



**ENVIRONMENTAL ASSESSMENT  
FAMILY, MORALE, WELFARE AND RECREATION TRAVEL CAMP EXPANSION  
U.S. ARMY GARRISON  
YUMA PROVING GROUND**

**June 2018**

**Prepared for  
U.S. Army Garrison Yuma Proving Ground  
Environmental Sciences Division  
Yuma, Arizona 85365**





**Draft Finding of No Significant Impact**  
**Family, Morale, Welfare and Recreation Travel Camp Expansion**  
**U.S. Army Garrison**  
**Yuma Proving Ground, Arizona**

The U.S. Army Garrison (USAG) Yuma Proving Ground (YPG) prepared the attached environmental assessment (EA), hereby incorporated by reference, to identify and evaluate potential environmental impacts associated with the expansion and operation of the existing Family, Morale, Welfare, and Recreation (FMWR) Travel Camp and storage areas located on the Howard Cantonment Area (HCA) (Proposed Action). The proposed expansion of the current facilities would enable YPG FMWR to provide services to additional qualified active and retired military members, further enhancing quality of life as well as improving revenue streams for ancillary FMWR facilities, and Base Operations to include Army & Air Force Exchange Services (AAFES) and Defense Commissary Agency (DeCA; Commissary). The EA was prepared in accordance with the National Environmental Policy Act of 1969 (NEPA), the Council on Environmental Quality (CEQ) regulations implementing NEPA (Title 40, USC, Parts 1500 through 1508); Department of Defense (DOD) Directive 4715.9 Environmental Planning and Analysis; and Environmental Analysis of Army Actions (CFR Title 32, Part 651).

In preparation of the EA, no alternatives other than those presented in the EA, were determined to satisfy the purpose and need of the Proposed Action. No other alternatives were identified for the Travel Camp site. Therefore, only the No Action Alternative and the Preferred Alternative were carried forward for analysis.

**Description of the Proposed Action**

The Proposed Action involves construction and modification of approximately 9.3 acres of land to expand the current FMWR Travel Camp and provide additional recreational vehicle parking and hookup areas and vehicle storage facilities at YPG. Expansion of the FMWR Travel Camp would include: site preparation, paving and grading, electrical, communications and cable television systems distribution, site lighting, and water distribution system. The new site would include approximately 7 acres for the RV area, 2 acres for storage, and 0.3 acres for a dog park. The Proposed Action includes expanding the existing security fence in order to accommodate expansion of the Travel Camp.

The Travel Camp would consist of roads, utilities (water, sewer, including a lift station, if necessary, and power), and concrete slabs for approximately 81 RV spaces. There would also be shade ramadas and laundry facilities. An existing parking/storage area to the east of the camp would be converted to additional RV spaces. Expansion of the existing FMWR Travel Camp would create 93 new full service spaces located as per design plans. Concrete and paving would be added to the area. Electricity would be provided to each site as would conduit for TV and Wi-Fi. Supporting facilities include exterior lighting and area signage. Heating and air conditioning for the laundry buildings would be provided by self-contained units. A new storage area – approximately 2 acres in size – would be constructed. The area would be graded, leveled, and covered with gravel. The security fence would be expanded to encompass this new storage area. A 0.3-acre dog park would be constructed in the southern corner of the project area, south of a small wash. The security fence would be expanded to encompass this area as well.

## **No Action Alternative**

Under the No Action Alternative, no construction would occur and the Travel Camp would not be expanded. The YPG FMWR Travel Camp currently provides 102 full service hookups and includes a small dog park and small storage area. The Travel Camp is consistently full during the winter season, resulting in denial of requests from prospective eligible tenants for camp reservations. If the Travel Camp is not expanded, FMWR would be unable to improve its ability to service the increasing needs of retirees and other eligible prospective tenants and would be unable to increase its revenue streams associated with this program.

## **Environmental Consequences**

The EA evaluated potential impacts on the following resources: Air Quality, Biological Resources (Vegetation and Wildlife), Cultural Resources, Environmental Justice and Protection of Children, Floodplains, Geology and Geography, Hazardous Materials and Waste, Health and Safety, Land Use and Recreation, Noise, Socioeconomic Values, Soil Resources, Water Resources, Utilities and Infrastructure, and Visual and Aesthetic Resources. The Cultural Resources, Environmental Justice and Protection of Children, Floodplains, Geology and Geography, Health and Safety, Socioeconomic Values, and Visual and Aesthetic Resources were eliminated from further analysis because the potential for impacts to these resources was determined to be nonexistent, unlikely, or negligible. As a result, the scope of environmental analysis focused on the resources listed below because they were determined to be potentially affected in connection with Proposed Action activities.

## **Summary of Impacts**

As summarized below, the Proposed Action will result in less than significant impacts, individually and cumulatively, to the resources analyzed in the EA.

### **Air Quality**

Construction activities would result in temporary and short-term emission increases, primarily from fuel combustion from construction equipment and from fugitive dust emissions. Dust emissions from the site would be localized, and increases in air pollutants at YPG would not be anticipated partly due to good dispersal by strong winds and lack of topographic features to inhibit dispersal. Construction best management practices (BMPs) would be utilized during construction to reduce fugitive dust emissions. Increased tenant vehicle traffic (RVs and automobiles) and use of municipal services (i.e., energy, maintenance, water, and waste) during operation of the expanded Travel Camp could also generate emissions. Overall, the levels of construction and operational emission increases would result in less than a significant impact to the local and regional baseline emissions.

### **Biological Resources**

Construction of the Proposed Action would disturb approximately 9.3 acres of partially disturbed Sonoran desert scrub habitat. Implementation would result in removal of common vegetation, and displacement of wildlife (primarily small mammals) present within the proposed expansion area. Operation of the Travel Camp would result in the long-term loss of vegetation and habitat for wildlife species. BMPs would be implemented to minimize potential impacts. Overall, the level of construction and operational impacts to biological resources would be less than significant. The Proposed Action may affect, but is not likely to adversely affect Southwestern willow flycatcher and Western yellow-billed cuckoo. YPG has engaged in informal consultation with the United States Fish and Wildlife Service (FWS) on this determination. Concurrence from FWS is expected to occur in July 2018.

### **Hazardous Materials and Wastes**

Small quantities of potentially hazardous materials (e.g., oils, grease) would be used during construction. Waste contents would be characterized periodically and disposed of in accordance with applicable regulations. Impacts from construction and operation would be less than significant.

### **Land Use and Recreation**

The proposed Travel Camp expansion would not be incompatible with existing land use in the region. Use of the area for a Travel Camp would not affect current activities on YPG or on surrounding land uses. The existing security fence would be expanded around the new Travel Camp and the area would remain inaccessible to the general public. The expansion would not affect recreational opportunities that are available at YPG or on surrounding lands. Overall, impacts to land use and recreation would be less than significant.

### **Noise**

Noise generated from the Proposed Action would result in short-term effects due to construction activities. Residents in the Travel Camp would experience increased noise during construction; however, impacts would be considered minor because these activities would be temporary. Long-term impacts would be limited to vehicular traffic and resident use of the expanded Travel Camp area. The potential for adverse noise impacts would be less than significant.

### **Soil Resources**

Construction and operation of the expanded Travel Camp would result in both short- and long-term, localized impacts to soil resources in the approximately 9.3-acre project area. Impacts to soils would be short-term during construction, with the potential for long-term impacts as a result of increased erosion due to increased runoff rates or altered runoff flow patterns associated with land clearing, construction grading, and increased impervious area. Disturbances to soils would be minimized by use of proper construction techniques and implementation of BMPs during construction. A construction stormwater pollution prevention plan would be implemented during construction to reduce potential impacts. Overall, the levels of construction and operational impacts to soils would be less than significant.

### **Utilities and Infrastructure**

The expansion of the Travel Camp under the Proposed Action would expand existing utilities and infrastructure to the new location. There would be construction of new utility lines and an increase in the use of utilities related to increased use of the area. Existing utilities, infrastructure, and associated support would be sufficient to sustain activities at the expanded Travel Camp. There is adequate water supply for the domestic and fire suppression demands. The sewer treatment system is adequate to support the requirements for this project. Impacts to utilities and infrastructure would be less than significant.

### **Water Resources**

Construction of the Travel Camp expansion would result in an increase in impervious surface, but there would not be a significant impact on stormwater quantity or quality. Appropriate BMPs and compliance with the stormwater pollution prevention plan would reduce the potential for impacts to water resources. Overall, impacts to water resources would be less than significant.

## **Public Participation**

Fifty-five scoping letters were mailed to interested parties on January 18, 2018, announcing the preparation of this EA and soliciting comments and concerns from interested stakeholders, agencies, and tribal governments on the proposed project. Two comments were received during the scoping period.

The USAG YPG published a public notice in the Yuma Sun on July 1, 2018 announcing the availability of the EA and draft Finding of No Significant Impact (FNSI) for review and comment. The EA and draft FNSI were made available on USAG YPG's public website at <https://www.yuma.army.mil/documents.html>. The public review period ended July 31, 2018. Comments received were considered in issuing this FNSI and addressed and incorporated into the EA, as appropriate.

## **Conclusion**

Based on the analysis presented in the EA for expanding and operating a Travel Camp on USAG YPG no significant environmental impacts are anticipated as a result of implementing the project as proposed under the Preferred Alternative. Therefore, preparation of an Environmental Impact Statement is not required and a FNSI is the appropriate decision document to conclude the NEPA process.

I have read and concur with the findings and analyses documented in the Environmental Assessment and hereby approve the Finding of No Significant Impact.

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Gordon K. Rogers  
Garrison Manager

Date

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### **List of Acronyms**

AAFES	Army & Air Force Exchange Services
ADEQ	Arizona Department of Environmental Quality
AR	Army Regulation
AZGFD	Arizona Game and Fish Department
BLM	Bureau of Land Management
BMP	Best Management Practice
CEQ	Council on Environmental Quality
CO	Carbon Monoxide
CO <sub>2</sub>	Carbon Dioxide
dB	Decibel
dBA	A-weighted decibel
DeCA	Defense Commissary Agency
DOD	Department of Defense
EA	Environmental Assessment
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FMWR	Family, Morale, Welfare, and Recreation
FNSI	Finding of No Significant Impact
HCA	Howard Cantonment Area
IRP	Installation Restoration Program
LUPZ	Land Use Planning Zone
MCAS	Marine Corps Air Station
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NO <sub>2</sub>	Nitrogen Dioxide
NWR	National Wildlife Refuge
NZ	Noise Zone
ORV	Off-road Vehicle
O <sub>3</sub>	Ozone

Pb	Lead
PM	Particulate Matter
PM <sub>10</sub>	Particulates up to 10 microns in diameter
PM <sub>2.5</sub>	Particulates up to 2.5 microns in diameter
SIP	State Implementation Plan
SO <sub>2</sub>	Sulfur Dioxide
SWPPP	Stormwater Pollution Prevention Plan
UFC	Unified Facilities Criteria
USAG	United States Army Garrison
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
WCA	Walker Cantonment Area
YPG	Yuma Proving Ground

# 1 Purpose of and Need for Action

## 1.1 Introduction

The primary mission of the United States Army Garrison (USAG) Yuma Proving Ground (YPG) is to serve as a major research, development, testing, and evaluation facility for the Department of Defense (DOD). YPG provides a flexible, responsive, innovative, and diverse set of testing capabilities and services in a desert environment in order to meet the current and future needs of the U.S. Armed Forces. The USAG YPG is proposing to expand the existing Family, Morale, Welfare, and Recreation (FMWR) Travel Camp and storage areas located on the Howard Cantonment Area (HCA) on YPG. As such they have initiated this Environmental Assessment (EA) per the National Environmental Policy Act of 1969 (NEPA; 42 USC 4321 et seq.), to evaluate and document the potential for direct, indirect, and cumulative effects to the natural and human environment that could result from the Army's Proposed Action, as described in detail in Chapter 2. The analysis in this EA is tiered to the Programmatic Environmental Impact Statement for Activities and Operations at Yuma Proving Ground, Arizona (YPG 2016) and has been prepared to support the decision making process pursuant to the requirements of NEPA and Army Regulation (AR) 200-2, *Environmental Analysis of Army Actions* (32 CFR Part 651) and AR 200-1, *Environmental Protection and Enhancement* (32 CFR Part 650).

## 1.2 Project Location

YPG is a Major Range and Test Facility that serves as the Army's center for desert natural environment testing for artillery, equipment and armament, target acquisition, vehicles, a variety of munitions, personnel, and supply parachute systems, aviation weapons and sensors, and specialized equipment. YPG encompasses approximately 1,309 square miles (838,174 acres) of the Sonoran Desert in Yuma and La Paz counties in southwestern Arizona and is located approximately 25 miles northeast of the City of Yuma, Arizona (Figure 1). YPG is surrounded on three sides by federal land reserved either as Bureau of Land Management (BLM) or National Wildlife Refuge (NWR) land.

YPG is subdivided into three geographic and functional areas; (1) the Laguna Region, (2) the Cibola Region, and (3) the Kofa Region. The existing FMWR Travel Camp is located in the HCA, within the Laguna Region (Figure 2). The cantonment areas in this region include the HCA (formerly the Main Administrative Area), where most public works functions, FMWR services, and post housing are located; Laguna Army Airfield, where aviation support functions are based; and the Walker Cantonment Area (WCA), which is the location of Command functions (Garrison and Test) and their associated offices.

The existing Travel Camp is located on the western extent of the HCA, east of Laguna Dam Road. The proposed Travel Camp expansion would be north and west of the current travel camp facilities and the proposed Storage Area expansion would be east of the existing storage area (Figure 2).

## 1.3 Purpose and Need of the Proposed Action

The current Travel Camp facilities are located within the HCA and provide 102 full service hookups for active and retired military customers. The Travel Camp is consistently full during the winter season and regularly experiences significantly higher demand for facilities than are available. The proposed expansion of the current facilities would enable YPG FMWR to provide services to additional qualified active and retired military members, further enhancing quality of life as well as improving revenue streams for ancillary FMWR facilities, and Base Operations to include Army & Air Force Exchange Services (AAFES) and Defense Commissary Agency (DeCA; Commissary).

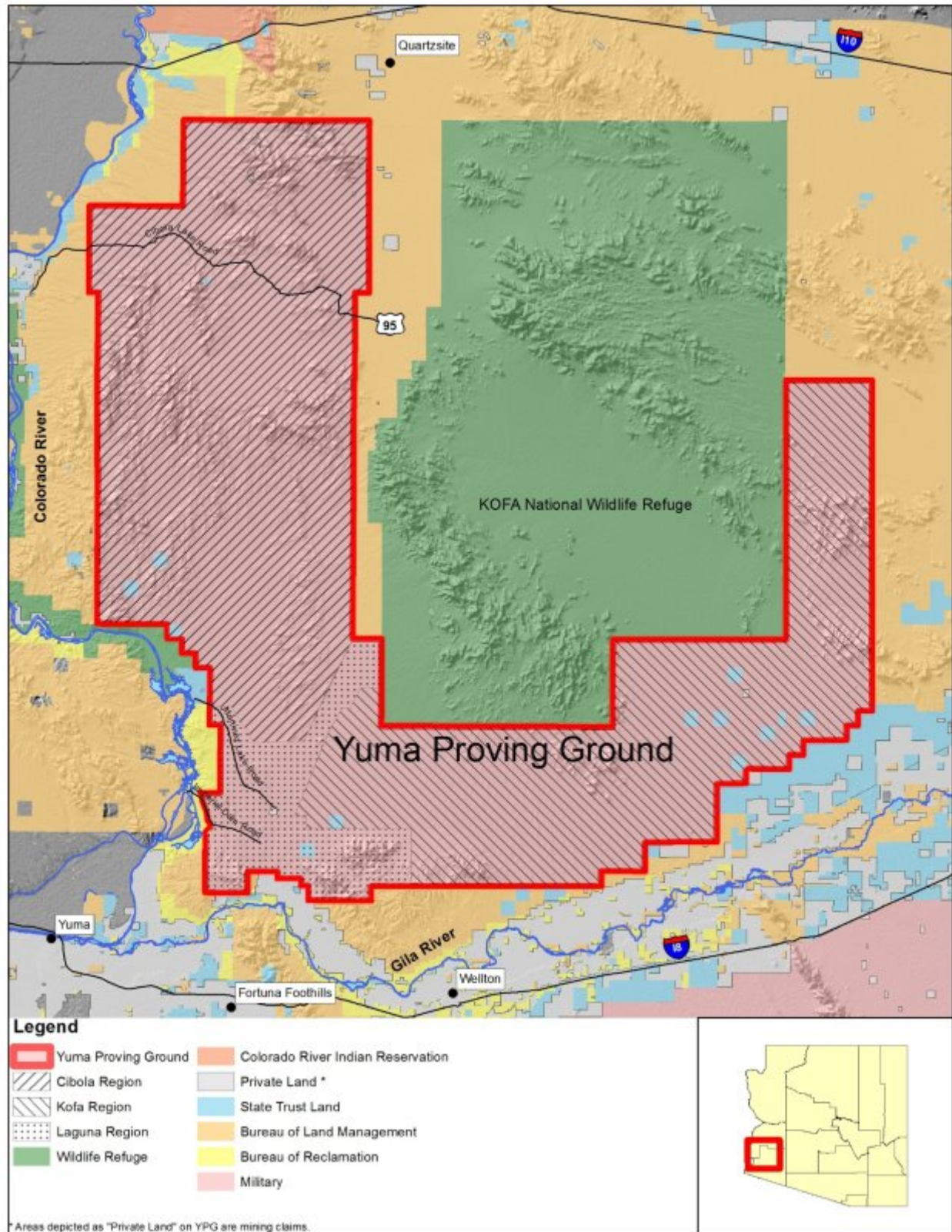


Figure 1. General Location



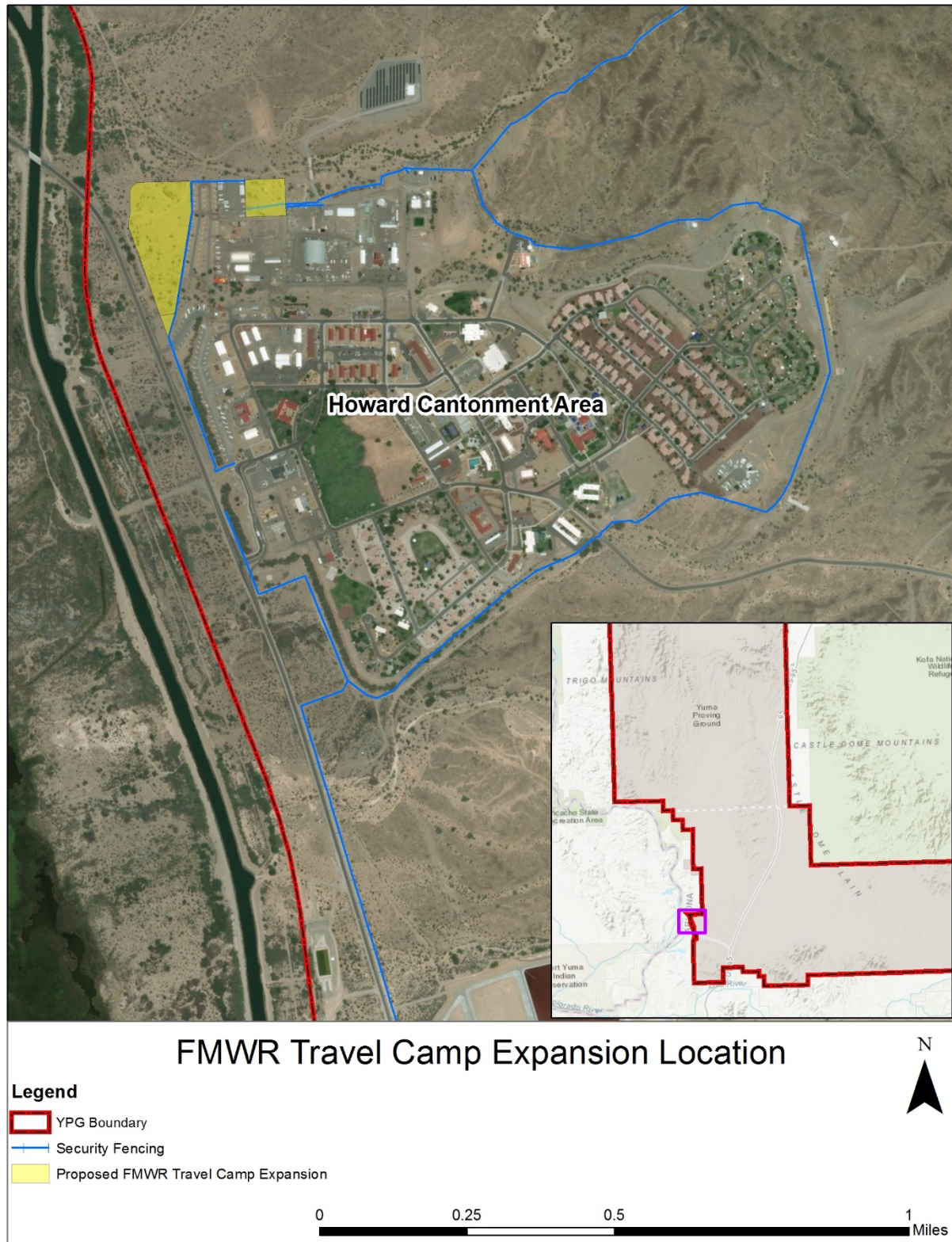


Figure 2. Project Area Location

## 1.4 Agency and Public Participation

The scoping process is described as “an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action” (40 CFR 1501.7). Direction for public participation opportunities with respect to this EA and decision making on the Proposed Action is provided by AR 200-2, *Environmental Analysis of Army Actions* (32 CFR Part 651). The public scoping process begins the NEPA process by gathering comments and documenting important issues and concerns that will be addressed in an analysis. The U.S. Army believes that consideration of the views and information of all interested persons promotes open communication and enables better decision making. All agencies, organizations, and members of the public having a potential interest in the Proposed Action are urged to participate in the decision making process.

Fifty-five scoping letters were mailed to interested parties on January 18, 2018, including letters submitted to potentially interested tribal governments. (A list of tribal representatives and others who were contacted is included in Section 4.1.) Two comments were received during the scoping period.

Upon completion, the Final EA, along with the draft Finding of No Significant Impact (FNSI), will be made available to the public for comment for a period of 30 days. At the end of that time period, the U.S. Army will consider all comments submitted by individuals, agencies, and organizations. As appropriate, the U.S. Army may then execute the FNSI and proceed with implementation of the Proposed Action. If it is determined that implementation of the Proposed Action would result in significant impacts, the U.S. Army will publish in the Federal Register a Notice of Intent to prepare an Environmental Impact Statement (EIS) or alternatively would not take the action.

Throughout this process, the public may obtain information on the status and progress of the Proposed Action and the EA through the YPG NEPA Program Manager, Sergio Obregon, at 928-328-2015 or [sergio.obregon.civ@mail.mil](mailto:sergio.obregon.civ@mail.mil).

## 1.5 Scope of the Environmental Analysis and Decision to be Made

This EA was prepared in accordance with NEPA, Council on Environmental Quality (CEQ) Regulations at 40 CFR Parts 1500-1508, and AR 200-2. It analyzes the direct, indirect, and cumulative effects of the Proposed Action and the No Action Alternative. A discussion of the affected environment, and the potential impacts to physical, natural, and human environments are provided.

YPG determined that the Proposed Action could potentially affect the resources listed below; therefore, the focus of the analysis in this EA is on these resource areas:

- Air Quality
- Biological Resources (Vegetation and Wildlife)
- Hazardous Materials and Waste
- Land Use and Recreation
- Noise
- Soil Resources
- Water Resources
- Utilities and Infrastructure

The following environmental resources were not evaluated since the Proposed Action would either not impact the resource or would result in negligible impacts. A brief rationale is provided explaining why they were dismissed from further analysis.

- **Cultural Resources:** Cultural resources at YPG are managed in accordance with the YPG Integrated Cultural Resources Management Plan, Fiscal Years 2017-2021 (Versar Inc. 2016).

Section 106 of the National Historic Preservation Act requires that federal agencies take into account the effect of an undertaking on historic properties listed, or eligible for listing, on the National Register of Historic Places, and afford the State Historic Preservation Office and the Advisory Council on Historic Preservation an opportunity to comment with regard to the undertaking. The statute also requires consultation with Native American Tribes that claim cultural affiliation to the area.

The Area of Potential Effect – the geographic area within which a proposed action may directly or indirectly affect cultural resources – for this project is the boundaries of the proposed Travel Camp expansion area. Review procedures have been implemented for this project in accordance with 36 CFR 800. The review has established that there would be no effect (Goslin, 2018), based on the Programmatic Agreement between the Arizona State Historic Preservation Office and the Advisory Council on Historic Preservation. If any unanticipated discoveries of archaeological remains are made, all activities in the area of the discovery would be stopped, and the YPG Cultural Resources Manager would be notified immediately in accordance with the Native American Graves Protection and Repatriation Act and Standard Operating Procedure 9 in the Integrated Cultural Resources Management Plan (Versar Inc. 2016).

- **Environmental Justice and Protection of Children:** Executive Order 12898, *Federal Action to Address Environmental Justice in Minority Populations and Low-Income Populations*, requires federal agencies to analyze potential impacts to minority and low-income populations, including human health and environmental effects, resulting from their activities. The goal of Executive Order 12898 is to ensure activities that affect human health and the environment do not discriminate against minority or low-income populations. Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, requires that federal agencies evaluate environmental health or safety risks that could disproportionately affect children. The Proposed Action would occur within YPG, on land that is restricted from the public. Only authorized personnel would be allowed in the project area. There would be no impacts to individuals living in poverty, minorities, or children.
- **Floodplains:** Executive Order 11988, *Floodplain Management*, restricts federal agencies from constructing in a floodplain. The project area is not located in a floodplain. No construction or other modification of a floodplain area is proposed.
- **Geology and Geography:** The scale of activities associated with the Proposed Action cannot reasonably be expected to affect these large-scale resource areas; therefore, they were not carried forward for detailed analysis.
- **Health and Safety:** The Travel Camp project would be constructed within an existing operational area on YPG. Construction of the new Travel Camp would present common construction hazards and impacts. All construction work on the site would occur within established guidelines and procedures to ensure that appropriate safety precautions are followed to prevent accidents and injuries. All existing safety protocols and regulations in effect on YPG would be implemented. There would be no substantial increases in health and safety risks for public or military personnel.
- **Socioeconomic Values:** The Proposed Action takes place entirely on YPG lands and would not have potential impacts associated with income, employment, conflicts with county and local plans, population growth, displacement of persons and businesses, or community disruption.
- **Visual and Aesthetic Resources:** The project area is next to a developed area and has been largely previously disturbed. The Proposed Action would not obstruct, damage, dominate, or substantially modify a scenic view from public viewing areas and would not have a substantial adverse effect on a scenic vista.



## 2 Description of the Proposed Action and Alternatives

This chapter describes in detail the Proposed Action as well as the No Action Alternative. The No Action Alternative is analyzed to provide a baseline against which to compare the potential environmental consequences of the Proposed Action. This chapter also describes the alternatives that were considered but eliminated from detailed analysis, along with the rationale for their elimination (Section 2.3).

### 2.1 No Action Alternative

The YPG FMWR Travel Camp currently provides 102 full service hookups. Currently there is a small dog park and small storage area located in the existing Travel Camp (refer to Figure 3 below). Laundry facilities are available at the AAFES building, approximately ¼ mile away. The Travel Camp is consistently full during the winter season, resulting in denial of requests from prospective eligible tenants for camp reservations. Under this alternative, no construction would occur and the Travel Camp would not be expanded. If the Travel Camp is not expanded, FMWR would be unable to improve its ability to service the increasing needs of retirees and other eligible prospective tenants and would be unable to improve its revenue streams associated with this very successful program. Photos of the existing Travel Camp area are shown below.



**Photo 1. Looking into existing storage area, facing south**

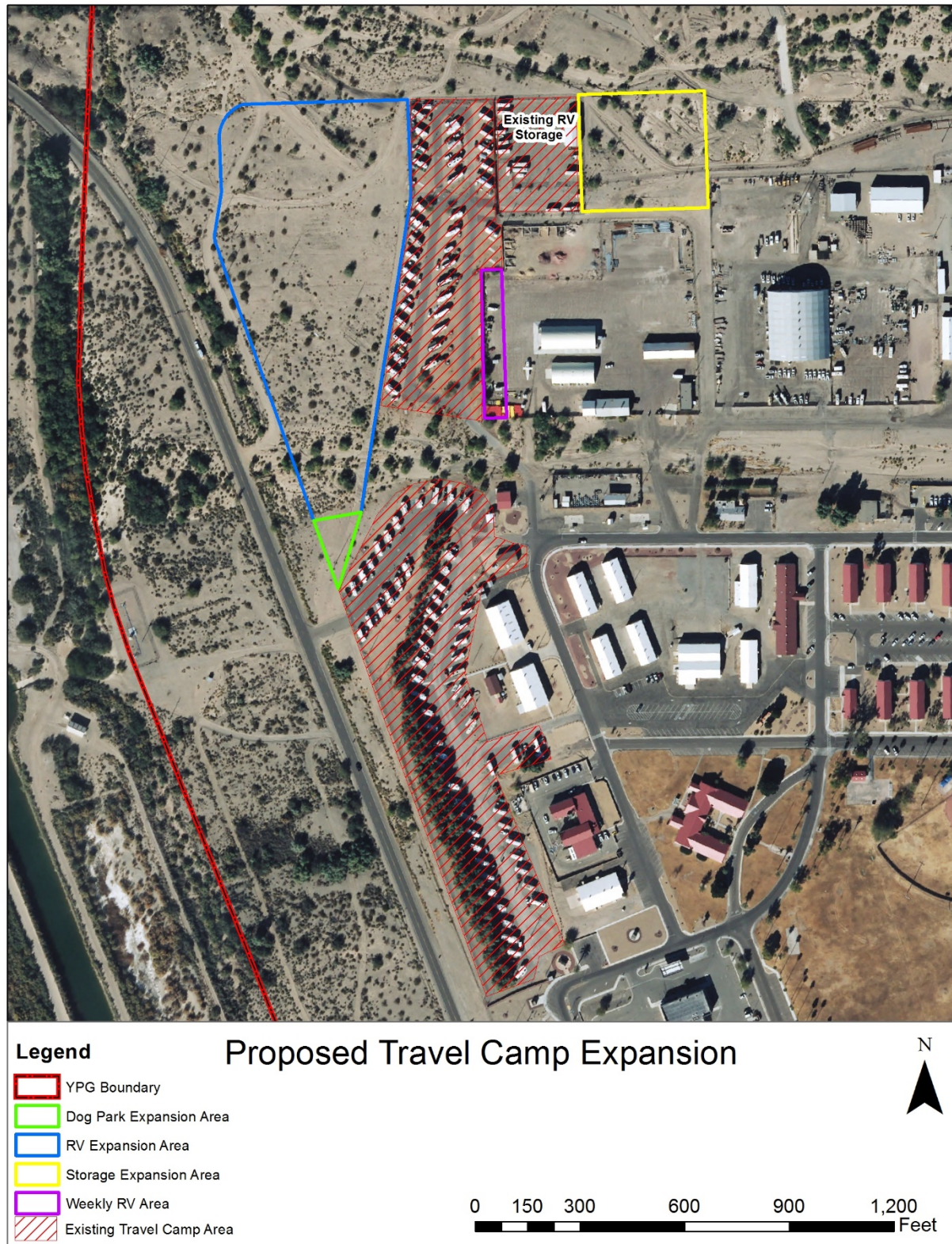




**Photo 1. Looking into existing Travel Camp RV area, facing east**

## 2.2 Description of the Proposed Action

The Proposed Action involves construction and modification of approximately 9.3 acres of land to expand the current FMWR Travel Camp and provide additional recreational vehicle parking and hookup areas and vehicle storage facilities at YPG. Expansion of the FMWR Travel Camp would include site preparation, paving and grading, electrical, communications and cable television systems distribution, site lighting, and water distribution system. The new site would include 7 acres for the RV area, 2 acres for storage expansion, and 0.3 acre for a dog park (Figure 3). Each of these proposed features is described below. Photos of the proposed Travel Camp location are also shown below.



**Figure 3. Proposed Travel Camp Expansion**

This project has been coordinated with the installation physical security plan, and all necessary physical security measures have been included. This project has also been coordinated with the installation's antiterrorism plans. Risk and threat analyses have been performed in accordance with DA PAM 190-51, *Risk Analysis for Army Property*, and Unified Facilities Criteria (UFC) 4-020-01, *DOD Security Engineering Facilities Planning Manual*, respectively. Protective measures required by regulation and additional protective measures, above the minimum required by UFC 4-010-01, *Department of Defense Minimum Antiterrorism Standards for Buildings*, would be included in the design.

Sustainable Design and Development, Energy Policy Act 2005, and Energy Independence and Security Act of 2007, Section 438, Low Impact Development, features would be included. Sustainable principles, to include life cycle cost effective practices, would be integrated into the design, development, and construction of the project and would follow the guidance detailed in the Army Sustainable Design and Development Policy in compliance with applicable laws and executive orders. Facilities would be designed to a minimum life of 50 years in accordance with DOD UFC 1-200-02, *High Performance and Sustainable Building Requirements*, including energy efficiencies, building envelope, and integrated building systems performance. This project would also be designed to meet accessibility and usability standards for individuals with disabilities in accordance with the Architectural Barriers Act of 1968 (42 USC § 4151 et seq.).

**Travel Camp:** The Proposed Action includes expanding to the west, the existing security fence paralleling the road in order to accommodate an expansion of approximately 7 acres for the travel camp (see Photo 3 below). (A description of the fencing is presented below.) The travel camp would consist of roads, utilities (water, sewer, including a lift station, if necessary, and power), and concrete slabs for approximately 81 RV spaces (Figure 4). There would also be shade ramadas and laundry facilities. An existing parking/storage area to the east of the camp would be converted to additional RV spaces. Expansion of the existing FMWR Travel Camp would create 93 new full service spaces located as per design plans. Concrete and paving would be added to the area. Electricity would be provided to each site as would conduit for TV and Wi-Fi. Supporting facilities include exterior lighting and area signage. Heating and air conditioning for the laundry buildings would be provided by self-contained units.

**Storage Area:** A new storage area – approximately 2 acres in size – would be constructed (see Photo 4 below). The area would be graded, leveled, and covered with gravel. The security fence would be expanded to encompass this new storage area.

**Dog Park:** A 0.3-acre dog park would be constructed in the southern corner of the project area, south of a small wash. The security fence would be expanded to encompass this area as well.





**Photo 2. Proposed Travel Camp expansion area, facing south**



**Photo 3. Proposed storage expansion area, facing southeast**



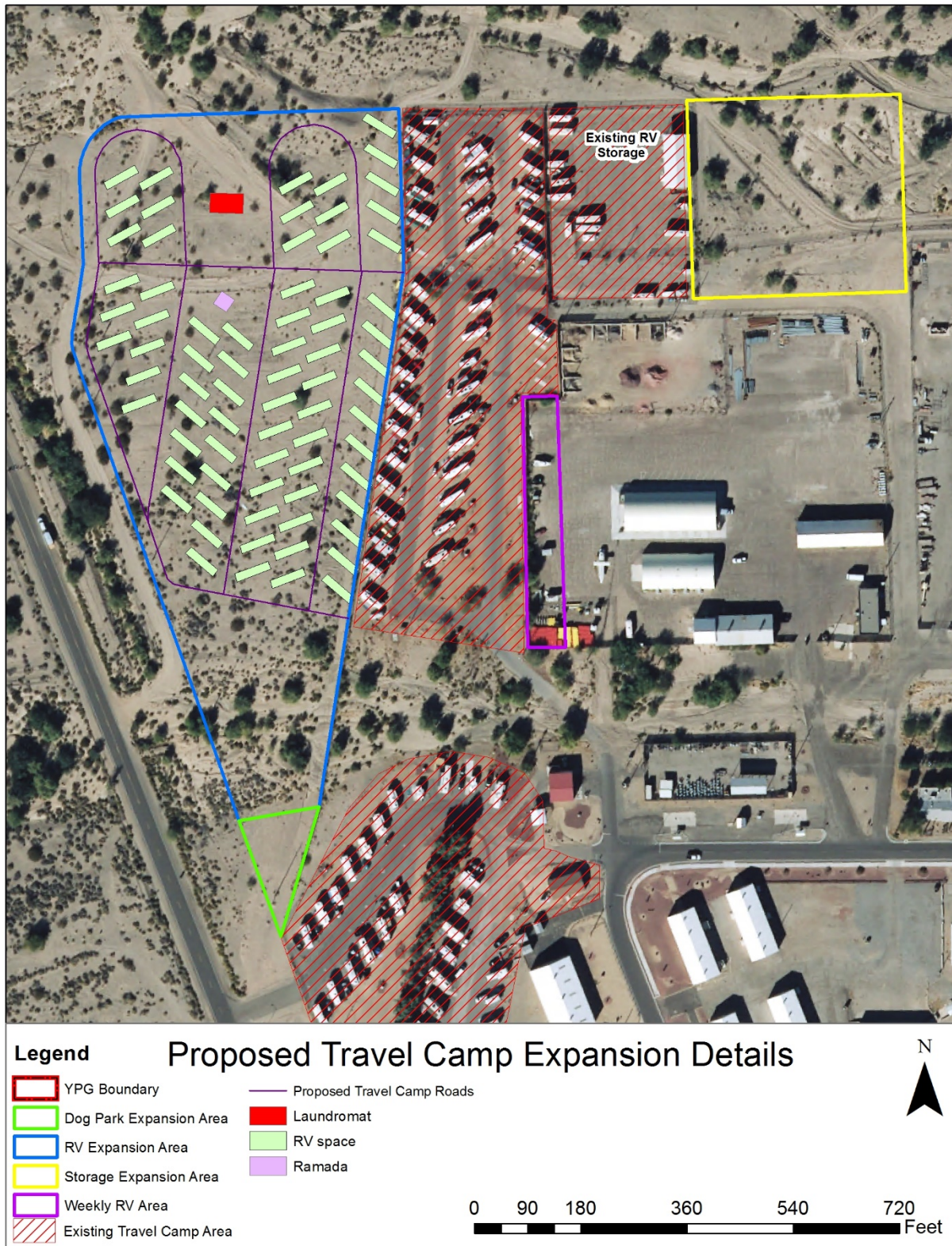


Figure 4. Proposed Travel Camp Expansion Details

**Fencing:** Per AR 190-13, *Army Physical Security Program*, and UFC 4-022-03, *Security Fences and Gates*, the cantonment perimeter areas must be protected by a security fence. Fences must meet the criteria under the above UFC. Because of this requirement, the existing perimeter fence would be moved to encompass the new Travel Camp area. Building codes require clear zones; the dimensions of the clear zone could vary between 30 feet wide on the outside of the fence and 20 feet wide on the inside of the fence. Any trees within the clear zone would have to be removed for security reasons. Although all of the buffer area may not be needed, it is included in the analysis to allow for flexibility for on-the-ground conditions encountered during construction. The existing perimeter fence and associated security system would be expanded to encompass the new area. Riprap, such as rubble or rock armor, or other armoring methods would be added adjacent to the wash located to the north of the new storage area as needed. This riprap would armor the area to allow for construction of the fence and reduce the risk of scour and water erosion along the newly constructed fence line.

### 2.2.1 Energy and Utility Requirements

The following is a summary of the energy and utility requirements for the project.

- **Air Conditioning:** Air conditioning is required for the laundry facilities. Cooling is expected to be provided by electric chiller units. Total cooling peak demand for the building is estimated to be 100 tons. Specific demand by the facility would be determined during the design phase.
- **Electrical Power:** Electric power would be satisfied using existing electrical sources and distribution systems. Power is furnished by Substation A and the existing electrical overhead circuitry and new underground circuitry. Switches would be required and underground electric circuitry would be extended to the buildings. There is adequate capacity available to support this project.
- **Water:** Water is required in all primary facilities. A 6-inch potable water line south of the site can be extended to provide adequate potable water to the project. An additional above ground storage tank and 10 to 12 inch fire lines may be required to provide fire suppression to the site. The fire suppression requirements would be approximately 2,750 gallons per minute with 2-hour flow duration.
- **Sewage System:** There are existing wastewater lines southwest of the site with available capacity. Gravity sewer lines, a lift station, and force main would be required for the laundry buildings. The project can connect additional gravity lines to discharge to this system. The proposed sewers and lift station for the project would be designed to accommodate the flows generated by the units. The sewer treatment system is adequate to support the requirements for this project.
- **Heating:** Natural gas heating is not required.

### 2.2.3 Construction Details

Construction would involve grading, leveling, hardening, trenching for utilities, and paving. The materials and necessary equipment for construction would be transported to the site by tractor-trailers. Standard road graders, water trucks, tractor-trailers, and paving machinery would be used to construct the Travel Camp. Standard paving practices would be followed and would include grading, water spraying, compaction, and spreading of ABC gravel, prior to applying a paved surface in locations where this is determined necessary. A staging area would be required to store various vehicles, fuel, and other construction equipment. The location of this staging area would be in a previously disturbed area within the boundaries of the HCA and would be determined before construction begins.

Construction of the new Travel Camp would present common construction hazards and impacts. All construction work on the site would occur within established guidelines and procedures to ensure that appropriate safety precautions are followed to prevent accidents and injuries. There are no buildings in the footprint of the proposed project, therefore no buildings are proposed for demolition.

### 2.3 Alternatives Considered but Not Carried Forward

The Proposed Action boundary for the RV expansion area initially extended further to the northwest (Figure 5). This boundary was changed from an angular northwestern point, to a rounded northwestern corner to address concerns related to wildlife movement around the area (D. Steward, personal communication, January 22, 2018). Desert bighorn (*Ovis canadensis mexicana*) sheep are found in the rugged hills near the HCA as well as surrounding mountains and travel to and from the canal for water, often passing near the cantonment area. Bighorn sheep occasionally pass between mountain ranges which is important for genetic diversity and overall health of individual herds. The region near the HCA is identified as a wildlife corridor with impediments (YPG 2017). Although there is adequate habitat in the surrounding area and wildlife would continue to have access to abundant habitat, the extended fence line would have resulted in narrowing of the movement corridor for bighorn sheep between the Laguna Mountains and Imperial Hills to a greater degree than the Proposed Action. Therefore, this alternative was dismissed from further consideration in the EA.



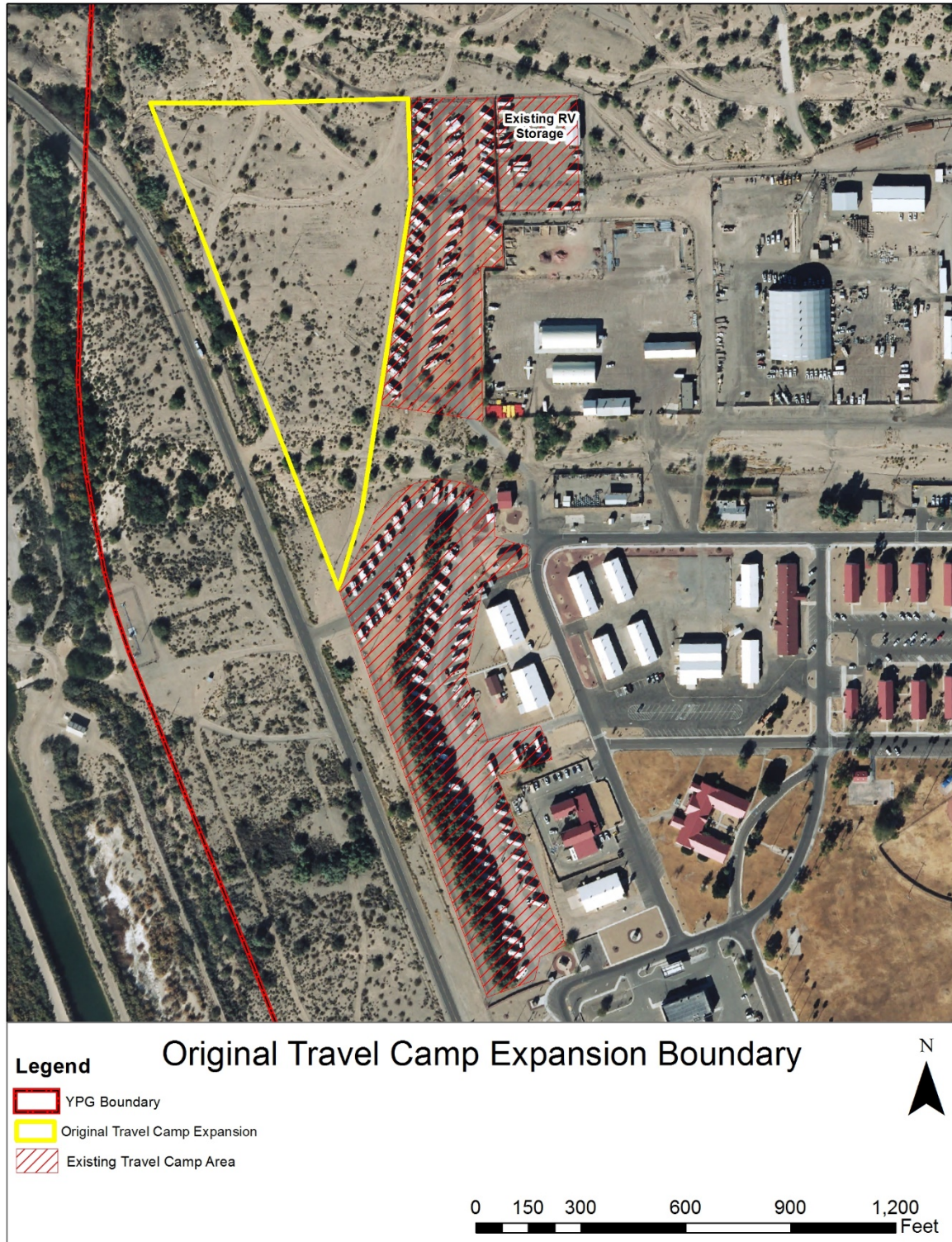


Figure 5. Originally Proposed Travel Camp Expansion Boundary



### 3 Affected Environment and Environmental Effects

This chapter presents the affected environment and environmental consequences for implementation of the Proposed Action. The affected environment represents the baseline conditions against which the effects that may result from the Proposed Action are evaluated under each alternative. A number of resources were not carried forward for further analysis because the potential for environmental impacts to these resources was determined to be nonexistent, unlikely, or negligible (see Section 1.5); therefore, the analysis is focused on the resource areas where an impact is more likely to occur.

In addition to a description of the affected resources, this chapter presents an analysis of the direct, indirect, and cumulative impacts to the human and natural environment likely to result from implementation of the alternatives described in Chapter 2. Environmental effects can be direct, indirect, or cumulative and short-term or long-term. Direct effects are those that are caused by the action and occur at the same time and place. Indirect effects are the reasonably foreseeable consequences of the action but occur later in time, or are further removed in distance from the direct effects. Cumulative effects result from the incremental effect of an action when added to other past, present, or reasonably foreseeable actions regardless of what agency or person undertakes such other actions.

The description of the Proposed Action includes all known mitigating measures, and it is assumed that the Proposed Action would be implemented as described, using accepted guidelines, standard operating procedures, and best management practices (BMPs) intended to reduce potential impacts.

#### 3.1 Air Quality

##### 3.1.1 Affected Environment

The Clean Air Act identified and established the National Ambient Air Quality Standards (NAAQS) for a number of criteria pollutants in order to protect the public health and welfare. The criteria pollutants include carbon monoxide (CO), ozone (O<sub>3</sub>), lead (Pb), sulfur dioxide (SO<sub>2</sub>), nitrogen dioxide (NO<sub>2</sub>), and suspended particulate matter (PM). Two size classes of PM emissions are regulated, including particulates up to 10 microns in diameter (PM<sub>10</sub>) and particulates up to 2.5 microns in diameter (PM<sub>2.5</sub>). The federal NAAQS have been adopted by the Arizona Department of Environmental Quality (ADEQ) (<http://www.epa.gov/air/criteria.html>) as the Arizona Ambient Air Quality Standard; the ADEQ Air Quality Division regulates and enforces these standards in Arizona.

If the NAAQS for a particular criteria pollutant has been exceeded in a region, a status of "nonattainment" is identified for that pollutant. When a nonattainment area is reclassified to attainment, it is designated as a "maintenance area," indicating the requirement to establish and enforce a plan to maintain attainment of the standard. If the NAAQS have not been exceeded in a region, it is classified as "attainment" or "unclassified."

YPG is located within Yuma and La Paz Counties. Yuma County is in attainment for all criteria pollutants with the exception of PM<sub>10</sub>. The ADEQ, in conjunction with the EPA, designated portions of Yuma County as a moderate nonattainment area for the 24-hour standard of PM<sub>10</sub>. The Yuma PM<sub>10</sub> Nonattainment Area is located in the southwestern part of Yuma County comprising about 456 square miles or 300,000 acres. The nonattainment area is located in the following townships (40 CFR § 81.303):

- T7S- R21W, R22W
- T8S-R21W, R22W, R23W, R24W
- T9S-R21W, R22W, R23W, R24W, R25W
- T10S-R21W, R22W, R23W, R24W, R25W

Mobile emission sources, such as vehicular and agricultural equipment emissions, and blowing dust are the primary contributors to PM<sub>10</sub> emissions in this region. A State Implementation Plan (SIP) revision was submitted in 1991, and a supplement was submitted in 1994 adopting a range of PM<sub>10</sub> control measures and demonstrating attainment with the NAAQS. Data indicate that the entire county has moved into attainment with the 24-hour PM<sub>10</sub> standard; however, U.S. Environmental Protection Agency (USEPA) has not approved the ADEQ Yuma County PM<sub>10</sub> Maintenance Plan (ADEQ 2006), and this area remains classified as nonattainment. A small portion of YPG is located within the Yuma PM<sub>10</sub> nonattainment area; however, the project area is north of the nonattainment boundary.

### **General Conformity Rule**

The Clean Air Act, Section 176(c), states that a federal agency cannot issue a permit for, or support an activity within, a nonattainment or maintenance area unless the agency determines it will conform to the most recent EPA-approved SIP. A conformity analysis must clearly demonstrate that federal projects will not:

- Cause or contribute to any new violation of a NAAQS.
- Increase the frequency or severity of any existing violation.
- Interfere with provisions in the applicable SIP for compliance with the NAAQS.

General Conformity de minimis rates are specified in 40 CFR 93.153. A conformity determination is required for each criteria pollutant or precursor where the total of direct and indirect emissions of the criteria pollutant or precursor in a nonattainment or maintenance area caused by the federal action would equal or exceed the de minimis rates. 40 CFR 93.150-160 contains general conformity requirements that currently apply to federal agency related activities, except transportation projects, in the Yuma Moderate PM<sub>10</sub> Nonattainment Area. The regulations are intended to ensure federal actions are consistent with state and local air quality planning. The Travel Camp Expansion project area is north of the nonattainment area; therefore emissions from the Travel Camp Expansion Project are exempt from the Clean Air Act General Conformity Rule.

### **3.1.2 Environmental Consequences**

#### **3.1.2.1 No Action Alternative**

No changes to air quality would occur under the No Action Alternative. The Travel Camp would continue to operate at its current capacity without any changes. Construction would not occur for additional RV parking pads, storage areas, or other proposed expansion components and there would be no increase in Travel Camp tenant motor vehicle traffic. There would be no new air emissions associated with construction, and operational emissions would not change from current levels. No additional air quality impacts would occur under this alternative.

#### **3.1.2.2 Preferred Alternative**

The impacts of the Proposed Action are evaluated in terms of the change in air emissions that would be caused by the project. Impacts would occur in the project area due to both the construction and operational activities at the expanded Travel Camp. These impacts would occur at different times and would be of different durations. Air emissions from construction activities are considered a temporary or short-term impact since these would be associated with a one-time construction event. Air emissions from operational activities are considered a long-term impact because these are associated with recurring activities that would continue for the foreseeable future.

Construction activities would result in temporary and short-term emission increases and would primarily result from fuel combustion within construction power equipment used for grading, trenching, and material hauling as well as from fugitive dust emissions. Construction activities that would generate emissions include construction vehicle traffic (e.g., commuting workers, haul trucks, etc.), off-road power equipment, paving, and fugitive dust. Exhaust from the construction vehicles and off-road equipment would include the pollutants CO, NO<sub>x</sub>, PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, and carbon dioxide (CO<sub>2</sub>). Fugitive dust emissions would be generated from site grading and trenching activities.

Construction BMPs would be utilized during construction to reduce or eliminate fugitive dust emissions. The following BMPs may be implemented as necessary to reduce disturbance of particulate matter, including emissions caused by strong winds as well as machinery and trucks disturbing soils in the project area:

- Minimize land disturbance;
- Suppress dust on traveled paths which are not paved through wetting, use of watering trucks, chemical dust suppressants, or other reasonable precautions to prevent dust entering ambient air;
- Cover trucks hauling soil;
- Minimize soil track-out by washing or cleaning truck wheels before leaving construction site.

Operational activities that would generate emissions include an increase in Travel Camp tenant vehicle traffic (RVs and automobiles) and use of municipal services (i.e., energy, maintenance, water, and waste). These emissions would occur both on-site and off-site, and would contribute to the total emissions in the area. Direct emissions would occur as exhaust from tenant vehicles, and would consist of the same pollutants identified above for construction. Indirect emissions would be generated from increased camp maintenance and an increased demand for municipal services associated with the Travel Camp expansion. Indirect emissions would occur from increased maintenance of the camp and from additional public utilities and services that would be required to support the additional tenants at the expanded Travel Camp. The additional demand for utilities and service would indirectly increase emissions due to activities such as additional electric power generation and waste hauling. These increases in emissions associated with operational activities would be recurring throughout the year.

Overall, the levels of construction and operational emission increases would result in less than a significant impact to the local and regional baseline emissions. Dust emissions from the site would be localized, and increases in air pollutants at YPG would not be anticipated partly due to good dispersal by strong winds and lack of topographic features to inhibit dispersal. Dust emissions would be minimized as needed with appropriate BMPs and dust abatement measures to prevent potential deterioration of air quality. The project area is currently in attainment for all NAAQS and the Proposed Action is not anticipated to impact air quality exceedances in the PM<sub>10</sub> nonattainment area. Because the project area is located outside of designated maintenance and nonattainment areas, a General Conformity analysis is not required. No sensitive receptors are known to occur within the vicinity of the project area.

## 3.2 Biological Resources

### 3.2.1 Affected Environment

YPG is located in the arid Lower Colorado River subdivision of the Sonoran Desert. The area is characterized by broad, flat valleys and low mountain ranges with barren rock that support many plant and animal species native to the Sonoran Desert (YPG 2017). The affected environment for biological resources is described below for the following two resources: Vegetation and Wildlife.

### 3.2.1.1 Vegetation

YPG contains four plant communities of the Lower Colorado River Valley Subdivision (Turner and Brown 1994); these are:

- Creosotebush-White Bursage – Creosotebush (*Larrea tridentata*) and white bursage (*Ambrosia dumosa*) occur either together or alone and comprise the most widespread and important community of the Lower Colorado River Valley subdivision.
- Mixed Scrub – Areas along washes and similar places typically have more diverse vegetation communities within the overall Creosotebush-White Bursage series. These areas may support dense stands of paloverde (*Parkinsonia* spp.), ironwood (*Olneya tesota*), desert lavender (*Hyptis emoryi*), smoke tree (*Psoralea arguta*), and jojoba (*Simmondsia chinensis*) as well as other typical Sonoran desert species.
- Creosotebush-Big Galleta – Creosotebush and big galleta grass (*Pleuraphis rigida*) generally occur together in sandy areas found in the lowest and hottest reaches of the desert.
- Saltbush – This series is a community of gently sloping lands and valleys, and commonly includes soils that are more saline than the Creosotebush-White Bursage series.

Most of YPG consists of open plains sparsely covered with drought-tolerant shrubs, grasses, and cacti (YPG 2017). The most common species is creosote bush; this species is found in widespread stands or mixed with combinations of ocotillo (*Fouquieria splendens*), bursage (*Ambrosia* spp.), teddy bear cholla (*Cylindropuntia bigelovii*), and foothills paloverde trees (*Parkinsonia microphylla*), depending on landform features (Turner and Brown 1994; Shreve and Wiggins 1964). Washes dissect the open plains and support less drought-tolerant plants such as blue paloverde (*Parkinsonia florida*), ironwood, honey mesquite (*Prosopis glandulosa*), and other tree species.

It appears that between 50 and 90 percent of the site could have been previously disturbed based on historic aerial images and existing topographic features (Sergio Obregon, personal communication, May 24, 2018). Revegetation has occurred on approximately 5.5 acres of the 9.3 acres while the remaining portion is not vegetated. Due to the previous disturbance in the area, the understory consists primarily of annual vegetation. Common species present in the project area include creosotebush, white bursage, ratany (*Krameria bicolor*), and blue paloverde. The southern and western portions of the project area contain larger trees and shrubs including two saguaros (*Carnegiea gigantea*). The north end of the project area has a side wash that connects to a small ephemeral wash where less drought-tolerant plants are present. These washes would be avoided during construction to preserve natural stormwater flow and native flora and fauna. West of the project area, just off the installation boundary is the Gila Main Canal. The eastern levee from the canal supports dense growth of paloverde and mesquite. West of the canal is an extensive riparian woodland dominated by salt cedar (*Tamarix* spp.) that extends to the Laguna Division Conservation Area, approximately 0.5 miles to the west.

#### **Protected Native Plants**

The only native plant species protected under Arizona's Native Plant Law identified in the project vicinity is the Saguaro cactus (*Carnegiea gigantea*). There are two saguaros in the Travel Camp Expansion project area. Saguaros in the vicinity would be avoided or incorporated into the landscape of the design, to the extent practical. However, if the cacti fall within critical construction areas, such as concrete pads or roads, they would need to be removed.

### 3.2.1.2 Wildlife

Wildlife on YPG is typical of the Sonoran desert scrub habitat. Common wildlife species usually have physical and behavioral adaptations to survive the extreme hot and dry conditions, in addition to many being nocturnal to avoid the hot daytime temperatures. While mammal, reptile, and bird species are well-represented, fish and amphibians are limited to perennial waterbodies such as the Colorado and Gila Rivers. The project area is used by small mammals and common bird species. Mule deer (*Odocoileus hemionus*) and foxes have also been observed on cameras in the area (Daniel Steward, personal communication, January 23, 2018).

Common large mammals include mule deer, coyote (*Canis latrans*), kit fox (*Vulpes macrotis*), gray fox (*Urocyon cinereoargenteus*), badger (*Taxidea taxus*), bobcat (*Lynx rufus*), ringtail (*Bassariscus astutus*), and occasional mountain lion (*Puma concolor*). Common small mammals known to occur on YPG include black-tailed jackrabbit (*Lepus californicus*), desert cottontail (*Sylvilagus auduboni*), rock pocket mouse (*Chaetodipus intermedius*), Merriam's kangaroo rat (*Dipodomys merriami*), woodrats (*Neotoma* spp.), Harris' antelope squirrel (*Ammospermophilus harrisi*), round-tailed ground squirrel (*Spermophilus tereticaudus*), California leaf-nosed bat (*Macrotus californicus*), California myotis (*Myotis californicus*), and western pipistrel (*Pipistrellus hesperus*) (YPG 2017).

Washes provide important habitat for wildlife because of the relatively dense vegetation that grows in these areas. These wash woodlands are important for nesting and foraging for native birds and also provide important habitat for numerous migratory birds. Bats may also forage along the vegetation in washes. These washes also provide shade and movement corridors for mule deer and other mammals. Mesquite bosques (woodlands) are a particularly valuable habitat type on YPG. These isolated woodland patches usually occur in otherwise monotypic creosote plains, and provide food and cover for wildlife (YPG 2017). The most common species observed utilizing the bosques on YPG include mule deer, desert cottontail rabbits, black-tailed jackrabbits, and coyotes.

The most commonly occurring reptile species at YPG include the side-blotched lizard (*Uta stansburiana*), desert horned lizard (*Phrynosoma platyrhinos*), western whiptail (*Aspidocelis tigris*), sidewinder snake (*Crotalus cerastes*), western diamondback rattlesnake (*Crotalus atrox*), and western shovel-nosed snake (*Chionactis occipitalis*). Amphibian species known to occur on YPG include red-spotted toad (*Anaxyrus punctatus*), Couch's spadefoot (*Scaphiopus couchii*), and Sonoran desert toad (*Incilius alvarius*) (YPG 2017).

### **Wild Horse and Burro**

Both wild horses and burros (*Equus caballus* and *asinus*, respectively) are found on YPG. Neither animal is considered wildlife by Arizona Game and Fish Department (AZGFD). Management of these species falls under the purview of the BLM under the Wild and Free Roaming Horse and Burro Act of 1971, Public Law 92-195, and Cooperative Management Agreement updated in September 1989. Management is guided by the Cibola-Trigo Herd Management Area Plan (BLM 1980) and the Resource Management Plan (BLM 2010). The Herd Management Area includes portions of the Cibola and Laguna regions on YPG and BLM-managed lands adjacent to these areas. Horses and burros occupy those portions of YPG that are included within the Cibola-Trigo Herd Management Area and continue to occupy the Kofa Firing Range. Both of these species have been observed in the project area (Daniel Steward, personal communication, January 23, 2018). YPG would continue to cooperate fully with BLM in implementing the current Herd Management Area Plan (YPG 2017).

### 3.2.1.3 Special Status Species

Special status species include those listed as Wildlife of Special Concern by the state and those listed under the Endangered Species Act (ESA) as threatened and endangered. Table 1 presents a list of state species of greatest conservation need with potential to occur near the proposed project area, and Table 2 contains a list of ESA-species. Table 1 was generated using the Arizona National Heritage Program Data Management System (AZGFD 2018). Species with potential to occur in the project area are discussed briefly; those determined to be unlikely to occur in the project area based on habitat features are not discussed further.

**Table 1. State Species of Greatest Conservation Need**

Common Name Scientific Name	Habitat	Occurrence in Project Area
<b>Amphibians</b>		
Lowland Leopard Frog <i>Lithobates yavapaiensis</i>	Aquatic systems in desert grasslands to pinyon juniper. Species believed to be extirpated along Colorado River.	Unlikely
<b>Birds</b>		
Abert's Towhee <i>Pipilo aberti</i>	Dense brush near water in arid lowlands, as in streamside thickets, edges of ponds or irrigation ditches, understory of cottonwood-willow groves, even riverside marshes.	Unlikely
American Bittern <i>Botaurus lentiginosus</i>	Freshwater and brackish marshes and swamps. Prefers areas with thick clumps of tall plants like bulrushes, cattails, or sedges. Associated with the nearby Colorado River and its tributaries and adjacent wetlands.	Unlikely
Arizona Bell's Vireo <i>Vireo bellii arizonae</i>	Lowland riparian areas, containing willows and mesquite. Can also utilize a mixed plant community of honey mesquite and saltcedar.	Unlikely, but possible west of the canal
Gila Woodpecker <i>Melanerpes uropygialis</i>	Deserts, riverside groves. Found in groves of cottonwoods and other trees along rivers and streams at low elevations. Nests in holes in giant saguaro cactus.	Observed near site
Gilded Flicker <i>Colaptes chrysoides</i>	Strongly associated with, but not completely restricted to, giant cactus forests of southwestern deserts. Digs hole in saguaro cactus	Possible
<b>Mammals</b>		
American Beaver <i>Castor canadensis</i>	Near rivers, streams, ponds, small lakes, and marshes.	Unlikely
Arizona Myotis <i>Myotis occultus</i>	Wooded riparian areas; ponderosa pine and oak-pine woodlands near water.	Possible
Arizona Pocket Mouse <i>Perognathus amplus</i>	Flat habitats with varying desert scrub vegetation or bunch-grasses. Most often in mesquite bush, creosote bush, cactus, and paloverde, but may include greasewood, rabbitbrush, ephedra, shortgrass, fescue, and juniper.	Possible
California Leaf-nosed Bat <i>Macrotus californicus</i>	Sonoran desert scrub; roosts in abandoned mines.	Possible

Common Name Scientific Name	Habitat	Occurrence in Project Area
Cave Myotis <i>Myotis velifer</i>	Desert scrub of creosote, brittlebush, paloverde, and cacti. Roosts in caves, tunnels, and mineshafts and under bridges.	Possible
Desert Bighorn Sheep <i>Ovis canadensis mexicana</i>	Dry, desert mountain ranges with sparse vegetation.	Possible
Greater Western Mastiff Bat <i>Eumops perotis californicus</i>	Arid and semiarid, rocky canyon country habitats; roosts in crevices and shallow caves on the sides of cliffs and rock walls.	Unlikely
Harris' Antelope Squirrel <i>Ammospermophilus harrisi</i>	Rocky desert habitats that contain cactus and shrubs. Inhabit valleys, canyons, and river bottoms and favor areas with dense vegetation.	Observed near site
Yuma Myotis <i>Myotis yumanensis</i>	Wide variety of upland and lowland habitats, including riparian, desert scrub, moist woodlands, and forests. Prefer cliffs and rocky walls near water.	Possible
<b>Reptiles</b>		
Gila Monster <i>Heloderma suspectum</i>	Desert hillsides and slopes, canyons, gullies, and washes with rock substrates, and occasionally in rock piles.	Possible

Abert's Towhee may occur in the dense vegetation along the nearby canal. The habitat in the project area is marginal for Gila woodpecker and gilded flicker. However, because saguaro cacti are present in the area there is the potential for them to occur. Gila woodpecker has been observed on site. Arizona pocket mouse, Harris' antelope squirrel, and Yuma myotis may be present based on habitat types present. California leaf-nosed bat and cave myotis may forage in the area but no roosting habitat is present. Gila monster may be present in washes, but most of the project area is not preferred habitat. Riparian or marsh land associated species such as beaver or American bittern may occur along the wetlands west of the Gila Main Canal, but would be unlikely to occur in the project area. Arizona Bell's vireo may breed at the Laguna Division Conservation Area and forage along the riparian vegetation west of the canal, but the Proposed Action would not impact their foraging or migration.

Desert bighorn sheep are found in the hills near the HCA as well as surrounding mountains. This rugged terrain is used by bighorn sheep to watch for predators and for escape if needed. While sheep are typically observed in the mountains, they travel to and from the canal for water, often passing near the cantonment area. They occasionally pass between mountain ranges which is important for genetic diversity and overall health of individual herds. The YPG Integrated Natural Resource Management Plan identifies several movement corridors for sheep and identifies the area near the HCA as a corridor with impediments (YPG 2017). Roads, fences, canals or other infrastructure are potential impediments to bighorn sheep movement. In 2004 YPG constructed a security fence around the cantonment areas in order to meet increasing security requirements. Wildlife passages were incorporated into the original fence; however in 2017, the Imperial Dam Road passage was closed to meet security standards. In 2006-2007, AZGFD deployed GPS collars to five sheep (four in Imperial Hills and one in Laguna Mountains) to evaluate frequency in movement of sheep between these populations. Sheep were documented using the northern crossing, but no sheep were documented using the southern crossing during the study. However, the sample size and duration were too short to be conclusive (See Figure 6). Bighorn sheep have been observed walking along the canal road to the west of the security fence (Meyers 2017). This pathway (approximately 720 feet) is likely the most important connection remaining for wildlife to the north and south of the security fence.



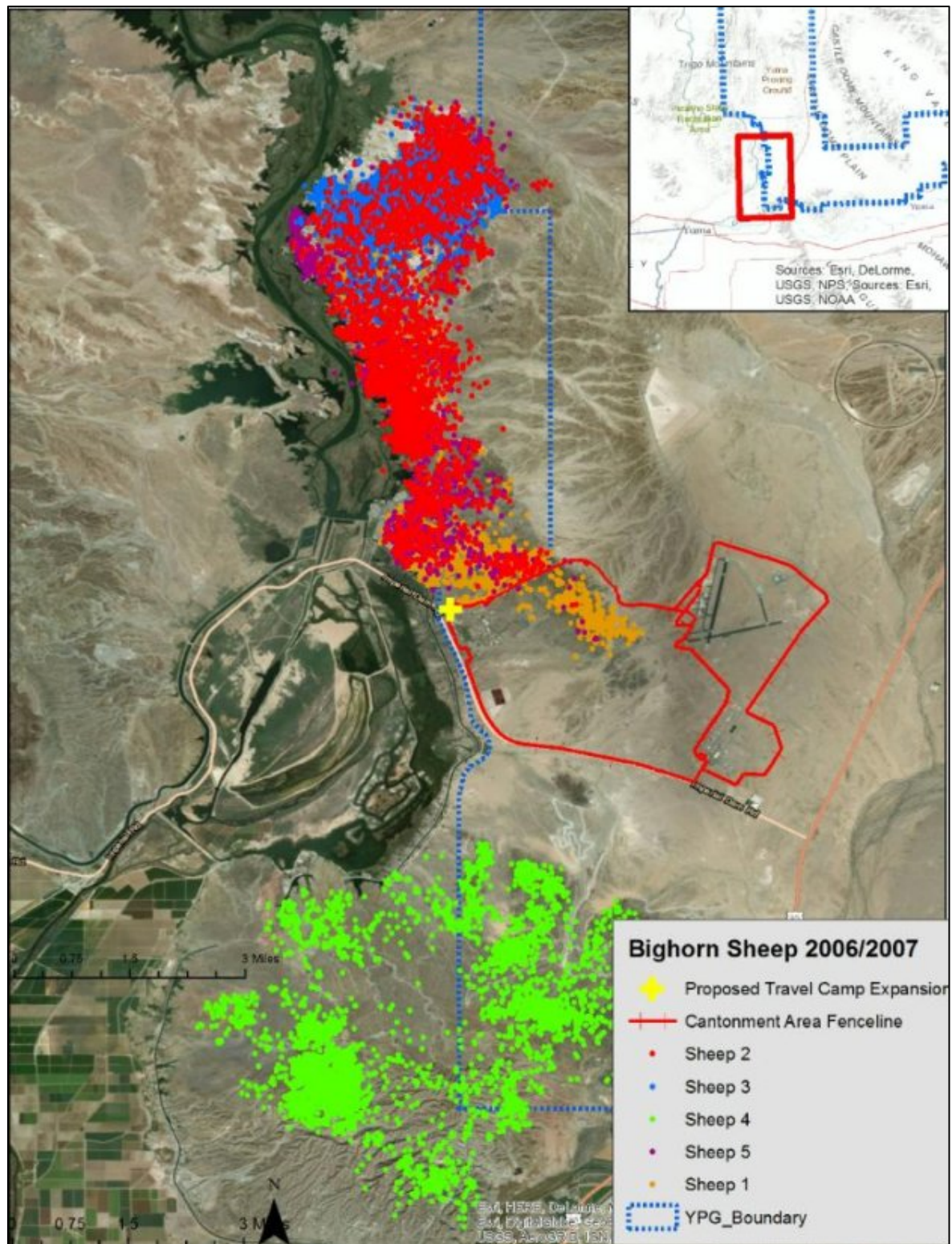


Figure 6. Bighorn Sheep Movement near the Cantonment Area



### **Threatened and Endangered Species**

A list of threatened and endangered species that may occur in the proposed project area, and/or may be affected by the Proposed Action was received from the U.S. Fish and Wildlife Service (USFWS), Arizona Ecological Services Field Office, on January 24, 2018. The species in Table 2 were identified by the USFWS as potentially occurring in the project area.

**Table 2. Federally listed species with potential to occur in the project area.**

<b>Common Name</b>	<b>Scientific Name</b>	<b>Status</b>
Sonoran Pronghorn	<i>Antilocapra americana sonoriensis</i>	Experimental Population, Non-Essential
Southwestern Willow Flycatcher	<i>Empidonax traillii extimus</i>	Endangered
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	Threatened
Yuma Clapper Rail	<i>Rallus longirostris yumanensis</i>	Endangered
Razorback Sucker	<i>Xyrauchen texanus</i>	Endangered

**Sonoran Pronghorn (*Antilocapra americana sonoriensis*):** The USFWS established a Nonessential Experimental Population of Sonoran pronghorn under Section 10(j) of the ESA (76 FR 25593). Since 2013, the USFWS has released pronghorn from the captive breeding pens onto the Kofa NWR, and pronghorn from the experimental population have been observed in portions of the Kofa Region. Presently, there are more than 72 pronghorn ranging across the King Valley, with some individuals scattering west as far as Highway 95 and east onto the Palomas Plain (USFWS 2017). The Section 10(j) population on YPG is treated as a species proposed to be listed with respect to ESA compliance. There is no requirement for consultation or conferencing under section 7 of the ESA on DOD lands because the released animals are part of a population that, by definition, is not essential to the continued survival of the species. The only requirement on DOD lands is to report to USFWS if incidental take occurs within one of the designated population areas because of military operations (YPG 2017).

Preferred habitat for Sonoran pronghorn consists of flat to rolling topography, which includes broad intermountain alluvial valleys with creosote bush-bursage and paloverde-mixed cacti associations (YPG 2017). Within its current range, the Sonoran pronghorn generally prefers creosote bush-bursage, paloverde mixed cacti, and ephemeral wash habitats. The project area is located approximately 15 miles from Kofa NWR where pronghorn are known to occur. So far, there is no indication that Sonoran pronghorn will move into this area. The Proposed Action would have no effect on Sonoran pronghorn.

**Southwestern Willow Flycatcher (*Empidonax traillii extimus*):** Southwestern willow flycatcher is listed as endangered under the ESA (60 FR 10695) and critical habitat was designated in 2013 (78 FR 343). They are typically found in riverine habitat, especially within significant willow habitat. For nesting, they require dense riparian habitats (cottonwood/willow and tamarisk vegetation) with microclimatic conditions dictated by the local surroundings. Saturated soils, standing water, or nearby streams, pools, or cienegas are a component of nesting habitat that also influences the microclimate and density vegetation component. Habitat that is not suitable for nesting may be used for migration and foraging.

The Colorado River, which supports breeding Southwestern willow flycatcher, is about 0.5 mile from the project area. The nearest Southwestern willow flycatcher has been documented about 1 mile from the project area at the Laguna Division Conservation Area (GBBO 2017). Mittry Lake, Martinez Lake, and

Picacho are the nearest areas that have had documented breeding territories in the past (Durst 2007). While most of these areas were recently unoccupied by breeding Southwestern willow flycatcher, it is important to note that they could return. Furthermore, habitat improvements such as the Laguna Division Conservation Area are creating more suitable habitat.

West of the Welton-Mohawk Canal (approximately 1,000 feet from the project area) there is a large expanse of salt cedar, mesquite, and arrowweed (*Pluchea sericea*) extending westward toward the Colorado River. Much of this area's soil is very dry and would not support breeding Southwestern willow flycatcher until it reaches marshlands near the river, about 1,000 feet further away. East of the canal supports some dense patches of mesquite and paloverde which may support foraging for flycatchers moving through the area along the canal and nearby Colorado River. The habitat along this part of the canal is very small and narrow, and would provide limited foraging for Southwestern willow flycatcher. Critical habitat for this species has been designated, but none is in the vicinity of the project area.

The Gila Main Canal supports some dense patches of mesquite and paloverde along the levee to the east which may support foraging for flycatchers moving through the area. The Proposed Action may affect but is not likely to adversely affect Southwestern willow flycatcher.

**Yellow-Billed Cuckoo (*Coccyzus americanus*):** The western population of yellow-billed cuckoo is listed as a threatened species by the USFWS (79 FR 59991) and Critical Habitat has been designated along the Colorado River north of the border with Mexico (79 FR 71373). This species uses wooded habitat with dense cover and water nearby, including woodlands with low, scrubby, vegetation, and dense thickets along streams and marshes. Suitable habitat is present along the Colorado River and associated wetlands west of YPG.

The Colorado River, which supports breeding yellow-billed cuckoo, is about 0.5 mile from the project area. Breeding yellow-billed cuckoo have been observed at the Laguna Division Conservation Area approximately 0.8 mile away (Parametrix 2018). There is some dense mesquite, paloverde, and salt cedar west of the Gila Main Canal (located about 1,000 feet from the project area) that may provide some marginal foraging habitat for cuckoo moving through the area. The soils along this part of the canal are very dry and there is little willow or cottonwood present to support breeding yellow-billed cuckoo. The dense mesquite and paloverde patch east of the canal (about 500 feet away) is small and narrow and would provide a limited foraging area for this species. There are no wetlands or associated shrublands on YPG that would support yellow-billed cuckoo, including within the project area. The Proposed Action may affect but is not likely to adversely affect yellow-billed cuckoo.

**Yuma Clapper Rail (*Rallus longirostris yumanensis*):** Yuma clapper rail is listed as endangered under the ESA (32 FR 4001). There is no critical habitat within Yuma County for this species. This species occurs along and near the Colorado River from the delta to the upstream end of Lake Mead and along the Lower Gila River and some other major tributaries of the Colorado River. Yuma clapper rail is typically found in freshwater marshes with water greater than 12 inches deep and dense to moderately dense stands of cattail (*Typha* spp.), bulrush (*Scirpus* spp.), and other emergent plants. There is no suitable wetland habitat for this species on YPG (YPG 2017). The project area falls outside of any marsh land habitat. The Proposed Action would have no effect on Yuma clapper rail.

**Razorback Sucker (*Xyrauchen texanus*):** Razorback sucker is listed as endangered under the ESA (56 FR 54957) and the Colorado River upstream of Imperial Dam has been designated as critical habitat for the species (59 FR 13374). Habitat for this species consists of riverine and lacustrine areas, including backwaters. River habitat for this species has been impacted by dam construction and withdrawal of water for irrigation and other human uses, and the native fish populations have been greatly altered

(Phillips and Comus 2000). Razorback sucker are known to occur northwest of the project area in the Colorado River. Naturally occurring waters on YPG are ephemeral and do not provide adequate and sustainable fisheries habitat. Natural and man-made water tanks are present on the installation but do not support native fisheries (YPG 2017). There is no suitable habitat for this species in the project area. The Proposed Action would have no effect on razorback sucker.

### 3.2.2 Environmental Consequences

#### 3.2.2.1 No Action Alternative

Under the No Action Alternative, the Travel Camp would not be expanded and there would be no changes to vegetation or wildlife habitat. No impacts to biological resources would occur under this alternative.

#### 3.2.2.2 Preferred Alternative

Construction of the Proposed Action would disturb approximately 9.3 acres of partially disturbed Sonoran desert scrub habitat. This area mainly provides habitat for annual vegetation and other common plant and wildlife species known to occur on YPG. Implementation of the Proposed Action would result in the removal of common vegetation, and wildlife present within the proposed expansion area (primarily small mammals) would be displaced. Both the vegetation and wildlife found in the project area are ubiquitous on the base. Following implementation of the Preferred Alternative, vegetation within the expansion area would be similar to that currently present in the existing Travel Camp, such as drought tolerant species.

Implementation of the Preferred Alternative would likely displace larger wildlife such as mule deer, coyote, and smaller animals and birds from the project area during construction. Impacts to wildlife could include disruptions in normal behavior such as feeding, breeding, or predation. Mobile animals such as mule deer, foxes, and birds can avoid the activities. Smaller, less mobile species, such as lizards and snakes, may become injured or killed by vehicles or equipment operating in the project area. Due to the proposed use of the area following construction, the habitat within the project area for large animals would be permanently lost; however, the area would potentially be available for small animals and bird species. There is similar habitat surrounding the project area that could be used by wildlife displaced during construction.

The project area does not provide suitable habitat for any threatened or endangered species. However, there is the potential for species of greatest conservation need (tier 1b) to occur within habitat types in the project area or in close proximity to the project area. Abert's Towhee may occur along dense vegetation along the nearby canal. The habitat in the project area is marginal for Gila woodpecker and gilded flicker. However, because saguaro cacti are present in the project area there is the potential for them to occur. Arizona pocket mouse, Harris' antelope squirrel, and Yuma myotis may be present based on habitat types present in the project area. California leaf-nosed bat and cave myotis may forage in the area but no roosting habitat is present; any impact to foraging bats would be minimal and intermittent. Gila monster may be present in washes, but most of the project area is not preferred habitat. A pre-construction survey would be conducted prior to construction to verify that no state species of concern are present within the project area and to identify any nesting birds. If any active nests or state listed sensitive species occur within the project area, the nest would be avoided and a buffer would be established to avoid disturbance to the species; nests could be sheltered in place using appropriate protocols through coordination with the AZGFD. Construction activities may also be delayed until after the eggs have hatched and the young can be relocated into other suitable habitat or until the fledglings have left the nest.

The Proposed Action would result in further narrowing of the movement corridor for bighorn sheep between the Laguna Mountains and Imperial Hills. Sheep have been observed along the canal, however the frequency and distance traveled by individuals is unknown. It is unknown how much movement of sheep occurred in this area prior to the construction of the cantonment area security fence, but it is assumed that the fence has already altered sheep movements in the area including when the passage on Imperial Dam Road was closed to meet security standards in 2017. Expansion of the existing fence would slightly narrow the movement corridor, but would not block movement through this area.

### Effects to Federally Listed Species

YPG has identified five listed species occurring near the project area; determinations of effect for the purpose of section 7(a)(2) consultation are listed in Table 3.

**Table 3. Determination of Effects to Federally Listed Species**

Common Name	Scientific Name	Status	Affect Determination
Sonoran Pronghorn	<i>Antilocapra americana sonoriensis</i>	Experimental Population, Non-Essential	No Effect
Southwestern Willow Flycatcher	<i>Empidonax traillii extimus</i>	Endangered	May Affect, Not Likely to Adversely Affect. Critical Habitat will not be affected.
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	Threatened	May Affect, Not Likely to Adversely Affect. No Critical habitat has been designated.
Yuma Clapper Rail	<i>Rallus longirostris yumanensis</i>	Endangered	No Effect
Razorback Sucker	<i>Xyrauchen texanus</i>	Endangered	No Effect

Based on our analysis, the listed species that may be affected by the Proposed Action are the Southwestern willow flycatcher and Western yellow-billed cuckoo. The Proposed Action would involve construction activity, as well as ongoing operations and maintenance of the Travel Camp, approximately 650 feet from the Gila Main Canal. While the canal does not support riparian vegetation in the immediate vicinity, there are dense stands of honey mesquite and paloverde along the levee. West of the canal is an expanse of woodland dominated by salt cedar (*Tamarix* spp.) that extends west to wetlands associated with the Laguna Division Conservation Area approximately 0.5 miles to the west. Habitat that is not suitable for nesting by Southwestern willow flycatcher or yellow-billed cuckoo may be used for migration and foraging. All clearing and construction would occur during daylight hours and take approximately 90 to 120 days. Clearing and construction is anticipated to happen between October 1 to March 14, outside the breeding season for yellow-billed cuckoos (May 15 to September 30), southwestern willow flycatcher (April 15 to September 15), and other breeding birds, however if any clearing of vegetation must occur during this period, the area would be inspected by a biologist for nesting birds prior to initiating work. Noise and light from construction and operation of the travel camp would be detected west of the canal. Critical habitat for Southwestern willow flycatcher would not be affected because it is too far away.

The effect to Southwestern willow flycatcher is not adverse because the impacts are insignificant and discountable. The impacts are insignificant due to the small footprint of the project (9.3 acres) and because all activity would occur approximately 330 feet from the vegetation along the levee. The effects are discountable because there is no way of reasonably detecting effects to Southwestern willow flycatcher; if they were ever to occupy this habitat, it would only be in a transient manner.

Overall, construction activities would result in short-term impacts to wildlife and long-term impacts to vegetation and associated habitat. Operation of the Travel Camp would result in the long-term loss of vegetation and habitat for wildlife species. Overall, impacts to vegetation and wildlife as a result of implementation of the Proposed Action would be less than significant. The following standard mitigation measures will be implemented, as appropriate to eliminate or avoid adverse impacts to biological resources during site preparation activities.

- To the extent practical, avoid or minimize removal or trimming of trees during the breeding and migrating season (March 15<sup>th</sup> to September 30<sup>th</sup>).
- If any clearing of vegetation must occur during breeding season, the area would be inspected by a biologist for nesting birds prior to initiating work.
- Limit vehicle use to existing roads and facilities to the greatest extent practicable.
- Conduct plant surveys for rare natives and plants listed in the Arizona Plant Law, and, when feasible, protect in situ or remove and plant elsewhere if construction activities will result in death of vegetation.
- Monitor and remove invasive species in accordance with the Integrated Pest Management Plan.
- In coordination with AZGFD, YPG would continue the ongoing effort to study bighorn sheep movement between the Imperial Hills and Laguna Mountains populations. Data collected through this study would supplement current monitoring efforts of AZGFD.

### 3.3 Hazardous Materials and Waste

#### 3.3.1 Affected Environment

The primary operations on YPG that use hazardous substances or generate hazardous wastes are industrial processes, routine maintenance activities, testing, and support activities (YPG DPW 2010). In general, hazardous materials are defined as materials of general use that contain clearly hazardous properties in commercial, military, or industrial applications. These hazardous materials can pose a substantial threat to human health or the environment. In general, these materials pose hazards due to quantity and concentration, or physical and chemical characteristics. Components that contain hazardous constituents include propellants, batteries, flares, igniters, jet fuel, diesel fuel, hydraulic fluid, and explosive warheads. Aircraft, automotive, and generator fuels, oils, lubricants, paints, cleaning solvents, pesticides, and herbicides constitute hazardous materials that are currently used at developed range administration and support facilities at YPG. Use of hazardous materials at other dispersed locations, such as manned and tactical ranges, is generally limited to petroleum, oils, lubricants, and latex paints. In addition, as an Army testing facility, YPG stores, utilizes, and destroys considerable quantities of explosives and pyrotechnics; live high explosives and white phosphorus artillery and mortar ammunition are stored on YPG. Each of these may affect human health and the environment through direct contact with water, soil, or air.

The Army completed a remedial investigation of the installation as part of the DOD Installation Restoration Program (IRP) in 2002. Several removal actions have been conducted at YPG since, as well as interim remedial actions involving soil vapor extraction. Overall, there are approximately 1,635 acres managed under the IRP at YPG; 25 sites are under investigation (CH2M HILL 2015). These sites vary widely in contaminants and characteristics. YPG is currently performing site characterizations and

investigations, producing studies and reports, providing support for remedial actions, performing remediation activities, and conducting soil, groundwater, and air monitoring at the installation. Approval of new construction within IRP sites must be obtained from the YPG Environmental Sciences Division. New facilities can be constructed within certain IRP sites depending on the level of contamination, clean-up efforts, and land use controls.

There are no known hazardous or toxic substances within the project area, nor are there any IRP sites. Site YPG-28 is an IRP site that is located to the north of the proposed camp expansion area. This site was formerly used as a landfill. The Former Mortar Impact Area (YPG-002-R-01) is a Munitions Response Site that comprises approximately 625 acres in the southwestern portion of YPG. It is believed that the site was used to train troops in desert warfare during the early part of World War II. The northern end of the proposed storage area expansion crosses into this area. In 2009, YPG completed a remedial investigation to characterize potential munitions and explosives of concern and munitions constituents at the Former Mortar Impact Area. As a result of the remedial investigation, one munition and explosive of concern (75-mm projectile, fused) and 27 munitions debris items were identified. None of the objects found were in the area near the proposed storage area expansion.

### **3.3.2 Environmental Consequences**

#### **3.3.2.1 No Action Alternative**

There would be no new activities under the No Action Alternative; therefore, there would be no impacts to hazardous materials and wastes.

#### **3.3.2.2 Preferred Alternative**

Federal, state, and local agencies regulate hazardous materials and hazardous waste. During construction small quantities of potentially hazardous materials (e.g., oils, grease) would be used. Use of regulated substances as a result of the Proposed Action would primarily be limited to fuel consumption from vehicle use and heavy equipment operation during construction and would be managed in accordance with applicable guidance and regulations. Unintentional release of hazardous materials or toxic substances due to accidental release would not create a substantial potential public health or safety hazard. The following measures would be implemented during site preparation and operations to avoid or minimize potential impacts to resources in the project area.

- Drip pans will be used under construction equipment when not in operation to prevent soil contamination from undetected leaks and under any generators that are used at each site.
- Any leaks or accidental releases of petroleum products (i.e., fuel or lubricants) will be immediately contained and cleaned up in accordance with the YPG Spill Prevention, Control, and Countermeasures plan.

There are no known hazardous or toxic substances within the project area. Site YPG-28, the former landfill located to the north of the proposed camp expansion area, would not be affected by the Proposed Action. The northern end of the proposed storage area expansion crosses into the Former Mortar Impact Area boundary, and some objects from that past use have been found near the project area. The Proposed Action would not affect either of these sites.

### **3.4 Land Use and Recreation**

#### **3.4.1 Affected Environment**

YPG occupies approximately 445,717 acres in Yuma County and approximately 392,199 acres in La Paz County. Land ownership adjacent to YPG includes BLM, USFWS, state and private land, and agricultural land, with the majority of the land in both counties under federal ownership. Areas adjacent to YPG

include the Kofa NWR, Cibola NWR, and Imperial NWR. The small community of Roll is the closest community on the southern boundary of the Kofa Region, Martinez Lake is the closest community on the southwest side of YPG, and Quartzite is located north of the Cibola Region. The City of Yuma, which is the nearest large city, is located approximately 25 miles southwest of YPG.

Land within the boundary of YPG is composed of withdrawn public land and a small quantity of non-public land designated for use by the Department of the Army for military purposes and devoted to functions that are compatible with the current mission of the installation (YPG 2017). Because the land base of YPG is dedicated to military testing and evaluation, most of the land is reserved for firing ranges, impact areas, drop zones, mobility test courses, and other mission-related support facilities. Large open areas with associated safety and buffer areas are required for many of these activities and facilities; thus there are vast open spaces at YPG with scattered developed areas.

The installation is subdivided into three geographic and functional areas, as described in Section 1.2, Project Location (see Figure 1 in Chapter 1), and encompasses 1,309 square miles (837,760 acres). The Laguna Region, where the project area is located, is the area where cantonment areas and population centers are primarily located. In addition to being the main administrative area, a number of other functions are present, including aviation support functions, Command functions, and automotive testing. The proposed Travel Camp Expansion project area is adjacent to the existing FMWR Travel Camp. The location is undeveloped and is currently not being used. Photos of the area are shown in Section 2.2.

### **Recreational Use**

There are a number of recreational activities offered in the area around YPG, most of which are available year-round. These include numerous athletic centers, golf courses, local parks, fairgrounds, and a community center. At Martinez Lake, Marine Corps Air Station (MCAS)-Yuma hosts a recreational facility that is available for the local military and their families, including YPG personnel. Various activities – such as fishing, boating, swimming, hiking, camping, birding, and sightseeing – are available at Picacho State Recreation Area along the Colorado River. The Imperial Sand Dunes Recreation Area is a nearby off-road vehicle (ORV) area.

YPG is closed to the public; as a closed installation, recreational use on YPG is more restricted than that on surrounding lands. Outdoor recreational opportunities on YPG are limited; they include developed recreational facilities, such as a swimming pool and basketball and tennis courts, which are available under the jurisdiction of the FMWR Division of the Directorate of Personnel and Community Activities.

Hunting is allowed on YPG in coordination with AZGFD. In portions of YPG where safety constraints were not an issue and where hunting would not interfere with the military mission of the installation, 14 recreational hunting areas have been established. YPG issues approximately 200 hunting permits per year. Hunters are required to obtain an annual YPG hunting license in addition to required state and federal licenses, permits, and tags. All hunters using YPG are required to complete a safety briefing, sign a hold harmless agreement, and be acquainted with regulations before entering YPG property. In-season hunting for mule deer, desert bighorn sheep, Gambel's quail (*Callipepla gambelii*), mourning dove (*Zenaida macroura*), white-winged dove (*Zenaida asiatica*), Eurasian dove (*Streptopelia decaocto*), and African collared dove (*Streptopelia rosagrisea*) is permitted in all 14 designated areas.

Although hunting is allowed, a number of other uses are restricted because land within YPG is regulated to the extent necessary to safeguard public health and safety, to provide for national security and the military mission of YPG, and to preserve environmental quality and other natural and cultural resource

values. Examples of restricted activities include: target shooting; recreational ORV travel; prospecting or mining; geocaching; hiking; and privately owned drone flight.

### 3.4.2 Environmental Consequences

#### 3.4.2.1 No Action Alternative

Under the No Action Alternative, the Travel Camp would not be expanded. There would be no changes to current land use or recreation in the project area.

#### 3.4.2.2 Preferred Alternative

The proposed Travel Camp expansion is located in the HCA within the Laguna Region and is compatible with existing land use in that region. Use of the area for a Travel Camp would not affect current activities on YPG. Furthermore, the proposed Travel Camp expansion would have no effect on surrounding land uses.

The project area is not in an area that is available for public access. The existing security fence would be expanded around the new Travel Camp and the area would remain inaccessible to the public. Access to the area by authorized individuals would be along existing roads.

Although expanding the Travel Camp would increase the number of people staying in the area it would not affect recreational opportunities that are available at YPG or on surrounding lands.

## 3.5 Noise

### 3.5.1 Affected Environment

Chapter 7 of AR 200-1, Environmental Protection and Enhancement, dictates guidelines and regulations to reduce noise impacts and establishes an Environmental Noise Management Program. YPG has an Installation Operational Noise Management Plan that describes the current noise environment and predicts future noise conditions through computer modeling. The Installation Operational Noise Management Plan provides guidelines to attain land use compatibility between noise generated by military activities on YPG and the surrounding communities (YPG 2011).

Installation Compatible Use Zones have been established for YPG based on the level of noise exposure in three types of areas, designated as noise zones (NZs). NZ I has the least noise exposure with NZ III having the greatest noise exposure. The intent of Installation Compatible Use Zones is to prevent land use incompatibilities as a result of placing noise-sensitive activities in high-noise exposure areas. NZ I includes all areas in which the peak – single event sound level without weighting – decibels (dB) are less than 87 dB (for small caliber), the A-weighted Day-Night Average Sound Level is less than 65 dB (for aircraft), or the C-weighted Day-Night Average Sound Level is less than 62 dB (for large caliber and demolitions); it is usually the furthest zone from the noise source, and it is basically all areas not in either of the next two zones. As a rule, this area is suitable for all types of land use. NZ II is not recommended for noise-sensitive land uses and typically is limited to activities such as manufacturing, warehousing, transportation, and resource protection. No noise sensitive land uses are recommended in NZ III. The Land Use Planning Zone (LUPZ) is a supplemental zone used for aircraft and large caliber weapons noise. The LUPZ is part of the NZ I just outside of the NZ II, thus most noise-sensitive land uses are acceptable in the LUPZ (YPG 2011).

Ambient noise on YPG includes natural sources, such as wind, and manmade noises, such as aircraft noise, traffic on US 95 and other roads, munitions testing, military vehicle and equipment testing, and military training activities. Aircraft noise includes fixed- and rotary-wing military aircraft from YPG and MCAS-Yuma, AZGFD wildlife surveys, and commercial air traffic. Principal operational noise sources on YPG are weapons firing and aviation activities in the Cibola and Kofa regions (YPG 2011). According to



the guidelines used to assess noise and land use compatibility, the overall noise impact of YPG's current training activities would be characterized as minimal due to the remote nature of the proving ground. In addition, complaint risk guidelines were used to supplement and/or further assess the total impact of training noise which were found to be minimal (YPG 2011). The exception would be a moderate risk of complaints near the only identified noise-sensitive areas around YPG, which are the Martinez Lake area on the Colorado River near the western boundary of the Cibola Range and the Dome Valley agricultural/rural residential area to the south of the Laguna Region (YPG 2011). In addition, the Kofa NWR, Trigo Mountain Wilderness Area, Imperial NWR, and the Muggins Mountain Wilderness Area are considered sensitive noise receptor areas around YPG due to their proximity to firing ranges and the use of airspace over these areas for military testing and training (Gutierrez-Palmenberg, Inc. and Jason Associates Corporation 2001).

The proposed Travel Camp Expansion project area is located in an NZ I area. Ambient noise levels in this area are comparable to a rural environment, but could be noisier at times depending upon training and testing activities taking place in the surrounding area. Sources of noise that contribute to ambient noise levels in the project area are mainly from administrative activities in the Laguna Region and noise from Imperial Dam Road, located just to the west of the project boundary. No sensitive receptors have been identified on or within the vicinity of the project area.

### 3.5.2 Environmental Consequences

#### 3.5.2.1 No Action Alternative

Under the No Action Alternative, no changes to the noise environment would occur. The proposed Travel Camp expansion would not occur and thus there would be no potential for increased noise from construction or future use of the expanded area.

#### 3.5.2.2 Preferred Alternative

Noise generated from the Proposed Action would have short-term effects to the existing noise environment due to construction activities. Long-term impacts would be limited to vehicular traffic and resident use of the expanded Travel Camp area.

Construction activities generate noise by their very nature and are highly variable, depending on the type, number, and operating schedules of equipment. Construction projects are usually executed in stages, each having its own combination of equipment and noise characteristics and magnitudes. The proposed activities would include mobilization, site preparation, placing forms and foundations, heavy equipment movement to facilitate paving, concrete pouring, etc. The most prevalent noise source at typical construction sites is the internal combustion engine. General engine powered construction equipment includes, but is not limited to, the following: heavy, medium, and light equipment (i.e., excavators); graders; backhoes; dump trucks; water trucks; and utility trucks. Peak noise levels would be variable and intermittent because each piece of equipment would only be operated when needed. However, peak construction noise levels would be considerably higher than current noise levels. Relatively high peak noise levels in the range of 93 to 108 dBA (A-weighted decibel), would potentially occur on the active proposed expansion site, decreasing with distance from the construction area. Table 3 presents peak noise levels that could be expected from a range of construction equipment that could be used during proposed construction activities.

**Table 3. Peak Noise Levels Expected from Typical Construction Equipment**

Source	Peak Noise Level (dBA, attenuated)					
	Distance from Source (feet)					
	0	50	100	200	400	1,000
Heavy Truck	95	84-89	78-83	72-77	66-71	58-63
Dump Truck	108	88	82	76	70	62
Concrete Mixer	108	85	79	73	67	59
Scraper	93	80-89	74-82	68-77	60-71	54-63
Bulldozer	107	87-102	81-96	75-90	69-84	61-76
Generator	96	76	70	64	58	50
Grader	108	88-91	82-85	76-79	70-73	62-65
Forklift	100	95	89	83	77	69
Source: Tipler 1976						

The existing Travel Camp is located adjacent to the proposed expansion project area. Residents in the Travel Camp would experience noise in the ranges shown in Table 3 depending on their location in the camp. Generally speaking, peak noise levels within 50 feet of active construction areas would most likely be considered very loud, comparable to peak crowd noise at an indoor sports arena. At approximately 200 feet, peak noise levels would be loud – approximately comparable to a garbage disposal or vacuum cleaner at 10 feet. At 1,000 feet, construction noise levels would generally be quiet enough so as to be considered background noise, although transient noise levels may be noticeable at times. Although noise levels would be quite loud in the immediate area, peak construction noise levels would be intermittent. Construction would increase noise levels in the immediate vicinity of the project; however, impacts would be considered minor because these activities would be temporary, would be limited to daylight hours. The potential for adverse noise impacts would be less than significant, and limited to the duration of construction activities. Long-term noise impacts would be limited to use of the Travel Camp by residents including vehicular traffic. Therefore, long-term noise impacts would be less than significant.

### 3.6 Soil Resources

#### 3.6.1 Affected Environment

The surface soils of YPG have been classified as aridic and hyperthermic with lithic and typic torriorthents on the hills and mountains by the U.S. Department of Agriculture, Natural Resources Conservation Service (formerly the Soil Conservation Service). The majority of soils at YPG have been characterized as ranging from extremely gravelly, or cobbly sand, to very fine, sandy loam. Soil depth ranges from moderately deep in alluvial basins to very shallow in the mountain regions where bedrock is often exposed (Cochran 1991).

The project area is comprised of primarily Laposa-Rock outcrop complex soils. The Laposa soils are moderately deep and well drained. They were formed in extremely gravelly residuum. Extremely gravelly loam comprises the surface layer and the underlying material. Typically, 70 to 80 percent of the surface is covered with pebbles and cobbles. Permeability of this soil is moderate. Available water capacity is low and surface runoff is rapid. Rock outcrops consist of exposed areas of granite, gneiss, schist, andesite, and rhyolite (USDA SCS 1980).

The potential plant community associated with these soils is mainly creosotebush, white bursage, and ocotillo. Soils in the project area has been disturbed for various reasons over the past, resulting in a sparse vegetative community with large bare, or un-vegetated areas. This soil complex has very poor potential for rangeland wildlife habitat.

### 3.6.2 Environmental Consequences

#### 3.6.2.1 No Action Alternative

Under the No Action Alternative, no changes to project area soils would occur and there would be no affect to soil resources.

#### 3.6.2.2 Preferred Alternative

Construction and operation of the expanded Travel Camp would result in both short- and long-term, localized impacts to soil resources in the approximately 9.3-acre project area. Impacts to soils would be short-term during construction, with the potential for long-term impacts as a result of increased erosion due to increased runoff rates or altered runoff flow patterns associated with land clearing, construction grading, and increased impervious area.

Impacts to soils would occur from facility construction, utility infrastructure installation, and grading and paving for parking and storage. Use of heavy equipment to grade the site, move and compact soils, add riprap on the north end of the proposed storage area, and remove debris during construction activities would impact soils in the project area. Additional impervious areas would be created through construction, with the potential for increased stormwater runoff. Scour from erosion as a result of increased runoff could result in soil loss along flow paths in some areas. Vegetation removal could also result in increased potential for soil erosion.

The disturbed area would be subject to wind and water erosion, but there would be no substantial increase in wind or water erosion of soils, either on or off the site, and erosion would decrease over time as loose soils are consolidated. The erosion impacts to construction areas would be temporary and could be reduced by using standard BMPs described below as well as dust suppression techniques described in Section 3.1.2 that would be implemented to minimize erosion around the disturbed area during construction. Furthermore, the addition of riprap near the proposed storage area would reduce the potential for erosion in that area. Because construction would result in disturbance of surface area greater than one acre it would be subject to ADEQ Construction General Permit requirements. Appropriate post-construction stormwater controls would be implemented to minimize the potential for increased runoff and erosion, including preparation of a stormwater pollution prevention plan (SWPPP). Stormwater control features constructed on site would reduce the possibility of offsite impacts from water based erosion during construction and use of the area.

Although the project area has been largely previously disturbed, additional disturbance of soil during site preparation would be limited to the greatest extent practicable and would be contained within the designated project area. Disturbances to soils would be further minimized by use of proper construction techniques and implementation of BMPs during construction. Standard erosion control measures (e.g., silt fencing, sediment traps, and application of water sprays) would reduce additional potential impacts.

In addition, the following measures would be implemented during site preparation and operations to avoid or minimize potential impacts to soil resources.

- Disturbance of soil will be kept to the minimum necessary for operational purposes and will be confined to the delineated boundaries for the site to the greatest extent practical.
- Erosion control procedures and techniques will be used to avoid or minimize potential for severe erosion to occur.
- Vehicle and equipment traffic will use designated access roads.

### 3.7 Utilities and Infrastructure

#### 3.7.1 Affected Environment

Utility infrastructure on YPG is generally concentrated in the areas of heavy use, primarily in the cantonments, which make up approximately 0.2 percent of the land area of YPG. Water, electricity, telecommunications, and wastewater services are generally limited to cantonments and the immediate vicinity, although some down-range components also have utilities or other infrastructure. The majority of YPG has no utility services; water is typically trucked to remote testing and training sites, and power is provided by portable generators. There are no operating utilities within the project area. Nearby utilities include powerlines along the road to the west and in the existing Travel Camp to the east.

Facilities on YPG are linked by an internal network of maintained paved and gravel roads. Road access within YPG is limited because of security constraints and potentially hazardous conditions resulting from the test mission. YPG contains approximately 180 miles of paved roads and 820 miles of improved (gravel/graded) roads. Numerous unimproved (dirt only) roads and trails are present throughout the more remote areas of the installation. The majority of the paved roads are in the Laguna Region. County Highway S24/Imperial Dam Road, is a paved road that transects the Laguna Region and provides access to the installation, including the HCA and the project area.

All of the main complexes at YPG have hardwired electrical service. The primary electricity supplier is Western Area Power Administration. YPG currently does not use natural gas as an energy source, but they have successfully implemented solar power as a primary or supplemental energy source in some areas. Solar generated electricity is used for activities ranging from a single photovoltaic panel providing power to an individual remote device (flashing lights) to several photovoltaic solar “farms” supplementing YPG’s electrical grid with 105 to 450 kilowatts (YPG 2017). Remote activities depend on gasoline-powered portable generators.

YPG has an Aquifer Protection Permit and a Notice of Discharge from the ADEQ for the operation of wastewater facilities. Wastewater disposal systems on YPG consist of individual septic systems, chemical toilets, and localized collection systems served by evaporative lagoon systems (CH2M HILL 2015). Localized wastewater collection systems typically are gravity fed, with pump stations in some locations, as needed. Domestic sewage and brine waste from water treatment plants are collected in lagoons. Waste is discharged into specially designed evaporative lagoons or septic tanks. The evaporative lagoons are cleaned periodically and septic tanks are pumped regularly. Sewage lagoon cells are inspected and operated by certified wastewater operators and typically operate below capacity. For work areas beyond the range of the sewer lines, chemical toilets or septic treatment systems are provided.

### 3.7.2 Environmental Consequences

#### 3.7.2.1 No Action Alternative

No changes to utilities or infrastructure would occur under the No Action Alternative; therefore, there would be no impacts to these resources.

#### 3.7.2.2 Preferred Alternative

The expansion of the Travel Camp under the Proposed Action would expand existing utilities and infrastructure to the new location. This includes electric service, exterior lighting, communications, and water distribution systems (water, sewer, and storm drainage). Existing roads would be used to access the area and new roads would be developed in the Travel Camp itself. There would be construction of new utility lines and an increase in the use of utilities related to increased use of the area. Existing utilities, infrastructure, and associated support would be sufficient to sustain activities at the expanded Travel Camp.

Each RV site would be equipped with 50-Amp electricity and a conduit for TV and Wi-Fi. Communications would be connected to an existing fiber optic line adjacent to the site. Electric power would be satisfied using existing electrical sources and distribution systems. Power would be furnished by Substation A and the existing electrical overhead circuitry and new underground circuitry. Switches would be required and underground electric circuitry would be extended to the building. There is adequate available capacity to support this project. Heating and air conditioning for the laundry building would be provided by self-contained units and would not require additional infrastructure.

A six-inch potable water line south of the site would be extended to provide potable water to the project area. There is adequate water supply for both the domestic and fire suppression demands. The fire suppression requirements would be approximately 2,750 gallons per minute with 2-hour flow duration.

There are existing wastewater lines southwest of the project area with available capacity. Gravity sewer lines, a lift station, and force main would be required for the laundry buildings. The project would connect additional gravity lines to discharge to this system. The proposed sewers and lift station for the project would be designed to accommodate the flows generated by the units. The sewer treatment system is adequate to support the requirements for this project.

### 3.8 Water Resources

#### 3.8.1 Affected Environment

YPG is within the Colorado/Lower Gila watershed. The Colorado River is located west of the installation and flows in a north to south direction, while the lower Gila River is south of YPG and flows in an east to west direction. Neither river is located within the YPG boundaries. These two rivers replenish groundwater for the Yuma region. Depth to groundwater at the installation varies dependent upon geology, location, and thickness of basin alluvium, with known depths ranging from 30 feet (near HCA) to more than 1,000 feet (in the north Cibola Region). Groundwater wells supply water for potable and non-potable uses to three separate public water distribution systems serving each of the main complexes. Groundwater supplied by most wells is non-potable because of naturally occurring, elevated concentrations of fluoride and arsenic. Therefore, drinking water is treated to bring it below the applicable regulatory limit. Water supplies are considered ample for both current and future use (YPG 2017).

There are no perennial lakes, streams, mountain springs, or wetlands within the boundaries of YPG; however, there are numerous ephemeral stream courses, or washes, that originate on or cross the installation. Desert washes are regulated as Waters of the U.S. under Section 404 of the Clean Water



Act. These washes may be steep, stable, narrow channels in higher elevations, grading to wide, meandering, braided drainages in the surrounding plains. These desert washes are dry most of the year, which is characteristic of the low rates of precipitation and high evapotranspiration rates of the Sonoran Desert; only after significant rainfall events do these washes carry surface drainage from the area towards the Gila River to the south and towards the Colorado River to the west. The runoff from YPG typically is of good quality, but the volume is minimal and the volume of water conveyed to the two rivers is barely perceptible (Gutierrez-Palmenberg, Inc. and Jason Associates Corporation 2001).

No jurisdictional drainages were observed within the project area. Major washes near the project area include Castle Dome Wash, located approximately 5 miles east of the project area, and Los Angeles Wash, located approximately 10 miles north of the project area. Small side washes traverse the landscape at the proposed location. Desert washes provide habitats of high relative diversity and biomass compared to surrounding areas, and they serve as movement corridors as well as browse and cover sources for wildlife.

### 3.8.2 Environmental Consequences

#### 3.8.2.1 No Action Alternative

Under the No Action Alternative, the Travel Camp would not be expanded. There would be no affect to water resources.

#### 3.8.2.2 Preferred Alternative

The Proposed Action would increase potable water demand and wastewater discharge; there is adequate water supply for domestic use and the sewer treatment system is adequate to support the requirements for this project. Construction of the Travel Camp expansion would result in an increase in impervious surface. The increase in impervious surface that would result from implementation of the Proposed Action would not have a significant impact on stormwater quantity or quality. There are minor erosional features in and near the project area that drain to the surrounding area. Due to the relatively flat topography of the project area, post-construction stormwater runoff would be allowed to flow to the natural drainages to the north and west of the site. The Water Program Manager would be consulted during contract preparation to ensure that all appropriate BMPs are included in the contract as requirements and the contractor would be required to comply with all required BMPs contained in the SWPPP.

### 3.9 Cumulative Effects

Cumulative impacts on environmental resources result from incremental impacts of an action, when combined with other past, present, and reasonably foreseeable future projects in the area. A cumulative impact is an impact induced by a proposed action that, when added to the effects of other past, present, and reasonably foreseeable future actions, results in an incremental effect on the resource. Cumulative impacts can result from minor, but collectively substantial actions undertaken over a period of time by various agencies (Federal, State, and local) or individuals (40 CFR 1508.7). While this single project may have minor impacts, when it is considered together with other projects on the installation, the effect may be collectively significant.

CEQ guidelines state that cumulative effects analyses should be limited to effects that can be evaluated meaningfully by decision-makers. These guidelines further state that the area to use in defining the cumulative impacts geographical boundary should extend to the point at which the resource is no longer affected significantly (CEQ 1997). For the purpose of this analysis, a geographic boundary of 1 mile was evaluated to determine the area for consideration for projects that could reasonably be expected to contribute to cumulative impacts when considered in conjunction with the Proposed Action.

### 3.9.1 Other Past, Present, and Reasonably Foreseeable Future Actions

The potential for other past, present, and reasonably foreseeable future actions to interact with the Proposed Action to create cumulative effects varies among the different resource areas. Each resource considered in this EA is analyzed in terms of its ability to accommodate additional effects of the Proposed Action in combination with past, present, or reasonably foreseeable future projects. Projects or actions with the potential to contribute to cumulative effects in the analysis area are listed in Table 4.

**Table 4. Past, Present, and Future Projects within the Area of Interest**

Activity	Location/Description	Timeframe
Operation of HCA, which includes the existing Travel Camp	Occupied cantonment area	Past, Present and Future
Roads and Highways	Imperial Dam Road	Past, Present and Future
Infrastructure updates identified in the 2015 Real Property Master Plan	Update water treatment plant and replace old cast-iron water pipes for potable water. Extend fiber optics to modernize the communications infrastructure. Expand pedestrian circulation. Upgrade gates. Construct a new youth services center. Consolidate storage and industrial functions. Consolidate the Directorate of Emergency Services with the Dispatch Center. Construct a DPW headquarters and consolidate Garrison functions. Relocate SOTACC. Enhance Cox Field and reduce the amount of turf requiring irrigation. Reserve land for hotel expansion.	Future

### 3.9.2 Cumulative Impact Analysis

#### Air Quality

Construction activities would have short-term minor impacts on the air quality of YPG, and there would be a long-term negligible incremental addition of emissions from increased use of the Travel Camp. Ongoing and future activities in the HCA and along Imperial Dam Road would result in similar types of effects to air quality. The Proposed Action and other planned actions would conform to the SIP and would not be regionally significant. BMPs would be implemented to minimize dust generation, as appropriate. Neither the Proposed Action nor the other past, present, or planned future actions would contribute to long-term impacts on air quality, because there would be no significant increase in traffic or operational emissions. Any contribution to cumulative impacts would be expected to be minor or less. Therefore, no significant cumulative impacts on air quality are anticipated.

## **Biological Resources**

The Proposed Action in combination with ongoing and future activities in the HCA and along Imperial Dam Road are not expected to significantly affect biological resources. Ongoing activity within the HCA, including operation of the existing Travel Camp, and use of the nearby Imperial Dam Road alters wildlife habitat and generates noise and human disturbance. Wildlife movement patterns are altered through wildlife avoidance of this busy road and wildlife mortality occurs through vehicle collisions. Wildlife movement corridors particularly for bighorn sheep have been altered by the presence of the cantonment area security fence. The remaining corridor along the canal is impacted by Imperial Dam Road and other trails that parallel the canal as well as the YPG fording basin. Future activities identified in the 2015 Real Property Master Plan have the potential to disturb habitat and wildlife. The cumulative impacts of incremental vegetation and habitat loss from ongoing and future activities would be minor. Because the amount of clearing would be small relative to the amount of habitat available on YPG and its surrounding lands, any indirect cumulative impacts to species present in the area as a result of habitat loss would be minor. No significant incremental impacts to special status species from vegetation clearing or habitat loss would be anticipated. Any potential impacts to threatened, endangered, or sensitive species would require consultation with the USFWS and potential mitigation. Therefore, no significant cumulative impacts to any biological resources would be anticipated.

## **Hazardous Wastes and Materials**

Impacts from hazardous materials and hazardous waste during construction activities would be anticipated to be minor. The cumulative impacts to YPG from the other activities in the analysis area that utilize hazardous materials and produce hazardous waste would remain at current levels or increase slightly due to future activities identified in the 2015 Real Property Master Plan. The contribution to cumulative impacts from the Proposed Action would not be significant. BMPs for appropriate use, storage, and disposal measures for all activities at YPG would minimize the potential for cumulative impacts.

## **Land Use and Recreation**

Construction and operation of the Travel Camp would cause approximately 9.3 acres of land to be converted from open land to land comprised of developed facilities. New projects identified in the 2015 Real Property Master Plan also have the potential to affect land use. Activities in the HCA are already occurring on land that has been deemed compatible for its specific use. The area would continue to support and comply with YPG land use designations. Overall, cumulative impacts to land use and recreation would be minor.

## **Noise**

The short-term construction noise from the proposed Travel Camp expansion would have a minor impact on the analysis area. Future activities identified in the 2015 Real Property Master Plan also have the potential to increase noise in the area during construction. No substantial long-term noise would result from operation of the camp. The actions would result in short-term construction-related noise impacts that would affect only the area surrounding the project area, but the project would not substantially contribute to cumulative noise impacts in the long term because operational noise would be minimal. Activity in the HCA and along existing roads creates traffic noise and human disturbance. Noise created in the HCA and along Imperial Dam Road would vary based on the events occurring but would be within the historical range; therefore, any cumulative impacts from operation of a newly expanded Travel Camp would be negligible. No significant long-term cumulative impacts to noise would be anticipated.

## **Soils**

Implementation of the Proposed Action would likely result in minor impacts to disturbed soils. Impacts to soil from construction activities would occur during site preparation and construction; however, with appropriate planning and the use of mitigation measures, direct and indirect impacts to soil from construction would be anticipated to be minor. The Proposed Action could incrementally add to other projects on YPG that create soils disturbance, including those identified in the 2015 Real Property Master Plan, and lead to minor cumulative impacts to soils. Continued implementation of BMPs for all projects and activities on YPG would reduce the potential for severe soil impacts and for incremental interaction with other on-post projects. Therefore, no significant cumulative impacts would be expected.

## **Utilities and Infrastructure**

There would be a minor increase in utilities and infrastructure from expansion of the Travel Camp. This increase along with continued and proposed operation and activity in the HCA is not anticipated to result in significant cumulative impacts.

## **Water Resources**

The Proposed Action is expected to have negligible, less than significant impacts on water resources. None of the past, present, or planned activities in the analysis area would result in significant impacts to water resources. Therefore, no significant cumulative impacts to water resources would be anticipated.

### **3.10 Conclusions**

This EA has analyzed the potential for environmental impacts from the proposed Travel Camp expansion to each applicable resource area. Based on the evaluation in this EA, it was determined that impacts to air quality, biological resources, hazardous materials and wastes, land use and recreation, noise, soil resources, utilities and infrastructure, and water could result from implementation of the Proposed Action. As discussed in the EA, implementing the Proposed Action would result in less than significant adverse impacts on these resources. The potential for adverse impacts will be minimized by implementation of mitigation measures and BMPs described in the analysis. All aspects of the Proposed Action would follow applicable plans, policies, and procedures and standard BMPs will be implemented to reduce or prevent undesirable effects resulting from the project. Based on the analysis presented in this EA, no significant adverse impacts would be expected as a result of implementation of the Proposed Action including all applicable mitigation measures. Therefore, preparation of an EIS is not required, and a FNSI is recommended.

## **4Coordination and Preparation**

This chapter lists the preparers, reviewers, and agencies and groups or persons who were contacted during development of this EA. Copies of correspondence to and from agencies, tribes, and persons contacted during the preparation of the EA are included in the administrative record.

### **4.1 Contacts**

The following tribes, agencies and organizations were contacted during scoping:

#### **Tribal Representatives**

- Ak-Chin Indian Community
- Chemehuevi Indian Tribe
- Cocopah Indian Tribe
- Colorado River Indian Tribes
- Fort McDowell Yavapai Nation
- Fort Mojave Indian Tribe
- Gila River Indian Community
- Hopi Tribe
- Quechan Indian Tribe
- Salt River Pima-Maricopa Indian Community
- San Carlos Apache Tribe
- Tohono O'odham Nation
- Yavapai-Apache Nation
- Yavapai-Prescott Indian Tribe

#### **Federal Agencies**

- Bureau of Indian Affairs
- Bureau of Land Management
- Marine Corps Air Station Yuma
- U.S. Bureau of Reclamation, Yuma Area Office
- U.S. Customs and Border Protection
- U.S. Fish and Wildlife Service
- USDA Natural Resources Conservation Service

#### **State Agencies**

- Arizona Department of Agriculture
- Arizona Department of Environmental Quality
- Arizona Department of Transportation
- Arizona Game and Fish Department

#### **Local Agencies**

- City of Yuma
- La Paz County
- Yuma County



## Private Entities

- Arizona Deer Association
- Arizona Desert Bighorn Sheep Society
- Arizona Historical Society
- Arizona Wilderness Coalition
- Greater Yuma Economic Development Corp.
- Sierra Club, Grand Canyon Chapter
- Yuma Audubon Society
- Yuma County Chamber of Commerce
- Yuma Metropolitan Planning Organization
- Yuma Valley Rod and Gun Club

## 4.2 Preparers

This EA was prepared by North Wind Resources Consulting. Individuals who assisted with development of the EA are listed below.

Name	Title
Kim Maloney	Program Manager
Steven W. Dilks	Project Scientist
Andrew Blatchford	Archivist
Jace Fahnestock	Botanist
Kelly Green	NEPA Specialist
Scott Webster	Wildlife Biologist

## 4.3 Reviewers

The following individuals from U.S. Army Garrison, Yuma Proving Ground were instrumental in review of this EA.

Name	Title
Sergio Obregon	NEPA & SDWA Program Manager, Environmental Sciences Division
John Glover	Ecologist
Erin Goslin	Archaeologist, Environmental Sciences Division
Brian Hoon	Environmental Protection Specialist, Water Program
Daniel Steward	Wildlife Biologist, Environmental Sciences Division
Rick Bessett	Director, FMWR

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