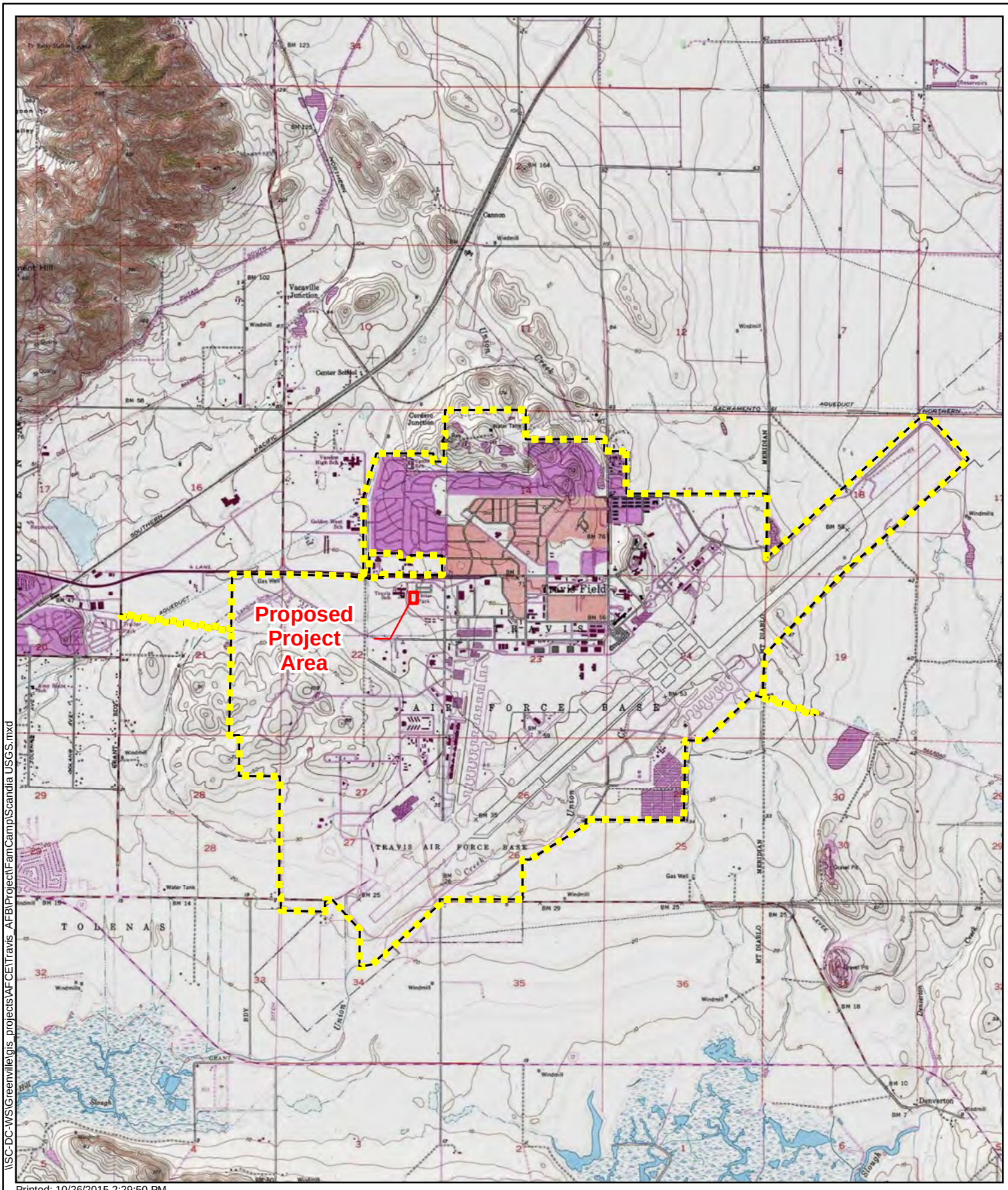
Thank you for your cooperation and assistance. I look forward to your earliest possible reply. Please direct any questions to Mr. Matthew Blazek at (707) 424-5127 or email at matthew.blazek@us.af.mil.

Sincerely

X

Matthew Blazek, GS-12
NEPA Program Manager, 60 CES/CEIE

Attachment:
USGS Map of Proposed Area_Family Camp Trailer Park



\\SC-DC-WS\Greenville\gis_projects\AFCE\Travis_AFB\Project\FamCamp\Scandia USGS.mxd

Printed: 10/26/2015 2:29:50 PM

Legend

Travis AFB Boundary

Proposed Expansion of the Family Camp
Travis Air Force Base
Solano County, California
USGS 7.5' Quadrangle
1980 Elmira, CA and 1980 Denverton, CA

N
W E
S

0 0.5 1 Mile

NATIVE AMERICAN HERITAGE COMMISSION
1550 HARBOR BLVD., SUITE 100
WEST SACRAMENTO, CA 95691
916-373-3710
Fax (916-373-5471

November 9, 2015

Mr. Matthew Blazek
NEPA PROGRAM MANAGER
DEPARTMENT OF THE AIR FORCE
411 Airmen Drive, Bldg. 570
Travis AFB CA 94535

Sent by Email: matthew.blazek@us.af.mil
Number of Pages: 2

RE: Family Camp Trailer Park project, Solano County

Dear Mr. Blazek;

A record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 373-3713.

Sincerely,

Debbie Pilas-Treadway
Environmental Specialist III

Native American Contact
Solano County
November 9, 2015

Kesner Flores
P.O. Box 1047 Wintun / Patwin
Wheatland , CA 95692
(925) 586-8919

Yocha Dehe Wintun Nation
Leland Kinter, Chairperson
P.O. Box 18 Wintun (Patwin)
Brooks , CA 95606
lkinter@yochadehe-nsn.gov
(530) 796-3400

(530) 796-2143 Fax

Cortina Band of Indians
Charlie Wright, Chairperson
P.O. Box 1630 Wintun / Patwin
Williams , CA 95987
(530) 473-3274 Office

(530) 473-3301 Fax

Yocha Dehe Wintun Nation
Leland Kinter, Chairperson
P.O. Box 18 Wintun (Patwin)
Brooks , CA 95606
lkinter@yochadehe-nsn.gov
(530) 796-3400

(530) 796-2143 Fax

Yocha Dehe Wintun Nation
Burnam R. Lowell
P.O. Box 18 Wintun (Patwin)
Brooks , CA 95606
(530) 796-3400 - office
(530) 796-2143 Fax

Yocha Dehe Wintun Nation
Native Cultural Renewal Committee
P.O. Box 18 Wintun (Patwin)
Brooks , CA 95606
(530) 979-6346
(530) 796-3400 - office
(530) 796-2143 Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Family Camp Trailer Park project, Solano County

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 60TH AIR MOBILITY WING (AMC)

FEB 10 2016

Colonel Joel D. Jackson
Commander
60th Air Mobility Wing
400 Brennan Circle
Travis AFB CA 94535-5000

Honorable Charlie Wright
Chairman, Cortina Band of Indians
PO Box 1630
Williams CA 95987-0018

Dear Chairman Wright

The United States Air Force is preparing an Environmental Assessment (EA) of the proposed expansion of the Family Camp on Travis Air Force Base (AFB), California. The EA is being prepared pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code (USC) §4321 et seq.); the Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations (CFR) Parts 1500-1508); and the Air Force NEPA policy and procedures (32 CFR Part 989).

The Family Camp is currently operating at 90 percent of capacity on an annual basis, and has to turn away potential campers during peak times. Implementation of the Proposed Action would include the construction of 10 50-foot long paved camping sites. The attached figures provide the location of the Family Camp, current conditions at the site, and the proposed expansion plan.

In accordance with Executive Order 13175, the National Environmental Policy Act (NEPA) (42 United States Code 4321 et seq. and 40 Code of Federal Regulations Part 1500), and Section 106 of the National Historic Preservation Act (NHPA) (36 CFR Sections 800.2, 800.3, and 800.4), the Air Force would like to initiate government-to-government consultation regarding this proposed action. The Air Force desires to discuss the proposal in detail with you so that we may understand and consider any comments, concerns, and suggestions you may have.

Please let us know when you would like to meet to discuss the proposal and your expectations on how we should proceed with the consultations. Do not hesitate to call me at (707) 424-2452 to arrange dates and times for consultation. Thank you for your cooperation and interest in this matter.

Sincerely

JOEL D. JACKSON, Colonel, USAF
Commander

Attachments (3):
1. Site Location
2. Current Conditions
3. Proposed Expansion

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 60TH AIR MOBILITY WING (AMC)

FEB 10 2016

Colonel Joel D. Jackson
Commander
60th Air Mobility Wing
400 Brennan Circle
Travis AFB CA 94535-5000

Honorable Leland Kinter
Chairman, Yocha Dehe Wintun Nation
PO Box 18
Brooks CA 95606-0018

Dear Chairman Kinter

The United States Air Force is preparing an Environmental Assessment (EA) of the proposed expansion of the Family Camp on Travis Air Force Base (AFB), California. The EA is being prepared pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code (USC) §4321 et seq.); the Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations (CFR) Parts 1500-1508); and the Air Force NEPA policy and procedures (32 CFR Part 989).

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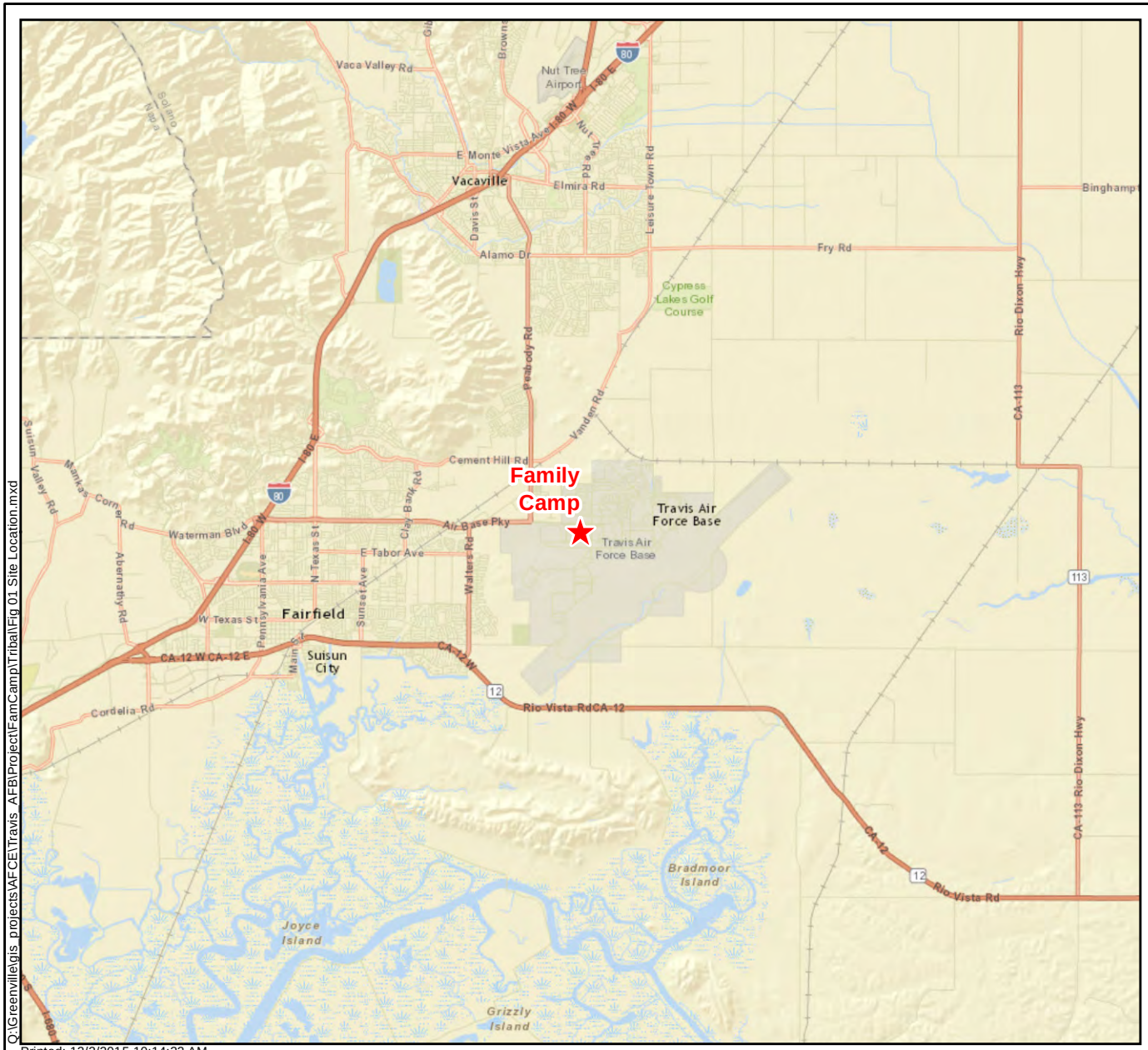
Please let us know when you would like to meet to discuss the proposal and your expectations on how we should proceed with the consultations. Do not hesitate to call me at (707) 424-2452 to arrange dates and times for consultation. Thank you for your cooperation and interest in this matter.

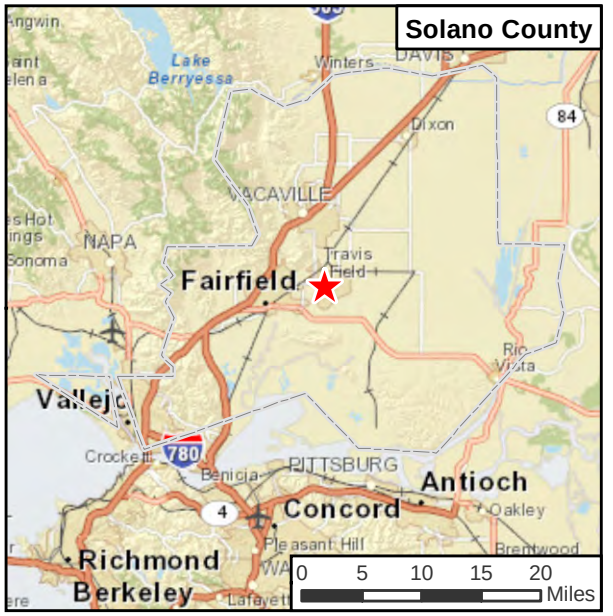
Sincerely

JOEL D. JACKSON, Colonel, USAF
Commander

Attachments (3):
1. Site Location
2. Current Conditions
3. Proposed Expansion

cc:
Mr. James Sarmento, Cultural Resources Manager, Yocha Dehe Wintun Nation





Legend

★ Family Camp

Figure 1

Site Location

Family Camp

Travis Air Force Base, California

N W E S

0 1 2 3 4 5 Miles

\\SC-DC-WS\Greenville\gis_projects\AFCEE\Travis_AFB\Project\FamCamp\Tribal\Fig 02 Current Conditions.mxd

Printed: 12/3/2015 10:12:04 AM

Legend

Family Camp Boundary

Figure 2
Current Conditions

Family Camp

Travis Air Force Base, California

N

W E

S

0 100 200 300 400 500

Feet

\\SC-DC-WS\Greenville\gis_projects\AFCEE\Travis_AFB\Project\FamCamp\Tribal\Fig 03 Proposed Expansion.mxd

Printed: 12/3/2015 10:22:06 AM

Legend

- Limits of Disturbance (2.4 acres)
- Asphalt Road
- Concrete Camping Pad
- Overflow Parking

Figure 3
Proposed Expansion

Family Camp

Travis Air Force Base, California

N W E S

0 100 200 300 400 500 Feet

Subject: FW: Travis AFB Government to Government Consultation Letters
Date: Thursday, April 7, 2016 at 2:41:41 PM Eastern Daylight Time
From: BLAZEK, MATTHEW F GS-12 USAF AMC 60 CES/CEIE
To: Tony Ruhlman, PMP
Attachments: G2G Letter Cortina Band of Indians- Area G_signed.pdf, G2G Letter Cortina Band of Indians - FamCamp_signed.pdf

-----Original Message-----
From: BLAZEK, MATTHEW F GS-12 USAF AMC 60 CES/CEIE
Sent: Wednesday, March 23, 2016 11:35 AM
To: 'cww281@gmail.com' <cww281@gmail.com>
Subject: Travis AFB Government to Government Consultation Letters

Hello Chairperson Wright,

Thank you for speaking with me briefly today. As discussed, attached are the letters we sent to the Cortina Band of Indians regarding two proposed projects here at Travis Air Force Base. We would be happy to discuss these two projects with you and so please let us know if there are any questions or concerns you have. Thank you sir!

Best,

Matt

****

Matthew Blazek
NEPA Program Manager
CES/CEIE, Bldg 570, Travis AFB
707-424-5127 | DSN 837-5127

****

From: BLAZEK, MATTHEW F GS-12 USAF AMC 60 CES/CEIE
To: "cww281@gmail.com"
Subject: Travis AFB Government to Government Consultation Letters
Date: Wednesday, March 23, 2016 11:34:00 AM
Attachments: G2G Letter Cortina Band of Indians- Area G_signed.pdf
G2G Letter Cortina Band of Indians - FamCamp_signed.pdf

Hello Chairperson Wright,

Thank you for speaking with me briefly today. As discussed, attached are the letters we sent to the Cortina Band of Indians regarding two proposed projects here at Travis Air Force Base. We would be happy to discuss these two projects with you and so please let us know if there are any questions or concerns you have. Thank you sir!

Best,

Matt

****

Matthew Blazek
NEPA Program Manager
CES/CEIE, Bldg 570, Travis AFB
707-424-5127 | DSN 837-5127

****

From: BLAZEK, MATTHEW F GS-12 USAF AMC 60 CES/CEIE
To: "cww281@gmail.com"
Subject: Travis AFB Government to Government Consultation Letters
Date: Wednesday, April 13, 2016 9:44:00 AM
Attachments: G2G Letter Cortina Band of Indians- Area G_signed.pdf
G2G Letter Cortina Band of Indians - FamCamp_signed.pdf

Hello Chairperson Wright,

I hope this email finds you well. I'm checking on the status of the two Government to Government Consultation letters referenced below and attached? Please let us know if you have any questions or concerns - thank you sir!

Best,

Matt

-----Original Message-----
From: BLAZEK, MATTHEW F GS-12 USAF AMC 60 CES/CEIE
Sent: Wednesday, March 23, 2016 11:35 AM
To: 'cww281@gmail.com' <cww281@gmail.com>
Subject: Travis AFB Government to Government Consultation Letters

Hello Chairperson Wright,

Thank you for speaking with me briefly today. As discussed, attached are the letters we sent to the Cortina Band of Indians regarding two proposed projects here at Travis Air Force Base. We would be happy to discuss these two projects with you and so please let us know if there are any questions or concerns you have. Thank you sir!

Best,

Matt

****

Matthew Blazek
NEPA Program Manager
CES/CEIE, Bldg 570, Travis AFB
707-424-5127 | DSN 837-5127

****

Subject: FW: Travis AFB Government to Government Consultation Letters
Date: Thursday, April 7, 2016 at 2:41:13 PM Eastern Daylight Time
From: BLAZEK, MATTHEW F GS-12 USAF AMC 60 CES/CEIE
To: Tony Ruhlman, PMP
Attachments: G2G Letter Yocha Dehe Wintun Nation - FamCamp_signed.pdf, G2G Letter Yocha Dehe Wintun Nation- Area G_signed.pdf

-----Original Message-----
From: BLAZEK, MATTHEW F GS-12 USAF AMC 60 CES/CEIE
Sent: Wednesday, March 23, 2016 11:24 AM
To: 'JSarmento@yochadehe-nsn.gov' <JSarmento@yochadehe-nsn.gov>
Subject: Travis AFB Government to Government Consultation Letters

Hello Mr. Sarmento,

Thank you for speaking with me today. As discussed, attached are the letters we sent to the Yocha Dehe Wintun Nation regarding two proposed projects here at Travis Air Force Base. We would be happy to discuss these two projects with the Yocha Dehe Wintun Nation and so please let us know if there are any questions or concerns you have. Thank you!

Best,

Matt

****

Matthew Blazek
NEPA Program Manager
CES/CEIE, Bldg 570, Travis AFB
707-424-5127 | DSN 837-5127

****

YOCHA DEHE
CULTURAL RESOURCES

CE & Legal

March 3rd, 2016

Col. Joel D. Jackson
60th Air Mobility Wing
400 Brennan Circle
Travis AFB, CA 94535-5000

RE: Family Camp Expansion Project

Dear Col. Jackson:

Thank you for your project notification letter dated February 10, 2016 regarding cultural information on or near the proposed Family Camp Expansion Project, Travis AFB, Solano County, CA. We appreciate your effort to contact us and wish to respond.

The Cultural Resources Department has reviewed the project and concluded that it is within the aboriginal territories of the Yocha Dehe Wintun Nation. Therefore, we have a cultural interest and authority in the proposed project area.

Based on the information provided, the Tribe has concerns that the project could impact known archaeological/cultural sites. Please send us the cultural resource study for this project. Also, please supply the depths of excavations for this project.

Should you have any questions, please contact the following individual:

Mr. Anthony Flores
Cultural Resources Site Protection Manager
Yocha Dehe Wintun Nation
Office: (530) 796-3400, Email: aflores@yochadehe-nsn.gov

Please refer to identification number YD – 02252016-01 in any correspondences concerning this project.

Thank you for providing us with this notice and the opportunity to comment.

Sincerely,

James Kinter
Tribal Secretary
Tribal Historic Preservation Officer

From: BLAZEK, MATTHEW F GS-12 USAF AMC 60 CES/CEIE
To: aflores@yochadehe-nsn.gov
Subject: Travis AFB Response for Proposed FamCamp Project: YD-02252016-01
Date: Thursday, June 16, 2016 8:54:57 AM
Attachments: TAFB-SHPO Correspondence - FamCamp.pdf

Dear Mr. Flores,

We at Travis Air Force Base (TAFB) thank the Yocha Dehe Wintun Nation for their attached response letter from March 3rd, 2016 regarding the base's Family Camp Expansion (FamCamp) Project. The letter instructed me to contact you for future correspondence regarding this project (identification number YD-02252016-01). The Yocha Dehe Wintun Nation noted that archaeological and cultural sites can be impacted from the proposed FamCamp project, and requests a cultural resources study as well as the depths of excavation areas.

Previous archaeological field surveys have been conducted on TAFB, and only two prehistoric archaeological sites have been known to occur within the installation boundaries. Both sites, located near vernal pools in the northwest portion of the base, were recorded and artifacts were recovered from them in 1989 prior to the construction of the new medical center. One other prehistoric shell midden site may have been located on a TAFB property near Martinez, California, at the OZOL strategic petroleum storage facility. That site has not been relocated since its initial discovery in 1909 and is presumed destroyed by the 1959 construction of the OZOL facility.

In addition, a field survey in 1995 located evidence for seven historic archaeological sites on TAFB, but subsequent consultations with the State Historic Preservation Officer (SHPO) determined that none of these sites were eligible for the National Register of Historic Places (NRHP). In April of 2015, TAFB also consulted with the SHPO regarding the FamCamp site specifically, and requested the in situ B-29 crash site that killed General Travis in 1950 be eligible for NRHP listing; however, the SHPO did not concur and TAFB ultimately agreed with SHPO.

Analysis of field survey information, data from the Travis AFB Geographic Information System, and careful on-site inspections of the project area have verified that there are no prehistoric archaeological properties in the vicinity, and no other historic properties of any kind in or near the Area of Potential Effect. Due to the relatively small size of TAFB and the amount of ground disturbance from continuous construction and maintenance activities, probability analysis suggests that intact prehistoric archaeological deposits would be extremely rare. Furthermore, the proposed FamCamp project will not impact any previously undisturbed soils.

As a brief overview, TAFB occupies 6,383 acres within the city limits of Fairfield, and the 60th Air Mobility Wing, as the host unit, is responsible for providing strategic airlift and air refueling missions around the world. Since the late 1940s, the existing FamCamp is situated on approximately 7.5 acres immediately south of the base's main gate and includes full RV hookup (i.e., electrical, water, sewer, and cable TV) and camping sites for recreational use. To provide adequate camping sites and meet current demand, the proposed project would expand the FamCamp by 2.5 acres and create additional concrete parking spaces with utility hookups. Average depth of excavation would be 2 feet. Additionally, a monument or memorial for the B-29 crash site would be erected as part of the proposed project.

Based on the past surveys and discussions with SHPO, TAFB believes that no archaeological or cultural resources will be impacted by the proposed FamCamp project. Attached is correspondence with SHPO and their agreement with the Air Force's finding. If there are further concerns or needs, please feel free to contact me. We also invite you to visit us here at the base to discuss this and other ongoing projects and activities if you wish. TAFB thanks the Yocha Dehe Wintun Nation for their continued cultural stewardship and interests here on base and we look forward to hearing from you soon.

Respectfully,

Matthew Blazek

****

Matthew Blazek

NEPA Program Manager

CES/CEIE, Bldg 570, Travis AFB

707-424-5127 | DSN 837-5127

****

From:	BLAZEK, MATTHEW F GS-12 USAF AMC 60 CES/CEIE
To:	James Sarmento
Cc:	aflores@yochadehe-nsn.gov
Subject:	Travis AFB Response for Proposed FamCamp Project: YD-02252016-01
Date:	Wednesday, July 6, 2016 12:55:03 PM
Attachments:	TAFB-SHPO Correspondence - FamCamp.pdf Yocha Dehe Wintun Nation Response FamCamp- 03-06-16.pdf

---

Hello Mr. Sarmento,

I hope all is well with you. We at TAFB are just checking in to see if the Yocha Dehe Wintun Nation had any questions or concerns regarding the Proposed FamCamp Project (YD-02252016-01)? Please see below for our response and see the attached documents for the requested information. Please feel free to contact me if you would like to discuss any issues further.

Thank you!

Best,

Matt

****

Matthew Blazek
NEPA Program Manager
CES/CEIE, Bldg 570, Travis AFB
707-424-5127 | DSN 837-5127

****

-----Original Message-----
From: BLAZEK, MATTHEW F GS-12 USAF AMC 60 CES/CEIE
Sent: Thursday, June 16, 2016 2:35 PM
To: James Sarmento <JSarmento@yochadehe-nsn.gov>
Subject: Travis AFB Response for Proposed FamCamp Project: YD-02252016-01

Hello Mr. Sarmento,

We received an out of office message from Mr. Anthony Flores that instructed us to contact you regarding cultural resource items. We at Travis Air Force Base (TAFB) thank the Yocha Dehe Wintun Nation for their attached response letter from March 3rd, 2016 regarding the base's Family Camp Expansion (FamCamp) Project. The letter instructed me to contact Mr. Flores for future correspondence regarding this project (identification number YD-02252016-01). The Yocha Dehe Wintun Nation noted that archaeological and cultural sites can be impacted from the proposed FamCamp project, and requests a cultural resources study as well as the depths of excavation areas.

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Respectfully,

Matthew Blazek

****

Matthew Blazek

NEPA Program Manager

CES/CEIE, Bldg 570, Travis AFB

707-424-5127 | DSN 837-5127

****

From: BLAZEK, MATTHEW F GS-12 USAF AMC 60 CES/CEIE
To: James Sarmento; lbill@yochadehe-nsn.gov
Subject: Travis AFB Visit - Follow-up Action Items
Date: Thursday, August 18, 2016 4:19:54 PM
Attachments: EPA Aerial Photographic Analysis TAFB - Area G & FamCamp.pdf

---

Hello James and Laverne,

I hope your weeks are going well! I'm following up with you both on the two actions items that I had based on discussions during your site visit last Wednesday. My understanding, I was to provide you both any historical maps that we have as well as the depth of excavation/construction for the Family Camp expansion project.

Attached you'll find pages of a 1994 report that was conducted by the EPA, Region 9 where they analyzed historical aerial photos of the base for contaminants and other items of interest for the agency. I parsed out the pages that displayed images of the Area G (highlighted in pink) and FamCamp (highlighted in green) project sites. I tried my best to capture the project sites in the inserted boxes to give you a general sense of their locations but just note that these are not drawn to scale. I was also told that some of EPA's assessments were found to be inaccurate and so please ignore some of their markings on the map.

Regarding excavation depths for the FamCamp project, the utility lines are 6 feet deep in the present FamCamp area. To attach new lines in the expanded area to the existing ones, digging may occur up to 10 feet. It was noted that this is a very conservative estimate as the engineers won't know what is needed until they actually dig down but emphasized digging should not go deeper than 10 feet.

Please let me know if you have more questions on these items or need anything else for the Area G (YD-02042016-04) and FamCamp (YD-02252016-01) projects – thank you!

Best,

Matt

****

Matthew Blazek
NEPA Program Manager
CES/CEIE, Bldg 570, Travis AFB
707-424-5127 | DSN 837-5127

****

-----Original Message-----
From: BLAZEK, MATTHEW F GS-12 USAF AMC 60 CES/CEIE
Sent: Thursday, August 11, 2016 9:45 AM
To: James Sarmento <JSarmento@yochadehe-nsn.gov>; lbill@yochadehe-nsn.gov
Subject: Travis AFB Visit - Thank you!

Hello James and Laverne,

I just wanted to first say thank you for visiting the base yesterday and introducing yourselves, your ideas and your concerns to us. We are excited to hear you are interested in becoming more involved with our projects and activities and we look forward to more such helpful discussions in the future. I think this is a great start in establishing a working partnership between the Yocha Dehe Wintun Nation and Travis AFB.

To quickly verify with you both, for the two immediate projects in question (Area G and FamCamp) I will be providing any available historical maps of the base as well as depths of excavation/construction for the FamCamp trailer park expansion. Is my understanding correct? I'll also be looking for appropriate Air Force meetings that discuss current and future base projects that may be helpful for either of you to attend. If none exist, we can plan separate quarterly meetings with you all as well. Please just let me know and stay tuned - thank you again!

Best,

Matt

****

Matthew Blazek
NEPA Program Manager
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707-424-5127 | DSN 837-5127

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United States
Environmental Protection
Agency

Environmental Monitoring
Systems Laboratory
P.O. Box 93478
Las Vegas, NV 89193-3478

TS-PIC-94732
September 1994

Research and Development

EPA

AERIAL PHOTOGRAPHIC ANALYSIS OF TRAVIS AIR FORCE BASE

Fairfield, California

EPA Region 9

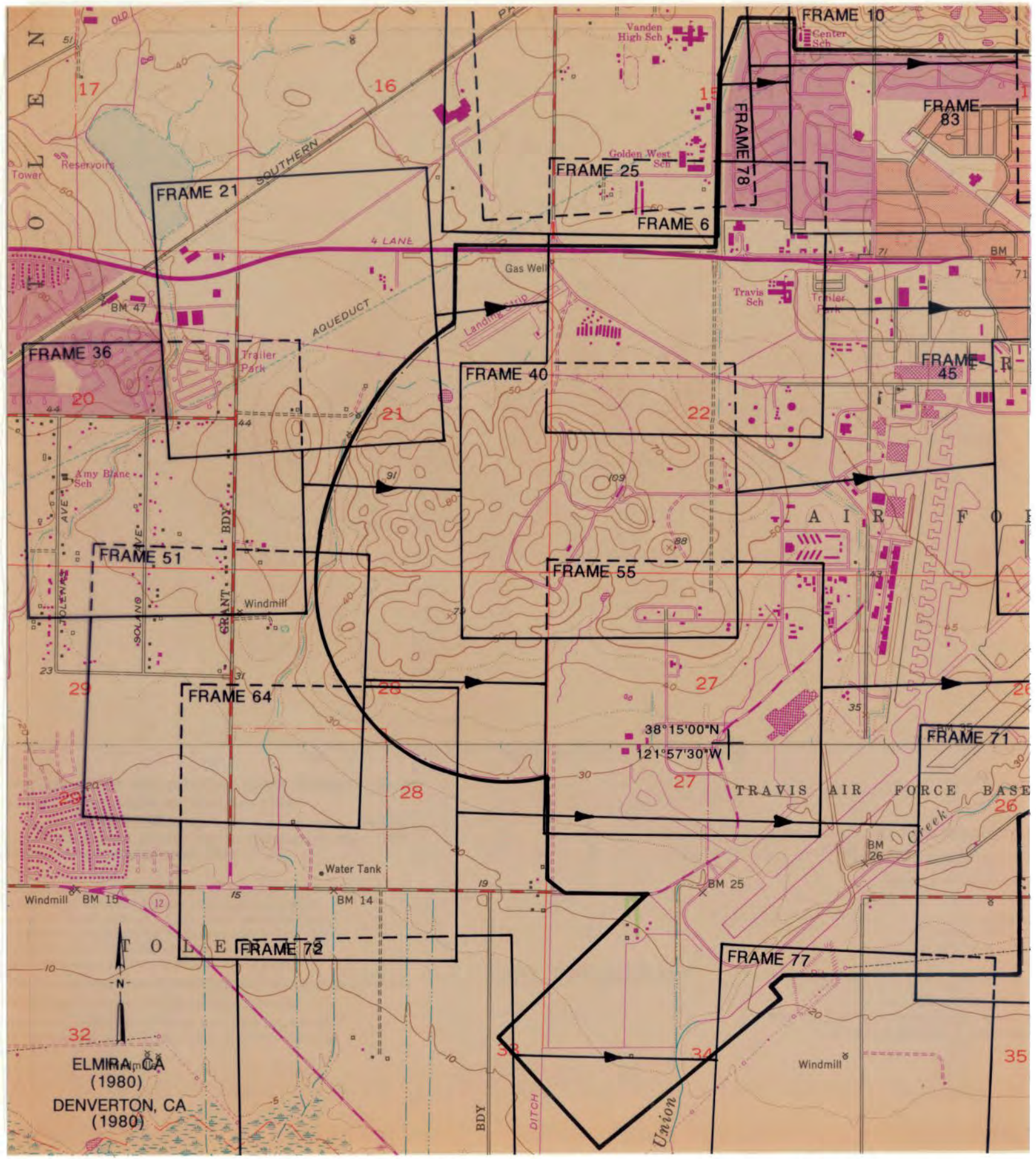


Figure 2. Local study area location map and current photographic index map, Fairfield, California. Scale 1:24,000.

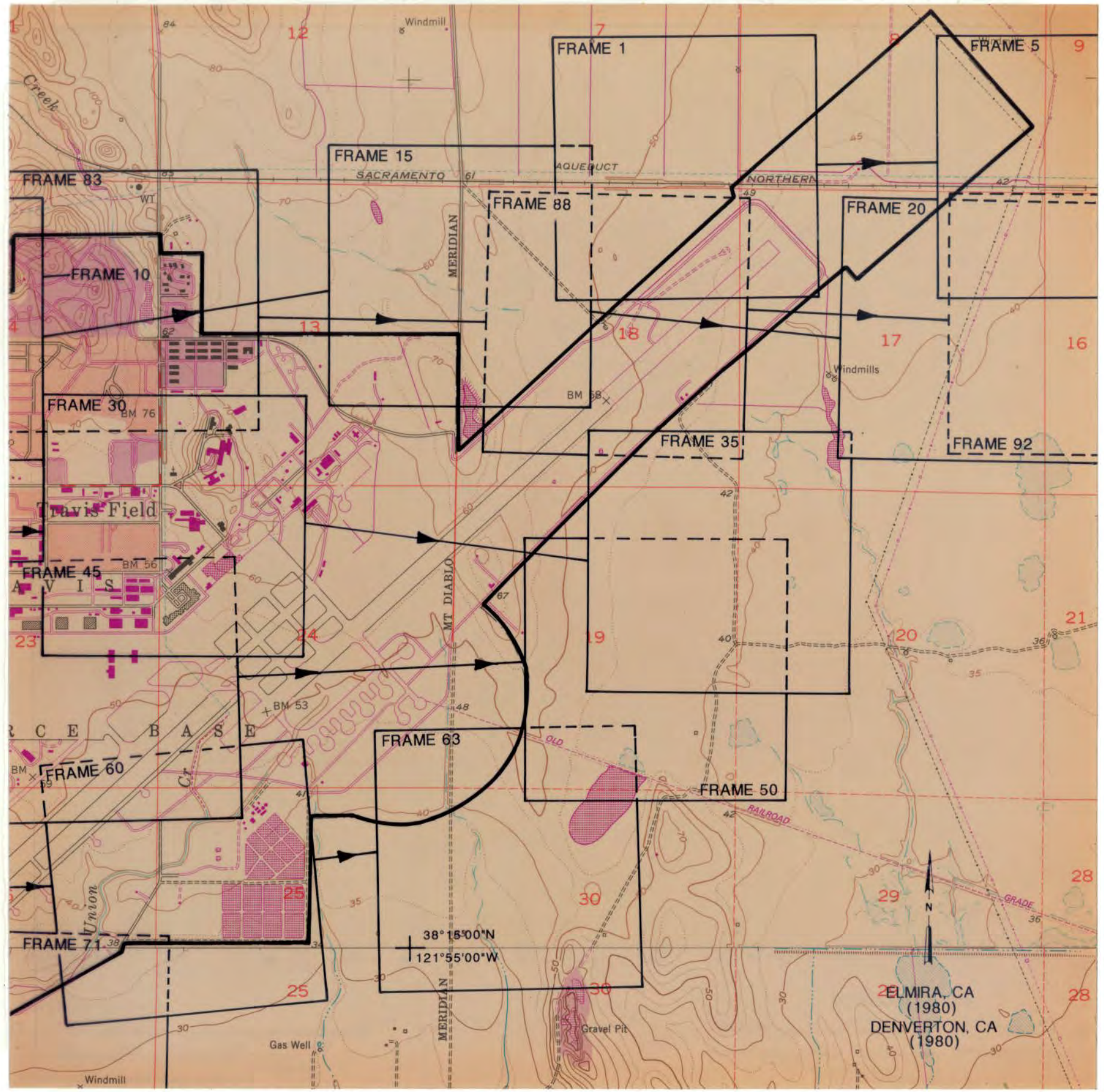
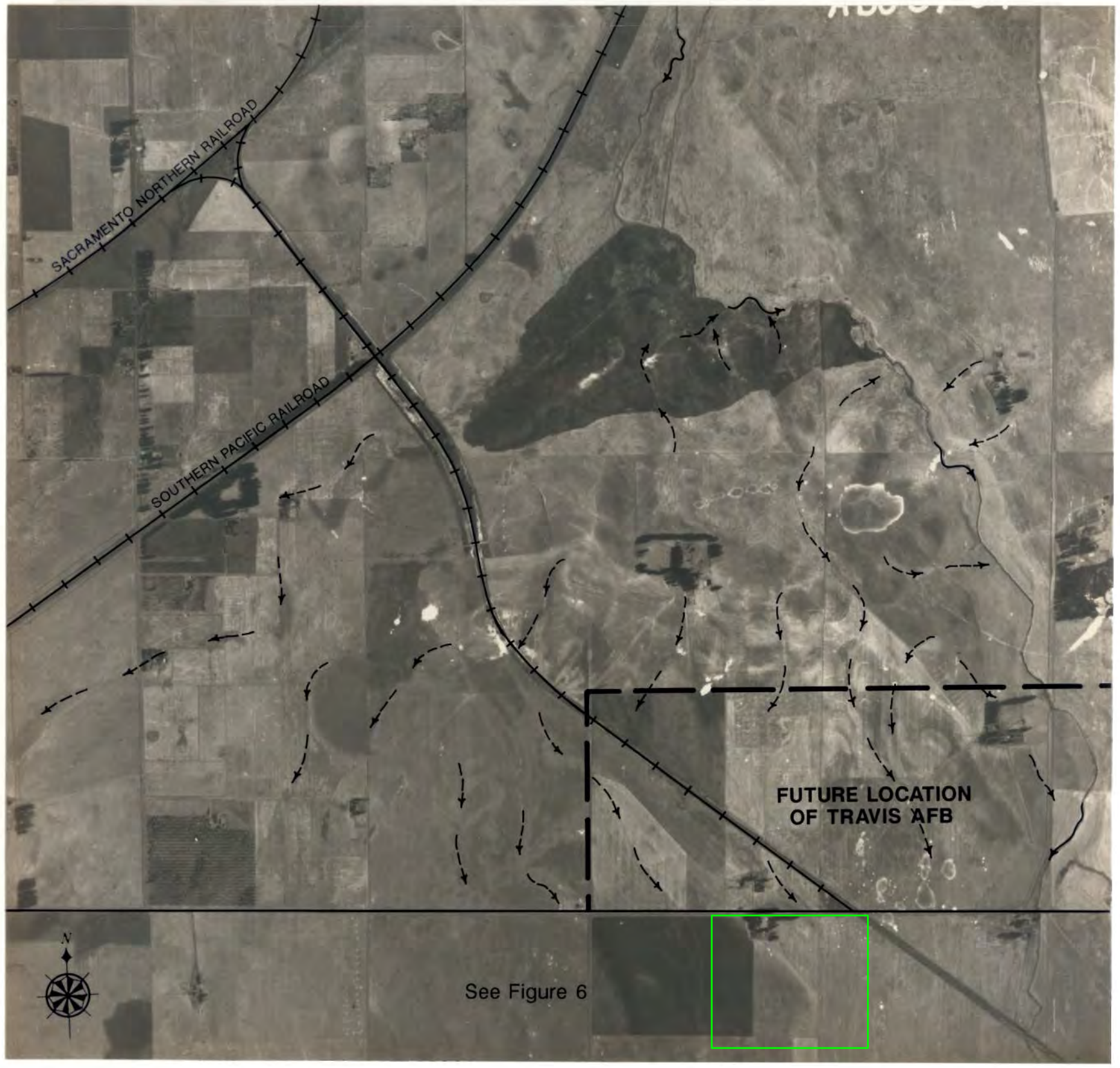


Figure 3. Local study area location map and current photographic index map, Fairfield, California. Scale 1:24,000.



INTERPRETATION CODE

BOUNDARIES AND LIMITS

- FENCED SITE BOUNDARY
- UNFENCED SITE BOUNDARY
- FENCE
- STUDY AREA

DRAINAGE

- DRAINAGE
- FLOW DIRECTION
- INDETERMINATE DRAINAGE

TRANSPORTATION/UTILITY

- VEHICLE ACCESS
- RAILWAY

SITE FEATURES

- DIKE
- STANDING LIQUID
- SL STANDING LIQUID
- EXCAVATION, PIT (EXTENSIVE)
- MOUNDED MATERIAL (EXTENSIVE)
- MM MOUNDED MATERIAL (SMALL)
- CR CRATES/BOXES
- DR DRUMS
- HT HORIZONTAL TANK
- PT PRESSURE TANK
- VT VERTICAL TANK
- CA CLEARED AREA
- DG DISTURBED GROUND
- FL FILL
- IM IMPOUNDMENT
- LG LAGOON
- OF OUTFALL
- SD SLUDGE
- ST STAIN
- SW SOLID WASTE
- TR TRENCH
- VS VEGETATION STRESS
- WD WASTE DISPOSAL AREA
- WL WETLAND

Figure 4. Travis Air Force Base, Fairfield, California, August 25, 1937. Approximate Scale 1:.17,600.

Figure 5. Travis Air Force Base, Fairfield, California, August 25, 1937. Approximate Scale 1:.17,600.

INTERPRETATION CODE

BOUNDARIES AND LIMITS

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- UNFENCED SITE BOUNDARY
- FENCE
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DRAINAGE

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- FLOW DIRECTION
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TRANSPORTATION/UTILITY

- VEHICLE ACCESS
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SITE FEATURES

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- VS VEGETATION STRESS
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- WL WETLAND

Figure 7. Travis Air Force Base, Fairfield, California, August 2, 1952. Approximate Scale 1:21,500.

Figure 8. Travis Air Force Base, Fairfield, California, August 2, 1952. Approximate Scale 1:21,500.

INTERPRETATION CODE

BOUNDARIES AND LIMITS

- FENCED SITE BOUNDARY
- UNFENCED SITE BOUNDARY
- FENCE
- STUDY AREA

DRAINAGE

- DRAINAGE
- FLOW DIRECTION
- INDETERMINATE DRAINAGE

TRANSPORTATION/UTILITY

- VEHICLE ACCESS
- RAILWAY

SITE FEATURES

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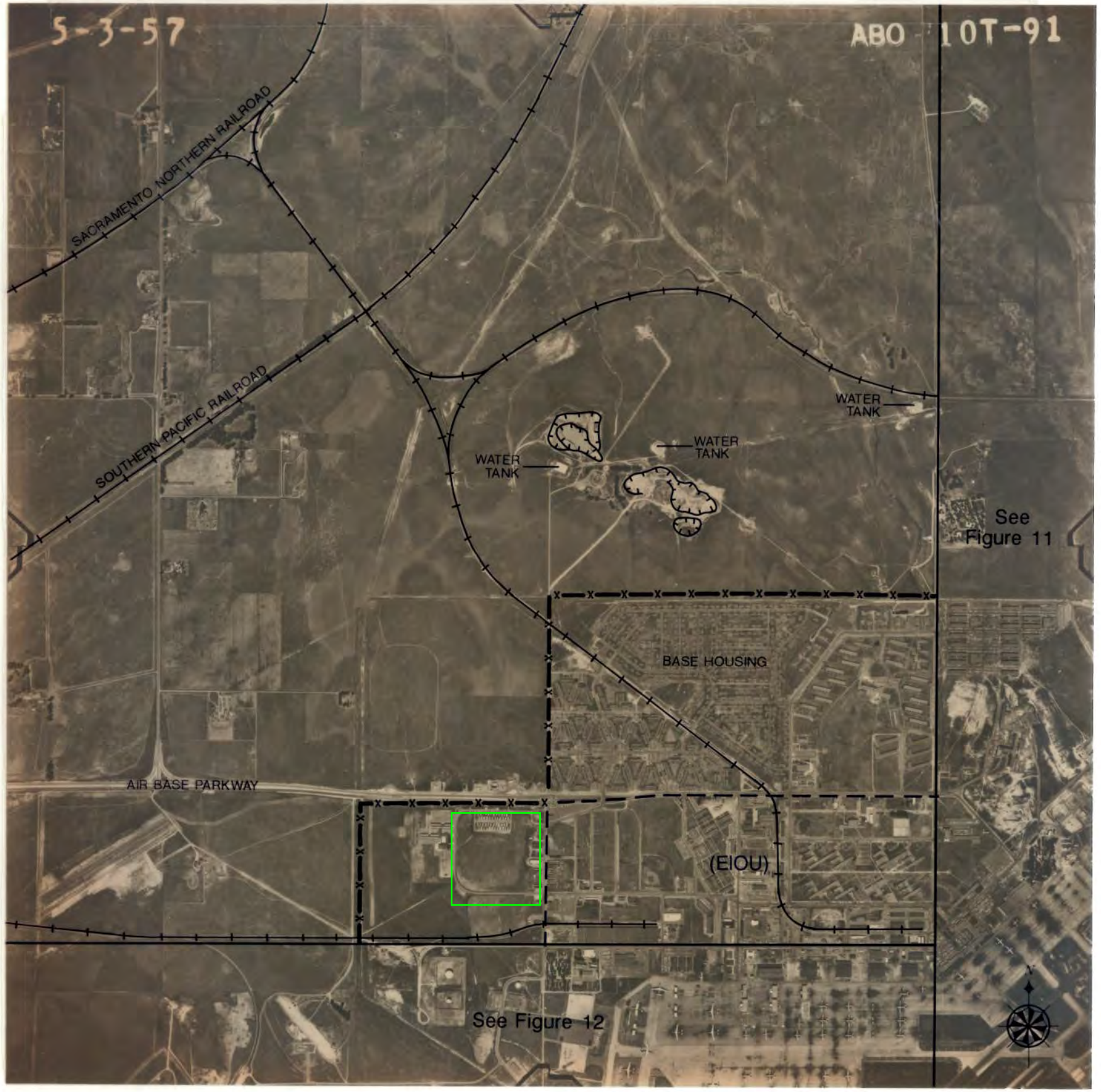

INTERPRETATION CODE

BOUNDARIES AND LIMITS

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- FENCE
- STUDY AREA

DRAINAGE

- DRAINAGE
- FLOW DIRECTION
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TRANSPORTATION/UTILITY

- VEHICLE ACCESS
- RAILWAY

SITE FEATURES

- DIKE
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- SW SOLID WASTE
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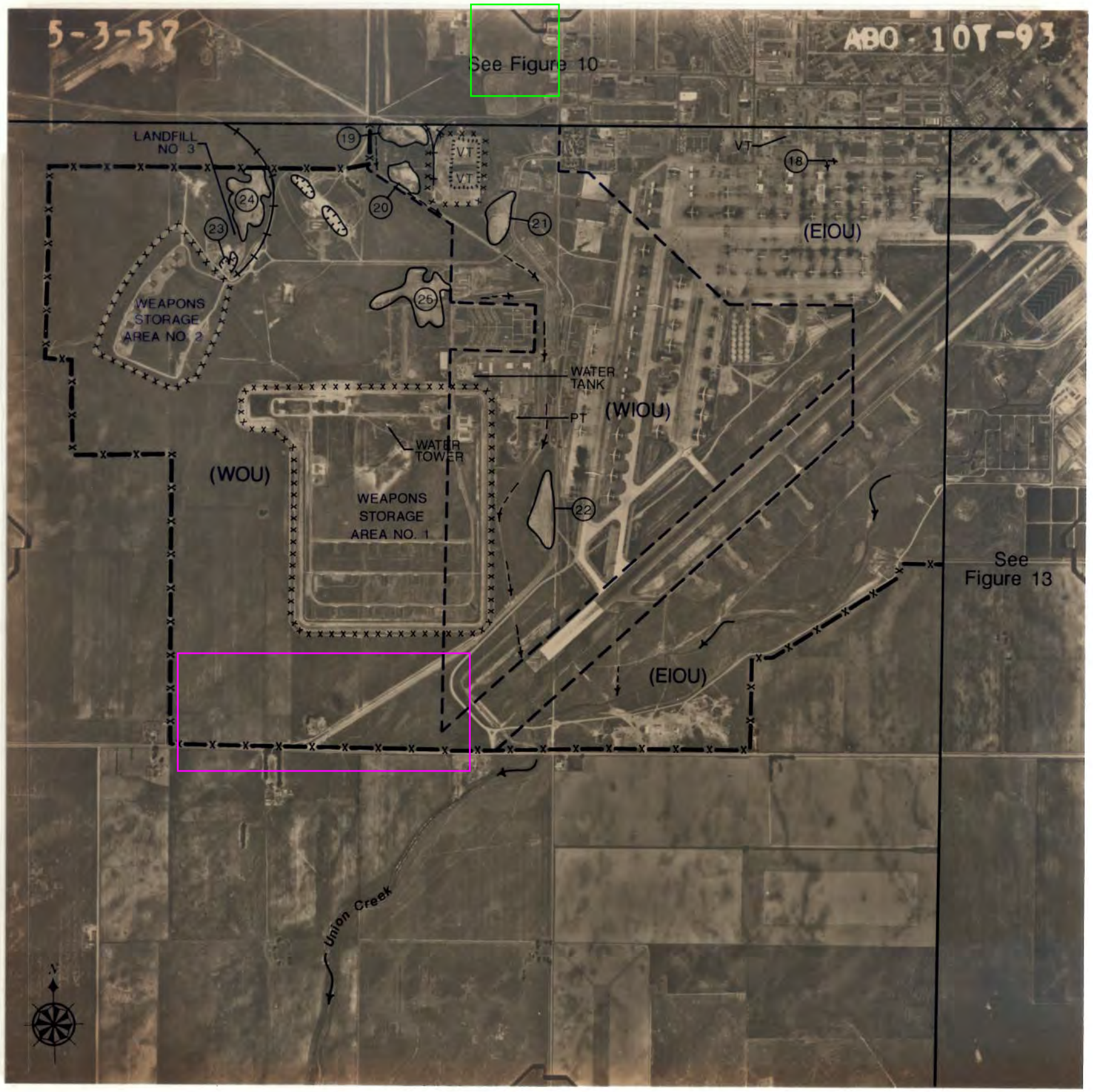
- WD WASTE DISPOSAL AREA
- WL WETLAND

Figure 10. Travis Air Force Base, Fairfield, California, May 3, 1957. Approximate Scale 1:19,900.



INTERPRETATION CODE

BOUNDARIES AND LIMITS
- FENCED SITE BOUNDARY
- UNFENCED SITE BOUNDARY
- FENCE
- STUDY AREA

DRAINAGE
- DRAINAGE
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TRANSPORTATION/UTILITY
- VEHICLE ACCESS
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SITE FEATURES
- DIKE
- STANDING LIQUID
- SL STANDING LIQUID
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- OF OUTFALL
- SD SLUDGE
- ST STAIN
- SW SOLID WASTE
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- VS VEGETATION STRESS
- WD WASTE DISPOSAL AREA
- WL WETLAND

Figure 12. Travis Air Force Base, Fairfield, California, May 3, 1957. Approximate Scale 1:19,900.

INTERPRETATION CODE

BOUNDARIES AND LIMITS

- FENCED SITE BOUNDARY
- UNFENCED SITE BOUNDARY
- FENCE
- STUDY AREA

DRAINAGE

- DRAINAGE
- FLOW DIRECTION
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TRANSPORTATION/UTILITY

- VEHICLE ACCESS
- RAILWAY

SITE FEATURES

- DIKE
- STANDING LIQUID
- SL STANDING LIQUID
- EXCAVATION, PIT (EXTENSIVE)
- MOUNDED MATERIAL (EXTENSIVE)
- MM MOUNDED MATERIAL (SMALL)
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- DR DRUMS
- HT HORIZONTAL TANK
- PT PRESSURE TANK
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- SD SLUDGE
- ST STAIN
- SW SOLID WASTE
- TR TRENCH
- VS VEGETATION STRESS
- WD WASTE DISPOSAL AREA
- WL WETLAND

Figure 14. Travis Air Force Base, Fairfield, California, May 14, 1964. Approximate Scale 1:20,100.

Figure 16. Travis Air Force Base, Fairfield, California, May 14, 1964. Approximate Scale 1:20,100.

INTERPRETATION CODE

BOUNDARIES AND LIMITS

- FENCED SITE BOUNDARY
- UNFENCED SITE BOUNDARY
- FENCE
- STUDY AREA

DRAINAGE

- DRAINAGE
- FLOW DIRECTION
- INDETERMINATE DRAINAGE

TRANSPORTATION/UTILITY

- VEHICLE ACCESS
- RAILWAY

SITE FEATURES

- DIKE
- STANDING LIQUID
- SL STANDING LIQUID
- EXCAVATION, PIT (EXTENSIVE)
- MOUNDED MATERIAL (EXTENSIVE)
- MM MOUNDED MATERIAL (SMALL)
- CR CRATES/BOXES
- DR DRUMS
- HT HORIZONTAL TANK
- PT PRESSURE TANK
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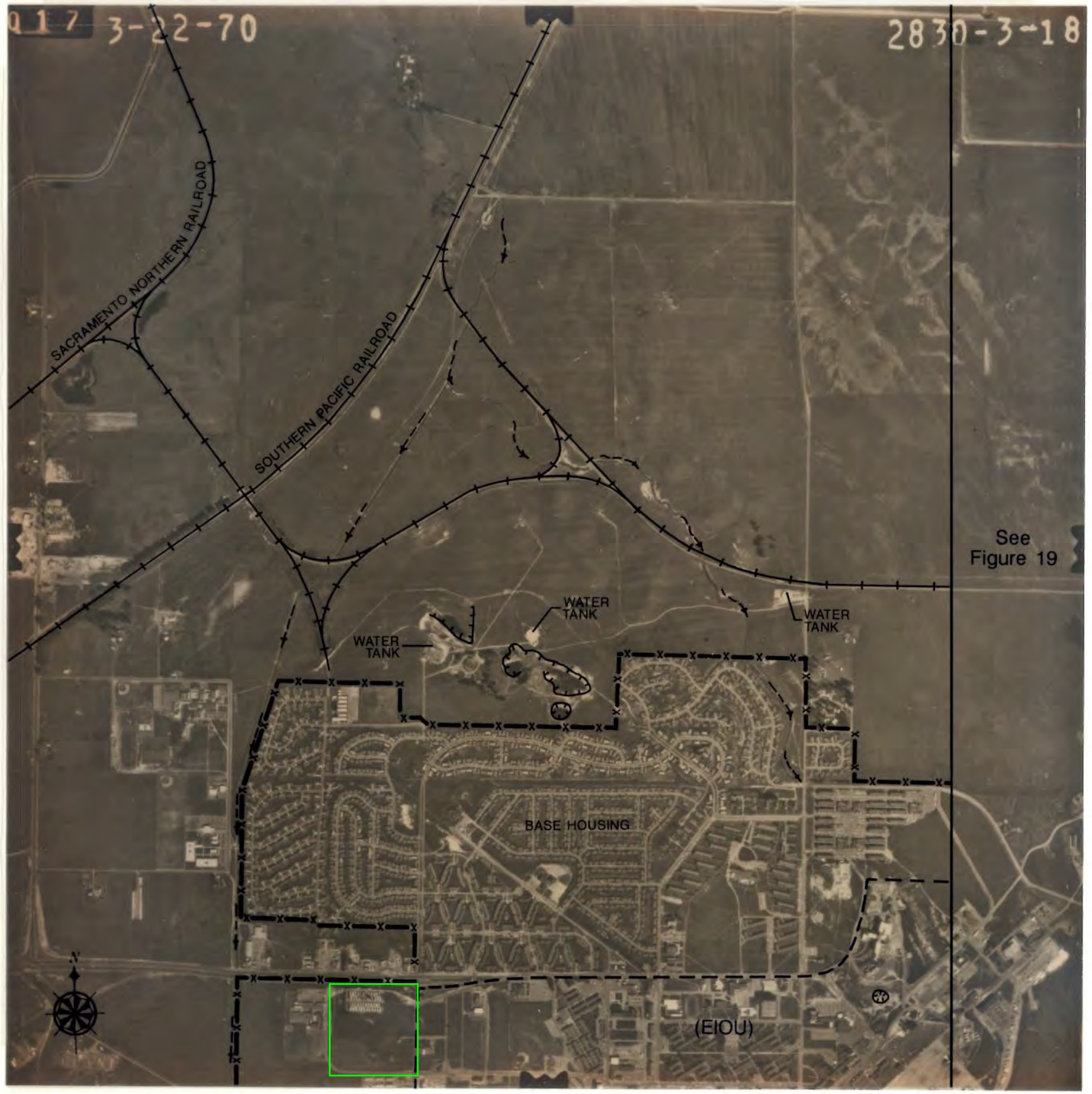

INTERPRETATION CODE

BOUNDARIES AND LIMITS

- FENCED SITE BOUNDARY
- UNFENCED SITE BOUNDARY
- FENCE
- STUDY AREA

DRAINAGE

- DRAINAGE
- FLOW DIRECTION
- INDETERMINATE DRAINAGE

TRANSPORTATION/UTILITY

- VEHICLE ACCESS
- RAILWAY

SITE FEATURES

- DIKE
- STANDING LIQUID
- SL STANDING LIQUID
- EXCAVATION, PIT (EXTENSIVE)
- MOUNDED MATERIAL (EXTENSIVE)
- MM MOUNDED MATERIAL (SMALL)
- CR CRATES/BOXES
- DR DRUMS
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- SW SOLID WASTE
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- WD WASTE DISPOSAL AREA
- WL WETLAND

Figure 18. Travis Air Force Base, Fairfield, California, March 22, 1970. Approximate Scale 1:19,800.

INTERPRETATION CODE

BOUNDARIES AND LIMITS

- FENCED SITE BOUNDARY
- UNFENCED SITE BOUNDARY
- XXXXXX FENCE
- STUDY AREA

DRAINAGE

- DRAINAGE
- FLOW DIRECTION
- INDETERMINATE DRAINAGE

TRANSPORTATION/UTILITY

- VEHICLE ACCESS
- RAILWAY

SITE FEATURES

- DIKE
- STANDING LIQUID
- SL STANDING LIQUID
- EXCAVATION, PIT (EXTENSIVE)
- MOUNDED MATERIAL (EXTENSIVE)
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- CR CRATES/BOXES
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- WD WASTE DISPOSAL AREA
- WL WETLAND

Figure 20. Travis Air Force Base, Fairfield, California, March 22, 1970. Approximate Scale 1:19,800.

INTERPRETATION CODE

BOUNDARIES AND LIMITS

- FENCED SITE BOUNDARY
- UNFENCED SITE BOUNDARY
- FENCE
- STUDY AREA

DRAINAGE

- DRAINAGE
- FLOW DIRECTION
- INDETERMINATE DRAINAGE

TRANSPORTATION/UTILITY

- VEHICLE ACCESS
- RAILWAY

SITE FEATURES

- DIKE
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- WL WETLAND

Figure 22. Travis Air Force Base, Fairfield, California, July 12, 1973. Approximate Scale 1:14.100.

INTERPRETATION CODE

BOUNDARIES AND LIMITS
- FENCED SITE BOUNDARY
- UNFENCED SITE BOUNDARY
- FENCE
- STUDY AREA

DRAINAGE
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- FLOW DIRECTION
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TRANSPORTATION/UTILITY
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- RAILWAY

SITE FEATURES
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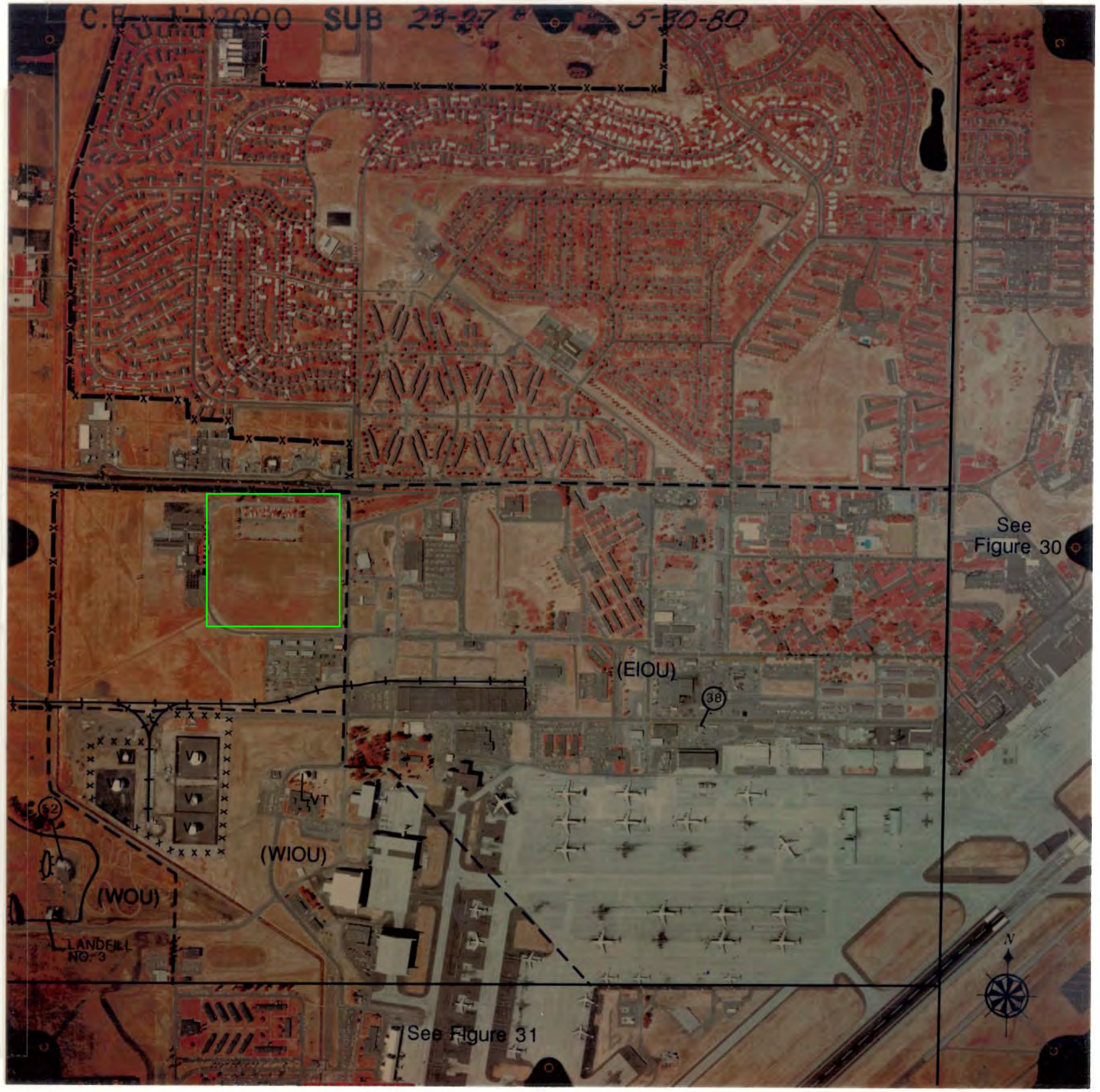
- WD WASTE DISPOSAL AREA
- WL WETLAND

Figure 23. Travis Air Force Base, Fairfield, California, July 12, 1973. Approximate Scale 1:14.100.



INTERPRETATION CODE

BOUNDARIES AND LIMITS

- FENCED SITE BOUNDARY
- UNFENCED SITE BOUNDARY
- FENCE
- STUDY AREA

DRAINAGE

- DRAINAGE
- FLOW DIRECTION
- INDETERMINATE DRAINAGE

TRANSPORTATION/UTILITY

- VEHICLE ACCESS
- RAILWAY

SITE FEATURES

- DIKE
- STANDING LIQUID
- SL STANDING LIQUID
- EXCAVATION, PIT (EXTENSIVE)
- MOUNDED MATERIAL (EXTENSIVE)
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- CR CRATES/BOXES
- DR DRUMS
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- PT PRESSURE TANK
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- OF OUTFALL
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- WL WETLAND

Figure 29. Travis Air Force Base, Fairfield, California, March 30, 1980. Approximate Scale 1:12,900.

INTERPRETATION CODE

BOUNDARIES AND LIMITS

- FENCED SITE BOUNDARY
- UNFENCED SITE BOUNDARY
- FENCE
- STUDY AREA

DRAINAGE

- DRAINAGE
- FLOW DIRECTION
- INDETERMINATE DRAINAGE

TRANSPORTATION/UTILITY

- VEHICLE ACCESS
- RAILWAY

SITE FEATURES

- DIKE
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Figure 43. Travis Air Force Base, Fairfield, California, March 18, 1992. Approximate Scale 1:32,600.

INTERPRETATION CODE

BOUNDARIES AND LIMITS

- FENCED SITE BOUNDARY
- UNFENCED SITE BOUNDARY
- FENCE
- STUDY AREA

DRAINAGE

- DRAINAGE
- FLOW DIRECTION
- INDETERMINATE DRAINAGE

TRANSPORTATION/UTILITY

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SITE FEATURES

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Figure 53. Travis Air Force Base, Fairfield, California, March 7, 1994. Approximate Scale 1:6,000.

DEPARTMENT OF THE AIR FORCE
60TH CIVIL ENGINEER SQUADRON (AMC)

Matthew Blazek
NEPA Program Manager
60th Civil Engineer Squadron
411 Airman Drive, Building 570
Travis AFB, CA 94535

21 October, 2016

Mr. James Sarmento
Cultural Resources Manager
Yocha Dehe Wintun Nation
P.O. Box 18
Brooks CA 95606-0018

Dear Mr. Sarmento

This letter is regarding the two projects that Travis Air Force Base (Travis AFB) previously discussed with the Yocha Dehe Wintun Nation:

- Hydrant Fuel System Area G (Area G) Project: YD-02042016-04
- Family Camp Expansion (FamCamp) Project: YD-02252016-01

In March 2016, Travis AFB received letters from the Yocha Dehe Wintun Nation stating that there were concerns about potential impacts to cultural and archaeological sites from the above two projects and cultural resource studies were requested by the tribe. In August 2016, Travis AFB was pleased to welcome you and Mr. Laverne Bill to the base where we visited the project sites and discussed your questions, needs, and ideas about these projects as well as for establishing mechanisms for review and consultation of future base activities. Subsequently, historical aerial photographs, maps, and information from past cultural resource studies at Travis AFB were provided to you and we received verbal confirmation from you that there were no more concerns on behalf of the tribe regarding the Area G and FamCamp projects.

As a summary of what was discussed over the months about the base, previous archaeological field surveys concluded that only two prehistoric archaeological sites have been known to occur within the installation boundaries. Both sites were recorded and artifacts were recovered from them in 1989. In addition, a field survey of undisturbed areas in 1995 found evidence for seven historic archaeological sites on Travis AFB, but our consultation with the State Historic Preservation Officer (SHPO) determined that none of these sites were eligible for the National Register of Historic Places. Due to the amount of ground disturbance from constant construction and operations across the base, probability analysis suggests that intact prehistoric archaeological deposits at Travis AFB would be extremely rare.

In addition, the Area G project will occur almost entirely on or under existing pavement and the FamCamp project is located where a B-29 crashed in 1950, creating a crater that has been since filled and surface artifacts were since recovered. Travis AFB corresponded with SHPO on both projects and it was determined that no historic properties are present. In our discussions, you asked and we confirmed that the Air Force will follow the requirements of Section 106 of the National Historic Preservation Act regarding any unanticipated discoveries that may occur during construction. We also acknowledge the Patwin

Cultural Protection and Preservation Plan (see attachment) that was submitted on a previous project that will assist Travis AFB in cultural resource protection.

Since you concurred with our determinations that there are no impacts to cultural resources, Travis AFB intends to move forward with these two projects. We will continue with public reviews for the Environmental Assessments and Findings of No Significant Impacts for the Area G and FamCamp projects, and once these documents are finalized, we will begin to implement these two projects. We assure you that these projects shall be accomplished in accordance with Executive Order 13175, the National Environmental Policy Act, Section 106 of the National Historic Preservation Act, and the 2014 Patwin Cultural Protection and Preservation Plan.

Please notify me (707-424-5127) within a couple of weeks if you have any further questions or concerns because we intend to move forward with these projects as indicated above in early November, if possible. Again we thank you for your cooperation and interest in this matter and look forward to future collaboration with the Yocha Dehe Wintun Nation.

Respectfully

MATTHEW BLAZEK, GS-12, DAFC
NEPA Program Manager

Attachment:

1) Patwin Cultural Protection and Preservation Plan, February 2014

PATWIN CULTURAL PROTECTION AND PRESERVATION PLAN

PREAMBLE

Three sovereign tribes – the Cachil Dehe, Kletsel Dehe and Yocha Dehe (the "Tribes") – are joining together to support and strengthen our shared interest in preserving and protecting our common Patwin history and culture. People of Cachil Dehe, Kletsel Dehe and Yocha Dehe traditionally occupied lands in Yolo, Colusa, Sutter, Solano, Butte, Napa, and Lake Counties. Lands throughout these counties are full of cultural and sacred resources important to our Tribes.

STATEMENT OF INTENT

Cachil Dehe, Kletsel Dehe and Yocha Dehe are exercising our sovereign duty to protect each Tribe's individual and collective right to preserve our common history and culture. With great respect for traditional cultural authority, each Tribe pledges mutual support to the other in defending our sacred sites and cultural resources.

Cachil Dehe, Kletsel Dehe and Yocha Dehe are exercising inherent rights to our own cultural items. All cultural items held in private or public institutions, universities or museums should be repatriated. No further cultural items should be taken from us. We value and respect our culture and ancestors and want to welcome them home.

DECLARATION

Cachil Dehe, Kletsel Dehe and Yocha Dehe declare our common interest in protecting our sacred sites and cultural resources. We will stand together to ensure the protection of Patwin sacred sites and cultural resources. We recognize our common values regarding burial disturbances. Each Tribe shall determine what it considers to be a sacred site or cultural resources.

PATWIN CULTURAL PROTECTION AND PRESERVATION PLAN

PRINCIPLES IMPORTANT TO CULTURAL RESOURCE PROTECTION

Our Tribes adopt the principles of the United Nations Declaration on the Rights of Indigenous People. We include the most important Articles here for emphasis.

Article 11 We have the right to practice and revitalize our cultural traditions and customs. This includes the right to maintain, protect and develop the past, present and future manifestations of our cultures, such as archaeological and historical sites, artifacts, designs, ceremonies, technologies, and cultural arts such as dance, basket making, songs and storytelling.

Article 12 We have the right to manifest, practice, develop and teach our spiritual and religious traditions, customs and ceremonies; the right to maintain, protect, and have access in privacy to our religious and cultural sites; the right to the use and control of our ceremonial objects; and the right to the repatriation of our human remains.

Article 13 We have the right to revitalize, use, develop and transmit to future generations our histories, languages, oral traditions, philosophies, writing systems and literatures, and to designate and retain our own names for communities, places and persons.

Article 14 We have the right to establish and control our educational systems and institutions providing education in our own languages, in a manner appropriate to our cultural methods of teaching and learning.

Article 25 We have the right to maintain and strengthen our distinctive spiritual relationship with our traditionally owned or otherwise occupied and used lands, territories, waters and coastal seas and other resources and to uphold our responsibilities to future generations in this regard.

Article 31 We have the right to maintain, control, protect and develop our cultural heritage, traditional knowledge and traditional cultural expressions and manifestations of our sciences, technologies and cultures, including human and genetic resources, seeds, medicines, knowledge of the properties of fauna and flora, oral traditions, literatures, designs, sports and traditional games and visual and performing arts. We also have the right to maintain, control, protect and develop our intellectual property over such cultural heritage, traditional knowledge and traditional cultural expressions.

NOTICE AND CONSULTATION

If sacred sites are likely to be impacted by a proposed land use, protective protocols must be followed through notification of and consultation with the Tribes. Proper notice and Meaningful Consultation is necessary to protect the dignity of sacred sites affected by proposed land use.

Notification and consultation are two separate principles. However, both notice and Meaningful Consultation must be early in any proposed land use planning. The Tribes are more aware of which locations contain, or are more likely to contain, sacred or cultural resources and early involvement and consultation with the Tribes is the best way to avoid delay. Notification of a potential impact should be made as early as possible, as soon as it is known or believed that an area that includes a proposed land use could contain cultural resources that could be impacted.

Counties and agencies should consider involving the Tribes in the planning process and provide the Tribes a seat on appropriate advisory committees involving project planning.

What is considered Meaningful Consultation will vary depending on each situation. However, Meaningful Consultation will at least include:

(1) In-person consultation with the tribal government;
(2) Good faith attempts to resolve whatever issues need to be resolved;
(3) Using whatever methods are necessary to address the Tribes' concerns.

Each Tribe's tribal government speaks on behalf of the Tribe.

TRIBAL MONITORING AND TREATMENT PROTOCOLS

Counties and agencies should ensure that Tribal monitors are on site during any ground-disturbing activity that could potentially impact sacred or cultural resources.

If a Tribe determines avoidance isn't possible then re-burial in a close location shall be an alternative. Tribes will define close location depending upon the

nature of the site and seek to identify an area that is as close as possible, but in an area that will not be disturbed.

TREATMENT PROTOCOLS

The Tribes see it as necessary and proper to consult with Tribal Knowledge Keepers and Tribal Cultural Authority to follow traditional ways. The Tribes' first guiding principle is total avoidance of disturbing human remains or cultural resources.

If authorized by the Tribes' it is acceptable to move cultural or funerary items **only if** the project that is impacting the cultural resource cannot be stopped or relocated. If an item must be moved, the first preference is to relocate in within area it came from, as close as possible, to a location that will not be further disturbed.

If an item must be moved, it may be stored in a temporary repository that allows the Tribes to maintain physical control over the items. Unless authorized by the Tribes' no human remains or cultural resources shall be moved for permanent curation. Items that the Tribes deem acceptable for curation shall be placed with a Tribal curator if available.

Tribal Knowledge Keepers and Tribal Cultural Authority will be appointed or identified by each Tribe.

INCORPORATING TRIBAL TREATMENT PROTOCOLS

Counties and agencies should incorporate the Tribes' treatment protocols for the handing of human remains and cultural items affiliated with a Tribe. If human remains are discovered the party or agency should notify the appropriate authorities and conduct Meaningful Consultation with the Tribe as to the appropriate treatment protocol. All cultural resources, as determined by the Tribes should be turned over to the Tribe for appropriate treatment. All cultural resources turned over to a Tribe shall be handled in accordance with the Tribe's treatment protocols.

SIGNATORIES

Each Tribe acknowledges and freely joins this Patwin Cultural Protection and Preservation Plan.

CACHIL DEHE BAND OF WINTUN INDIANS OF THE COLUSA INDIAN COMMUNITY

02 . 21 . 14

Chairman Wayne R. Mitchum Jr. Date

CORTINA RANCHERIA KLETSEL DEHE BAND OF WINTUN INDIANS

2-21-2014

Chairman Charlie Wright Date

YOCHA DEHE WINTUN NATION

2-21-2014

Chairman Marshall McKay Date

From: BLAZEK, MATTHEW F GS-12 USAF AMC 60 CES/CEIE
To: James Sarmento
Subject: Travis AFB - FamCamp and Area G Follow-up
Date: Thursday, September 15, 2016 10:12:33 AM

Hello Mr. Sarmento,

I hope your week is going well, I am just emailing you as a follow up to our conversation last week. My understanding, you said that there were no more concerns from the Yocha Dehe Wintun Nation on the FamCamp and Area G Projects; however, you wanted us to include some cultural resource conservation measures in our Environmental Assessment (EA) in case we come across anything during construction. Can you send us a letter or email to include in the EA that illustrates this language? We will add this correspondence as an Appendix to the EA and integrate the measures into the cultural resources section of the analyses.

Please let me know if you have any questions, thank you sir!

Best,

Matt

****

Matthew Blazek
NEPA Program Manager
CES/CEIE, Bldg 570, Travis AFB
707-424-5127 | DSN 837-5127

****

Subject: FW: FamCamp
Date: Tuesday, January 12, 2016 at 1:20:27 PM Eastern Standard Time
From: FRANKLIN, MILEA A GS-12 USAF AMC 60 CES/CEIE
To: Anthony R. Ruhlman (truhlman@northwindgrp.com)
Attachments: USFWS NLAA Cover Letter FamCamp 17 Dec 15.doc, 2. FamCamp NLAA Figures and Photos 17 Dec 2015.pdf, 1. FamCamp Expansion NLAA Determination 17 Dec 15.docx

//SIGNED//
Milea Franklin, E.I.T.
Chief, Environmental Element
Travis AFB, CA
(707) 424-4321 or DSN 837-4321

-----Original Message-----
From: SASSAMAN, BRIAN L GS-13 USAF AMC 60 CES/CEI
Sent: Thursday, December 17, 2015 2:32 PM
To: douglas_weinrich@FWS.gov
Cc: Aguilera, Amber (amber_aguilera@fws.gov); FRANKLIN, MILEA A GS-12 USAF AMC 60 CES/CEIE; CRAIG, PENN GS-12 USAF AMC 60 CES/CEIEC
Subject: FW: FamCamp

Doug,

Please find attached the cover letter and NLAA for the Family Camp (FamCamp) Expansion project for your review. The proposed project involves the addition of 10, 50-foot long paved camping sites, a road connecting the new sites to the current FamCamp, and the extension of existing utilities from the current FamCamp facilities located at Travis Air Force Base (AFB) in Fairfield, CA. Let me know if you have any questions. My POC on this project is Ms. Milea Franklin (cc'd) above.

//SIGNED//
Brian L. Sassaman, GS-13, DAFC
Flight Chief, Installation Management
411 Airmen Drive, Bldg 570
Travis AFB, CA 94535-2001
DSN: 837-8225; Comm: (707) 424-8225
Email: brian.sassaman.1@us.af.mil

DEPARTMENT OF THE AIR FORCE
60TH CIVIL ENGINEER SQUADRON (AMC)

Mr. Brian Sassaman
Chief, Installation Management
411 Airman Dr (Building 570)
Travis AFB CA 94535-2001

Mr. Douglas Weinrich
U.S. Fish and Wildlife Service
2800 Cottage Way, Room W2605
Sacramento CA 95825-1846

Re: Request for Consultation under Section 7 of the Endangered Species Act

Dear Mr. Weinrich

The intent of this letter is to initiate informal consultation under Section 7(a)(2) of the Endangered Species Act (ESA) for the Family Camp Expansion Project at Travis Air Force Base (AFB) in Fairfield, California.

The proposed project involves the addition of 10, 50-foot long paved camping sites, a road connecting the new sites to the current FamCamp, and the extension of existing utilities from the current FamCamp facilities. As described in the enclosed package, the Air Force believes that the proposed action will not likely to adversely affect the California tiger salamander (*Ambystoma californiense*) or vernal pool species. There is no designated critical habitat in the project area.

Please contact Ms. Milea Franklin (707) 424-4321 or milea.franklin@us.af.mil of my staff regarding this consultation request.

Sincerely

X

BRIAN L. SASSAMAN, GS-13, DAFC
Chief, Installation Management

Attachments (2):
1. FamCamp Expansion NLAA Determination
2. FamCamp NLAA Figures and Photos

Proposed Expansion of the Family Camp Not Likely to Adversely Affect Determination for the California Tiger Salamander (*Ambystoma californiense*)

I. INTRODUCTION

The purpose of this initiation package is to request United States Fish and Wildlife Service (USFWS) concurrence that Travis Air Force Base's (AFB) proposed expansion of the Family Camp (FamCamp) is not likely to adversely affect a threatened or endangered species. The following information is provided to comply with statutory requirements to use the best scientific and commercial information available when assessing the potential risks posed to listed species by proposed federal actions. This initiation package is prepared in accordance with legal requirements set forth under regulations implementing Section 7 of the Endangered Species Act (50 CFR 402; 16 U.S.C. 1536 (c)).

Threatened and Endangered Species: The following species were considered during our evaluation of the proposed action:

California tiger salamander, *(Ambystoma californiens*e), CTS, Main (Central Valley) Population—Federally Threatened;

Vernal pool fairy shrimp *(Branchinecta lynchi),* VPFS, Population—Federally Threatened;

Contra costa goldfields *(Lasthenia conjugens)* CCG—Federally Endangered; and

Vernal pool tadpole shrimp *(Lepidurus packardi)* VPTS—Federally Endangered.

Special Status Species removed from further discussion: Previous on base surveys have not found Delta green ground beetle (*Elaphrus viridis*) DGGB –Federally Threatened. Therefore, this species is removed from further discussion.

Critical Habitat: The action addressed in this document does not fall within Critical Habitat for any of the listed species considered during our evaluation.

II. CONSULTATION TO DATE

This document initiates informal consultation for this project with the USFWS.

III. PURPOSE AND DESCRIPTION OF THE PROPOSED PROJECT

The FamCamp (Figure 1) is currently operating at 90 percent of capacity on an annual basis, and has to turn away many potential campers during peak times. Implementation of the Proposed Action would include site preparation to facilitate the construction of 10 50-foot long concrete camping pads and a road connecting the new pads to the current FamCamp (Figure 2). Utilities would be extended from the current FamCamp facilities, and would be placed under the proposed connecting road.

The contractor staging area would be located on a paved parking area located approximately 500 feet east of the project area (Figure 2). The route from the staging area to the project site would run north on Ragsdale Street and through the current FamCamp.

Summary of Project Characteristics:

- Ingress/egress route to the project site would be via established paved roads.
- Staging area would be on a currently paved parking area.
- Area of Impact would be approximately 2.4 acres.
- Project duration would be approximately four months beginning in June 2016.
- Required equipment would include dozer/grader, heavy equipment to transport material (e.g., soil, asphalt, concrete), and a paving machine.

IV. ACTION AREA

The Action Area includes the proposed expansion area Limits of Disturbance (LOD) plus a 250-foot buffer, as well as the contractor staging area plus a 250-foot buffer. Both areas are shown on Figure 2.

The LOD encompasses approximately 2.4 acres of suitable CTS upland habitat. The entire LOD is comprised of semi-improved mowed grassland dominated by annual grasses and forbs. A number of ground squirrel burrows, gopher mounds and soil cracks are present within the LOD (see Photo Log, photos 1 and 2). The 0.3-acre contractor staging area is located on a paved parking area east of the baseball field and north of the car and RV wash area.

The Action Area outside of the LOD encompasses approximately 22 acres. It includes a baseball field, paved parking areas and a car/RV wash to the east; the existing FamCamp to the north and northeast; and a drainage ditch (photo 3) and paved paved parking areas to the west. Approximately half of the Action Area is regularly mowed non-native grass. Ground squirrel burrows, gopher mounds, and soil cracks are present in much of the Action Area. The drainage ditch located within the Action Area could potentially serve as a wildlife corridor from surrounding upland habitat and breeding ponds on and off base to the upland habitat on the site (see potential migration corridor from nearest breeding pond on Figure 3). However, this corridor would require an approximately 1.8-mile migration from the nearest breeding pond.

Conservation Measures

Conservation measures will be implemented as follows:

1. Prior to the start of construction activities, a USFWS approved biologist/or Service approved biologist shall provide education and training sessions for all individuals that will be involved with site preparation or construction. The training will focus on habitat sensitivity and identification of vernal pools and CTS. The training shall include species description and behavior, general measures to be taken to protect these species, the penalties for non-compliance, and the boundaries of the project area. A fact sheet or other supporting materials containing this information will be prepared and distributed. Upon completion of training, employees will sign a form stating that they attended the training and understand all the conservation and protection measures.
2. Construction activities will be timed to occur during the dry season (June-October) to minimize potential effects to salamander dispersal.

3. Within 14 days of the start of construction activities, a USFWS approved biologist/or Service approved biologist will perform a pre-construction survey and identify potential refuge habitats (burrows) suitable for CTS. In the unlikely event that a CTS is encountered, the USFWS Approved Biologist/or Service Approved Biologist will contact the USFWS for instructions.
4. A USFWS approved biologist/or Service approved biologist will be on-site during all activities that could result in the take of listed species. The qualifications of the USFWS Approved Biologist/or Service Approved Biologist(s) will be presented to the Service for review and approval at least 10 working days prior to any groundbreaking at the project site. If any of the requirements associated with these measures are not being fulfilled, the USFWS approved biologist/or Service approved biologist will have the authority to stop project activities, through communication with the Project Manager.
5. Before work begins, the contractor will clearly delineate (e.g., stake, chalk, or flag) the disturbance boundaries and prohibit any off-road traffic outside of these boundaries.
6. The contractor will confine all equipment to designated work zones (including access roads and laydown) within the area to be disturbed.
7. Construction personnel will be instructed to exercise caution when commuting within the area to be disturbed. A 15 mph speed limit will be observed on all unpaved surfaces.
8. All project related vehicle traffic will be restricted to established roads and other designated areas.
9. Orange barrier material will be used for wetlands near to the project site. The location of the orange barrier fencing will be determined by the USFWS approved biologist/or Service approved biologist prior to the start of work. Orange barrier fencing will be installed 2 inches off the ground to ensure CTS or other wildlife to not become entangled. The need for other wetland protections (i.e., coconut coir wattles and/or silt fencing) will be determined by the onsite USFWS approved biologist/or Service approved biologist or Natural Resource Management (NRM) staff. Vehicles, equipment and personnel will be restricted from these areas. The project proponent will remove all stakes and flagging within 60 days of construction completion.
10. All trenches or holes will be covered at the end of the workday or provided with earthen escape ramps.
11. All trash (food related items such as wrappers, bottles, cans, food scraps, etc.) will be placed in closed containers and removed from the project site on a daily basis
12. If there is a 50% or greater probability of rain forecasted by the National Weather Service by 07:00 am the day prior to a scheduled workday, then all work activities are cancelled for the next 24 hours. If any measurable amount of rainfall occurs (including trace amounts) work may not resume for 24 hours from rain cessation. The weather forecast and hourly weather data for Travis AFB can be found by entering the zip code 94535 (Travis AFB) at http://www.srh.noaa.gov/forecast.
13. All USFWS approved biologist/or Service approved biologists and or biological monitors are required to check the entire project site thoroughly including all equipment every morning before work begins. The USFWS approved biologist/or Service approved biologist should do a more extensive and thorough pre-construction check for CTS on and within 250 feet of the project site on days where the relative humidity the previous night was above 80% or if soil saturation occurs from the unseasonable application of water within the project site.
14. Water shall not be pumped, sprayed, or allowed to flow over undisturbed uplands that can support

CTS as part of planned project activities outside of pre-approved requirements (i.e. dust control). Water applied for pre-approved requirements shall be applied in the minimum quantities necessary, and only to disturbed soils. If excess water accumulates as the result of construction activity, water may be pumped through a screened pump and removed from the construction area as deemed necessary by the on-site USFWS approved biologist/or Service approved biologist in coordination with Travis AFB NRM staff. If water inadvertently or purposefully enters construction trenches, pits, or excavations, a USFWS approved biologist/or Service approved biologist will remain on site until water is pumped from the trench, pit, or excavation. Following pumping, the USFWS approved biologist/or Service approved biologist shall inspect the trench, pit, or excavation area and the surrounding uplands to determine if disturbance to CTS has occurred and implement any other measures necessary (e.g. placement of cover boards, exclusionary fencing) to protect CTS that may emerge due to the wet soil.

15. Pipes laid underground or stored on the ground shall be capped, covered, or taped in a manner that excludes CTS from entering the pipe prior to the completion of the construction project. Long-term storage of pipes and other construction material should be placed on asphalt and raised above the ground by no less than 1.5 inches (e.g., on top of 2x4 supports).
16. Trenches, pits, and excavations shall be covered in a manner that exclude CTS from entering these areas during weekends, holidays, humid days, rain events, etc. Specifically, gaps no greater than one inch shall be allowed within cover materials if USFWS approved biologist/or Service approved biologists will not be present the following day or if rain events or high humidity days are expected to occur.
17. The USFWS will be notified immediately verbally, and with a written notification within five days, if any worker inadvertently kills or injures a special-status species, or finds one injured, or trapped, on the project site or during work. Work will stop immediately if an incident occurs until corrective actions are provided by USFWS and implemented.
18. Erosion control Best Management Practices in accordance with the Travis AFB Storm Water Pollution Prevention Plan will be implemented as required, including but not limited to, grading during the dry season, compaction of upland spoils, and seeding and mulching areas of exposed soil as determined necessary by the Travis AFB Storm Water Manager.
19. The shoulders of the parking ramps will be restored to the previous condition to stabilize the disturbed area.
20. Disturbed areas will be re-seeded with a native seed mix approved by Travis, AFB Natural Resources Management Team. Unpaved areas within the proposed FamCamp expansion area will be xeriscaped.
21. A USFWS approved biologist/or Service approved biologist shall perform construction site inspections to ensure the contractor completes the proposed action as described and complies with all proposed minimization measures.
22. All fencing, flagging, debris, trash, and materials from work areas will be removed following completion of construction and habitat restoration activities.
23. Contractors and equipment operators will be responsible for spill prevention and emergency spill response measures as required, including clean-up. Appropriate materials such as emergency response plans will be on site at all times.
24. Concrete waste and water from curing operations will be collected in washouts and will be disposed of properly and not allowed into water courses or CTS upland habitat.

V. STATUS OF THE SPECIES AND CRITICAL HABITAT IN THE ACTION AREA

There is no Critical Habitat or documented occurrences of listed species (CTS) within the Proposed Action area. However, known CTS breeding ponds exist to the north, northeast, south, and east-southeast of Action Area. The nearest known breeding pond is located approximately 4,800 feet to the north on private land (Figure 3). Union Creek runs through this private property and directly onto the base and connects with the ditch on this site without any barriers. This section of Union Creek is seasonally inundated and therefore can be both potentially breeding habitat as well as a movement corridor for CTS (J. Alvarez, pers. comm.). The distance between the offsite breeding pond and the site (as shown on Figure 3) is approximately 1.7 miles. Significant upland artificial barriers to CTS dispersal (i.e., curbs, residential housing, railroad tracks, and other buildings) exist between breeding ponds and the project site (Figure 4) on and off Travis AFB making upland migration less likely, however driveways and pedestrian access points do make these barriers to the site incomplete. CTS Critical Habitat exists east of the base on the adjacent Wilcox Ranch. The Critical Habitat is owned by the Solano Land Trust.

An adult CTS was seen traveling west (from off-base private lands to the base interior) across the main runway on Travis AFB on 29 January 2014, however, the location of the sighting is approximately 10,600 feet from the Action Area. On July 5 and July 8, 2015 two dead individual CTS were found on the eastern portion of the base (9,100 feet and 10,400 feet from the Action Area). These two individuals were most likely responding to either ponded water as a result of a break in a water main near their estivation sites or humid weather conditions. These CTS encounters are not located in or near the Action Area; however, they indicate that CTS are estivating and dispersing through the upland habitat on the eastern portion of the base (Figure 3).

Previous sensitive species surveys did not include the drainage ditch located approximately 100 feet west of the LOD (CH2MHill 2006), but surveys are planned for the winter of 2015-2016. The nearest known occurrence of the VPFS is approximately 620 feet south of the Action Area. The nearest known CCG location is 1,500 feet from the Action Area, and the nearest known occurrence of VPTS is approximately 12,000 feet from the Action Area (Figure 3). No impacts to the drainage ditch would be anticipated as a result of the proposed expansion.

Section 318 of fiscal year 2004 National Defense Authorization Act (Pub. L. 108–136) amended the Endangered Species Act to address the relationship of Integrated Natural Resources Management Plans (INRMPs) to critical habitat by adding a new section 4(a)(3)(B). The Final Rule exempted the base under Section 4(a) (3) (B). This provision prohibits the Service from designating as critical habitat any lands or other geographical areas owned or controlled by the DOD that are subject to an INRMP prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary of the Interior determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation.

VI. EFFECTS OF THE ACTION

Effects from the Proposed Action are expected to be limited to the project area only and are not likely to impact CTS or other listed species. The project area does provide suitable habitat for CTS, and it is within their range of migration. However, the land between the project site and known breeding areas is developed, and is characterized by numerous significant artificial impediments to CTS dispersal (i.e., curbs, residential housing, railroad tracks, and other buildings). As shown on Figure 3, the route from the nearest breeding pond to the site via Union Creek and the drainage ditch to the west of the

site would require a migration of approximately 1.8 miles. With the implementation of conservation measures, the proposed project is not likely to adversely affect CTS. All construction activity would take place during daylight hours in the dry season, when CTS are in their burrows, thus effects to migrating salamanders would be insignificant, discountable, and immeasurable. Because habitat for the VPFS, CCG, or VPTS would not be impacted, no affects to those species would be expected.

VII. CONCLUSION

Effects on CTS are not likely to occur because available habitat on the project site is inaccessible or beyond the migration range of the species, and because proper conservation measures will be implemented and continuously monitored. Avoidance and minimization measures will prevent adverse effects to the CTS. ***The action is not likely to adversely affect CTS***. No impacts to other listed species (VPFS, CCG, or VPTS) would be expected.

VIII. LIST OF CONTACTS

For further information, contact Mr. Brian Sassaman at (707) 424-8225 or email at brian.sassaman.1@us.af.mil.

IX. REFERENCES

Auxillio Management Services. 2015. Final Jurisdictional Delineation for Travis Air Force Base, Fairfield California. April.

CH2M HILL. 2006. Summary of Rare, Threatened, and Endangered Species Associated with Seasonal Wetlands. Technical Memorandum.

\\SC-DC-WS\Greenville\gis_projects\AFCEE\Travis_AFB\Project\FamCamp\NLAA\Fig 01 Current Conditions.mxd

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Legend

- Family Camp Boundary
- Ditch
- Vernal Pool
- Break in Curb Line

Figure 1
Current Conditions

Family Camp

Travis Air Force Base, California

N

W E

S

0 100 200 300 400 500 Feet

\\SC-DC-WS\Greenville\gis_projects\AFCEE\Travis_AFB\Project\FamCamp\NLAA\Fig 02 Proposed Expansion.mxd

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Legend

- Concrete Camping Pad
- Overflow Parking
- Asphalt Road
- Ditch
- Vernal Pool
- Contractor Staging Area
- Action Area (250' buffer of Limits of Disturbance)
- Contractor Travel Route
- Limits of Disturbance

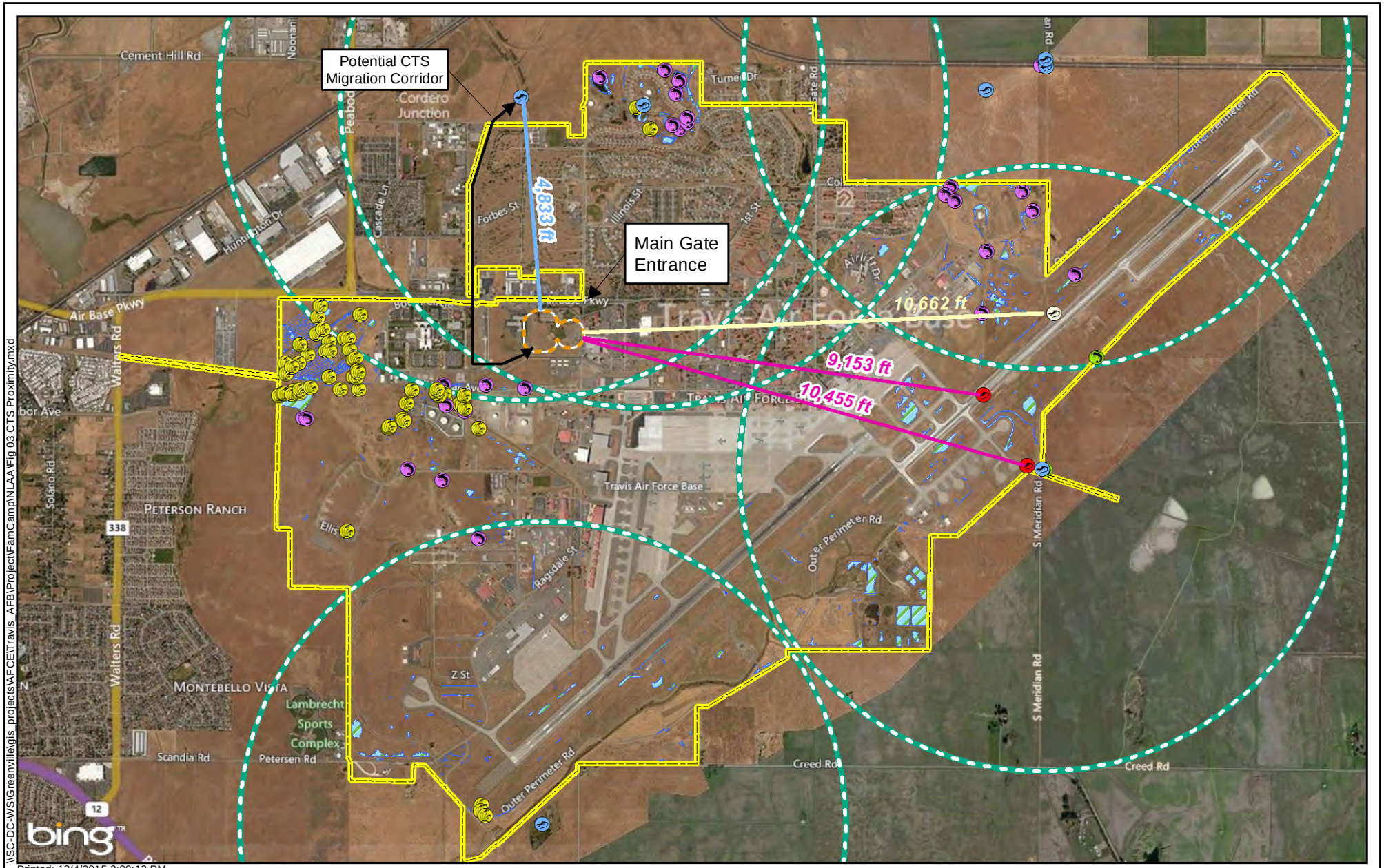
Figure 2
Proposed Expansion

Family Camp

Travis Air Force Base, California

N W E S

0 100 200 300 400 500 Feet



\\SC-DC-WS\Greenville\gis_projects\AFCEC\Travis_AFB\Project\FamCamp\NLAA\Fig 03 CTS Proximity.mxd

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Legend

- Contra Costa Goldfields
- Vernal Pool Fairy Shrimp
- Vernal Pool Tadpole Shrimp
- California Tiger Salamander (CTS)
- CTS Breeding Pool
- CTS Sighting (January 2014)
- Dead CTS Sighting (July 2015)
- Action Area (250' buffer of Limits of Disturbance)
- Travis AFB
- CTS Breeding Pond 1.3 mile buffer
- Wetlands

Figure 3
Proximity of Project Site to Known Threatened & Endangered Species Locations

Family Camp
Travis Air Force Base, California

N
W E
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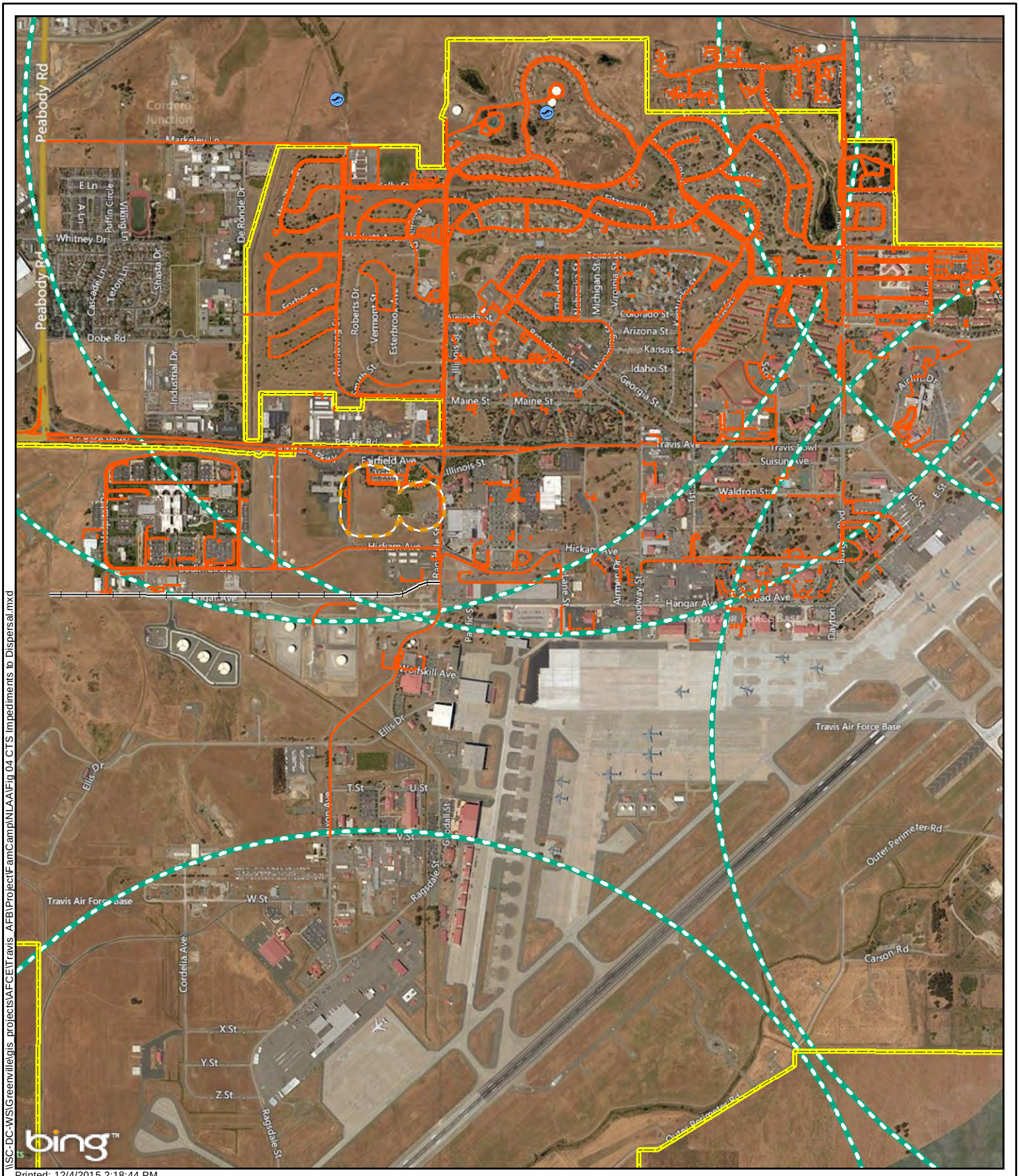
0 2,500 5,000 Feet



\\SC-DC-WS\Greenv\llelgis_projects\AFCE\Travis_AFB\Project\FamCamp\NLAA\Fig 04 CTS Impediments to Dispersal.mxd

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Legend

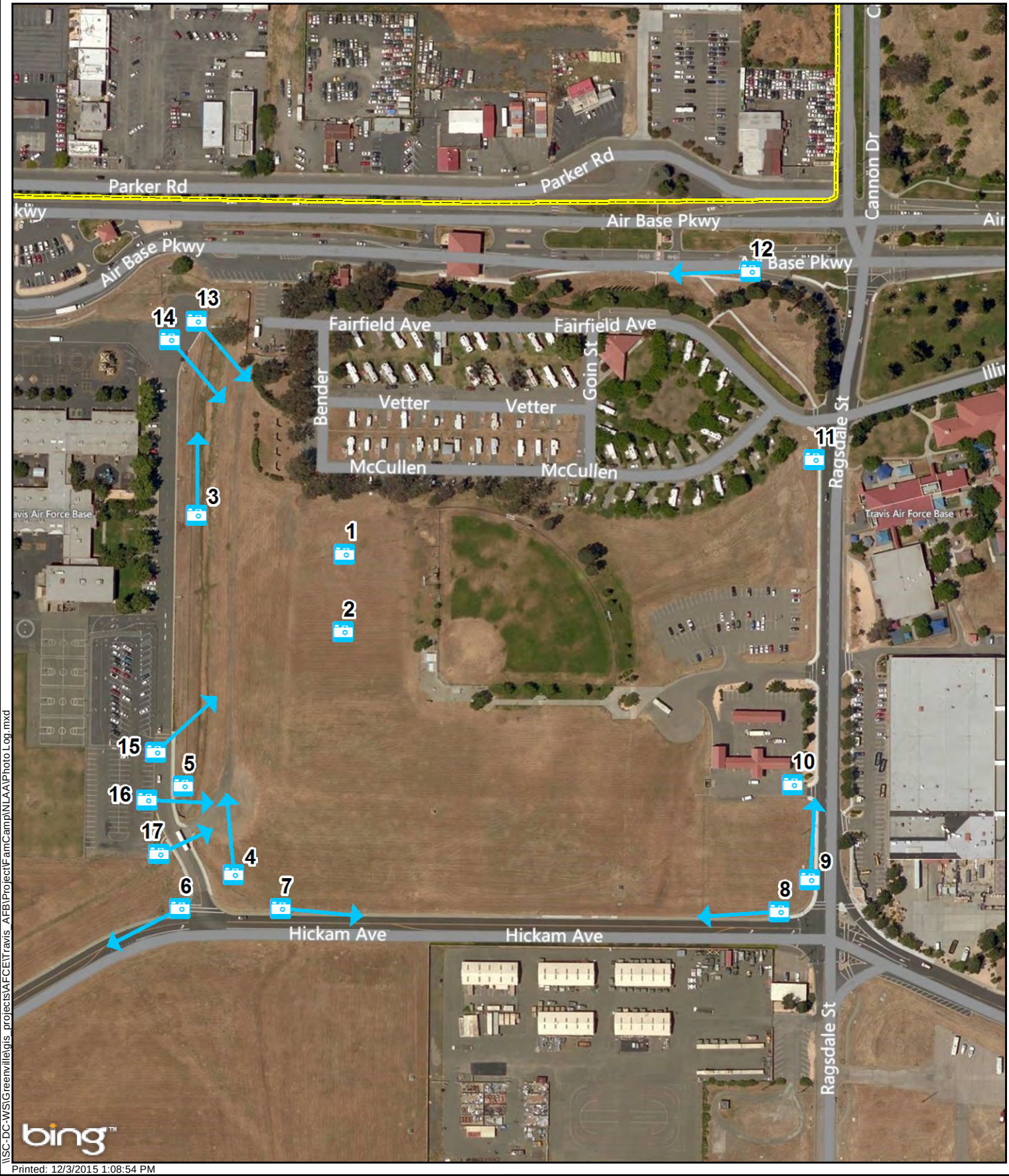
- CTS Breeding Pool
- Curbed Road
- Railroad
- Travis AFB Boundary
- Action Area (250' buffer of Limits of Disturbance)
- CTS 1.3 mile buffer

N W E S

0 1,000 2,000 3,000 4,000 5,000 Feet

Figure 4
California Tiger Salamander Impediments to Dispersal

Family Camp
Travis Air Force Base, California



\\SC-DC-WS\Greenville\gis_projects\AFCEE\Travis_AFB\Project\FamCamp\NLAA\Photo Log.mxd

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Legend

- Photo Location
- Photo View Direction
- Travis AFB Boundary

N W E S

0 100 200 300 400 500 Feet

Photo Log

Family Camp

Travis Air Force Base, California

Photo 1: Ground squirrel burrow on the proposed FamCamp expansion site.

Photo 2: soil cracks on the proposed FamCamp expansion site.

Photo 3: drainage ditch located 100 feet west of the proposed FamCamp expansion site limits of disturbance (facing north).

Photo 4: View of Fairfield Avenue, the west side FamCamp Expansion Area, from south to north.

Photo 5: Closer view of Fairfield Avenue, the west side FamCamp Expansion Area, from south to north. Note this is 18 hours after a significant rain event.

Photo 6: View of Hickam Avenue immediately west of Fairfield Avenue and the FamCamp Expansion Area, from east to west.

Photo 7: View of Hickam Avenue south of the FamCamp Expansion Area, from west to east.

Photo 8: View of Hickam Avenue immediately south of the FamCamp Expansion Area, from east to west.

Photo 9: View of Ragsdale Street which is east of the FamCamp Expansion Area, from south to north.

Photo 10: View of the carwash area immediately east of the FamCamp Expansion Area

Photo 11: View of the entrance to the FamCamp Expansion Area

Photo 12: View of Air Base Boulevard which is north of the FamCamp Expansion Area, from east to west.

Photo 13: Curb break, facing east.

Photo 14: Facing east-southeast.

Photo 15: acing northeast (current FamCamp in background).

Photo 16: Facing east.

Figure 17: Facing northeast.

Subject: FW: FamCamp Project Additional Information
Date: Tuesday, January 12, 2016 at 1:16:27 PM Eastern Standard Time
From: FRANKLIN, MILEA A GS-12 USAF AMC 60 CES/CEIE
To: Tony Ruhlman, PMP

As requested.

//SIGNED//
Milea Franklin, E.I.T.
Chief, Environmental Element
Travis AFB, CA
(707) 424-4321 or DSN 837-4321

-----Original Message-----
From: Aguilera, Amber [mailto:amber_aguilera@fws.gov]
Sent: Monday, January 11, 2016 10:58 AM
To: SASSAMAN, BRIAN L GS-13 USAF AMC 60 CES/CEI; FRANKLIN, MILEA A GS-12 USAF AMC 60 CES/CEIE; CRAIG, PENN GS-12 USAF AMC 60 CES/CEIEC
Subject: FamCamp Project Additional Information

Mr. Sassaman,

This email is in response to your December 17, 2015, letter requesting initiation of informal consultation with the U.S. Fish and Wildlife Service (Service) for the proposed Family Camp Expansion Project at Travis Air Force Base (proposed project), in Solano County, California. The Service received your request and the enclosed project information via email on December 17, 2015. At issue are the potential effects of the proposed project on the federally-listed as threatened Central Valley population of the California tiger salamander (Ambystoma californiense) (California tiger salamander) and vernal pool fairy shrimp (Branchinecta lynchi) (fairy shrimp), and the federally-listed as endangered Contra Costa goldfields (Lasthenia conjugens) and vernal pool tadpole shrimp (Lepidurus packardi) (tadpole shrimp). The proposed project includes the addition of 10 new camping sites, road construction, and extension of utilities. The proposed project is located within Travis Air Force Base (Travis AFB). This response is provided under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.) (Act).

Your initiation letter states that the proposed project may affect, but is not likely to adversely affect the California tiger salamander, fairy shrimp, Contra Costa goldfields, and tadpole shrimp. However, the project information you provided states that "because habitat for the VPFS, CCG, or VPTS would not be impacted, no affects to those species would be expected." Please clarify your determination for the fairy shrimp, tadpole shrimp, and the Contra Costa goldfields.

The project information you provided does not describe how the proposed project will be constructed. Please describe what construction activities are associated with the proposed project, including any activities associated with site preparation and the extension of utilities.

The consultation process for the proposed project cannot begin until we receive all of the information, or a statement explaining why that information cannot be made available. We will notify you when we receive this additional information. If you have any questions regarding our response on the proposed Family Camp Expansion Project at Travis Air Force Base, please contact Amber Aguilera, Fish and Wildlife Biologist, at (916) 414-6577.

Thank You,

Amber

--

Amber Aguilera
Fish and Wildlife Biologist
Sacramento Fish and Wildlife Office
Phone: 916-414-6577
Fax: 916-414-6713
amber_aguilera@fws.gov <mailto:amber_aguilera@fws.gov>

Subject: FW: FamCamp Project Additional Information
Date: Tuesday, March 22, 2016 at 8:12:12 PM Eastern Daylight Time
From: BLAZEK, MATTHEW F GS-12 USAF AMC 60 CES/CEIE
To: Tony Ruhlman, PMP

Apologies Tony, I seemed to have misplaced your first emailed request, but below are our responses made to the USFWS on 01-14-16. Please let me know if there is anything else you need, thanks!

Best,

Matt

-----Original Message-----
From: SASSAMAN, BRIAN L GS-13 USAF AMC 60 CES/CEI
Sent: Thursday, January 14, 2016 4:36 PM
To: Aguilera, Amber
Cc: FRANKLIN, MILEA A GS-12 USAF AMC 60 CES/CEIE; CRAIG, PENN GS-12 USAF AMC 60 CES/CEIEC
Subject: RE: FamCamp Project Additional Information

Hi Amber,

In response to your questions for additional information, please find our "response" listed below.

If you have any further questions, please let me know,

Thank you,

//SIGNED//
Brian L. Sassaman, GS-13, DAFC
Flight Chief, Installation Management
411 Airmen Drive, Bldg 570
Travis AFB, CA 94535-2001
DSN: 837-8225; Comm: (707) 424-8225
Email: brian.sassaman.1@us.af.mil

-----Original Message-----
From: Aguilera, Amber [mailto:amber_aguilera@fws.gov]
Sent: Monday, January 11, 2016 10:58 AM
To: SASSAMAN, BRIAN L GS-13 USAF AMC 60 CES/CEI; FRANKLIN, MILEA A GS-12 USAF AMC 60 CES/CEIE; CRAIG, PENN GS-12 USAF AMC 60 CES/CEIEC
Subject: FamCamp Project Additional Information

Mr. Sassaman,

This email is in response to your December 17, 2015, letter requesting initiation of informal consultation with the U.S. Fish and Wildlife Service (Service) for the proposed Family Camp Expansion Project at Travis Air Force Base (proposed project), in Solano County, California. The Service received your request and the enclosed project information via email on December 17, 2015. At issue are the potential effects of the proposed project on the federally-listed as threatened Central Valley population of the California tiger salamander (Ambystoma californiense) (California tiger salamander) and vernal pool fairy shrimp (Branchinecta lynchi) (fairy shrimp), and the federally-listed as endangered Contra Costa goldfields (Lasthenia conjugens) and vernal pool tadpole shrimp (Lepidurus packardi) (tadpole shrimp). The proposed project includes the addition of 10 new camping sites, road construction, and extension of utilities. The proposed project is located within Travis Air Force Base (Travis AFB).

This response is provided under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.) (Act).

1. FWS: Your initiation letter states that the proposed project may affect, but is not likely to adversely affect the California tiger salamander, fairy shrimp, Contra Costa goldfields, and tadpole shrimp. However, the project information you provided states that "because habitat for the VPFS, CCG, or VPTS would not be impacted, no affects to those species would be expected." Please clarify your determination for the fairy shrimp, tadpole shrimp, and the Contra Costa goldfields.

RESPONSE: As shown on Figure 3 of the NLAA determination submitted on 17 December, the Contra costa goldfields (Lasthenia conjugens) CCG—Federally Endangered, and vernal pool tadpole shrimp (Lepidurus packardi) VPTS—Federally Endangered do not occur within the Action Area. The Air Force has determined that the proposed expansion of the FamCamp would have no effect on these species. The vernal pool fairy shrimp (Branchinecta lynchi), VPFS, Population—Federally Threatened is not known to occur within the Action Area. However, as noted in the 17 December determination, the drainage ditch located 100' west of the proposed limits of disturbance is within the Action Area and could potentially harbor this species. Even if VPSF is present in the ditch, the proposed action is not likely to adversely affect the species because proper conservation measures to minimize migration of soils from the project site (i.e., coconut coir wattles and/or silt fencing) will be implemented and continuously monitored.

2. FWS: The project information you provided does not describe how the proposed project will be constructed. Please describe what construction activities are associated with the proposed project, including any activities associated with site preparation and the extension of utilities.

RESPONSE: Components of the Proposed Action include the following:
- a) Site grading and leveling within the limits of disturbance; b) Construction of ten 50-foot × 15-foot full service concrete camping pads with 50-Amp electrical service; c) Construction of an asphalt road network that would connect the new sites with the existing FamCamp and provide pull-through access to the sites, and d) Construction of two gravel overflow parking areas. The Proposed Action would require the extension of utilities (water, sewer, cable television, and 50-Amp electrical service). Utilities would be extended from the current FamCamp, and are located near the proposed expansion site. Some minor disturbance to the existing FamCamp road near the proposed expansion site would likely be required to connect and extend utilities. All utilities would be underground and would be routed within the limits of disturbance shown on Figure 3. All site activities (with the possible exception of temporary sediment control measures during construction) would be contained within the proposed limits of disturbance

The consultation process for the proposed project cannot begin until we receive all of the information, or a statement explaining why that information cannot be made available. We will notify you when we receive this additional information. If you have any questions regarding our response on the proposed Family Camp Expansion Project at Travis Air Force Base, please contact Amber Aguilera, Fish and Wildlife Biologist, at (916) 414-6577.

Thank You,

Amber

Amber Aguilera
Fish and Wildlife Biologist
Sacramento Fish and Wildlife Office
Phone: 916-414-6577
Fax: 916-414-6713
amber_aguilera@fws.gov <mailto:amber_aguilera@fws.gov>

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Suite W-2605
Sacramento, California 95825-1846

In Reply Refer to:
08ESMF00-
2016-I-0622

MAR 22 2016

Brian L. Sassaman
60th Civil Engineer Squadron
Flight Chief, Installation Management
411 Airman Drive, Building 570
Travis AFB, California 94535-2001

Subject: Informal Consultation on the Proposed Family Camp Expansion Project at Travis Air Force Base, Solano County, California

Dear Mr. Sassaman:

This letter is in response to Travis Air Force Base's (Travis AFB/base), December 17, 2015, request for initiation of informal consultation with the U.S. Fish and Wildlife Service (Service) on the proposed Family Camp Expansion Project (proposed project), in Solano County, California. Your request, which included the December 17, 2015, *Proposed Expansion of the Family Camp Not Likely to Adversely Affect Determination for the California Tiger Salamander (Ambystoma californiense)* initiation package, was received by the Service on December 17, 2015; however, the initiation package you provided was insufficient for the Service to concur with your determination. The Service requested additional information via email on January 11, 2016, and Travis AFB provided the additional information requested via email on January 14, 2016. The initiation package and the additional information presents an evaluation of the proposed project's effects on species federally-listed under the Endangered Species Act of 1973, as amended (16 U.S.C. §1531 *et seq.*) (Act).

The federal action we are consulting on is the extension of the Family Camp (FamCamp) campground at Travis AFB. The extension of the FamCamp includes the addition of 10 50-foot by 15-foot paved camping sites, a road connecting the new sites to the existing FamCamp sites, and the extension of utilities from the current FamCamp facilities to the additional 10 sites. This response is provided under the authority of the Act, and in accordance with the implementing regulations pertaining to interagency cooperation (50 CFR 402). The proposed project is not within designated or proposed critical habitat for any federally-listed species.

The findings presented in the initiation package and additional information conclude that the proposed project may affect, but is not likely to adversely affect the federally-listed as threatened Central Valley population of the California tiger salamander (*Ambystoma californiense*) (California tiger salamander) and vernal pool fairy shrimp (*Branchinecta lynchi*) (fairy shrimp).

The findings and recommendations in this consultation are based on: (1) the January 14, 2016, additional information received via email from Travis AFB; (2) your December 17, 2015, letter initiating consultation and the enclosed initiation package; (3) email and telephone correspondence between the Service and Travis AFB; and (4) other information available to the Service.

Project Description

The existing FamCamp campground at Travis AFB (see Enclosure, Figure 1) is currently operating annually at 90% of capacity and has to turn away potential campers during peak times. Construction of the proposed project will expand the FamCamp to include an additional 10 campground sites. Proposed project activities to complete the expansion include grading and leveling the site, placement of 10 50-foot by 15-foot concrete pads with 50 amp electrical service, construction of an asphalt road network that will connect the 10 new sites with the existing FamCamp and to provide a pull through access to the sites, and the construction of two gravel overflow parking areas (see Enclosure, Figure 2). The proposed project also includes the extension of water, sewer, cable, and electrical utilities from the current FamCamp facilities. Some minor disturbance to the existing FamCamp road near the proposed expansion site will likely be required to connect and extend the utilities, which will be routed underground within the limits of disturbance shown in the Enclosure, Figure 3.

Equipment required to complete the proposed project include a dozer/grader, vehicles to transport material (e.g., soil, asphalt, concrete), and a paving machine. A contractor staging area will be located on an existing paved parking area located 500 feet east of the proposed project area (see Enclosure, Figure 2). The construction route from the staging area to the project site will run north on Ragsdale Street to the current FamCamp (see Enclosure, Figure 2) and all other access routes will be via established paved roads. The proposed project will result in permanent impacts to 2.4 acres of upland habitat. Construction of the proposed project will begin in June 2016 and will take 4 months to complete.

Avoidance and Minimization Measures

The following avoidance and minimization measures will be implemented:

1. Prior to the start of construction activities, a Service approved biologist will provide education and training sessions for all individuals that will be involved with site preparation or construction. The training will focus on habitat sensitivity and identification of vernal pools and California tiger salamanders. The training will include a description of the California tiger salamander and fairy shrimp, a description of their behavior, general measures to be taken to protect species, the penalties for non-compliance, and the boundaries of the project area. A fact sheet or other supporting materials containing this information will be prepared and distributed. Upon completion of training, employees will sign a form stating that they attended the training and understand all the avoidance and minimization measures.
2. Construction activities will be timed to occur during the dry season (June-October) to minimize potential effects to California tiger salamander dispersal.
3. Within 14 days of the start of construction activities, a Service approved biologist will perform a pre-construction survey and identify potential refuge habitats (burrows) suitable for the California tiger salamander. In the unlikely event that a California tiger salamander is encountered, the Service approved biologist will contact the Service for instructions.
4. A Service approved biologist will be on-site during all activities that could result in the take of listed species. The qualifications of the Service approved biologist(s) will be presented to the Service for review and approval at least 10 working days prior to any groundbreaking at the project site. If any of the requirements associated with these measures are not being fulfilled, the Service approved biologist will have the authority to stop project activities, through communication with the Project Manager.
5. Before work begins, the contractor will clearly delineate (e.g., stake, chalk, or flag) the disturbance boundaries and prohibit any off-road traffic outside of these boundaries.

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5. Before work begins, the contractor will clearly delineate (e.g., stake, chalk, or flag) the disturbance boundaries and prohibit any off-road traffic outside of these boundaries.

6. The contractor will confine all equipment to designated work zones (including access roads and laydown) within the area to be disturbed.
7. Construction personnel will be instructed to exercise caution when commuting within the area to be disturbed and a 15 mph speed limit will be observed on all unpaved surfaces.
8. All project related vehicle traffic will be restricted to established roads and other designated areas.
9. Orange barrier material will be used for wetlands near the project site. The location of the orange barrier fencing will be determined by the Service approved biologist prior to the start of work. Orange barrier fencing will be installed 2 inches off the ground to ensure California tiger salamanders or other wildlife does not become entangled. The need for other wetland protections (i.e., coconut coir wattles and/or silt fencing) will be determined by the on-site Service approved biologist or Natural Resource Management staff. Vehicles, equipment and personnel will be restricted from these areas. All stakes and flagging will be removed within 60 days of completion of construction.
10. All trenches or holes will be covered at the end of the workday or provided with earthen escape ramps.
11. All trash (food related items such as wrappers, bottles, cans, food scraps, etc.) will be placed in closed containers and removed from the project site on a daily basis
12. If there is a 50% or greater probability of rain forecasted by the National Weather Service by 07:00 am the day prior to a scheduled workday, then all work activities are cancelled for the next 24 hours. If any measurable amount of rainfall occurs (including trace amounts) work may not resume for 24 hours from rain cessation. The weather forecast and hourly weather data for Travis AFB can be found by entering zip code 94535 at http://www.srh.noaa.gov/forecast.
13. All Service approved biologists and or biological monitors are required to check the entire project site thoroughly including all equipment every morning before work begins. The Service approved biologist will do a more extensive and thorough pre-construction check for California tiger salamanders at and within 250 feet of the project site on days where the relative humidity the previous night was above 80% or if soil saturation occurs from the unseasonable application of water within the project site.
14. Water shall not be pumped, sprayed, or allowed to flow over undisturbed uplands that can support California tiger salamanders as part of planned project activities outside of pre-approved requirements (i.e. dust control). Water applied for pre-approved requirements will be applied in the minimum quantities necessary, and only to disturbed soils. If excess water accumulates as the result of construction activity, water may be pumped through a screened pump and removed from the construction area as deemed necessary by the on-site Service approved biologist in coordination with Travis AFB staff. If water inadvertently or purposefully enters construction trenches, pits, or excavations, a Service approved biologist will remain on-site until water is pumped from the trench, pit, or excavation. Following pumping, the Service approved biologist will inspect the trench, pit, or excavation area, and the surrounding uplands to determine if disturbance to California tiger salamanders has occurred and implement any other measures necessary (e.g. placement of cover boards, exclusionary fencing) to protect individuals that may emerge due to the wet soil.
15. Pipes laid underground or stored on the ground will be capped, covered, or taped in a manner that excludes California tiger salamanders from entering the pipe prior to the completion of construction. Long-term storage of pipes and other construction material will be placed on asphalt and raised above the ground by no less than 1.5 inches (e.g., on top of 2x4 supports).
16. Trenches, pits, and excavations will be covered in a manner that exclude California tiger salamanders from entering these areas during weekends, holidays, humid days, rain events, etc. Specifically, no gaps greater than one inch will be allowed within cover materials if the Service approved biologist(s) will not be present the following day or if rain events or high humidity days are expected to occur.

17. The Service will be notified verbally immediately, and with a written notification within 5 days, if any worker inadvertently kills or injures a listed species, or finds one injured, or trapped, on the project site or during work. Work will stop immediately if an incident occurs until corrective actions are provided by the Service, which will then be implemented.
18. Erosion control Best Management Practices in accordance with the Travis AFB Storm Water Pollution Prevention Plan will be implemented as required, including but not limited to, grading during the dry season, compaction of upland spoils, and seeding and mulching areas of exposed soil as determined necessary by the Travis AFB Storm Water Manager.
19. Disturbed areas will be re-seeded with a native seed mix approved by the Travis AFB Natural Resources Management Team. Unpaved areas within the proposed FamCamp expansion area will be xeriscaped.
20. A Service approved biologist will perform construction site inspections to ensure the contractor completes the proposed action as described and complies with all proposed minimization measures.
21. All fencing, flagging, debris, trash, and materials from work areas will be removed following completion of construction and habitat restoration activities.
22. Contractors and equipment operators will be responsible for spill prevention and emergency spill response measures as required, including clean-up. Appropriate materials such as emergency response plans will be on-site at all times.
23. Concrete waste and water from curing operations will be collected in washouts and will be disposed of properly and not allowed into water courses or upland habitat.

The proposed project area is composed of maintained grassland surrounded by a baseball field, paved parking areas, and a car/RV wash to the east; the existing FamCamp to the north and northeast; and a drainage ditch and paved parking areas to the west. The maintained grassland is scattered with ground squirrel burrows, gopher mounds, and soil cracks, which provides suitable upland habitat for the California tiger salamander. Known California tiger salamander breeding ponds exist to the north, northeast, south, and southeast of the proposed project area, with the nearest known breeding pond located 4,800 feet to the north on private land (see Enclosure, Figure 3). Union Creek runs through this private property onto the base and connects with a drainage ditch located to the west of the project site. This drainage could potentially serve as a dispersal corridor (see potential migration corridor from nearest breeding pond in Enclosure, Figure 3) and possibly breeding habitat for the California tiger salamander (J. Alvarez 2015, pers. comm.), although this has not been confirmed. Dispersal from this breeding pond into the project site via Union Creek and the drainage ditch requires an almost 1.8 mile migration. In addition, there are significant upland artificial barriers to dispersal between the known breeding ponds and the proposed project site (i.e., curbs, residential housing, railroad tracks, and other buildings) but driveways and pedestrian access points make these barriers incomplete.

An adult California tiger salamander was seen traveling west (from off-base private lands to the base interior) across the main runway on Travis AFB on January 29, 2014, however, the location of the sighting is approximately 10,600 feet from the project area. On July 5 and July 8, 2015, two dead individuals were found on the eastern portion of the base (9,100 feet and 10,400 feet from the project area, respectively). These two individuals were most likely responding to either ponded water as a result of a break in a water main near their estivation sites or humid weather conditions. These encounters were not located in or near the project area but they do indicate that California tiger salamanders are aestivating and dispersing through the upland habitat on the eastern portion of the base (see Enclosure, Figure 3).

Previous sensitive species surveys did not include the drainage ditch located approximately 100 feet west of the project area (CH2M Hill 2006), but surveys are planned for the winter of 2015-2016.

The nearest known occurrence of the fairy shrimp is about 620 feet south of the project area. No impacts to the drainage ditch will occur as a result of the proposed project.

The Service concurs with your determination that the proposed project may affect, but is not likely to adversely affect the California tiger salamander. The proposed project reached the 'may affect' level due to the fact that the proposed project occurs within dispersal distance of known California tiger salamander breeding pools and there is suitable upland habitat within the action area. However, due to the presence of numerous barriers to dispersal between the project site and known breeding ponds, and the implementation of avoidance and minimization measures, the Service believes that any potential adverse effects to the California tiger salamander from construction of the proposed project will be discountable.

The Service also concurs with your determination that the proposed project may affect, but is not likely to adversely affect the fairy shrimp. The proposed project reached the 'may affect' level due to the fact that there is a wetland within 250 feet of the project area that is potential habitat for the fairy shrimp. Due to the lack of ground disturbance within this wetland and the implementation of avoidance and minimization measures, the Service believes that any potential adverse effects to the fairy shrimp from construction of the proposed project will be discountable.

Therefore, unless new information reveals effects of the proposed project that may affect listed species in a manner or to an extent not considered, or a new species or critical habitat is designated that may be affected by the proposed project, no further action pursuant to the Act is necessary.

If you have any questions regarding the proposed Family Camp Expansion Project at Travis Air Force Base, please contact Amber Aguilera (amber_aguilera@fws.gov), Fish and Wildlife Biologist, at (916) 414-6577, or myself at (916) 414-6563.

Sincerely,

Doug Weinrich

Doug Weinrich
Assistant Field Supervisor

Enclosure

LITERATURE CITED

CH2M Hill. 2006. Summary of Rare, Threatened, and Endangered Species Associated with Seasonal Wetlands. Technical Memorandum. September.

Enclosure

Figures 1-3

Legend

- Family Camp Boundary
- Ditch
- Vernal Pool
- Break in Curb Line

Figure 1
Current Conditions
Family Camp
Travis Air Force Base, California

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0 100 200 300 400 500 Feet

\\SC-DC-WSIG\reenville\gis_projects\AF-CE\Travis_AFB\ProjectFamCamp\NLAA\Fig 02 Proposed Expansion.mxd

Printed: 12/4/2015 2:06:29 PM

Legend

- Concrete Camping Pad
- Overflow Parking
- Asphalt Road
- Ditch
- Vernal Pool
- Contractor Staging Area
- Action Area (250' buffer of Limits of Disturbance)
- Contractor Travel Route
- Limits of Disturbance

Figure 2
Proposed Expansion
Family Camp
Travis Air Force Base, California

N
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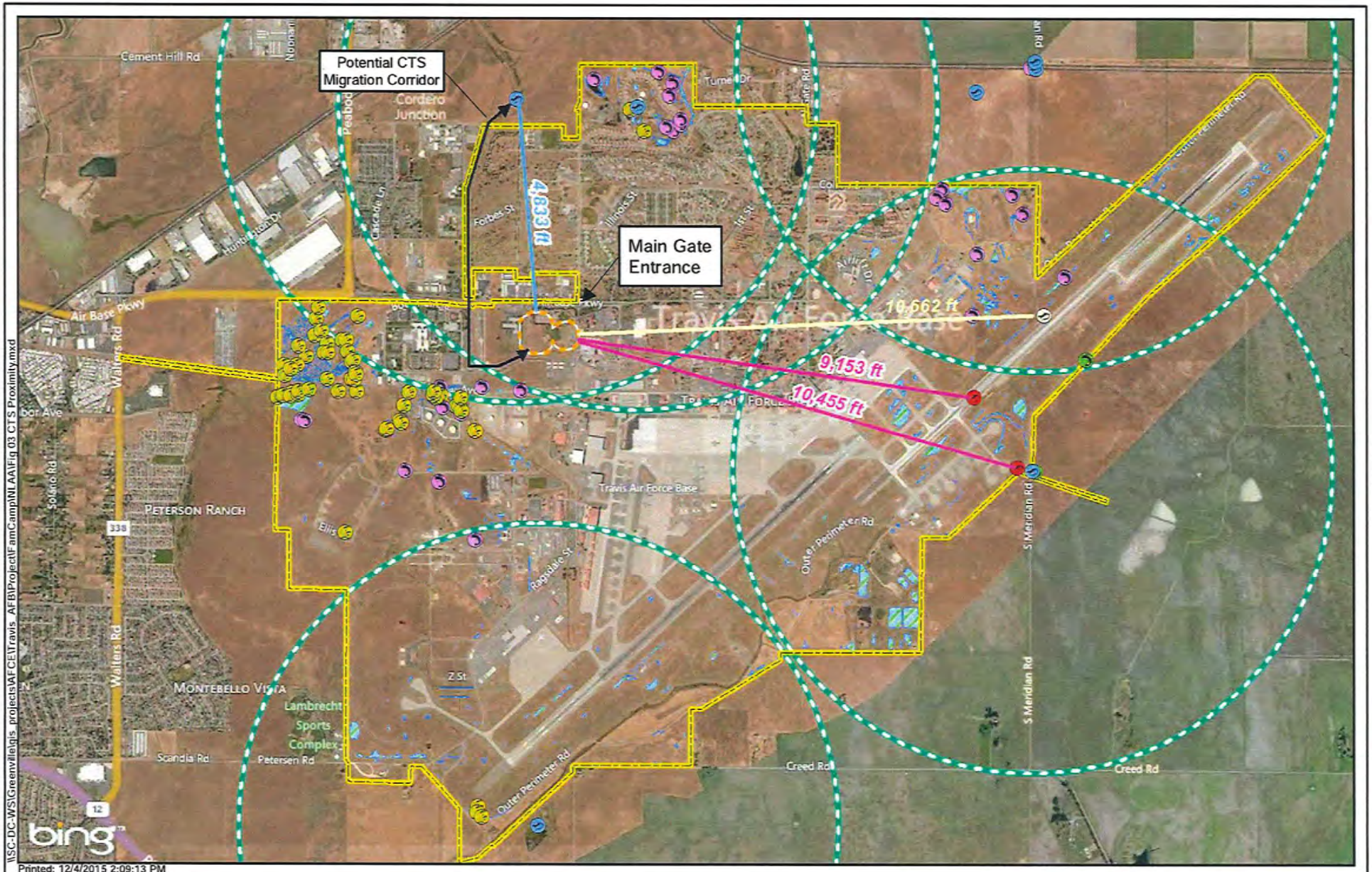
0 100 200 300 400 500 Feet



Legend

- Contra Costa Goldfields
- Vernal Pool Fairy Shrimp
- Vernal Pool Tadpole Shrimp
- California Tiger Salamander (CTS)
- CTS Breeding Pool
- CTS Sighting (January 2014)
- Dead CTS Sighting (July 2015)
- Action Area (250' buffer of Limits of Disturbance)
- Travis AFB
- CTS Breeding Pond 1.3 mile buffer
- Wetlands

Figure 3
Proximity of Project Site to Known Threatened & Endangered Species Locations
Family Camp
Travis Air Force Base, California

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0 2,500 5,000 Feet

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APPENDIX C

USFWS Information, Planning, and Conservation System and California Natural Diversity Database 2016 Sensitive Species Lists for Solano County

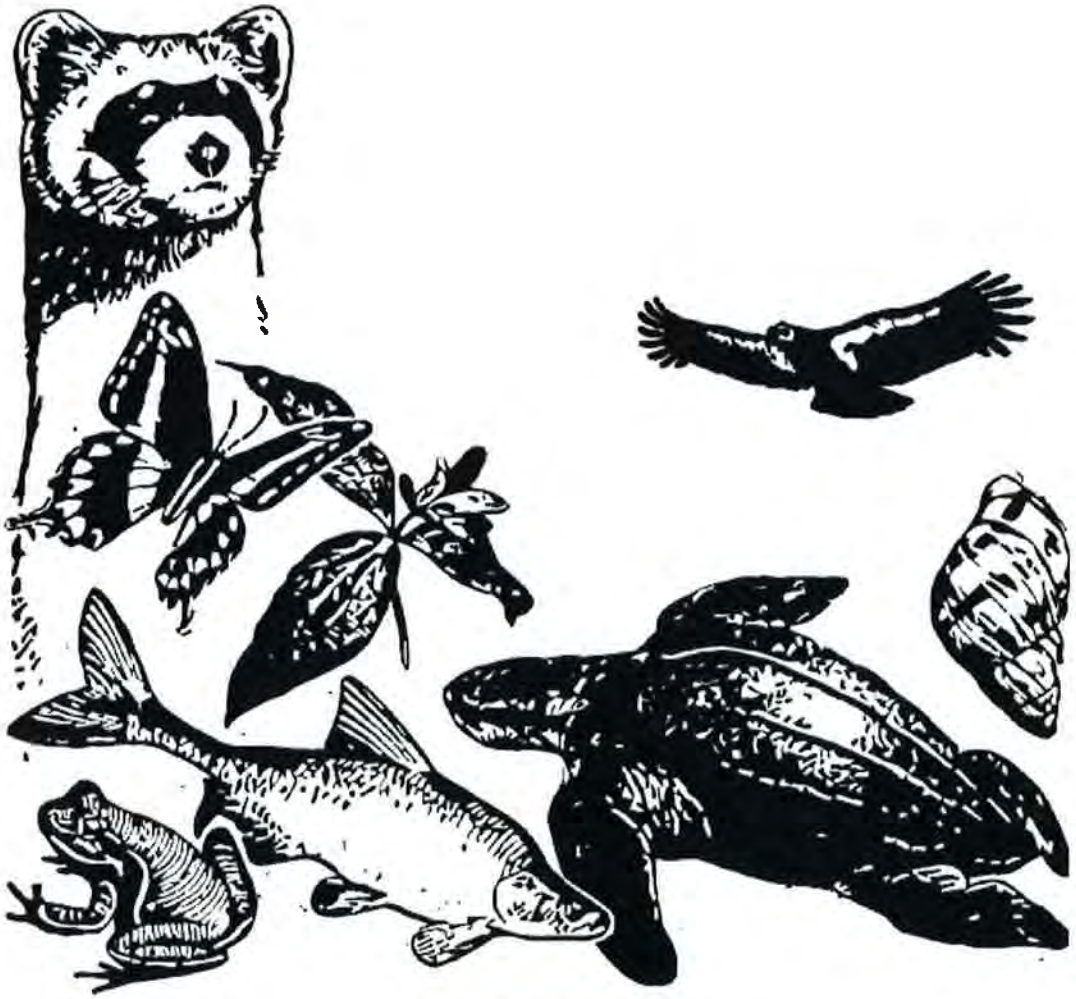
U.S. Fish & Wildlife Service

Proposed FamCamp Expansion on Travis AFB

IPaC Trust Resources Report

Generated April 12, 2016 01:23 PM MDT, IPaC v3.0.2

This report is for informational purposes only and should not be used for planning or analyzing project level impacts. For project reviews that require U.S. Fish & Wildlife Service review or concurrence, please return to the IPaC website and request an official species list from the Regulatory Documents page.



IPaC - Information for Planning and Conservation (https://ecos.fws.gov/ipac/): A project planning tool to help streamline the U.S. Fish & Wildlife Service environmental review process.

Table of Contents

U.S. Fish & Wildlife Service

IPaC Trust Resources Report

NAME

Proposed FamCamp Expansion on Travis AFB

LOCATION

Solano County, California

DESCRIPTION

Proposed expansion of the current FamCamp to the south to add 10 camping spaces.

IPAC LINK

https://ecos.fws.gov/ipac/project/E74PT-S3IGZ-HJBCP-6KKXV-NK4KEU

U.S. Fish & Wildlife Service Contact Information

Trust resources in this location are managed by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Endangered Species

Proposed, candidate, threatened, and endangered species are managed by the Endangered Species Program of the U.S. Fish & Wildlife Service.

This USFWS trust resource report is for informational purposes only and should not be used for planning or analyzing project level impacts.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list from the Regulatory Documents section.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency.

A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list either from the Regulatory Documents section in IPaC or from the local field office directly.

The list of species below are those that may occur or could potentially be affected by activities in this location:

Amphibians

California Red-legged Frog Rana draytonii — Threatened

CRITICAL HABITAT
There is **final** critical habitat designated for this species.
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=D02D

California Tiger Salamander Ambystoma californiense — Threatened

CRITICAL HABITAT
There is **final** critical habitat designated for this species.
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=D01T

Birds

California Clapper Rail Rallus longirostris obsoletus — Endangered

CRITICAL HABITAT
No critical habitat has been designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B04A

California Least Tern Sterna antillarum browni — Endangered

CRITICAL HABITAT
No critical habitat has been designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B03X

Crustaceans

Conservancy Fairy Shrimp Branchinecta conservatio — Endangered

CRITICAL HABITAT
There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=K03D

Vernal Pool Fairy Shrimp Branchinecta lynchi — Threatened

CRITICAL HABITAT
There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=K03G

Vernal Pool Tadpole Shrimp Lepidurus packardi — Endangered

CRITICAL HABITAT
There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=K048

Fishes

Delta Smelt Hypomesus transpacificus — Threatened

CRITICAL HABITAT
There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=E070

Steelhead Oncorhynchus (=Salmo) mykiss — Threatened

CRITICAL HABITAT
There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=E08D

Flowering Plants

Contra Costa Goldfields Lasthenia conjugens — Endangered

CRITICAL HABITAT
There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=Q122

Keck's Checker-mallow Sidalcea keckii — Endangered

CRITICAL HABITAT
There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=Q1OS

San Joaquin Orcutt Grass Orcuttia inaequalis — Threatened

CRITICAL HABITAT
There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=Q1ZP

Showy Indian Clover Trifolium amoenum — Endangered

CRITICAL HABITAT
No critical habitat has been designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=Q238

Soft Bird's-beak Cordylanthus mollis ssp. mollis — Endangered

CRITICAL HABITAT
There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=Q0GT

Suisun Thistle Cirsium hydrophilum var. hydrophilum — Endangered

CRITICAL HABITAT
There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=Q0FC

Insects

Delta Green Ground Beetle Elaphrus viridis — Threatened

CRITICAL HABITAT
There is **final** critical habitat designated for this species.
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=I01G

San Bruno Elfin Butterfly Callophrys mossii bayensis — Endangered

CRITICAL HABITAT
No critical habitat has been designated for this species.
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=I00Q

Valley Elderberry Longhorn Beetle Desmocerus californicus dimorphus — Threatened

CRITICAL HABITAT
There is **final** critical habitat designated for this species.
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=I01L

Mammals

Salt Marsh Harvest Mouse Reithrodontomys raviventris — Endangered

CRITICAL HABITAT
No critical habitat has been designated for this species.
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=A03Y

Reptiles

Giant Garter Snake Thamnophis gigas — Threatened

CRITICAL HABITAT
No critical habitat has been designated for this species.
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=C057

Critical Habitats

This location overlaps all or part of the critical habitat for the following species:

Conservancy Fairy Shrimp Branchinecta conservatio
Final designated critical habitat
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=K03D#crithab

Contra Costa Goldfields Lasthenia conjugens
Final designated critical habitat
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=Q122#crithab

Vernal Pool Fairy Shrimp Branchinecta lynchi
Final designated critical habitat
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=K03G#crithab

Vernal Pool Tadpole Shrimp Lepidurus packardi

Final designated critical habitat
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=K048#crithab

Migratory Birds

Birds are protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

Any activity that results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish & Wildlife Service.[1] There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

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1. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Additional information can be found using the following links:

- Birds of Conservation Concern
  http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Conservation measures for birds
  http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Year-round bird occurrence data
  http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/akn-histogram-tools.php

The following species of migratory birds could potentially be affected by activities in this location:

Bald Eagle Haliaeetus leucocephalus — Bird of conservation concern
Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B008

Bell's Sparrow Amphispiza belli — Bird of conservation concern
Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HE

Black Oystercatcher Haematopus bachmani — Bird of conservation concern
Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0KJ

Black Rail Laterallus jamaicensis — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B09A

Burrowing Owl Athene cunicularia — Bird of conservation concern
Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0NC

Fox Sparrow Passerella iliaca — Bird of conservation concern
Season: Wintering

Lawrence's Goldfinch Carduelis lawrencei — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0J8

Least Bittern Ixobrychus exilis
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B092

Lesser Yellowlegs Tringa flavipes — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0MD

Lewis's Woodpecker Melanerpes lewis — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HQ

Loggerhead Shrike Lanius ludovicianus — Bird of conservation concern
Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0FY

Long-billed Curlew Numenius americanus — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B06S

Marbled Godwit Limosa fedoa — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0JL

Mountain Plover Charadrius montanus — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B078

Nuttall's Woodpecker Picoides nuttallii — Bird of conservation concern
Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HT

Oak Titmouse Baeolophus inornatus — Bird of conservation concern
Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0MJ

Peregrine Falcon Falco peregrinus — Bird of conservation concern
Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0FU

Short-billed Dowitcher Limnodromus griseus — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0JK

Short-eared Owl Asio flammeus — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HD

Snowy Plover Charadrius alexandrinus — Bird of conservation concern
Season: Breeding

Song Sparrow Melospiza melodia maxillaris — Bird of conservation concern
Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B08R

Swainson's Hawk Buteo swainsoni — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B070

Tricolored Blackbird Agelaius tricolor — Bird of conservation concern
Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B06P

Western Grebe aechmophorus occidentalis — Bird of conservation concern
Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0EA

Yellow Rail Coturnicops noveboracensis — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0JG

Yellow-billed Magpie Pica nuttalli — Bird of conservation concern
Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0N8

Wildlife refuges and fish hatcheries

There are no refuges or fish hatcheries in this location

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

DATA LIMITATIONS
The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

DATA EXCLUSIONS
Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

DATA PRECAUTIONS
Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

This location overlaps all or part of the following wetlands:

Freshwater Emergent Wetland

PEM1Ci	1.09 acres
PEM1B	0.368 acre

Freshwater Pond

PUBKh	8.84 acres
PUBHx	7.52 acres

PUSCx	3.9 acres

Riverine

R4SBCx	12.2 acres
R4SBA	0.767 acre
R4SBAx	0.577 acre

A full description for each wetland code can be found at the National Wetlands Inventory website: http://107.20.228.18/decoders/wetlands.aspx

California Natural Diversity Database

Element_Type	Scientific_Name	Common_Name	Federal_Status	State_Status	CDFW_Status	CA_Rare_Plant_Rank
Animals - Amphibians	Ambystoma californiense	California tiger salamander	Threatened	Threatened	SSC	-
Animals - Amphibians	Rana boylii	foothill yellow-legged frog	None	None	SSC	-
Animals - Amphibians	Rana draytonii	California red-legged frog	Threatened	None	SSC	-
Animals - Birds	Aquila chrysaetos	golden eagle	None	None	FP ; WL	-
Animals - Birds	Buteo swainsoni	Swainson's hawk	None	Threatened	-	-
Animals - Birds	Circus cyaneus	northern harrier	None	None	SSC	-
Animals - Birds	Elanus leucurus	white-tailed kite	None	None	FP	-
Animals - Birds	Haliaeetus leucocephalus	bald eagle	Delisted	Endangered	FP	-
Animals - Birds	Charadrius alexandrinus nivosus	western snowy plover	Threatened	None	SSC	-
Animals - Birds	Charadrius montanus	mountain plover	None	None	SSC	-
Animals - Birds	Ammodramus savannarum	grasshopper sparrow	None	None	SSC	-
Animals - Birds	Melospiza melodia	song sparrow (-inModesto-in population)	None	None	SSC	-
Animals - Birds	Melospiza melodia maxillaris	Suisun song sparrow	None	None	SSC	-
Animals - Birds	Melospiza melodia pusillula	Alameda song sparrow	None	None	SSC	-
Animals - Birds	Melospiza melodia samuelis	San Pablo song sparrow	None	None	SSC	-
Animals - Birds	Passerculus sandwichensis beldingi	Belding's savannah sparrow	None	Endangered	-	-
Animals - Birds	Falco peregrinus anatum	American peregrine falcon	Delisted	Delisted	FP	-
Animals - Birds	Agelaius tricolor	tricolored blackbird	None	Endangered	SSC	-
Animals - Birds	Lanius ludovicianus	loggerhead shrike	None	None	SSC	-
Animals - Birds	Sternula antillarum browni	California least tern	Endangered	Endangered	FP	-
Animals - Birds	Geothlypis trichas sinuosa	saltmarsh common yellowthroat	None	None	SSC	-

Animals - Birds	Icteria virens	yellow-breasted chat	None	None	SSC	-
Animals - Birds	Coturnicops noveboracensis	yellow rail	None	None	SSC	-
Animals - Birds	Laterallus jamaicensis coturniculus	California black rail	None	Threatened	FP	-
Animals - Birds	Rallus longirostris obsoletus	California clapper rail	Endangered	Endangered	FP	-
Animals - Birds	Asio flammeus	short-eared owl	None	None	SSC	-
Animals - Birds	Athene cunicularia	burrowing owl	None	None	SSC	-
Animals - Crustaceans	Branchinecta conservatio	Conservancy fairy shrimp	Endangered	None	-	-
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	Threatened	None	-	-
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	Endangered	None	-	-
Animals - Fish	Acipenser medirostris	green sturgeon	Threatened	None	SSC	-
Animals - Fish	Pogonichthys macrolepidotus	Sacramento splittail	None	None	SSC	-
Animals - Fish	Hypomesus transpacificus	Delta smelt	Threatened	Endangered	-	-
Animals - Fish	Spirinchus thaleichthys	longfin smelt	Candidate	Threatened	SSC	-
Animals - Fish	Lampetra ayresii	river lamprey	None	None	SSC	-
Animals - Fish	Oncorhynchus kisutch	coho salmon - central California coast ESU	Endangered	Endangered	-	-
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - central California coast DPS	Threatened	None	-	-
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - Central Valley DPS	Threatened	None	-	-
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - spring-run Klamath-Trinity Rivers pop.	None	None	SSC	-
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Central Valley spring-run ESU	Threatened	Threatened	-	-
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Sacramento River winter-run ESU	Endangered	Endangered	-	-

Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Central Valley fall / late fall-run ESU	None	None	SSC	-
Animals - Insects	Elaphrus viridis	Delta green ground beetle	Threatened	None	-	-
Animals - Insects	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	Threatened	None	-	-
Animals - Insects	Speyeria callippe callippe	callippe silverspot butterfly	Endangered	None	-	-
Animals - Mammals	Reithrodontomys raviventris	salt-marsh harvest mouse	Endangered	Endangered	FP	-
Animals - Mammals	Taxidea taxus	American badger	None	None	SSC	-
Animals - Mammals	Sorex ornatus sinuosus	Suisun shrew	None	None	SSC	-
Animals - Mammals	Antrozous pallidus	pallid bat	None	None	SSC	-
Animals - Mammals	Corynorhinus townsendii	Townsend's big-eared bat	None	Candidate Threatened	SSC	-
Animals - Mammals	Lasiurus blossevillii	western red bat	None	None	SSC	-
Animals - Reptiles	Emys marmorata	western pond turtle	None	None	SSC	-
Animals - Reptiles	Thamnophis gigas	giant garter snake	Threatened	Threatened	-	-
Plants - Vascular	Sagittaria sanfordii	Sanford's arrowhead	None	None	-	1B.2
Plants - Vascular	Cicuta maculata var. bolanderi	Bolander's water-hemlock	None	None	-	2B.1
Plants - Vascular	Lilaeopsis masonii	Mason's lilaeopsis	None	Rare	-	1B.1
Plants - Vascular	Perideridia gairdneri ssp. gairdneri	California Gairdner's yampah	None	None	-	4.2
Plants - Vascular	Balsamorhiza macrolepis	big-scale balsamroot	None	None	-	1B.2
Plants - Vascular	Blepharizonia plumosa	big tarplant	None	None	-	1B.1
Plants - Vascular	Centromadia parryi ssp. congdonii	Congdon's tarplant	None	None	-	1B.1
Plants - Vascular	Centromadia parryi ssp. parryi	pappose tarplant	None	None	-	1B.2
Plants - Vascular	Centromadia parryi ssp. rudis	Parry's rough tarplant	None	None	-	4.2

Plants - Vascular	Cirsium hydrophilum var. hydrophilum	Suisun thistle	Endangered	None	-	1B.1
Plants - Vascular	Erigeron biolettii	streamside daisy	None	None	-	3
Plants - Vascular	Harmonia nutans	nodding harmonia	None	None	-	4.3
Plants - Vascular	Helianthella castanea	Diablo helianthella	None	None	-	1B.2
Plants - Vascular	Isocoma arguta	Carquinez goldenbush	None	None	-	1B.1
Plants - Vascular	Lasthenia conjugens	Contra Costa goldfields	Endangered	None	-	1B.1
Plants - Vascular	Lasthenia ferrisiae	Ferris' goldfields	None	None	-	4.2
Plants - Vascular	Microseris paludosa	marsh microseris	None	None	-	1B.2
Plants - Vascular	Senecio aphanactis	chaparral ragwort	None	None	-	2B.2
Plants - Vascular	Symphyotrichum lentum	Suisun Marsh aster	None	None	-	1B.2
Plants - Vascular	Plagiobothrys hystriculus	bearded popcornflower	None	None	-	1B.1
Plants - Vascular	Arabis modesta	modest rockcress	None	None	-	4.3
Plants - Vascular	Lepidium latipes var. heckardii	Heckard's pepper-grass	None	None	-	1B.2
Plants - Vascular	Downingia pusilla	dwarf downingia	None	None	-	2B.2
Plants - Vascular	Legenere limosa	legenere	None	None	-	1B.1
Plants - Vascular	Atriplex cordulata var. cordulata	heartscale	None	None	-	1B.2
Plants - Vascular	Atriplex coronata var. coronata	crownscale	None	None	-	4.2
Plants - Vascular	Atriplex depressa	brittlescale	None	None	-	1B.2
Plants - Vascular	Atriplex persistens	vernal pool smallscale	None	None	-	1B.2
Plants - Vascular	Extriplex joaquinana	San Joaquin spearscale	None	None	-	1B.2
Plants - Vascular	Eleocharis parvula	small spikerush	None	None	-	4.3
Plants - Vascular	Astragalus tener var. ferrisiae	Ferris' milk-vetch	None	None	-	1B.1

Plants - Vascular	Astragalus tener var. tener	alkali milk-vetch	None	None	-	1B.2
Plants - Vascular	Lathyrus jepsonii var. jepsonii	Delta tule pea	None	None	-	1B.2
Plants - Vascular	Trifolium amoenum	showy rancheria clover	Endangered	None	-	1B.1
Plants - Vascular	Trifolium hydrophilum	saline clover	None	None	-	1B.2
Plants - Vascular	California macrophylla	round-leaved filaree	None	None	-	1B.1
Plants - Vascular	Juglans hindsii	Northern California black walnut	None	None	-	1B.1
Plants - Vascular	Trichostema ruygtii	Napa bluecurls	None	None	-	1B.2
Plants - Vascular	Fritillaria agrestis	stinkbells	None	None	-	4.2
Plants - Vascular	Fritillaria liliacea	fragrant fritillary	None	None	-	1B.2
Plants - Vascular	Fritillaria pluriflora	adobe-lily	None	None	-	1B.2
Plants - Vascular	Hesperolinon breweri	Brewer's western flax	None	None	-	1B.2
Plants - Vascular	Hibiscus lasiocarpos var. occidentalis	woolly rose-mallow	None	None	-	1B.2
Plants - Vascular	Sidalcea keckii	Keck's checkerbloom	Endangered	None	-	1B.1
Plants - Vascular	Castilleja ambigua var. ambigua	johnny-nip	None	None	-	4.2
Plants - Vascular	Chloropyron molle ssp. hispidum	hispid salty bird's-beak	None	None	-	1B.1
Plants - Vascular	Chloropyron molle ssp. molle	soft salty bird's-beak	Endangered	Rare	-	1B.2
Plants - Vascular	Gratiola heterosepala	Boggs Lake hedge-hyssop	None	Endangered	-	1B.2
Plants - Vascular	Neostapfia colusana	Colusa grass	Threatened	Endangered	-	1B.1
Plants - Vascular	Orcuttia inaequalis	San Joaquin Valley Orcutt grass	Threatened	Endangered	-	1B.1
Plants - Vascular	Tuctoria mucronata	Crampton's tuctoria or Solano grass	Endangered	Endangered	-	1B.1
Plants - Vascular	Navarretia leucocephala ssp. bakeri	Baker's navarretia	None	None	-	1B.1

Plants - Vascular	Eriogonum truncatum	Mt. Diablo buckwheat	None	None	-	1B.1
Plants - Vascular	Polygonum marinense	Marin knotweed	None	None	-	3.1
Plants - Vascular	Stuckenia filiformis ssp. alpina	slender-leaved pondweed	None	None	-	2B.2
Plants - Vascular	Delphinium recurvatum	recurved larkspur	None	None	-	1B.2
Plants - Vascular	Myosurus minimus ssp. apus	little mousetail	None	None	-	3.1
Plants - Vascular	Ranunculus lobbii	Lobb's aquatic buttercup	None	None	-	4.2
Plants - Vascular	Ceanothus purpureus	holly-leaved ceanothus	None	None	-	1B.2
Plants - Vascular	Limosella australis	Delta mudwort	None	None	-	2B.1
Plants - Vascular	Triteleia lugens	dark-mouthed triteleia	None	None	-	4.3

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APPENDIX D

Air Emission Calculations and Record of Non-Applicability

DEPARTMENT OF THE AIR FORCE
60TH CIVIL ENGINEER SQUADRON (AMC)

MEMORANDUM FOR RECORD

FROM: 60 CES/CEI

SUBJECT: General Conformity – Record of Non-Applicability for Proposed Expansion of the Family Camp at Travis AFB, CA

1. The United States Air Force (USAF) proposed action is for expanding the Family Camp, which is located on the property of Travis Air Force Base (AFB) in California. This action may directly and indirectly result in air emissions from the following activities:

- Expansion of RV camping site; affected area = 2.4 acres
- Construction of 10 additional concrete pad full-service RV camping sites ; 7,500 square feet
- Construction of asphalt road network for access to the camping sites; 45,400 square feet
- Construction of 2 gravel overflow parking areas; 4,800 square feet
- Additional RV and passenger car traffic; vehicle fuel combustion

2. Travis AFB is located Solano County which is part of the Bay Area Air Quality Management District (BAAQMD). The area is currently designated as moderate nonattainment for PM2.5, marginal nonattainment for 8-hour ozone, and maintenance for carbon monoxide (CO) relative to the National Ambient Air Quality Standards (NAAQS) as of December 2015. The General Conformity regulations under the Clean Air Act, Section 176 and 40 CFR 93, Subpart B have been reviewed for applicability to the project described above.

3. Based on air emission levels from proposed construction and operation (see table below and attached supporting documentation from the California Emission Estimator Model (CalEEMod version 2013.2.2), the requirements of this rule are not applicable to the proposed action because:

- Total potential emissions of the NAAQS non-attainment pollutants and precursors from this project/action have been estimated to be below the conformity threshold values established in 40 CFR 93.153(b) for the above-referenced nonattainment levels of ozone and PM2.5.

- The project/action is not considered regionally significant under 40 CFR 93.153(i).

Pollutant	Project Emissions [A] (ton/yr)	Threshold Value (ton/yr)
CO	0.14	100
NOx [B, C]	0.19	100

PM2.5	0.02	100
SO2 (C)	< 0.01	100
VOCs (B, C)	0.72	100

(A) Summary of maximum annual emissions (direct and indirect) associated with construction and operational activity during year 2017 and beyond.
(B) NOx and VOCs are precursors of ozone. VOCs are listed as ROCs in CalEEMod.
(C) NOx, SO2, and VOCs are precursors of PM2.5

4. To the best of my knowledge, the information presented in this Record of Non-Applicability is correct and accurate and I concur in the finding that the Proposed Action does not require a formal Conformity Determination for the reasons stated above.

4/19/2016

X Brian L. Sassaman

BRIAN L. SASSAMAN, GS-13, DAFC
Flight Chief, Installation Management
Signed by: SASSAMAN.BRIAN.L.1080522793

1.0 PROJECT CHARACTERISTICS

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	2.40	Acre	2.40	104,544.00	0
Other Asphalt Surfaces	45.40	1000sqft	1.04	45,400.00	0
Other Non-Asphalt Surfaces	7.50	1000sqft	0.17	7,500.00	0
User Defined Parking	4.80	User Defined Unit	0.11	4,800.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	56
Climate Zone	4			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default

Project Characteristics - Construction Year = 2017 (June thru Oct). Operation Year = 2018.
Land Use - RV Park Expansion - 2.4 acres total area with asphalt road system (45,400 sq ft), 10 concrete pads (7,500 sq ft), 2 gravel parking areas (4,800 sq ft).
Construction Phase - RV Park expansion area is devoid of trees, other vegetation, and rocks. No site preparation is required. Grading for drainage, asphalt road system, concrete parking pads, and gravel parking areas. Trenching for underground utilites.
Off-road Equipment - Asphalt Paving of Road Systems - Equipment Used = Pavers, Paving Equipment, Rollers, Tractors/Loaders/Backhoes.
Off-road Equipment - Concrete Paving for RV Pads - Equipment Used = Cement/Mortar Mixers, Tractors/Loaders/Backhoes.
Off-road Equipment - Gravel Paving - Equipment Used = Rollers, Tractors/Loaders/Backhoes.
Off-road Equipment - Site Grading = general grading, drainage, road beds, and concrete pad beds. Excavation to a depth of 6" to be accomplished with graders & tractors/loaders/backhoes.
Off-road Equipment - Trenching required for underground utilities.
Trips and VMT - Hauling for Asphalt/Gravel @ 22,700 cu ft = 841 cu yd / Concrete/Gravel @ 3,750 cu ft = 139 cu yd / Gravel Paving @ 2,400 cu ft = 89 cu yd. Assume 16 cu yd of material per load and 2 trips per load (arrive full and return empty).
Demolition - No demolition will occur for this project.
Grading - Soil removal from excavation for road and RV parking pad beds. Assumes soil removed to a depth of 6" for road, concrete pad, and gravel parking area beds. Total area = 57,700 sq ft. Total volume =28,850 cu ft = 1,069 cu yd.
Architectural Coating - No architectural coatings to be used for this project (i.e., no buildings).
Vehicle Trips - 10 Additional RV Parking Pads for extended stays. Assume 1 month per RV w/ 1 passenger car towed per RV for daily use. Annual Total = (120 RVs×2 trips) + (120 cars×30 day/car×2 trips/day) = 7,440 trips/yr = 20.4 trips/day = 8.49 trips/acre/day @ 2.4 acre.
Woodstoves - No woodstoves or fireplaces.
Consumer Products - No consumer products.
Area Coating - No architectural coatings.
Landscape Equipment - No landscape equipment (no grass areas and no snow removal).
Energy Use - RV hookups @ 10 Concrete Pads each with 50 amp × 120 volt = 6kW service (Total Capacity = 60kW). Assume 365 day/yr × 12 hr/day × 50% load = 131,400 kWhr/yr distributed over 7,500 sq ft (assumes CA Title 24 does not apply to RVs).
Water And Wastewater - RV hookups @ 10 Concrete Pads. Assume indoor water use = 365 day/yr × 30 gal/day × 10 sites = 109,500 gal/yr distributed over 7.5 × 1000 sq ft. Outdoor water use for "City Park" is a default calculation by CalEEMod and cannot be removed.
Solid Waste - RV hookups @ 10 Concrete Pads. Assume 365 day/yr × 5 lb/day × 10 sites = 18,250 lb/yr = 9.125 ton/yr distributed over 7.5 × 1000 sq ft. Solid waste for "City Park" is a default calculation by CalEEMod and cannot be removed.
Land Use Change - Little to no vegetation to be added to Camp Area expansion.
Sequestration - No sequestration.
Construction Off-road Equipment Mitigation - Mitigation not included for Construction since this activity will occur over a very short term and very small area.
Mobile Land Use Mitigation - Mitigation not included for RVs since these area generally parked for long periods of time.

Area Mitigation - Mitigation not included for Area Maintenance at RV sites.
Energy Mitigation - Mitigation not included for Energy used in RVs.
Water Mitigation - Mitigation not included for Water and Wastewater within RVs.
Waste Mitigation - Mitigation not included for Solid Waste Recycling.
Vechicle Emission Factors - Fleet Mix based on (120 RVs/yr × 2 trips/RV) = 240 RV trips/yr and (120 cars/yr × 30 days/car × 2 trips/car/day) = 7200 car trips/yr. Percentage by vehicle type = 3.2% RVs as Medium Duty Truck (MDV) and 96.8% passenger cars as Light Duty Auto (LDA).
Vechicle Emission Factors - Fleet Mix based on (120 RVs/yr × 2 trips/RV) = 240 RV trips/yr and (120 cars/yr × 30 days/car × 2 trips/car/day) = 7200 car trips/yr. Percentage by vehicle type = 3.2% RVs as Medium Duty Truck (MDV) and 96.8% passenger cars as Light Duty Auto (LDA).
Vechicle Emission Factors - Fleet Mix based on (120 RVs/yr × 2 trips/RV) = 240 RV trips/yr and (120 cars/yr × 30 days/car × 2 trips/car/day) = 7200 car trips/yr. Percentage by vehicle type = 3.2% RVs as Medium Duty Truck (MDV) and 96.8% passenger cars as Light Duty Auto (LDA).
Off-road Equipment - Trenching required for underground utilities.
Mobile Commute Mitigation - No commuting traffic associated with RV campers.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	8.00	5.00
tblConstructionPhase	NumDays	0.00	5.00
tblConstructionPhase	NumDays	18.00	5.00
tblConstructionPhase	NumDays	18.00	5.00
tblConstructionPhase	NumDays	18.00	2.00
tblEnergyUse	NT24E	0.00	17.52
tblGrading	MaterialExported	0.00	1,069.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Trenching - Underground Utilities
tblProjectCharacteristics	OperationalYear	2014	2018
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	0.00	1.22
tblTripsAndVMT	HaulingTripNumber	0.00	105.00
tblTripsAndVMT	HaulingTripNumber	0.00	17.00
tblTripsAndVMT	HaulingTripNumber	0.00	11.00
tblVehicleEF	HHD	0.04	0.00
tblVehicleEF	HHD	0.04	0.00
tblVehicleEF	HHD	0.04	0.00
tblVehicleEF	LDA	0.52	0.97
tblVehicleEF	LDA	0.52	0.97
tblVehicleEF	LDA	0.52	0.97
tblVehicleEF	LDT1	0.06	0.00
tblVehicleEF	LDT1	0.06	0.00
tblVehicleEF	LDT1	0.06	0.00
tblVehicleEF	LDT2	0.17	0.00
tblVehicleEF	LDT2	0.17	0.00
tblVehicleEF	LDT2	0.17	0.00
tblVehicleEF	LHD1	0.04	0.00
tblVehicleEF	LHD1	0.04	0.00
tblVehicleEF	LHD1	0.04	0.00
tblVehicleEF	LHD2	5.4250e-003	0.00
tblVehicleEF	LHD2	5.4250e-003	0.00
tblVehicleEF	LHD2	5.4250e-003	0.00
tblVehicleEF	MCY	6.7870e-003	0.00
tblVehicleEF	MCY	6.7870e-003	0.00
tblVehicleEF	MCY	6.7870e-003	0.00
tblVehicleEF	MDV	0.14	0.03
tblVehicleEF	MDV	0.14	0.03
tblVehicleEF	MDV	0.14	0.03
tblVehicleEF	MH	2.5010e-003	0.00
tblVehicleEF	MH	2.5010e-003	0.00
tblVehicleEF	MH	2.5010e-003	0.00
tblVehicleEF	MHD	0.01	0.00
tblVehicleEF	MHD	0.01	0.00

tblVehicleEF	MHD	0.01	0.00
tblVehicleEF	OBUS	4.5460e-003	0.00
tblVehicleEF	OBUS	4.5460e-003	0.00
tblVehicleEF	OBUS	4.5460e-003	0.00
tblVehicleEF	SBUS	6.7400e-004	0.00
tblVehicleEF	SBUS	6.7400e-004	0.00
tblVehicleEF	SBUS	6.7400e-004	0.00
tblVehicleEF	UBUS	2.6300e-003	0.00
tblVehicleEF	UBUS	2.6300e-003	0.00
tblVehicleEF	UBUS	2.6300e-003	0.00
tblVehicleTrips	ST_TR	1.59	8.49
tblVehicleTrips	SU_TR	1.59	8.49
tblVehicleTrips	WD_TR	1.59	8.49
tblWater	IndoorWaterUseRate	0.00	14,600.00

2.0 EMISSIONS SUMMARY

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.0225	0.1853	0.1426	2.40E-04	0.0197	9.62E-03	0.0293	9.30E-03	8.86E-03	0.0182	0	21.9782	21.9782	3.78E-03	0	22.0576
Total	**0.0225**	**0.1853**	**0.1426**	**2.40E-04**	**0.0197**	**9.62E-03**	**0.0293**	**9.30E-03**	**8.86E-03**	**0.0182**	**0**	**21.9782**	**21.9782**	**3.78E-03**	**0**	**22.0576**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7183	1.00E-05	5.6E-04	0		0	0		0	0	0	1.07E-03	1.07E-03	0	0	1.14E-03
Energy	0	0	0	0		0	0		0	0	0	38.2258	38.2258	1.73E-03	3.60E-04	38.3729
Mobile	6.21E-03	6.58E-03	0.0667	2.00E-04	0.0185	1.20E-04	0.0186	4.90E-03	1.10E-04	5.01E-03	0	13.7226	13.7226	6.10E-04	0	13.7353
Waste						0	0		0	0	0.2903	0	0.2903	0.0172	0	0.6505
Water						0	0		0	0	4.63E-03	2.9346	2.9392	6.10E-04	4.00E-05	2.9640
Total	**0.7245**	**6.59E-03**	**0.0673**	**2.00E-04**	**0.0185**	**1.20E-04**	**0.0186**	**4.90E-03**	**1.10E-04**	**5.01E-03**	**0.2949**	**54.884**	**55.1789**	**0.0201**	**4.00E-04**	**55.7239**

3.0 CONSTRUCTION DETAIL

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Grading	Grading	6/15/2017	6/21/2017	5	5	Initial Grading
2	Trenching - Underground Utilities	Trenching	6/22/2017	6/28/2017	5	5	Underground Utilities
3	Asphalt Paving - Road System	Paving	7/8/2017	7/14/2017	5	5	Road System
4	Concrete Paving - RV Pads	Paving	8/8/2017	8/14/2017	5	5	10 Additional RV Parking Pads
5	Gravel Paving - Overflow Parking Areas	Paving	9/8/2017	9/11/2017	5	2	2 Overflow Parking Areas

Acres of Grading (Site Preparation Phase): 0
Acres of Grading (Grading Phase): 0
Acres of Paving: 0
Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Grading	Excavators	0	8.00	162	0.38
Site Grading	Graders	1	8.00	174	0.41
Site Grading	Rubber Tired Dozers	1	8.00	255	0.40
Site Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Trenching - Underground Utilities	Trenchers	1	8.00	80	0.50
Asphalt Paving - Road System	Cement and Mortar Mixers	0	6.00	9	0.56
Asphalt Paving - Road System	Pavers	1	8.00	125	0.42
Asphalt Paving - Road System	Paving Equipment	2	6.00	130	0.36
Asphalt Paving - Road System	Rollers	2	6.00	80	0.38
Asphalt Paving - Road System	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Concrete Paving - RV Pads	Cement and Mortar Mixers	2	6.00	9	0.56
Concrete Paving - RV Pads	Pavers	0	8.00	125	0.42
Concrete Paving - RV Pads	Paving Equipment	0	6.00	130	0.36
Concrete Paving - RV Pads	Rollers	0	6.00	80	0.38
Concrete Paving - RV Pads	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Gravel Paving - Overflow Parking Areas	Cement and Mortar Mixers	0	6.00	9	0.56
Gravel Paving - Overflow Parking Areas	Pavers	0	8.00	125	0.42
Gravel Paving - Overflow Parking Areas	Paving Equipment	0	6.00	130	0.36
Gravel Paving - Overflow Parking Areas	Rollers	2	6.00	80	0.38
Gravel Paving - Overflow Parking Areas	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Grading	5	13.00	0.00	134.00	12.40	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Trenching - Underground Utilities	1	3.00	0.00	0.00	12.40	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Asphalt Paving - Road System	6	15.00	0.00	105.00	12.40	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Concrete Paving - RV Pads	3	8.00	0.00	17.00	12.40	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Gravel Paving - Overflow Parking Areas	3	8.00	0.00	11.00	12.40	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

None.

3.2 Site Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1640	0	0.1640	8.43E-03	0	8.43E-03	0	0	0	0	0	0
Off-Road	7.73E-03	0.0799	0.0549	6.00E-05		4.60E-03	4.60E-03		4.23E-03	4.23E-03	0	5.6754	5.6754	1.74E-03	0	5.7119
Total	**7.73E-03**	**0.0799**	**0.0549**	**6.00E-05**	**0.0164**	**4.60E-03**	**0.0210**	**8.43E-03**	**4.23E-03**	**0.0127**	**0**	**5.6754**	**5.6754**	**1.74E-03**	**0**	**5.7119**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.62E-03	0.0181	0.0168	5.00E-05	1.13E-03	2.30E-04	1.37E-03	3.10E-04	2.10E-04	5.20E-04	0	4.5362	4.5362	3.00E-05	0	4.5369
Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Worker	1.10E-04	1.50E-04	1.44E-03	0	3.00E-04	0	3.00E-04	8.00E-05	0	8.00E-05	0	0.2575	0.2575	1.00E-05	0	0.2578
Total	**1.74E-03**	**0.0183**	**0.0182**	**5.00E-05**	**1.43E-03**	**2.30E-04**	**1.67E-03**	**3.90E-04**	**2.10E-04**	**6.00E-04**	**0**	**4.7937**	**4.7937**	**4.00E-05**	**0**	**4.7947**

3.3 Trenching - Underground Utilities - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.34E-03	0.0118	7.00E-03	1.00E-05		9.20E-04	9.20E-04		8.50E-04	8.50E-04	0	0.8032	0.8032	2.50E-04	0	0.8084
Total	**1.34E-03**	**0.0118**	**7.00E-03**	**1.00E-05**		**9.20E-04**	**9.20E-04**		**8.50E-04**	**8.50E-04**	**0**	**0.8032**	**0.8032**	**2.50E-04**	**0**	**0.8084**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Worker	2.00E-05	4.00E-05	3.30E-04	0	7.00E-05	0	7.00E-05	2.00E-05	0	0	0	0.0594	0.0594	0	0	0.2578
Total	**2.00E-05**	**4.00E-05**	**3.30E-04**	**0**	**7.00E-05**	**0**	**7.00E-05**	**2.00E-05**	**2.10E-04**	**0**	**0**	**0.0594**	**0.0594**	**0**	**0**	**0.0595**

3.4 Asphalt Paving - Road System - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.92E-03	0.0406	0.0301	4.00E-05		2.46E-03	2.46E-03		2.26E-03	2.26E-03	0	4.0779	4.0779	1.25E-03	0	4.1042
Paving	1.36E-03					0	0		0	0	0	0	0	0	0	0
Total	**5.28E-03**	**0.0406**	**0.0301**	**4.00E-05**		**2.46E-03**	**2.46E-03**		**2.26E-03**	**2.26E-03**	**0**	**4.0779**	**4.0779**	**1.25E-03**	**0**	**4.1042**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.27E-03	0.0142	0.0131	4.00E-05	8.90E-04	1.80E-04	1.07E-03	2.40E-04	1.70E-04	4.10E-04	0	3.5545	3.5545	3.00E-05	0	3.555
Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Worker	1.20E-04	1.80E-04	1.66E-03	0	3.40E-04	0	3.40E-04	9.00E-05	0	9.00E-05	0	0.2971	0.2971	1.00E-05	0	0.2975
Total	**1.39E-03**	**0.0144**	**0.0148**	**4.00E-05**	**1.23E-03**	**1.80E-04**	**1.41E-03**	**3.30E-04**	**1.70E-04**	**5.00E-04**	**0**	**3.8516**	**3.8516**	**4.00E-05**	**0**	**3.8525**

3.5 Concrete Paving - RV Pads - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.01E-03	8.99E-03	7.14E-03	1.00E-05		6.30E-04	6.30E-04		5.80E-04	5.80E-04	0	0.8937	0.8937	2.40E-04	0	0.8987
Paving	1.36E-03					0	0		0	0	0	0	0	0	0	0
Total	**2.37E-03**	**8.99E-03**	**7.14E-03**	**1.00E-05**		**6.30E-04**	**6.30E-04**		**5.80E-04**	**5.80E-04**	**0**	**0.8937**	**0.8937**	**2.40E-04**	**0**	**0.8987**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.10E-04	2.30E-03	2.13E-03	1.00E-05	1.40E-04	3.00E-05	1.70E-04	4.00E-05	3.00E-05	7.00E-05	0	0.5755	0.5755	0	0	0.5756
Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Worker	7.00E-05	1.00E-04	8.80E-04	0	1.80E-04	0	1.80E-04	5.00E-05	0	5.00E-05	0	0.1585	0.1585	1.00E-05	0	0.1586
Total	**2.80E-04**	**2.40E-03**	**3.01E-03**	**1.00E-05**	**3.20E-04**	**3.00E-05**	**3.50E-04**	**9.00E-05**	**3.00E-05**	**1.20E-04**	**0**	**0.7340**	**0.7430**	**1.00E-05**	**0**	**0.7342**

3.6 Gravel Paving - Overflow Parking Areas - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.80E-04	7.40E-03	5.38E-03	1.00E-05		5.40E-04	5.40E-04		5.00E-04	5.00E-04	0	0.6536	0.6536	2.00E-04	0	0.6578
Paving	1.36E-03					0	0		0	0	0	0	0	0	0	0
Total	**2.14E-03**	**7.40E-03**	**5.38E-03**	**1.00E-05**		**5.40E-04**	**5.40E-04**		**5.00E-04**	**5.00E-04**	**0**	**0.6536**	**0.6536**	**2.00E-04**	**0**	**0.6578**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.30E-04	1.49E-03	1.38E-03	0	9.00E-05	2.00E-05	1.10E-04	3.00E-05	2.00E-05	4.00E-05	0	0.3724	0.3724	0	0	0.3724
Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Worker	3.00E-05	4.00E-05	3.50E-04	0	7.00E-05	0	7.00E-05	2.00E-05	0	2.00E-05	0	0.0634	0.0634	0	0	0.0635
Total	**1.60E-04**	**1.53E-03**	**1.73E-03**	**0**	**1.60E-04**	**2.00E-05**	**1.80E-04**	**5.00E-05**	**2.00E-05**	**6.00E-05**	**0**	**0.4358**	**0.4358**	**0**	**0**	**0.4359**

4.0 OPERATIONAL DETAIL - MOBILE

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Unmitigated	6.21E-03	6.58E-03	0.0667	2.00E-04	0.0185	1.20E-04	0.0186	4.90E-03	1.10E-04	5.01E-03	0	13.7226	13.7226	6.10E-04	0	13.7353

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	20.38	20.38	20.38	50,251	50,251
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
User Defined Parking	0.00	0.00	0.00		
Total	20.38	20.38	20.38	50,251	50,251

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	14.70	6.60	6.60	33.00	48.00	19.00	66	28	6
Other Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
User Defined Parking	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.968000	0	0	0.032000	0	0	0	0	0	0	0	0	0

5.0 ENERGY DETAIL

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Unmitigated						0	0		0	0	0	38.2258	38.226	1.73E-03	3.60E-04	38.3729
NaturalGas Unmitigated	0	0	0	0		0	0		0	0	0	0	0	0	0	0

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0	0	0	0		0	0		0	0	0	0	0	0	0	0
Other Asphalt Surfaces	0	0	0	0	0		0	0		0	0	0	0	0	0	0	0
Other Non-Asphalt Surfaces	0	0	0	0	0		0	0		0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**		**0**	**0**		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0	0	0	0
Other Asphalt Surfaces	0	0	0	0	0
Other Non-Asphalt Surfaces	131400	38.2258	1.73E-03	3.60E-04	38.3729
User Defined Parking	0	0	0	0	0
Total		**38.2258**	**1.73E-03**	**3.60E-04**	**38.3729**

6.0 AREA DETAIL

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Unmitigated	0.7183	1.00E-05	5.60E-04	0		0	0		0	0	0	1.07E-03	1.07E-03	0	0	1.14E-03

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0846					0	0		0	0	0	0	0	0	0	0
Consumer Products	0.6336					0	0		0	0	0	0	0	0	0	0
Landscaping	5.00E-05	1.00E-05	5.60E-04	0		0	0		0	0	0	1.07E-03	1.07E-03	0	0	1.14E-03
Total	**0.7183**	**1.00E-05**	**5.60E-04**	**0**		**0**	**0**		**0**	**0**	**0**	**1.07E-03**	**1.07E-03**	**0**	**0**	**1.14E-03**

7.0 WATER DETAIL

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated	2.9392	6.10E-04	4.00E-05	2.9640

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 2.8596	2.9116	1.30E-04	3.00E-05	2.9228
Other Asphalt Surfaces	0 / 0	0	0	0	0
Other Non-Asphalt Surfaces	0.0146 / 0	0.0276	4.80E-04	1.00E-05	0.0412
Total		**2.9392**	**6.10E-04**	**4.00E-05**	**2.9640**

8.0 WASTE DETAIL

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	0.2903	0.0172	0	0.6505

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.21	0.0426	2.52E-03	0	0.0955
Other Asphalt Surfaces	0	0	0	0	0
Other Non-Asphalt Surfaces	1.22	0.2477	0.0146	0	0.5550
Total		**0.2903**	**0.0172**	**0**	**0.6505**

9.0 OPERATIONAL OFFROAD

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
-						

10.0 VEGETATION

None.

DEPARTMENT OF THE AIR FORCE
60TH CIVIL ENGINEER SQUADRON (AMC)

MEMORANDUM FOR RECORD

FROM: 60 CES/CEI

SUBJECT: General Conformity – Record of Non-Applicability for Proposed Expansion of the Family Camp at Travis AFB, CA

1. The United States Air Force (USAF) proposed action is for expanding the Family Camp, which is located on the property of Travis Air Force Base (AFB) in California. This action may directly and indirectly result in air emissions from the following activities:

- Expansion of RV camping site; affected area = 2.4 acres
- Construction of 10 additional concrete pad full-service RV camping sites ; 7,500 square feet
- Construction of asphalt road network for access to the camping sites; 45,400 square feet
- Construction of 2 gravel overflow parking areas; 4,800 square feet
- Additional RV and passenger car traffic; vehicle fuel combustion

2. Travis AFB is located Solano County which is part of the Bay Area Air Quality Management District (BAAQMD). The area is currently designated as moderate nonattainment for PM2.5, marginal nonattainment for 8-hour ozone, and maintenance for carbon monoxide (CO) relative to the National Ambient Air Quality Standards (NAAQS) as of December 2015. The General Conformity regulations under the Clean Air Act, Section 176 and 40 CFR 93, Subpart B have been reviewed for applicability to the project described above.

3. Based on air emission levels from proposed construction and operation (see table below and attached supporting documentation from the California Emission Estimator Model (CalEEMod version 2013.2.2), the requirements of this rule are not applicable to the proposed action because:

- Total potential emissions of the NAAQS non-attainment pollutants and precursors from this project/action have been estimated to be below the conformity threshold values established in 40 CFR 93.153(b) for the above-referenced nonattainment levels of ozone and PM2.5.

- The project/action is not considered regionally significant under 40 CFR 93.153(i).

Pollutant	Project Emissions [A] (ton/yr)	Threshold Value (ton/yr)
CO	0.14	100
NOx [B, C]	0.19	100

PM2.5	0.02	100
SO2 (C)	< 0.01	100
VOCs (B, C)	0.72	100

(A) Summary of maximum annual emissions (direct and indirect) associated with construction and operational activity during year 2017 and beyond.
(B) NOx and VOCs are precursors of ozone. VOCs are listed as ROCs in CalEEMod.
(C) NOx, SO2, and VOCs are precursors of PM2.5

4. To the best of my knowledge, the information presented in this Record of Non-Applicability is correct and accurate and I concur in the finding that the Proposed Action does not require a formal Conformity Determination for the reasons stated above.

4/19/2016

X Brian L. Sassaman

BRIAN L. SASSAMAN, GS-13, DAFC
Flight Chief, Installation Management
Signed by: SASSAMAN.BRIAN.L.1080522793

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