Supplemental Environmental Assessment
and
DRAFT Finding of No Significant Impact
Mission Road Improvement Project

U.S. Department of the Army
U.S. Army Garrison Fort Hunter Liggett
Monterey County, California

March 2014

Mission Statements

The mission of the U.S. Department of the Army is to fight and win our Nation's wars by providing prompt, sustained land dominance across the full range of military operations and spectrum of conflict in support of combatant commanders. We do this by:

- Executing Title 10 and Title 32 United States Code directive, to include organizing, equipping, and training forces for the conduct of prompt and sustained combat operations on land.
- Accomplishing missions assigned by the President, Secretary of Defense and combatant commanders, and transforming for the future.

The mission of the U.S. Army Reserve Command is to provide trained and ready units and individuals to mobilize and deploy in support of the national military strategy.

Fort Hunter Liggett's mission is to maintain and allocate training areas, airspace, facilities, and ranges to support field maneuvers, live-fire exercises, testing, and institutional training. Additionally, the installation provides quality-of-life and logistical support to training units.

DRAFT
FINDING OF NO SIGNIFICANT IMPACT (FNSI)
FOR A
SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT ADDRESSING
INSTALLATION DEVELOPMENT AND TRAINING AT FORT HUNTER LIGGETT, CALIFORNIA

Introduction

U.S. Army Garrison Fort Hunter Liggett (FHL) has prepared this Supplemental Environmental Assessment (EA) to satisfy NEPA requirements for the Mission Road Improvement Project. This EA supplements and incorporates by reference the *Final Environmental Assessment Addressing Installation Development and Training (IDTEA) at Fort Hunter Liggett, California* (U.S. Army Reserve Command (USARC) 2010). An EA is required because the site layout and environmental impacts for this project were not defined in the 2010 IDTEA. The 2010 IDTEA addressed the potential environmental effects of range and cantonment area construction projects, and increased military training. The 2010 IDTEA may be accessed at http://www.liggett.army.mil/pdf/dpwPDF/Env/FHL_Training_Dev_EA_2010.pdf .

This Supplemental EA was prepared pursuant to the Council on Environmental Quality regulations (40 Code of Federal Regulations [CFR] 1500-1508) for implementing the National Environmental Policy Act (NEPA) of 1969 (42 U.S. Code 4321 et seq.) and 32 CFR Part 651 (*Environmental Analysis of Army Actions*).

Purpose and Need

The purpose of the proposed action is to improve roadway conditions by realigning two curves, demolishing abandoned roadway and facilities, and restoring native vegetation to disturbed areas along 1.2 mi of Mission Road. Mission Road supports FHL military and civilian vehicles as well as civilian traffic to Los Padres National Forest and the Pacific Coast via Del Venturi Road and Nacimiento-Fergusson Road, Mission San Antonio de Padua via Mission Road, and the Access Control Point for the Cantonment. This section of Mission Road is also referred to as Nacimiento-Fergusson Road (0.8 miles in an east-west direction) and Silo Road (0.4 miles in a north-south direction).

The proposed action is needed to improve driver safety and roadway conditions in order to comply with Federal and State Regulations, and will improve environmental conditions by creating a grassland buffer between the primary roadway and San Antonio River. Increases in training and construction in the cantonment described in the 2010 IDTEA have resulted in an increase in vehicular traffic and greater wear and damage to this section of roadway. Two curves in the roadway are not designed for safe passage over 30 mph. A portion of the existing roadway lies on a terrace above San Antonio River with little to no vegetated buffer between the roadway and the river. Portions of the roadway and the waste transfer station lie adjacent to the 100 year floodplain and near breeding habitat for the federally endangered arroyo toad.

Proposed Action

The Proposed Action for this EA is the Mission Road Improvement Project along 1.2 miles of Mission Road in the cantonment of Fort Hunter Liggett. The project consists of realigning two curves and constructing a bridge connector road, demolishing abandoned roadways and the waste transfer station, and restoring disturbed areas with native vegetation. Approximately 6.7

acres of grassland vegetation would be removed for road construction, and 8.3 acres of grassland vegetation would be restored after demolition. In 2014-2015, FHL would contract for construction and demolition of the two curves and bridge connector road. In 2014-2019, FHL would have military troop construction unit or a contractor demolish the waste transfer station. Site restoration would begin following demolition and continue until restoration is completed. The proposed action would comply with all applicable environmental and construction laws and standards.

No Action Alternative

CEQ regulations specify the inclusion of the No Action Alternative in the alternatives analysis (40 CFR 1502.14). The No Action Alternative serves as a baseline against which the impacts of the Proposed Action and other potential action alternatives can be evaluated.

Under the No Action Alternative, FHL would not implement the Proposed Action. Taking no action would not meet the purpose and need for the project to improve roadway and environmental conditions at the project site. In general, implementation of the No Action Alternative would result in continuing to utilize the existing Mission Road with its existing conditions, current alignment, speed limit, and proximity to San Antonio River. If the No Action Alternative is chosen, the increase in training at FHL would continue to deteriorate the roadway, and traffic flow and environmental conditions would not be improved.

Alternatives Considered but Dismissed

The U.S. Army evaluated possible alternatives to be considered for the Proposed Action. This section addresses options that were considered but not carried forward for detailed analysis in this EA.

The Army considered repaving the existing roadway with no realignments. This alternative was eliminated because it would not improve the safety of the existing curves and the lane widths would remain inconsistent and narrow.

The Army considered paved shoulders rather than maintaining the current condition of the road base shoulders. This alternative was eliminated due to increased cost and storm water runoff, with no additional benefit to the purpose and need of the project.

In developing the proposed action, the Army considered minor variations in road realignment. The proposed alternative was designed to have minimal adverse effects to the environment while meeting the purpose and need of the project. The design variations were minor and do not warrant separate analyses.

The Army considered connecting to Nacimiento-Fergusson Bridge from the middle portion of West Curve realignment, but found this to create an unsafe intersection along Mission Road.

The Army considered rerouting the road to the north of Gravel Pit Pond; however, this resulted in greater adverse impact to federally listed vernal pool fairy shrimp.

Potential Environmental Impacts

Preferred Alternative

This EA contains an evaluation of the existing conditions and environmental consequences of the Proposed Action and the No Action Alternative, as required by NEPA. Implementation of the Proposed Action would have the following effects:

- No effect to airspace management, land use, noise, cultural resources, socioeconomics and environmental justice, or infrastructure (with the exception of storm water systems).

- Beneficial effects to water resources, biological resources, threatened and endangered species, infrastructure (storm water systems), and traffic and transportation systems.
- Moderate adverse effects to threatened and endangered species due to adversely affecting a vernal pool fairy shrimp pool.
- Minor, adverse effects to air quality and climate change, geological resources, water resources, biological resources, threatened and endangered species, infrastructure (storm water systems), traffic and transportation systems, hazardous materials and wastes, and health and safety.

No mitigation is required to reduce impacts below significance thresholds. Conservation and minimization measures would be implemented to reduce potential adverse effects of construction, demolition, and vegetation restoration.

Implementation of the No Action Alternative would not result in a change in current conditions; therefore, no significant direct or indirect effects would occur under the No Action Alternative.

The potential for cumulative effects on the environment was evaluated by reviewing other projects in the vicinity of FHL that could affect the same environmental resources as the Proposed Action. Although some cumulative effects could occur, they are expected to be negligible to minor. Implementation of the No Action Alternative would not result in a change in current conditions; therefore, no cumulative effects would occur to the quality of the human or natural environment.

NEPA Determination

Based on the findings of the EA Supplement and incorporated by reference from the 2010 IDTEA, implementation of the Preferred Alternative, Mission Road Improvements, at Fort Hunter Liggett in Monterey County, California, would not have significant, adverse, direct, indirect, or cumulative effects on the quality of the human or natural environment. FHL has prepared this draft Finding of No Significant Impact (FNSI) to accompany the Supplemental EA. This draft FNSI concludes that an Environmental Impact Statement, the next level of environmental impact investigation under the NEPA, is not required for this action.

Public Review and Comment

The EA Supplement and draft FNSI will be published for a 30-day public comment period from [*March 20 – April 19, 2014*], and will be available to the public for comment at the San Antonio School Library, 67550 Lockwood Jolon Road, Lockwood, CA 93932; Fort Hunter Liggett Library, Building 291, 7th Division Road, Fort Hunter Liggett, Jolon, CA 93928; and the Monterey County Free Library, 26 Central Avenue, Salinas, CA 93901; and on the Internet at: http://www.liggett.army.mil/sites/dpw/environmental.asp

A copy of the public notice is provided in Appendix A of the EA Supplement.

Signature:
Approved by: _____

DONNA R. WILLIAMS
Colonel, U.S. Army
Commander

Date

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Draft
Supplemental Environmental Assessment
Mission Road Improvements Project
Fort Hunter Liggett, California

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1 Executive Summary

U.S. Army Garrison Fort Hunter Liggett (FHL) has prepared this Supplemental Environmental Assessment (EA) to address the proposed Mission Road Improvement Project. This EA supplements the *Final Environmental Assessment Addressing Installation Development and Training (IDTEA) at Fort Hunter Liggett, California* (U.S. Army Reserve Command (USARC) 2010). The 2010 IDTEA addressed the potential environmental effects of range and cantonment area construction projects, and increased military training. This EA incorporates the 2010 IDTEA by reference and addresses this additional road improvement project in the cantonment area.

1.1 Summary of Purpose and Need

The purpose and need is described in section 2.1. In summary, the purpose of the proposed action is to improve roadway conditions by realigning two curves, demolishing abandoned roadway and facilities, and restoring demolition areas along 1.2 mi of Mission Road. Mission Road supports FHL military and civilian vehicles within and transiting through FHL.

The proposed action is needed to improve driver safety and roadway conditions in order to comply with Federal and State Regulations, and the project will improve environmental conditions by expanding a grassland buffer between the primary roadway and San Antonio River.

1.2 Summary of Proposed Action

The detailed proposed action is described in section 0. The Proposed Action for this EA is improvement of 1.2 miles of Mission Road in the cantonment of Fort Hunter Liggett. The project consists of realigning two curves and constructing a bridge connector road, demolishing abandoned roadways and the waste transfer station, and restoring disturbed areas with native vegetation. The proposed action would comply with all applicable environmental and construction laws and standards. Minimization measures are included to minimize adverse environmental impacts during construction, demolition, and site restoration. Conservation measures are included to monitor and protect sensitive resources.

1.3 Summary of Alternatives

CEQ regulations specify the inclusion of the No Action Alternative in the alternatives analysis (40 CFR 1502.14) to serve as a baseline for comparison. Under the No Action Alternative, FHL would not implement the Proposed Action.

The U.S. Army evaluated possible alternatives to be considered for the Proposed Action that were not carried forward for detailed analysis in this EA (section 3.3). These included repaving and widening without realigning curves, paved shoulders rather than using road base, minor variations in road realignment, connecting Nacimiento-Fergusson Bridge to Mission Road within a curve, and rerouting Mission Road to north of Gravel Pit Pond. In each of these cases, the alternatives did not meet the purpose and need of the project.

1.4 Summary of Environmental Consequences and Mitigation Measures

Section 4 of this EA contains an evaluation of the existing conditions and environmental consequences of the Proposed Action and the No Action Alternative, as required by NEPA. Implementation of the Proposed Action would have the following effects:

- No effect to airspace management, land use, noise, cultural resources, socioeconomics and environmental justice, or infrastructure (with the exception of storm water systems).
- Beneficial effects to water resources, biological resources, threatened and endangered species, infrastructure (storm water systems), and traffic and transportation systems.
- Moderate adverse effects to threatened and endangered species (vernal pool fairy shrimp).
- Minor, adverse effects to air quality and climate change, geological resources, water resources, biological resources, threatened and endangered species, infrastructure (storm water systems), traffic and transportation systems, hazardous materials and wastes, and health and safety.

No mitigation is required to reduce impacts below significance thresholds. Minimization and conservation measures would be implemented as part of the proposed action to reduce potential adverse effects of construction, demolition, and vegetation restoration.

Implementation of the No Action Alternative would not result in a change in current conditions; therefore, no significant direct or indirect effects would occur under the No Action Alternative.

The potential for cumulative effects (section 4.10) on the environment was evaluated by reviewing other projects occurring within the last 2 years and planned for the next 5 years at FHL that could affect similar environmental resources as the Proposed Action. Although some cumulative effects could occur, they are expected to be negligible to minor. Implementation of the No Action Alternative would not result in a change in current conditions; therefore, no cumulative effects would occur.

Table ES-1 summarizes the effects of the Proposed Action, the minimization measures for construction and demolition that could be implemented to avoid or minimize these effects, and conservation measures such as monitoring for sensitive resources. Some minimization and conservation measures would be required by Federal or state regulations.

1.5 Conclusion

Based on the findings of this Supplemental EA, implementation of the Proposed Action, Mission Road Improvements at FHL in Monterey County, California, would not have significant adverse direct, indirect, or cumulative effects on the quality of the human or natural environment. FHL has prepared a draft Finding of No Significant Impact (FNSI) to accompany this EA Supplement.

Table ES-1. Summary of environmental consequences of the Proposed Action, Fort Hunter Liggett, California.

Resource Area	Environmental Consequences		Minimization and Conservation Measures
	Proposed Action	Impacts of No Action Alternative	
Air Quality and Climate Change	Minor, adverse– ▪ <10% NCCI AQCR, ▪ <0.001% CA CO_2 emissions	No effect	*Minimization Measures*:* Dust control and proper equipment maintenance as described in 2010 IDT EA section 2.1.
Geology, Soils and Seismicity	Minor, adverse – 6.7 acres ground disturbance	No effect	*Minimization Measures*:* Develop and implement an Erosion Sediment Control Plan (ESCP), Storm Water Pollution Prevention Plan (SWPPP) and follow recommendations in the Geotechnical Engineering Study (Beacon Geotechnical, Inc., 2012).
Water Resources	Minor beneficial—8.3 acres site restoration Minor adverse—6.7 acres ground disturbance	No effect	Minimization Measures*: Comply with the ▪ Spill Prevention, Control and Countermeasures (SPCC) Plan (HDR 2012) ▪ Final Storm Water Pollution Prevention Plan and Storm Water Monitoring Plan (HDR 2012). ▪ National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated With Construction and Land Disturbance Activities (2012), ▪ Energy Independence and Security Act section 438 (EISA), and ▪ U.S. Environmental Protection Agency technical guidance for EISA compliance

Resource Area	Environmental Consequences		Minimization and Conservation Measures
	Proposed Action	Impacts of No Action Alternative	
			(USEPA 2009).
Biological Resources	Minor beneficial—8.3 acres site restoration Minor, adverse effects– <0.1 acre wetlands affected	No effect	*Minimization Measures*:* Minimize vegetation removal to required areas only. Restore with native grassland species. Prevent introduction and spread of invasive species. Site storm water detention basins in upland soils, avoiding sandy soils associated with San Antonio River and federally endangered arroyo toads. *Conservation Measures**: Monitor for sensitive areas during construction and demolition activities. Mark sensitive areas for avoidance.
Threatened and Endangered Species	Moderate, beneficial—8.3 acres site restoration Minor, adverse—6.7 acres grassland converted to roadway Moderate adverse—direct adverse effect to one vernal pool fairy shrimp pool	No effect	Minimization Measures*: Comply with the ▪ BMPs identified in the installation's SPCC Plan (HDR 2012) ▪ NPDES General Permit for Storm Water Discharges, ▪ EISA section 438, and ▪ USEPA 2009 technical guidance for EISA compliance. *Conservation Measures*:* Monitor for sensitive species during construction and demolition activities. Mark sensitive species areas for avoidance. Consult with US Fish and Wildlife Service.
Error! Reference source not found.	No effect—no known sites in area of potential effect.	No effect	*Conservation Measures*:* Monitor during construction and demolition activities for the potential for undiscovered cultural resources.

Resource Area	Environmental Consequences		Minimization and Conservation Measures
	Proposed Action	Impacts of No Action Alternative	
Storm Water Systems	Minor, beneficial—improved storm water channel after construction Minor, adverse—6.7 acres of ground disturbance during construction	No effect	Minimization Measures*: Comply with the ▪ SPCC Plan (HDR 2012) ▪ National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated With Construction and Land Disturbance Activities (2012),, ▪ EISA section 438, and ▪ USEPA 2009 technical guidance for EISA compliance.
Traffic and Transportation Systems	Moderate, beneficial–roadway improvements after construction. Minor, adverse—traffic flow delays during construction	No effect	*Minimization Measures*:* Prepare and implement a traffic control plan.
Hazardous Materials and Waste	Minor, adverse—use of hazardous materials and generation of hazardous waste during construction	No effect	*Minimization Measures*:* Implement the installation's SPCC Plan (HDR 2012), Net Zero Waste Installation Plan & Management Action Plan (HDR 2013), and comply with Federal, state, and local regulations.
Health and Safety	Minor, adverse—construction risks	No effect	*Minimization Measures*:* Adhere to Federal, state, and local laws and applicable FHL plans.

* Minimization measures would be implemented as appropriate to avoid or minimize effects during construction and demolition. Conservation measures would be implemented to conserve sensitive resources.

2 Introduction

This Supplemental Environmental Assessment (EA) addresses the proposal by Fort Hunter Liggett (FHL) to improve approximately 1.2 miles of Mission Road by realigning two curves, expanding the grassland buffer between the road and San Antonio River, demolishing old sections of roadway, removing the abandoned waste transfer station, and restoring the habitat by re-establishing native vegetation.

National Environmental Policy Act of 1970 (NEPA; 42 U.S.C. Section 4321-4347) is a Federal statute requiring the identification and analysis of potential environmental effects associated with proposed Federal actions before those actions are taken. This EA has been prepared to comply with the requirements of NEPA; the Council on Environmental Quality's (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (CEQ Regulations, 40 Code of Federal Regulations [CFR] Parts 1500-1508); and Department of Defense (DOD) Instruction 4715.9, *Environmental Planning and Analysis*; and Environmental Analysis of Army Actions (32 CFR 651).

FHL is located 25 miles southwest of King City in southern Monterey County, California (Figure 2-1). The installation encompasses 162,000 acres and provides training ranges and other facilities year-round for the U.S. Army Reserve (USAR), and training for other branches of the U.S. military and government agencies. FHL's mission is to maintain and allocate training areas, airspace, facilities, and ranges to support field maneuvers, live-fire exercises, testing, and institutional training. Additionally, the installation provides quality-of-life and logistical support to training units.

In 2010, FHL developed the *Final Environmental Assessment Addressing Installation Development and Training (IDTEA) at Fort Hunter Liggett, California*, dated May 2010 (USARC 2010; 2010 IDTEA), to address the potential impacts of range and cantonment area construction projects, and increased military training. The 2010 IDTEA identified and evaluated potential adverse effects to traffic and transportation systems that may occur as a result of the implementation of the numerous projects. The 2010 IDTEA has helped facilitate efforts to coordinate land use planning and infrastructure projects, expedite project execution by using early planning, and encourage agency and public coordination. The document has served as a baseline for future environmental analysis of mission and training requirements.

Figure 2-1. Fort Hunter Liggett, Monterey County, California.

The 2010 IDTEA identified that increased unit training and vehicle movement on the installation would result in long-term, negligible to moderate, adverse effects on installation roads. As a result of the increase in military training at FHL, the 2010 IDTEA concluded the roadways in the installation's training areas and cantonment area would likely require more frequent maintenance.

The major regional travel routes to FHL are U.S. Highway 101 and Highway 1. Primary access for virtually all traffic to the installation is via Jolon Road, a public roadway that connects with U.S. Highway 101 near King City and again near Bradley. Secondary access to the installation is provided by Nacimiento-Fergusson Road, originating at Highway 1 west of FHL. Jolon Road, Mission Road, and Nacimiento-Fergusson Road provide the only east-west connection to the Pacific Coast between Monterey to the northwest and Paso Robles to the southeast. The FHL cantonment area is primarily accessed by Mission Road, which serves as an artery from Jolon Road.

2.1 Purpose and Need

The purpose of the proposed action is to improve roadway conditions along 1.2 mi of Mission Road by realigning two curves, demolishing old sections of roadway and the abandoned waste transfer station, and restoring demolition areas by re-establishing native vegetation (Figure 2-2). Mission Road supports FHL military and civilian vehicles as well as civilian traffic to Los Padres National Forest and the Pacific Coast via Del Venturi Road and Nacimiento-Fergusson Road, Mission San Antonio de Padua via Mission Road, and the Access Control Point for the Cantonment. This section of Mission Road is also referred to as Nacimiento-Fergusson Road (0.8 miles in an east-west direction) and Silo Road (1.5 miles in a north-south direction).

The proposed action is needed to improve driver safety and roadway conditions in order to comply with Federal and State Regulations, and will improve environmental conditions by creating a vegetated buffer between the primary roadway and San Antonio River. Increases in training and construction in the cantonment described in the 2010 IDTEA have resulted in an increase in vehicular traffic and greater wear and damage to this section of roadway. Two curves in the roadway are not designed for safe passage over 30 mph. A portion of the existing roadway lies on a terrace above San Antonio River with minimal vegetated buffer between the roadway and the river. Portions of the roadway and the waste transfer station lie adjacent to the 100 year floodplain and near breeding habitat for the federally endangered arroyo toad (*Anaxyrus californicus)*.

2.2 Scope of the Analysis

The scope of the analysis consists of the range of actions, alternatives, and effects to be considered. The scope of the Proposed Action and the range of alternatives to be considered are presented in detail in Section 3. In accordance with CEQ Regulations, the No Action Alternative has been analyzed to provide the baseline against which the environmental impacts of implementing the alternatives can be compared. This EA identifies appropriate minimization and conservation measures to avoid, minimize, or reduce adverse environmental impacts.

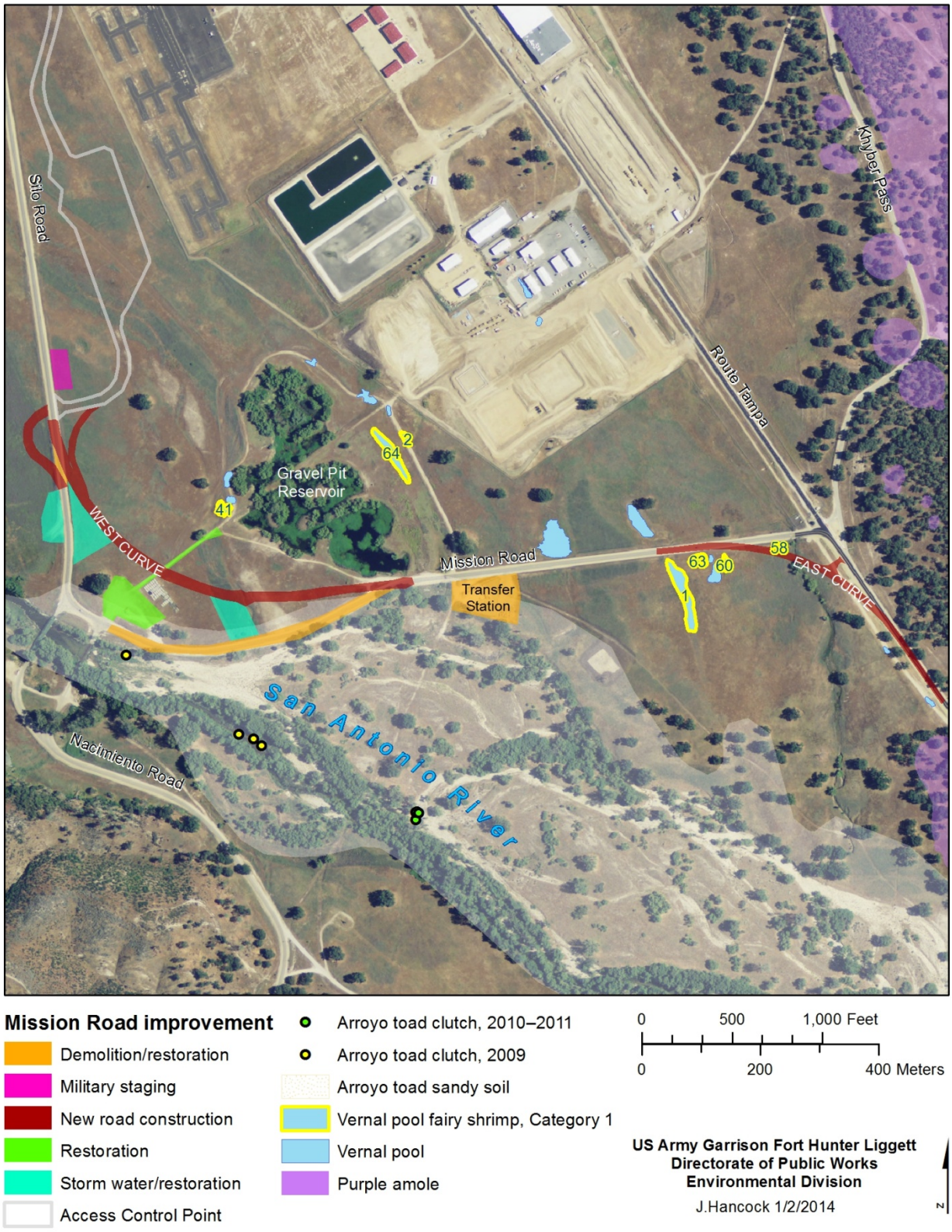

Figure 2-2. Mission Road Improvement Project, Fort Hunter Liggett, California.

2.3 Compliance Requirements and Public Coordination

Several laws and policy requirements have directed, limited, or guided the decision-making process for this EA. The key environmental compliance requirements associated with the NEPA process were discussed in the 2010 IDTEA and are applicable to this EA. Therefore, Section 1.4 from the 2010 IDTEA is incorporated herein by reference.

This EA examines potential effects of the Proposed Action and alternatives on 11 resource areas: noise, air quality and climate change, geological resources, water resources, biological resources, threatened and endangered species, cultural resources, infrastructure (storm water systems), traffic and transportation systems, hazardous materials and wastes, and health and safety. These were identified as being potentially affected by the Proposed Action and include applicable critical elements of the human environment that are mandated for review by Executive Order (EO), regulation, or policy. The 2010 IDTEA Appendix B contains examples of relevant laws, regulations, and other requirements that are often considered as part of the analysis.

Through the coordination process described in Section 1.4.3 of the 2010 IDTEA, FHL notifies relevant Federal, state, and local agencies, and federally recognized Tribes, of the Proposed Action and provides them sufficient time to make known their environmental concerns specific to the action. FHL coordinates with such agencies such as the U.S. Environmental Protection Agency (USEPA), U.S. Fish and Wildlife Service (USFWS), State Historic Preservation Office (SHPO), and other federal, state, and local agencies. The coordination process provides FHL the opportunity to cooperate with and consider state and local views in implementing the Federal proposal. Appendix A includes a copy of the coordination letter mailed to agencies for this action, the agency distribution list, and will include response letters received. A Notice of Availability (NOA) for this EA and Draft Finding of No Significant Impact (FNSI) are published in the *Monterey County Herald* and *King City Rustler* to solicit comments on the Proposed Action and involve the local community in the decision-making process. Upon receipt, public comments provided are incorporated into the analysis and included in the EA.

3 Description of Proposed Action and Alternatives

Under NEPA, the Proposed Action and reasonable alternatives must be considered in an EA. Considering alternatives helps avoid unnecessary impacts and allows analyses of reasonable ways to achieve the stated purpose. To warrant detailed evaluation, an alternative must be reasonable. To be considered reasonable, an alternative must also be ready for decision-making, affordable, capable of implementation, and satisfactory with respect to meeting the purpose and need for the action.

The following screening criteria were used to develop and evaluate the Proposed Action and alternatives:

- Ability to safely support vehicles traveling 45 mph at the curves in order to improve driver safety (may not reflect posted speed limits);
- Ability to improve roadway conditions at the project area;
- Ability to improve environmental conditions at the project area, and
- Consistency with the 2010 IDTEA.

The alternatives considered for further detailed analysis in the EA include the Proposed Action and the No Action Alternative. The Preferred Alternative is the Proposed Action described in section 3.1. The No Action Alternative is described in section 3.2. Alternatives considered but eliminated from detailed analyses are described in section 3.3.

3.1 Proposed Action

The Mission Road Improvement Project affects 1.2 miles of Mission Road and consists of new construction to realign two curves and construct a bridge connector road, demolishing the former roadways and waste transfer station, and restoring disturbed areas with native vegetation. In 2014-2015, FHL would contract for construction and demolition of the two curves and bridge connector road. In 2014-2019, FHL would have military troop construction unit or a contractor demolish the waste transfer station. Site restoration would begin following demolition and continue until restoration is completed. The site location crosses through a relatively level river valley adjacent to San Antonio River. Proposed new construction would encompass 6.7 acres. Proposed demolition and restoration would encompass 4.2 acres and 8.3 acres, respectively. Project activities would occur during normal work hours (7:00 a.m. and 5:00 p.m.)

All federal laws and regulation would be followed as applicable. This would include but is not limited to roadway and safety standards, Clean Water Act (CWA) 401/404 and NPDES permitting, EISA section 438 storm water controls, Endangered Species Act (ESA) and National Historic Preservation Act (NHPA) consultations, and other requirements.

3.1.1 Realignment

The Proposed Action would realign two (2) curves to improve safety conditions and to move a portion of roadway farther from San Antonio River. The final lane widths would be twelve (12) feet, along with six (6) foot class 2 base shoulders placed along both traffic lanes. The project may require the placement of new concrete headwalls and culverts, along with other drainage improvements. New sections of road would cross tributaries draining from north to south towards the river and will require minor grade changes and new constructed drainage crossings.

East curve is currently a 15 mph curve. This was formerly a straight-line entrance into the cantonment onto what is now called Route Tampa. In 2010, the entrance to the cantonment was relocated to Bradley Road 1.4 mi to the northwest. The realigned East Curve would be designed for 45 mph vehicle travel and provide a sweeping curve to the west, rather than sharply veering from a straight line of travel (Figure 2-2). The posted speed limit may be lower due to other safety factors, such as presence of military vehicles.

West curve is currently a 15 mph curve that transitions to 35 and 40 mph. Much of West Curve currently lies 15 feet from the 100 year floodplain on a 7-10 ft high terrace above San Antonio River (Figure 3-1). The realigned West Curve would be designed for 45 mph, and would be at minimum 140 feet from the edge of the river terrace, which would improve the grassland buffer between the road and the floodplain (Figure 2-2). The posted speed limit may be lower due to other safety factors, such as presence of military vehicles.

Figure 3-1. Mission Road, Fort Hunter Liggett, California. A portion of West Curve is visible on the left. San Antonio River during high flows in 2005 is visible in center and right of the photograph.

A Bridge Connector Road would be constructed to reconnect West Curve with Nacimiento-Fergusson Bridge, as well as the future Access Control Point (FHL 2013a). Vehicles traveling on Mission Road would encounter a 4-way stop and have the opportunity to turn east to the future ACP, west to the proposed connector road to Nacimiento-Fergusson Bridge, or to continue straight on Mission Road (Figure 2-2).

3.1.2 Demolition

Demolition would include portions of the existing West Curve and the abandoned waste transfer station (Figure 2-2). This portion of Mission Road is also referred to as Nacimiento Road and was constructed prior to 1929. The waste transfer station was constructed in about 1988 as a collection point for trash dumpsters and roll-off bins, but is no longer needed due to improvements in recycling and trash collection methods. Demolition would include removal and recycling or re-use of asphalt, concrete, and road base. Materials for re-use would be stored at existing FHL material borrow sites. Transfer station fencing would be removed and properly

disposed of, or re-used if it's in suitable condition. Road sections at East Curve would not be demolished as these would continue to provide emergency access to and from the cantonment.

3.1.3 Restoration

After demolition, the former roadway and transfer station would be restored, including staging areas or other ground disturbance (Figure 2-2). Additional restoration areas would include an area recently used for military staging, an artificial drainage ditch, and some low-lying weedy areas. The restoration areas would be disked, moisture conditioned and revegetated with native vegetation as soon as appropriate after construction activities are completed. The site would be restored to pre-project contours as appropriate, although some restoration areas may include vegetated storm water detention basins. Invasive and non-native vegetation would be removed from the site, and non-toxic binders would be applied to exposed areas. The areas would be hydro-seeded and revegetated with native grasses and forbs. Some small patches of riparian vegetation (*Salix spp.* and *Populus spp.*) and valley oaks may be planted adjacent to San Antonio River to improve transition from grasslands to riparian vegetation communities.

Restoration areas may include storm water detention basins for the temporary capture of storm water associated with the new roadway. Storm water basins will be placed in upland soils, will not pond long-term, and will otherwise be restored in the same manner as restoration areas.

3.1.4 Minimization and Conservation Measures

These measures are not inclusive of all actions taken by construction contractors and FHL, but rather, highlight specific areas of concern due to environmental resources that may be affected by the Proposed Action.

3.1.4.1 Minimization Measures

The proposed action would include the following measures taken by the construction contractors and subcontractors to minimize adverse environmental effects during construction, demolition, and site restoration:

Air Resources Best Management Practices (BMPs)

- Limit grading to 8.2 acres per day and grading and excavation to 2.2 acres per day.
- Maintain at least 2 feet of freeboard on haul trucks and cover loads.
- Use fugitive dust-control techniques, such as watering, soil stabilizers, non-toxic binders, and hydro-seeding to minimize dust and erosion in graded, excavated or disturbed areas. All such techniques would conform to applicable regulations.

Biological Resources and Threatened and Endangered Species BMPs

- Clean construction equipment of mud or other debris that may contain invasive plants and/or seeds, and inspect to reduce the potential of spreading noxious weeds before mobilizing to arrive at the construction site and before leaving the construction site.
- Minimize the introduction and spread of invasive species. Use certified weed-free straw. Use weed-free fill (material extracted 6–8" below top soil) obtained from sources no further north than northern San Luis Obispo County (Atascadero, Pas Robles, San Miguel areas) and no further east than San Benito County (Hazebrook, 2010). If using fill from FHL, request prior approval of the site, amount, and timing from DPW.

- Avoid and minimize effects to wetlands and other waters of the U.S. As applicable, incorporate design features (e.g., culverts, bridges, causeways, etc.) that reduce encroachment into wetlands. As needed, obtain a Section 404 permit under the federal CWA from the US Army Corps of Engineers (USACE) and a Section 401 permit under the federal CWA from the Regional Water Quality Control Board (RWQCB) prior to ground disturbance. All requirements of the permits shall be followed.

- Sand, soil, gravel or asphalt piles, concrete washouts, and vehicles and equipment staging areas require prior approval from DPW. Such sites must also be kept >650 ft from the northern/eastern bank of the San Antonio River and arroyo toad clutch sites identified from 2009 through time of construction, and may not adversely affect vernal pool fairy shrimp sites.

- Storm water detention basins will be placed in upland soils, avoiding the sandy soils associated with San Antonio River and federally endangered arroyo toads.

- Ensure no trash or food garbage is on site to attract predators.

- Cover or provide an escape ramp for excavations >3 ft deep.

- Check culverts >4 inches for wildlife prior to use or disturbance.

- Use exclusionary fencing, such as hay bales, protective wood barriers, or orange construction fencing, to mark sensitive areas for avoidance.

- Minimize the total area of graded or excavated areas, for example, time grading to construction activities. Minimize grading and excavation during wet weather.

- Utilize soil erosion-control measures, such as soil erosion-control mats, silt fences, straw bales, diversion ditches, riprap channels, water bars, water spreaders, and hardened stream crossings, as appropriate.

- Minimize the disturbance of environmental resources and topography by integrating existing vegetation, trees, and topography into site design.

Cultural Resources BMPs

- If cultural materials or human remains are discovered inadvertently during the project activity, work should cease and the procedures outlined under Standard Operation Procedure 11, “Inadvertent Discovery” required under the National Historic Preservation Act and outlined in Section 800.13 of 36 CFR 800 should be followed.

Health and Safety, and Hazardous Waste and Materials BMPs

- Prevent pollutants from reaching the soil, groundwater, or surface water. For example, during project activities, perform daily inspections of equipment, maintain appropriate spill-containment materials on site, and store all fuels and other materials in appropriate containers. Equipment maintenance activities would not be conducted on the construction site.

- Prevent access to the construction site by children and unauthorized personnel. For example, place physical barriers and “no trespassing” signs around the construction site; lock or secure construction vehicles and equipment when not in use.

Traffic and Transportation BMPs

- Develop a traffic control plan (TCP) to indicate the work area, proposed signs, the spacing and location of traffic control devices (such as arrow boards, flagmen, barricades, cones, pylon construction markers, etc.), the limits of proposed parking prohibitions, and the width and location of any reduced traffic lanes.

3.1.4.2 Conservation Measures

The proposed action would include the following conservation measures taken by FHL DPW Environmental Division to monitor and protect sensitive resources:

- Conduct an Employee Education Program for the construction crew prior to construction activities and provide at minimum the following information: 1) the appropriate access route in and out of the construction area and limits of project boundaries; 2) how DPW will monitor the area and agree upon a method which will ensure the safety of the monitor during such activities, 3) federally listed species that may be present; 4) specific minimization measures that will be incorporated into the construction effort; 5) general provisions and protections afforded by the ESA and NHPA; and 6) proper procedures if a federally listed animal or previously undiscovered cultural resource is encountered within the project site.

- Monitor the installation of protective fencing, the initial grading activities and vegetation removal, and then conduct weekly site visits until the construction is complete to ensure protective fencing remains intact and that all construction work is maintained within the limits of construction.

- Review and approve the species that will be included in seed mixes and revegetation efforts. In compliance with Executive Order 13112 on Invasive Species, any landscaping or replanting required for the project will not use species listed as noxious by the California Department of Food and Agriculture.

- Conduct pre-construction surveys for nesting birds of prey and other protected species within 300 feet of proposed construction activities if construction is to be initiated between February 1 and August 31. Pre-construction surveys should be conducted no more than 15 days prior to the start of construction. If nests are identified during the preconstruction surveys, DPW will impose a no-disturbance buffer. Construction activities would be restricted within the buffer to protect nests and nesting birds.

3.1.5 Construction Schedule and Methods

The disturbance areas for construction and demolition were determined based on the project design and taking into consideration the environmental constraints along the alignment as identified in the 2010 IDTEA, such as locations of wetlands and vernal pools. The area that would be affected by new construction and demolition was identified as 25 feet from the centerline of the proposed road realignments and connector road. This area was used as the basis for determining effects on environmental resources.

During project activities, hazardous materials such as gasoline, diesel fuel, lubricants, and cleaning solvents would be used for vehicles and equipment. The materials would be properly transported and stored in accordance with hazardous materials regulations and in accordance with best management practices to prevent release of pollutants.

The project would include site preparation, equipment delivery, and road construction. Excavation and grading would be required for locations with uneven gradient. Ground clearing

and excavation of the site would be performed using heavy construction equipment such as bulldozers, backhoes, cranes, scrapers, compactors, and graders.

3.1.6 Mitigation (2010 IDTEA)

The 2010 IDTEA Finding of No Significant Impact identifies mitigation actions and is incorporated by reference. These include but are not limited to complying with the terms and conditions of the Programmatic Biological Opinion for Fort Hunter Liggett (USFWS 2010).

3.2 No Action Alternative

CEQ regulations specify the inclusion of the No Action Alternative in the alternatives analysis (40 CFR 1502.14). The No Action Alternative serves as a baseline against which the impacts of the Proposed Action and other potential action alternatives can be evaluated.

Under the No Action Alternative, FHL would not implement the Proposed Action. Taking no action would not meet the purpose and need for the project to improve roadway and environmental conditions at the project site. In general, implementation of the No Action Alternative would result in continuing to utilize the existing Mission Road with its current conditions, alignment, speed limit, and proximity to San Antonio River. If the No Action Alternative is chosen, the increase in training at FHL would continue to deteriorate the roadway, and traffic flow and environmental conditions would not be improved.

3.3 Alternatives Considered but Eliminated from Further Analysis

The U.S. Army evaluated possible alternatives to be considered for the Proposed Action. This section addresses options that were considered but not carried forward for detailed analysis in this EA.

- Repaving the existing roadway with no realignments. This alternative was eliminated because it would not improve the safety of the existing curves and the lane widths would remain inconsistent and narrow.
- Paving shoulders rather than maintaining the current condition of the road base shoulders. This alternative was eliminated due to increased cost and storm water runoff, with no additional benefit to the purpose and need of the project.
- Minor variations in road realignment. The Proposed Action was designed to have minimal adverse effects to the environment while meeting the purpose and need of the project. The design variations were minor and do not warrant separate analyses.
- Connecting to Nacimiento-Fergusson Bridge from the middle portion of West Curve realignment, but this created an unsafe intersection along Mission Road.
- Rerouting Mission Road to the north of Gravel Pit Pond; however, this resulted in greater adverse effects to federally listed vernal pool fairy shrimp.

4 Affected Environment and Environmental Consequences

Based on review of the Proposed Action and the 2010 IDTEA, the following environmental resources would not be affected by the Proposed Action or No Action Alternative and are not analyzed in detail in this EA:

- Airspace Management and Safety—Airspace management is defined as the coordination, integration, and regulation of the use of airspace. The Proposed Action would not affect airspace management and safety.

- Land Use—Land use refers to real property classifications that indicate either natural conditions or the types of human activity occurring on a parcel. The Proposed Action would not result in a change of land use because the road realignment and improvements remains in the same vicinity, which is an area of military land use.

- Noise—Noise is unwanted sound. The Proposed Action would not result noise effects that exceed those described in the 2010 IDTEA. The area is currently subject to traffic noise from personal and military vehicles, and nearby construction noise in the Cantonment. The location of the Proposed Action is adjacent to Gravel Pit Pond (a recreational fishing pond), but not near any sensitive receptors.

- Cultural Resources—Archaeological Consulting conducted a review of previous archaeological studies completed for FHL (Archaeological Consulting, 2013). The report reviewed the previous cultural resources studies conducted at FHL, including the two studies that were conducted within the Proposed Action area. Archaeological Consulting 2013 concluded that no cultural resources have been identified or are likely to occur within the Proposed Action area. If cultural materials or human remains are discovered inadvertently during construction, work should cease and the procedures outlined under Standard Operation Procedure 11, “Inadvertent Discovery” required under the National Historic Preservation Act and outlined in Section 800.13 of 36 CFR 800 should be followed.

- Socioeconomics and Environmental Justice—Socioeconomics is defined as the basic attributes and resources associated with the human environment, particularly characteristics of population and economic activity. Federal regulations require that Federal agencies’ actions substantially affecting human health or the environment do not exclude persons, deny persons benefits, or subject persons to discrimination because of their race, color, or national origin. Consideration of environmental justice concerns includes race, ethnicity, and the poverty status of populations in the vicinity of a proposed action. The Proposed Action would not result effects to socioeconomics and environmental justice that exceed those described in the 2010 IDTEA, and would not result in: 1) a change in local business volume, employment, personal income, or population exceeding historical annual change; 2) adversely affect social services or conditions; or 3) disproportionately impact minority population or low-income populations.

- Infrastructure—Infrastructure consists of the systems and physical structures that enable a population in a specific area to function, including utilities (electrical and alternative power, propane, liquid fuel, water supply, sanitary sewage, storm water, and communications) and solid waste management. The Proposed Action would not result in effects to any of the identified infrastructure, with the exception of storm water infrastructure. Therefore, only storm water infrastructure is evaluated in detail in this EA.

The following resources are evaluated in detail: air quality and climate change; geology, soils, and seismicity; water resources, biological resources, threatened and endangered species, cultural resources, infrastructure, traffic and transportation, hazardous materials and waste, and health and safety. Effects from installation development on each of these resources were described in the 2010 IDTEA (USARC 2010). The following information provides analyses specific to the Proposed Action.

4.1 Air Quality and Climate Change

4.1.1 Definition, Existing Conditions, and Evaluation Criteria

The definition, existing conditions, and evaluation criteria used to determine significant effect on Air Quality and Climate Change are described in the 2010 IDTEA, which is incorporated by reference (USARC 2010).

Since the publication of the 2010 IDTEA, the USEPA and State of California have revised the national and state ambient air quality standards for criteria pollutants.

Table 3-1 presents the most recent national and state ambient air quality standards. The revised ambient air quality standards do not change the attainment status designations for Monterey County, California, as described in the 2010 IDTEA.

Table 3-1. Federal and State Ambient Air Quality Standards.

Pollutant	Averaging Time	California Standard[a,c]	Federal Standard[b]	
			Primary[c,d]	Secondary[c,e]
Ozone (O_3)	1-Hour	0.09 ppm (180 µg/m^3)	- -	- -
	8-Hour	0.07 ppm (137 µg/m^3)	0.075 ppm (147 µg/m^3)	0.075 ppm (147 µg/m^3)
Carbon Monoxide (CO)	1-Hour	20 ppm (23mg/m^3)	35.0 ppm (40mg/m^3)	- -
	8-Hour	9.0 ppm (10mg/m^3)	9.0 ppm (10mg/m^3)	- -
Nitrogen Dioxide (NO_2)	1-Hour	0.18 ppm (339 µg/m^3)	- -	- -
	Annual[f]	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	0.053 ppm (100 µg/m^3)
Sulfur Dioxide (SO_2)	1-Hour	0.25 ppm (655 µg/m^3)	- -	- -
	3-Hour	- -	- -	0.5 ppm (1,300 µg/m^3)
	24-Hour	0.04 ppm (105 µg/m^3)	0.14 ppm (365 µg/m^3)	- -
	Annual[f]	- -	0.030 ppm (80 µg/m^3)	- -
PM_{10}	24-Hour	50 µg/m^3	150 µg/m^3	150 µg/m^3
	Annual[f]	20 µg/m^3	- -	- -
$PM_{2.5}$	24-Hour	no separate state standard	35 µg/m^3	35 µg/m^3
	Annual[f]	12 µg/m^3	15 µg/m^3	15 µg/m^3
Lead[f]	Calendar quarter	- -	1.5 µg/m^3	1.5 µg/m^3
	30-day	1.5 µg/m^3	- -	- -
	3-Month[h]	- -	0.15 µg/m^3	0.15 µg/m^3
Sulfate	24-Hour	25 µg/m^3	- -	- -
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m^3)	- -	- -
Vinyl Chloride[g]	24-Hour	0.010 ppm (26 µg/m^3)	- -	- -
Visibility Reducing Particles	8-hours (10 am - 6 pm)	In sufficient amounts to reduce prevailing visibility to < 10 miles when relative humidity is < 70% w/ equivalent instrument method	- -	- -

Pollutant	Averaging Time	California Standard[a,c]	Federal Standard[b]	
			Primary[c,d]	Secondary[c,e]

ppm = Parts per Million by volume (or micromoles of pollutant per mole of gas)
$\mu g/m^3$ = Micrograms per Cubic Meter
(a)Standards for ozone, carbon monoxide, sulfur dioxide (1 and 24-hour), nitrogen dioxide, suspended particulate matter – PM_{10} and $PM_{2.5}$, and visibility reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
(b) National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98% of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact U.S. Environmental Protection Agency for further clarification and current federal policies.
(c) Concentrations expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to match reference temperature and pressure.
(d) National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
(e) National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
(f) Annual Arithmetic Mean
(g) The California Air Resources Board has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse heal effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
(h) National lead standard, rolling 3-month average: final rule signed October 15, 2008.
Source: California Air Resources Board. 2008. Ambient Air Quality Standards. Nov. 11. http://www.arb.ca.gov/research/aaqs/aaqs2.pdf.

4.1.2 Environmental Consequences

4.1.2.1 Proposed Action

Effects on air quality from implementing the Proposed Action would not be significant.

The Proposed Action would generate temporary construction emissions as a result of grading, filling, compacting, and other construction operations. These emissions, however, would be temporary and would not be expected to generate any off-site effects. Construction activities would generate particulate emissions as fugitive dust from ground-disturbing activities (e.g., grading, soil piles, etc.) and from combustion of fuels in construction equipment. Fugitive dust emissions would be greatest during the initial site preparation activities and would vary from day to day depending on the construction phase, level of activity, and prevailing weather conditions. The quantity of uncontrolled fugitive dust emissions from a construction site is proportional to the area of land being worked and the level of construction activity. Construction operations would also result in short-term emissions of criteria pollutants as combustion products from construction equipment, including asphalt paving operations.

The estimated emissions of construction activities associated with the Proposed Action fall well within the estimated emissions calculated for all projects at FHL in the 2010 IDTEA. As such, air quality emissions from the Proposed Action would be minor and less than 10 percent of the emissions inventory for NCCI AQCR. Monterey County is in Federal attainment for all criteria pollutants. Therefore, a conformity determination in accordance with 40 CFR 93-153(1) is not required, as the total of direct and indirect emissions from the Proposed Action would not be regionally significant (e.g., the emissions are not greater than 10 percent of the NCCI AQCR inventory).

The California Energy Commission estimates that in 2004, gross CO_2 emission in California were 492 million metric tons of CO_2 equivalents (California Energy Commission 2006). The Proposed Action's activity falls well within the emissions calculated for all projects at FHL in the 2010 IDTEA, which total less than 0.001 percent of the California state CO_2 emissions. Therefore, the Proposed Action's activities would represent a negligible contribution towards statewide greenhouse gas (GHG) inventories.

Construction operations would produce localized, short-term elevated air pollutant concentrations that would not result in any sustained effects on regional air quality. Minimization measures listed in section 3.1.4 of this SEA would be implemented to reduce effects to air quality.

4.1.2.2 No Action Alternative

Under the No Action Alternative, FHL would not implement the Proposed Action. Existing conditions would remain the same, and no effects on air quality would be expected.

4.2 Geology, Soils and Seismicity

4.2.1 Definition, Existing Conditions, and Evaluation Criteria

The definition, existing conditions, and evaluation criteria used to determine significant effect on Geology, Soils, and Seismicity are described in the 2010 IDTEA, which is incorporated by reference (USARC 2010).

4.2.1.1 Geology

FHL is situated within the eastern slopes and foothills of the northwest-trending Santa Lucia Range, west of Salinas Valley. The site geology dates back prior to the Quaternary period (2.6 million years ago to the present) and consists of older alluvium (Qalo), which is described as semi-consolidated, sand and silt, locally cemented. Evaluations of the soil surface indicated that soils are generally dense clayey silty sand with gravel and cobbles overlain by loose to medium dense clayey silty sand with gravel and cobbles. Soils encountered at boring depths should be designed at Site Classification D in accordance with the local building code. Soil expansion lies in the "very low" range. Groundwater was not encountered to a maximum depth of 15 ft.

4.2.1.2 Topography

The Proposed Action crosses through a relatively level river valley adjacent to the San Antonio River.

4.2.1.3 Seismic Hazards

FHL is located within an active seismic area subject to moderate to large earthquake events. Ground shaking resulting from earthquakes is the primary geologic hazard at the site. Ground displacement resulting from faulting is a potential hazard at or near faults. The site does not lie within an Earthquake Fault Zone identified on a State of California Earthquake Fault Zone Map. Faults closest to the site, measures from the approximate center of the site, which would most affect the Proposed Action include: Jolon Fault (0.9 mi); Rinconada Fault (9 mi km); Hosgri Fault (14 mi); and San Andreas Fault (27 mi).

Earthquake-induced vibrations can be the cause of several significant phenomena, including liquefaction in fine sands and silty sands. Based on the quality and conditions of site soils and the absence of groundwater, it was determined that the potential for liquefaction and/or lateral spreading is low at the site (Beacon Geotechnical, Inc., 2012). The site topography and exposed soils types indicate that the potential for landslides is minimal at the site. Further, no evidence of previous landslides was observed.

4.2.2 Environmental Consequences

4.2.2.1 Proposed Action

Effects on geology, soils, and seismicity from implementing the Proposed Action would not be significant.

The Proposed Action would result in soil compaction and disturbance that could result in erosion at 6.7 acres during new construction and 8.3 acres during site restoration. As described in the 2010 IDTEA, an erosion-and-sediment control plan (ESCP) should be prepared for projects that would disturb more than 1 acre. Projects of this size have more potential to result in adverse effects as a result of soil erosion and sedimentation, but the ESCP would minimize these potentially adverse effects by identifying project-specific BMPs. Construction of the Proposed Action is anticipated to disturb more than 1 acre and an ESCP would be developed and implemented both during and following site development to contain soil and runoff onsite, and would reduce potential for adverse effects associated with erosion and sedimentation and transport of sediments in runoff. A geotechnical study was prepared for the Proposed Action, which provided recommendations to reduce effects to geology and soils. Short-term, minor, adverse effects on geologic resources would be expected; these effects would be reduced with implementation of BMPs, the installation's SWPPP, and the recommendations identified in the Geotechnical Engineering Study (Beacon Geotechnical, Inc., 2012).

4.2.2.2 No Action Alternative

Under the No Action Alternative, FHL would not implement the Proposed Action. Existing conditions would remain the same, and no effects on geology, soils, or seismicity would be expected.

4.3 Water Resources

4.3.1 Definition, Existing Conditions, and Evaluation Criteria

The definition, existing conditions, and evaluation criteria used to determine significant effect on Water Resources are described in the 2010 IDTEA, which is incorporated by reference (USARC 2010). Wetlands are discussed in section 4.4 Biological Resources.

4.3.1.1 Surface Water and Floodplains

The Proposed Action is located to the north and east of the San Antonio River. A portion of the existing road is located adjacent to the 100 year floodplain on a terrace above San Antonio River. The Proposed Action crosses drainages draining from north to south towards the river and will require construction or improvement of drainage crossings.

4.3.1.2 Groundwater

The proposed action is located over a portion of the Mission-San Antonio Basin.

4.3.2 Environmental Consequences

4.3.2.1 Proposed Action

Effects on water resources from implementing the Proposed Action would not be significant.

The Proposed Action would result in an increase of 6.7 acres of impervious surfaces from construction, followed by a decrease of 6.4 acres of impervious surfaces during demolition. Compacted and paved sites alter natural drainage flow, and increase soil erosion and sedimentation. The Proposed Action would result in a total of approximately 13 acres of temporary ground disturbance. A Waste Discharge ID (WDID) Number pursuant to the National

Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated With Construction and Land Disturbance Activities (2012) would be required for any construction project disturbing 1 or more acres of land. Permit requirements include but are not limited maintaining effective erosion and sedimentation controls, and using BMPs to ensure disturbed soil does not pollute nearby water bodies. Low-impact development features are recommended, which would be consistent with the intent of EISA and USAEPA 2009 technical guidance. EISA Section 438 requirements apply to new road construction, which is proposed at the two realigned curves and bridge connector road.

Soil compaction could create less permeable soil, which could hamper ground-water recharge through infiltration; however, the amount of impervious surface would only slightly increase from the existing footprint, and, therefore, would not significantly affect recharge. Construction in the Proposed Action is not within the floodplain, and the implementation of the project would not divert flow significantly or alter floodwater volume or velocity.

The storm water system would be improved after construction by design and construction of more effective and appropriate storm water channels and detention capabilities along Mission Road.

4.3.2.2 No Action Alternative

Under the No Action Alternative, FHL would not implement the Proposed Action. Existing conditions would remain the same, and no effects on water resources would be expected.

4.4 Biological Resources

4.4.1 Definition, Existing Conditions, and Evaluation Criteria

The definition, existing conditions, and evaluation criteria used to determine significant effect on Biological Resources are described in the 2010 IDTEA, which is incorporated by reference (USARC 2010). Federal and state threatened and endangered species are addressed in Section 4.5.

Denise Duffy & Associates, Inc. (DD&A) prepared the Nacimiento-Silo Road Improvement Project Biological Resources Report (DD&A, 2013a) and Wetland Delineation Report (DD&A, 2013b) to evaluate potential effects of the proposed action on biological resources.

4.4.1.1 Vegetation Communities

The majority of the project site supports non-native annual grasslands and small patches of native grasses. The remaining area of the project site is developed or supports ruderal vegetation associated with roads, storage of materials, and vehicle/military equipment use.

Due to the timing of the survey, native grasses at the project site could not be identified; however, likely species at FHL include purple needle grass (*Stipa pulchra*) and/or nodding needlegrass (*Stipa cernua*). The grasslands within the project site are highly disturbed based on the dominance of annual non-native grass and forb species, such as yellow star-thistle (*Centurea solstitialis*), which occurs throughout the grassland in large dense patches, and within tank tracks. Large oak trees are scattered throughout the site.

4.4.1.2 Wetlands

Wetlands and vernal pools were identified in the vicinity of the project site per the 2010 IDTEA (Figure 2-2). Additionally, DD&A conducted a wetland delineation along the project site utilizing the wetland criteria outlined by the U.S. Army Corps of Engineers (ACOE) in the *Field Guide for Wetland Delineation: 1987 Corps of Engineers Manual*. Small potential isolated wetlands (0.02 acre), in-stream wetlands (0.05 acre), and other waters of the U.S. (96 linear ft) were identified

along and between East Curve and West Curve, encompassing a total area of less than 0.1 acre (DD&A, 2013b).

4.4.1.3 Wildlife Resources

Birds observed at FHL with the potential to occur within the project site include western meadow lark (*Sturnella neglecta*), horned lark (*Eromophila alpestri*), California quail (*Callipepe californica*), mourning dove (*Zenaida macroura*), turkey vulture (*Cathartes aura*), Cooper's hawk (*Accipiter cooperii*), and red-tailed hawk (*Buteo jamaicensis*). Migratory birds may nest in riparian habitat adjacent to the river, within trees, and on the ground. Nesting occurs in spring and summer, overwintering populations occur in the late fall and winter, and migrating populations transit the area in between those periods.

Mammal species expected to be found in or near the project site include the California ground squirrel (*Spermophilus beecheyi*), feral pig (*Sus scrofa*), tule elk (*Cervus canadensis nannodes*), Columbian black-tailed deer (*Odocoileus hemionus columbianus*), American badger (*Taxidea taxis*), coyote (*Canis latrans*), bobcat (*Lynx rufus*), black-tailed jackrabbit (*Lepus californicus*), desert cottontail (*Sylvilagus audubonii*), deer mouse (*Peromyscus maniculatus*), pocket mouse (*Perognathus californicus*), and kangaroo rat (*Dipodomys* spp.).

4.4.2 Environmental Consequences

4.4.2.1 Proposed Action

Effects on biological resources from implementing the Proposed Action would not be significant.

Vegetation. Approximately 6.7 acres of grassland vegetation would be removed for road construction, and 8.3 acres of grassland vegetation would be restored with native vegetation after demolition. Oak tree removal is not proposed. Adverse effects would be minimized by conservation measures identified in section 3.1.4.2.

Ground disturbance and importing soil for construction could result in the spread of exotic species. The effect of sediment deposition, scouring, and erosion due to water runoff from the road surface could disturb soils, providing habitat for exotic or invasive plant species. The spread of invasive species could degrade native vegetation communities.

Vegetation removal would be minimized to the extent practicable. Demolition and restoration of abandoned road sections would require minimal vegetation clearing because the existing road and shoulder would be the main area affected. Realignment of the road and construction of the connector road would require clearing grassland vegetation from the proposed new road sections. Removal of the transfer station would require staging and access areas, most of which could be accomplished along the existing dirt access road with minor effects to adjacent grassland communities; adjacent riparian vegetation would be avoided.

Revegetation and site restoration would be conducted in accordance with the installation's replanting procedures. Conservation measures included in the Proposed Action (section 3.1.4.2.) include protecting vegetation adjacent to construction, preventing spread of invasive species, and monitoring by a qualified biologist.

Wetlands. The Proposed Action would affect less than 0.1 acres of potentially jurisdictional waters of the U.S., including wetlands. Proposed realignment of the two curves are within 50 feet of potential jurisdictional wetlands and could affect wetlands from storm water runoff, erosion and sedimentation.

In accordance with EO 11990, avoidance of long- and short-term effects on wetlands on Federal lands is a priority. The proposed realigned curves were demonstrated to be the least environmentally damaging alternatives; other alignments had greater effects on wetlands and

other sensitive resources. Specific design features, including but not limited to pre-assembled, single span bridges, would be evaluated to avoid and minimize adverse effects. Appropriate Clean Water Act section 401/404 permitting and California Regional Water Quality Control Board certification would be obtained as needed.

Storm water management and erosion and sediment control BMPs would be implemented to minimize and avoid adverse effects.

Wildlife Resources. Approximately 6.7 acres of wildlife grassland habitat would be removed for road construction, and 8.3 acres of wildlife grassland habitat would be restored with native vegetation after demolition. Moving the roadway farther from San Antonio River would provide a vegetated buffer between the roadway and the river, and improve vegetation conditions along the river's edge.

Indirect effects include those on wildlife from degradation and loss of habitat. Effects on fish or other aquatic fauna could occur as storm water runoff could affect water quality. Following an approved ESCP and SWPPP would reduce the effects to negligible. Potential direct adverse effects to wildlife include increased vehicle-animal collisions associated with increased traffic speeds resulting from the improved roadway. However, the effect to wildlife would be minimal as the potential for increased vehicle-animal collisions would be reduced by the project's roadway safety improvement designs (i.e., wider roadway and lanes, safer curves, and improved driver visibility).

Ground-disturbing activities and vegetation clearing could displace or harm migratory adult or breeding birds. However, implementation of seasonal timing, pre-activity nest surveys and other natural resources management practices to avoid or minimize adverse effects would reduce the effects.

4.4.2.2 No Action Alternative

Under the No Action Alternative, FHL would not implement the Proposed Action. Existing conditions would remain the same, and no effects on biological resources would be expected.

4.5 Threatened and Endangered Species

4.5.1 Definition, Existing Conditions, and Evaluation Criteria

The definition, existing conditions, and evaluation criteria used to determine significant effect on Threatened and Endangered Species are described in the 2010 IDTEA, which is incorporated by reference (USARC 2010).

4.5.1.1 Federally Listed Species

The 2010 IDTEA lists eight federally listed plant and wildlife species with the potential to occur at FHL. Of these, three may occur at or near the project site: federally threatened vernal pool fairy shrimp (*Branchinecta lynchi*), federally endangered arroyo toad (*Anaxyrus californicus*), and federally endangered San Joaquin kit fox (*Vulpes macrotis mutica*) (Table 3-4). A current search of California Natural Diversity Database (CNDDB) for the USGS Quad within which the project site occurs and the eight surrounding quads identified occurrences of two additional federally listed species: Monterey spineflower (*Chorizanthe pungens* var. *pungens*) and Smith's blue butterfly (*Euphilotes enoptes* ssp. *smithi*). Neither species occurs near the project site, nor is there habitat for these species at the project site.

Vernal pool fairy shrimp occur in vernal pools, vernal pool-like depressions, depressions in sandstone rock outcrops, earth slumps, and grassy swales, and depression basins that are present within native and non-native grasslands, alkaline scrub, and coastal sage scrub

communities (USFWS 2010). Vernal pool fairy shrimp have been identified within 65 of approximately 400 pools on FHL. Vernal pool fairy shrimp occur in pools adjacent to portions of the project site (Figure 2-2).

Arroyo toads at FHL make up the northern recovery unit in the USFWS Recovery Plan for the species (USFWS 1999). At FHL, arroyo toads occur along the San Antonio River, which is south and west of the project site. Sandy soils along the river provide breeding and upland habitat. Arroyo toads most frequently forage within 650 ft of breeding habitat (Griffin and Case 2001; Mitrovich et. al 2011). Breeding habitat in the vicinity of the project is currently marginal due to stream stabilization (Hancock 2009). Arroyo toads deposited clutches in the vicinity of the project site in most years 1998–2009. In 2009, arroyo toads deposited 4 clutches within 650 ft of the project site. However, in 2010 and 2011, the nearest clutch site was more than 1100 ft away, and in 2012 and 2013, the nearest clutch was more than 2.3 mi from the project site.

Surveys for San Joaquin kit fox are conducted twice yearly at FHL; data collected between 1990 and 1995 indicated a decline in the population (FHL 2013b), and kit fox have not been observed within FHL since 2000.

4.5.1.2 State Listed and Other Sensitive Species

The 2010 IDTEA lists four state listed species with the potential to occur at FHL; however, none of these species have the potential to occur within the project site. A list of an additional 32 species of concern is provided in the 2010 IDTEA. State requirements of mitigation of effects on special-status species are not applicable on federal lands, however, documentation of potential effects to these species is required under NEPA. DD&A searched CNDDB for occurrence within 9 USGS Quads: within which the project site occurs and the eight surrounding quads. The search identified 10 additional species of concern (Table 3-5). Four species have the potential to occur at the project site based on elevation and vegetation conditions: California legless lizard (*Anniella pulchra*), California linderiella (*Linderiella occidentalis*), San Luis Obispo sedge (*Carex obispoensis*), and Santa Lucia dwarf rush (*Juncus luciensis*). Nearby vernal pools were surveyed for vernal pool fairy shrimp in 1995 and 2000, and monitored annually 2004–2013. Survey and monitoring would have detected California linderiella and none were identified.

Table 4-1. Species of concern not addressed in the 2010 IDTEA, Fort Hunter Liggett, California.

Scientific Name	Common Name	Status*	Presence of Suitable Habitat
Reptiles			
Anniella pulchra (includes *A. p. nigra* and *A. p. pulchra* as recognized by the DFW)	California legless lizard	CSC	Habitat present
Invertebrates			
Danaus plexippus	Monarch butterfly	CEQA	No habitat present
Linderiella occidentalis	California linderiella (fairy shrimp)	CEQA	Habitat present, species not detected in or near project site during USFWS protocol surveys for vernal pool fairy shrimp in 1995 and 2000.
Plants			
Arctostaphylos montereyensis	Toro Manzanita	CEQA	Not Present - Not observed during site survey
Calyptridium parryi var. hesseae	Santa Cruz Mountains pussypaws	CEQA	No habitat present
Carex obispoensis	San Luis Obispo sedge	CEQA	Habitat present
Chorizanthe breweri	Brewer's spineflower	CEQA	No habitat present
Galium clementis	Santa Lucia bedstraw	CEQA	No habitat present. Project site is below the known elevation range for this species.
Juncus luciensis	Santa Lucia dwarf rush	CEQA	Habitat present
Stylocline masonii	Mason's neststraw	CEQA	No habitat present

* CSC – California species of concern.
CEQA - Meets the definition of rare or endangered under California Environmental Quality Act §15380(b) and (d).

4.5.2 Environmental Consequences

4.5.2.1 Proposed Action

Effects on threatened and endangered species from implementing the Proposed Action would not be significant. The Army is in consultation with US Fish and Wildlife Service regarding effects to federally listed species for this project. Additional measures to minimize the potential for harm to federally listed species may be developed during the consultation process.

Vernal pool fairy shrimp pools that occur 10–80 ft from the Proposed Action area could be adversely affected by ground disturbance, erosion, and runoff associated with construction, as well as by changes in runoff patterns associated with the design of the roadway improvements. One pool could be lost due to construction of East Curve; the pool is a small artificial pool likely formed by a former dirt road. This pool had vernal pool fairy shrimp present in 1995 and 2000. During annual surveys 2004–2013, it held water in 2005, 2007, and 2010. In 2005, the pool was surveyed for fairy shrimp and none were detected. In order to maintain an appropriate curve radius and minimize overall effects to the small drainage to the east and a higher quality pool complex to the west, this pool would be adversely affected.

To minimize potential adverse effects to remaining pools, the pools and an appropriate buffer would be marked for avoidance during staging, construction, and site restoration. Within 50 m of the margins of pools and wetlands, vehicles and equipment staging would not be permitted outside of existing road shoulders, and construction and ground disturbance would be limited to the minimum footprint feasible. The roadway design would be such that existing hydrologic conditions would be maintained as practicable. Wetlands and pools would be monitored by DPW during construction activities and annually during the wet season to ensure protection measures were adequate.

Arroyo toad breeding habitat could be adversely affected by runoff of pollutants and sediment associated with construction and use of the improved roadways. Arroyo toad breeding habitat would be protected from erosion and storm water runoff by complying with CWA 401/404, NPDES, and EISA section 438 requirements as described in sections 0 and 4.3.2. The potential for harm to arroyo toads in uplands is minor due to a lack of friable soils for burrowing and marginal foraging habitat; both of which occur in abundance in the river but not in the upland terrace. Harm to arroyo toads would be minimized by limiting construction to daylight hours, maintaining a buffer between construction activities and sensitive habitats, and conducting biological monitoring as described in the proposed action.

Realigning West Curve away from sandy soils and San Antonio River reduces the potential for pollutants from vehicles, erosion, and spills from vehicle accidents from washing into the river. Removal and restoration of the road area may improve the area for upland foraging. Restoration would provide a vegetated buffer between the river bank and the road shoulder.

No San Joaquin kit fox have been sighted at FHL since 2000. Effects to San Joaquin kit fox would be minimized by covering excavations and culverts as described in the proposed action.

4.5.2.2 No Action Alternative

Under the No Action Alternative, FHL would not implement the Proposed Action. Existing conditions would remain the same, and no effects on threatened and endangered species would be expected.

4.6 Storm Water Systems

4.6.1 Definition, Existing Conditions, and Evaluation Criteria

The definition, existing conditions, and evaluation criteria used to determine significant effect on Infrastructure, specifically storm water systems, are described in the 2010 IDTEA, which is incorporated by reference (USARC 2010).

4.6.2 Environmental Consequences

4.6.2.1 Proposed Action

Effects on infrastructure, specifically storm water systems, from implementing the Proposed Action would not be significant.

Construction would result in ground disturbance from vegetation clearing, grading, and contouring of land along 1.2 mi of roadway. These activities would disrupt natural and man-made storm water drainage methods and increase the potential for storm water runoff to erode soil during construction activities. Soil erosion and sediment production would be minimized during construction by following the project-specific ESCP, SWPPP, construction BMPs, and NPDES permit requirements. Compliance with EISA Section 438 would ensure that predevelopment site hydrology be maintained or restored to the maximum extent technically feasible with respect to temperature, rate, volume, and duration of flow.

Once complete, new road construction would have improved storm water drainage and detention due to installation of appropriately sized and sloped storm water features.

4.6.2.2 No Action Alternative

Under the No Action Alternative, FHL would not implement the Proposed Action. Existing conditions would remain the same, and no effects on infrastructure, specifically storm water systems, would be expected.

4.7 Traffic and Transportation Systems

4.7.1 Definition, Existing Conditions, and Evaluation Criteria

The definition, existing conditions, and evaluation criteria used to determine significant effect on Traffic and Transportation Systems are described in the 2010 IDTEA, which is incorporated by reference (USARC 2010). Some installation roadways have been renamed since the 2010 IDTEA was written. Nacimiento-Fergusson Road from Mission Road to the Nacimiento Bridge and Silo Road have been renamed Mission Road. Other than naming conventions, the traffic and transportation conditions remain the same as those discussed in the 2010 IDTEA.

4.7.2 Environmental Consequences

4.7.2.1 Proposed Action

Effects on traffic and transportation systems from implementing the Proposed Action would not be significant.

There are no notable, significant traffic or congestion problems in or around FHL; however, construction activities would temporarily increase traffic congestion on local installation roads. Effects would be greatest during commute hours, as this is when construction crews would be expected to travel to and from FHL, and when road construction activities would most affect traffic patterns. Traffic and transportation systems on FHL would be improved by safer curves.

Construction activities would result in minor traffic delays for vehicles traveling past construction zones. This effect would be minimized by following a traffic control plan as described in the proposed action.

4.7.2.2 No Action Alternative

Under the No Action Alternative, FHL would not implement the Proposed Action. Existing conditions would remain the same, and no effects on traffic and transportation systems would be expected.

4.8 Hazardous Materials and Waste

4.8.1 Definition, Existing Conditions, and Evaluation Criteria

The definition, existing conditions, and evaluation criteria used to determine significant effect on Hazardous Materials and Waste are described in the 2010 IDTEA, which is incorporated by reference (USARC 2010). Other than updating of the SPCC Plan (HDR 2012), conditions remain the same as that discussed in the 2010 IDTEA.

4.8.2 Environmental Consequences

4.8.2.1 Proposed Action

Effects on hazardous materials and waste from implementing the Proposed Action would not be significant.

The Proposed Action would result the use of hazardous materials and hazardous waste generation during construction activities. Products containing hazardous materials would be procured and used during construction in accordance with practices established at FHL and their hazardous materials procurement mechanism. Contractors would be responsible for the management of hazardous materials, which would be handled in accordance with Federal and state regulations; Hazardous Materials Management, Plan; Hazardous Water Management Plan, SPCC (HDR 2012); and all other laws and regulations, which would minimize the potential for adverse effects. Contractors must report the use of hazardous materials to DPW including pertinent information (e.g. MSDS).

4.8.2.2 No Action Alternative

Under the No Action Alternative, FHL would not implement the Proposed Action. Existing conditions would remain the same, and no effects on hazardous materials or waste would be expected.

4.9 Health and Safety

4.9.1 Definition, Existing Conditions, and Evaluation Criteria

The definition, existing conditions, and evaluation criteria used to determine significant effect on Health and Safety are described in the 2010 IDTEA, which is incorporated by reference (USARC 2010).

4.9.2 Environmental Consequences

4.9.2.1 Proposed Action

Effects on health and safety from implementing the Proposed Action would not be significant.

The Proposed Action would slightly increase the short-term risk associated with contractors performing work at the project site during the normal workday because the level of such activity would increase and increased risk of construction-related accidents. Contractors would be required to establish and maintain safety programs for their employees and adhere to established Federal, state, and local safety regulations, including applicable FHL plans.

4.9.2.2 No Action Alternative

Under the No Action Alternative, FHL would not implement the Proposed Action. Existing conditions would remain the same, and no effects on health and safety would be expected.

4.10 Cumulative Effects Summary

CEQ regulations stipulate that cumulative effects in an EA should consider the potential environmental effects resulting from “the incremental impacts of the action when added to other past, present, and reasonable foreseeable future actions regardless of what agency or person undertakes such other actions” (40 CFR Part 1508.7).

The FHL cantonment area was selected as the primary focus for potential cumulative effects because (1) the environmental effects anticipated as a result of the Proposed Action would be

minor and have limited potential for far-reaching effects, and (2) development activities that occur in the FHL cantonment area would be more likely to occur simultaneously and in close proximity to the Proposed Action.

Activities with the potential for cumulative effects were reviewed with respect to the latest available information. These activities remain the same as that discussed in the 2010 IDTEA, thus, this information is incorporated by reference. Additional future projects include development of an ACP (FHL 2013a) north and west of the Proposed Action, development of an Operational Readiness Training Center (FHL 2012) north of the ACP site, and other cantonment projects identified in the 2010 IDTEA.

Resources that could be impacted by the Proposed Action include the following: Air Quality and Climate Change; Geology, Soils and Seismicity; Water Resources, Biological Resources, Threatened and Endangered Species, Storm Water Systems, Traffic and Transportation, Hazardous Materials and Waste, and Health and Safety.

The Proposed Action would not have significant cumulative effects on the quality of the human or natural environment. Best management practices would be implemented to minimize impacts. The overall size and scale of past and future projects in the cantonment and surrounding area are small relative to undeveloped lands in the area.

Implementation of the No Action alternative would not result in a change in current conditions; therefore, the No Action Alternative would not result in cumulative effects to the quality of the human or natural environment.

5 Preparers

FHL consulted environmental documentation provided by WEP Construction Inc., Vernadero Group Inc., and in-house knowledge, data, and expertise to prepare this final draft EA for public review and comment. FHL will prepare the draft Finding of No Significant Impact based on this SEA, ensure there is appropriate opportunity for public review, and, as appropriate, finalize the Finding of No Significant Impact.

5.1 Army Staff, Fort Hunter Liggett

Gary Houston, DPW Environmental Division Chief

Elizabeth Clark, Wildlife Biologist

Lisa Cipolla, Cultural Resources Manager

Michael Moeller, Compliance Program Manager

Robert Pike, Natural Resources Manager

5.2 Technical Assistance via W.E.P Construction, Inc.

A contract was awarded to W.E.P. Construction Inc. to prepare environmental analysis, design four phases of road construction and repair, and to perform road repairs on two phases. WEP subcontracted to Denise Duffy & Associates, Inc. (DD&A) for preparation of environmental analysis and subcontracted to Associated Engineering Consultants, Inc. for preparation of the project design. The construction portions of this project addressed in this EA would be awarded according to appropriate contracting procedures.

Joan Smay, President, W.E.P. Construction, Inc.

Mark E. Burlew, Principal Vice President, Associated Engineering Consultants, Inc.

Michael Bray, President, Michael Bray Construction

Erin Harwayne, AICP, Senior Project Manager, Denise Duffy & Associates, Inc.

Jami Davis, Assistant Environmental Scientist/GIS Analyst, Denise Duffy & Associates, Inc.

Gary S. Breschini, Ph.D., RPA, Archaeological Consulting

Josh Cwikla, P.G., Project Manager, Beacon Geotechnical, Inc.

5.3 Technical Assistance via Vernadero Group, Inc.

Vernadero Group Inc. is contracted to support natural resources support services to the FHL DPW Environmental Division. Vernadero Group Inc. subcontracted to Colorado State University, Center for Ecological Management of Military Lands.

Jackie Hancock, Research Associate II, Center for Environmental Management of Military Lands, Colorado State University

Jason Bachiero, Research Associate II, Center for Environmental Management of Military Lands, Colorado State University

Darlene Woodbury, Research Associate II, Center for Environmental Management of Military Lands, Colorado State University

Kimberly Guilliam, Research Associate II, Center for Environmental Management of Military Lands, Colorado State University

6 References

Archaeological Consulting. 2013. Cultural Resources Report for Proposed Action. Prepared for W.E.P Construction Inc., for Directorate of Public Works, US Army Garrison Fort Hunter Liggett, Monterey County.

Beacon Geotechnical, Inc. 2012. Geotechnical Engineering Report. Prepared for W.E.P Construction Inc., for Directorate of Public Works, US Army Garrison Fort Hunter Liggett, Monterey County.

Denise Duffy & Associates, Inc. (DD&A). 2013a. Biological Resources Report. Prepared for W.E.P Construction Inc., for Directorate of Public Works, US Army Garrison Fort Hunter Liggett, Monterey County.

DD&A. 2013b. Wetland Delineation Report. Prepared for W.E.P Construction Inc., for Directorate of Public Works, US Army Garrison Fort Hunter Liggett, Monterey County.

Department of Energy/Energy Information Administration (DOE/EIA) (2010) Table 3. State Emissions by Year (Million Metric Tons of Carbon Dioxide). Available online *http://www.eia.doe.gov/oiaf/1605/state/state_emissions.html*. Data released 26 October 2010.

Federal Emergency Management Agency (FEMA). (2009b) Flood Insurance Rate Map for Monterey County, California: Panel No. 06053C1325G. Effective date 2 April 2009. Available online. Accessed 16 January 2014. *http://msc.fema.gov/webapp/wcs/stores/servlet/FemaWelcomeView?storeId=10001&catalogId=10001&langId=-1&userType=null*.

Fort Hunter Liggett (FHL). 2012. Environmental assessment supplement. Proposed Army Reserve military construction project- operational readiness training complex, Fort Hunter Liggett, Monterey County, California. Prepared for Army Reserve Installation Management Directorate, US Army Garrison Fort Hunter Liggett, and US Army Corps of Engineers- Louisville District. December 2012. Accessed 16 January 2014 http://www.liggett.army.mil/pdf/dpwPDF/Env/FHL%20ORTC%20Supplemental%20EA%202013.pdf

FHL. 2013a. Supplemental environmental assessment and finding of no significant impact addressing construction of an Access Control Point at Fort Hunter Liggett, California. U.S. Army Garrison, Fort Hunter Liggett, Monterey County, California. Accessed 16 January 2014. http://www.liggett.army.mil/pdf/acsPDF/FHL%20ACP%20SEA_060613.pdf

FHL. 2013b. Final Integrated Natural Resources Management Plan/Environmental Assessment. U.S. Army Garrison Fort Hunter Liggett. October 2012. Signed 2013. Accessed 16 January 2014. http://www.liggett.army.mil/pdf/dpwPDF/Env/FHL_INRMP_Pre_Final_2011.pdf

Hancock, J. 2009. Arroyo toad (*Anaxyrus californicus*) life history, population status, population threats, and habitat assessment of conditions at Fort Hunter Liggett, Monterey County, California. M.S. thesis, California Polytechnic State University, San Luis Obispo.

Hazebrook, A. 2010. Suggested Plant Materials and Fill Sources for Use in Construction Projects on Fort Hunter Liggett. Memorandum 26 July 2010. U.S Army Garrison Fort Hunter Liggett.

HDR. 2012. United States Army Garrison Fort Hunter Liggett Spill Prevention Control and Countermeasures Plan. Prepared for US Army Garrison Fort Hunter Liggett, Directorate of Public Works Environmental Division, Jolon, California. March 2012. Accessed 16 January 2014. http://www.liggett.army.mil/pdf/dpwPDF/Env/FHL_SPCC_2012.pdf

U.S. Army Reserve Command (USARC). 2010. Environmental Assessment Addressing Installation Development and Training at Fort Hunter Liggett, California. Accessed 16 January 2014. http://www.liggett.army.mil/pdf/dpwPDF/Env/FHL_Training_Dev_EA_2010.pdf

U.S. Environmental Protection Agency (EPA). 2009. Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act.

U.S. Fish and Wildlife Service (USFWS). 1999. Arroyo southwestern toad (*Bufo microscaphus californicus*) recovery plan. U.S. Fish and Wildlife Service, Portland Oregon. Vi + 119 pp. Accessed 17 January 2014. http://ecos.fws.gov/docs/recovery_plan/990724.pdf

U.S. Fish and Wildlife Service (USFWS). 2010. Programmatic biological opinion for activities conducted at Fort Hunter Liggett, Monterey County, California (8-8-09-F-54R). May 26, 2010. U.S. Fish and Wildlife Service, Ventura Fish and Wildlife Office, Ventura, California.

7 Acronyms and Abbreviations

List of Acronyms, Abbreviations, and Definition of Terms	
Term	Meaning
BMPs	Best Management Practices
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Data Base
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalents
CWA	Clean Water Act
DD&A	Denise Duffy & Associates, Inc.
DOD	Department of Defense
DPW	Department of Public Works
EA	Environmental Assessment
EISA	Energy Independence and Security Act
EO	Executive Order
ESA	Endangered Species Act
ESCP	Erosion-and-Sediment-Control Plan
FEMA	Federal Emergency Management Agency
FHL	Fort Hunter Liggett
FNSI	Finding of No Significant Impact
ft^2	square feet
FY	fiscal Year
GIS	Geographical Information System
GHG	greenhouse gas
IDTEA	Installation Development and Training Environmental Assessment
ITAM	Integrated Training Area Management
MBUAPCD	Monterey Bay Unified Air Pollution Control District
MBTA	Migratory Bird Treaty Act
$\mu g/m^3$	micrograms per cubic meter
mg/m^3	milligrams per cubic meter
mm	millimeter
mph	miles per hour
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NOA	Notice of Availability
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
O_3	ozone
PM_{10}	particulates equal to or less than 10 microns in diameter
$PM_{2.5}$	particulates equal to or less than 2.5 microns in diameter
ppm	parts per million

List of Acronyms, Abbreviations, and Definition of Terms	
Term	Meaning
RWQCB	Regional Water Quality Control Board
SHPO	State Historic Preservation Office
SO_2	sulfur dioxide
SPCC	Spill Prevention Control and Countermeasures
SWPPP	Storm Water Pollution Prevention Plan
USACE	United States Army Corps of Engineers
USAR	United States Army Reserve
USARC	United States Army Reserve Command
U.S.C.	United States Code
USEPA	United States Environmental Protection Agency
USFWS	United States Fish & Wildlife Service
USGS	United States Geological Survey

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Appendix A. Interagency Coordination and Public Involvement
(Public Comments Pending)

Public Notice

Availability of Environmental Assessment and
Draft Finding of No Significant Impact
for
Implementation of Mission Road Improvement Project at
Fort Hunter Liggett, California

The United States Army has prepared an Environmental Assessment (EA) that considers the proposed Mission Road Improvements Project at Fort Hunter Liggett, California. Under the proposed action, the Army would improve 1.2 miles of Mission Road in the cantonment by realigning two curves and constructing a bridge connector road, demolishing abandoned roadways and the waste transfer station, and restoring disturbed areas with native vegetation.

Implementation of the proposed action is not expected to result in significant environmental impacts. Therefore, preparation of an environmental impact statement is not required in accordance with the National Environmental Policy Act. Copies of the EA and Draft Finding of No Significant Impact (FNSI) are available for review and comment at the following local libraries: Monterey County Free Libraries (King City and Buena Vista Branches), San Antonio School Library, and Fort Hunter Liggett Library.

Comments on the EA and Draft FNSI should be submitted to: Dir. of Public Works Env. Division (ATTN: Clark), 233 California Avenue, Fort Hunter Liggett, CA 93928-7090 or by electronic mail to liz.r.clark@us.army.mil. An electronic copy of the EA or FNSI can be obtained by using this contact information or downloading from
http://www.liggett.army.mil/sites/dpw/environmental.asp

Comments must be received no later than 30 days after publication of this notice. Subject to review and consideration of comments submitted by individuals, organizations, or agencies during the comment period, the United States Army intends to issue the final FNSI at the conclusion of the comment period and to proceed with the proposed action.