HIGHWAY 95 LAND WITHDRAWAL
LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT

Draft
Legislative Environmental Impact Statement Appendices
for the Highway 95 Land Withdrawal

U.S. Army Garrison Yuma Proving Ground
Yuma and La Paz Counties, Arizona

February 2024

Lead Agency:

U.S. Department of the Army

Cooperating Agency:

U.S. Department of the Interior
Bureau of Land Management

Prepared by:

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HIGHWAY 95 LAND WITHDRAWAL
LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT

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Legislative Environmental Impact Statement for the Highway 95 Land Withdrawal

U.S. Army Garrison Yuma Proving Ground
Yuma and La Paz Counties, Arizona

Contract Number: W912BV20C0024

Solicitation Number: W912BV20R0046

Lead Agency:

U.S. Department of the Army

Cooperating Agency:

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LIST OF ACRONYMS

ADEQ	Arizona Department of Environmental Quality
BLM	Bureau of Land Management
BMP	Best Management Practice
EPA	U.S. Environmental Protection Agency
FR	Federal Register
GWP	Global Warming Potential
HAP	Hazardous Air Pollutant
NAAQS	National Ambient Air Quality Standards
NESHAPS	National Emission Standards for Hazardous Air Pollutants
ppb	parts per billion
ppm	parts per million
RMP	Resource Management Plan
SIP	State Implementation Plan
YPG	Yuma Proving Ground

PROJECT DESCRIPTION

The Army has requested the withdrawal and reservation of approximately 22,000 acres of public land managed by the U.S. Department of the Interior, Bureau of Land Management (BLM). This withdrawal would add to the existing 829,565 acres withdrawn for the Yuma Proving Ground (YPG). The land is located west of Highway 95 and abuts the current YPG boundary. The requested withdrawal area (hereinafter referred to as the "project area"), which would extend a portion of the current boundary east to Highway 95, would establish the highway as a distinct physical landmark of the YPG boundary in that area. The additional land would accommodate larger Surface Safety Zones to allow for higher altitude parachute releases and provide an additional buffer area in case of release point errors and system failures.

AIR QUALITY

The project area falls under the BLM *Yuma Field Office Record of Decision Approved Resource Management Plan* (RMP; BLM 2010). The RMP states that the Federal Land Policy and Management Act of 1976, as amended, and the Clean Air Act of 1970, as amended, prohibit the BLM from "conducting, supporting, approving, licensing, or permitting any activity on Federal land that does not comply with all applicable local, State, and Federal air quality laws, statutes, regulations, and implementation plans" (BLM 2010).

The Clean Air Act requires the U.S. Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for six criteria pollutants. The EPA was authorized by the Clean Air Act to set air quality standards and regulate emissions of pollutants into the air to protect human health and the environment from the effect of airborne pollution (BLM 2010). The criteria pollutants include carbon monoxide (CO), lead (Pb), ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and particulate matter (PM), which is presented in the NAAQS in terms of particulate matter ≤10 micrometers in diameter (PM_{10}) and particulate matter ≤2.5 micrometers in diameter ($PM_{2.5}$). These pollutants are generated by both human activities and natural events. The NAAQS represent maximum concentration levels of air pollution that are considered safe for public health and the environment. The Arizona Department of Environmental Quality (ADEQ) is the regulating agency responsible for Arizona air quality standards and has adopted the EPA standards for these pollutants (BLM 2010). The NAAQS are presented in Table 1 (EPA 2023a).

Table 1. National Ambient Air Quality Standards (NAAQS)

Pollutant	Averaging Time	NAAQS*
Carbon Monoxide (CO)	1-hour	35 ppm
	8-hour	9 ppm
Lead (Pb)	3-month Rolling	0.15 µg/m^3
Nitrogen Dioxide (NO_2)	1-hour	100 ppb
	Annual	53 ppb
Ozone (O_3)	8-hour	0.070 ppm
Particulate Matter – Fine (PM_{10})	24-hour	150 µg/m^3
Particulate Matter – Respirable ($PM_{2.5}$)	24-hour	35 µg/m^3
	Annual	12 µg/m^3
Sulfur Dioxide (SO_2)	1-hour	75 ppb
	3-hour	0.5 ppm

*Parts per million (ppm); parts per billion (ppb); micrograms per cubic meter (µg/m^3) (EPA 2023a)

If the NAAQS for a particular criteria pollutant has been exceeded in a region, a status of "nonattainment" is identified for that pollutant and the state must develop a State Implementation Plan (SIP) for bringing that area back into "attainment." 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."

The project area is located within Yuma and La Paz Counties and is in attainment for all criteria pollutants. La Paz County is in attainment for all criteria pollutants, while Yuma County is in attainment for all criteria pollutants with the exception of PM_{10} and O_3 (Figure 1). The ADEQ, in conjunction with EPA, designated portions of Yuma County as a moderate nonattainment area for the 24-hour standard of PM_{10} on Nov. 6, 1991 (56 Federal Register [FR] 56694). The Yuma PM_{10} Nonattainment Area is located in the southwestern part of Yuma County and is the nearest non-attainment area to the project area. The RMP states that, with the exception of the Yuma PM_{10} nonattainment area, air quality in the area is generally excellent (BLM 2010). Human activity and windblown dust are the primary contributors to PM_{10} emissions in the region and the nearby non-attainment area (BLM 2010). Windblown dust emanates from agricultural fields, miscellaneous disturbed areas, unpaved roads, and urban disturbed areas (BLM 2010). Within the project area, primary potential sources of windblown dust include travel on unpaved roads, particularly recreational travel on and off roads and trails.

ADEQ has developed a SIP to improve the PM_{10} air quality in the Yuma nonattainment area, with the goal of having the region reclassified to an attainment area (BLM 2010). However, on May 17, 2022, the EPA requested that the state revise the SIP and the area remains classified as nonattainment (87 FR 29830). The EPA also designated a portion of Yuma County as marginal nonattainment for the 2015 Ozone NAAQS on June 4th, 2018 (83 FR 25786). ADEQ submitted a SIP revision to address the statutory and regulatory requirements for marginal nonattainment areas under the 2015 standard on December 22, 2020, and the area remains classified as nonattainment (ADEQ 2023).

The EPA established the General Conformity Rule to ensure actions taken by federal agencies do not: 1) cause or contribute to new violation of a NAAQS, 2) increase the frequency or severity of existing violations of a NAAQS, or 3) interfere with provisions in the applicable SIP for compliance with the NAAQS (Clean Air Act § 176(c)(4)). This section states that a federal agency cannot support an activity within a nonattainment area unless the agency determines it will conform to the SIP. 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. General Conformity de minimis rates are specified in 40 Code of Federal Regulations 93.153. Because the project area is not in a nonattainment area, the Proposed Action is exempt from the General Conformity Rule.

The Clean Air Act also identified and established National Emission Standards for Hazardous Air Pollutants (NESHAP). This group of 187 regulated hazardous air pollutants (HAPs), also known as toxic air pollutants or air toxics, have been identified by the EPA as having the potential to cause serious health effects or adverse environmental and ecological effects. These are generally associated with solvents and chemicals used in industrial processes, and usually emitted in much lower quantities than the criteria pollutants. There are no federal ambient air quality standards for HAPs; however, the State of Arizona has a HAP program that requires specified minor sources of HAPs and all major sources of HAPs to provide controls or perform a risk management analysis to demonstrate that control is not necessary. Federal NESHAP requirements are limited to categorical stationary source operations. There are no sources of HAP emissions in the project area and the Proposed Action would not affect these pollutants.

CLIMATE CHANGE

Greenhouse gases are of concern when evaluating the impacts of a proposed action because they trap heat in the atmosphere and are associated with climate change. Carbon dioxide (CO_2) is the primary greenhouse gas that is emitted through human activities, primarily the combustion of fossil fuels (i.e., coal, natural gas, and oil) for energy and transportation (EPA 2023b). Other prominent greenhouse gases associated with human activities are methane (CH_4) and nitrous oxide (N_2O), which are byproducts of fuel combustion and other activities. Other pollutants that are considered greenhouse gases, but that are much less prevalent in the atmosphere, are fluorinated gases, including hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride (SF), and nitrogen trifluoride (NF_3). Conventionally, greenhouse gases have been reported as CO_2 equivalents (CO2 e)[1], which reflects non-CO_2 greenhouse gases' relative potency and converts them to an equivalent amount of CO_2. This allows for reporting of a single quantity of emissions.

Recent climate change modeling predicts the following will occur in the Southwest: (1) regional temperature increases corresponding to climate change will drive an increase of drought severity and a very high risk for severe multi-decadal droughts by the end of the 21st century (Ault et al. 2016 referenced in the Integrated Natural Resources Management Plan [INRMP]); (2) a gradual and increasing decline in spring precipitation associated with zonal mean atmospheric warming, from the near future to the end of the current century (Ting et al. 2018; [IPCC AR6 referenced in the INRMP]); and (3) a reduction in surface water from April to September (Ting et al. 2018 [referenced in the INRMP]). These types of changes will likely impact a number of resources that may be present in the project area.

According to the Arizona Wildlife Conservation Strategy, shifts to warmer temperatures and altered precipitation patterns, such as timing and intensity of precipitation (with reduced precipitation especially likely in the winter and spring months), are stressing natural systems and creating ideal conditions for invasive species and wildfires (Association of Fish and Wildlife Agencies 2009 and Mellillo et al. 2014 [referenced in AGFD 2022]). Arizona has already begun to experience these climate shifts and associated threats. One result of these changes is that existing vegetative communities can be replaced over time by species more suitable to a warmer, drier climate (Garfin et al. 2014 [referenced in the AGFD 2022]). This can subsequently result in habitat shifts and replacement of wildlife communities. Shifts from forests and grasslands to more desert areas may force wildlife to adapt or migrate to more suitable areas as changes in temperatures and precipitation patterns occur (AGFD 2022).

YPG is preparing to address these expected changes to the Southwest climate in the coming years and to mitigate their effects to wildlife through a number of measures identified in the INRMP, including: (1) developing infrastructure and having resources in place to build new or enhance existing wildlife waters, as needed; (2) optimizing placement of wildlife waters for water delivery and maintenance and access; (3) implementing systemwide and continuous remote monitoring of wildlife monitors; and (4) establishing the means to quickly and effectively establish temporary feeding sites for wildlife that will be adversely affected by decreased spring and summer precipitation and surface water (YPG 2023).

[1] Greenhouse gases are typically presented as CO_2 equivalent. To convert emissions of a gas into CO_2 equivalent, its emissions are multiplied by the gas's Global Warming Potential (GWP). The GWP takes into account the fact that many gases are more effective at warming the planet than CO_2, per unit mass. The three main greenhouse gases are CO_2, CH_4, and N_2O. Methane and N_2O have a 25 and 298 times higher, respectively, global warming potential than carbon dioxide (1 × Carbon Dioxide emissions) + (25 × Methane emissions) + (298 × Nitrous Oxide emissions). The other four greenhouse gases have very high global warming potentials; however, these are generally countered by much lower levels of emissions.

PROPOSED ACTION EFFECTS

The effects of the Proposed Action on these resources are evaluated in terms of the change in air emissions that would be caused by the project. If the requested withdrawal is authorized by Congress, there would be no increase in emissions and the Army's use of the project area as a buffer would not result in any impacts to air quality.

Short-term fugitive dust (PM_{10}) emissions would occur from vehicle use on unpaved roads if recovery activities are required following errant air drop operations. These impacts would occur sporadically and would be of short duration. If recovery efforts were to result in ground disturbance, the Army would follow standard operating procedures and best management practices (BMPs) to minimize impacts. Dust emissions would be minimized, as needed, with appropriate BMPs and dust abatement measures to prevent potential deterioration of air quality.

In addition to temporary increases in fugitive dust, recovery activities would result in temporary emission increases associated with fuel combustion from recovery vehicles and equipment. Exhaust from vehicles and equipment could include CO, NO_x, SO_2, and CO_2. Air emissions from recovery activities are considered a minor, short-term impact since these would be associated with a one-time event related to vehicle use. It is not anticipated that these emissions would result in any substantial impacts to air quality.

Overall, surface disturbance resulting from recovery of inadvertent loads dropped in the project area would not result in long-term increases in pollutants. Dust emissions would be localized and increases in air pollutants would not be anticipated partly due to good dispersal by strong winds and lack of topographic features to inhibit dispersal. The YPG tracks air emissions on YPG and submits an annual air emissions inventory to ADEQ (YPG 2023); this would be expanded to cover the requested withdrawal lands if approved by Congress. 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_{10} or O_3 nonattainment areas. There would be no increases in criteria pollutant, HAPs, or greenhouse gas emissions in any nonattainment or maintenance area. Because the project area is located outside of designated maintenance and nonattainment areas, a General Conformity analysis is not required.

The Council on Environmental Quality *National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change* states that "agencies should consider the potential effects of a proposed action on climate change and the effects of climate change on a proposed action and its environmental impacts" (88 FR 1196). The Proposed Action increases testing capabilities, but does not include increases in operation tempo. Thus, it would not result in increases in the number of aircraft, vehicles, or duration of operation. Emissions from the Proposed Action would be minimal and would not have a measurable effect on climate change. Because the Army proposes no development or use of the land, other than as a safety buffer, the Proposed Action would have no effect on climate change. Management actions identified in the INRMP to address potential impacts to wildlife from climate change would be implemented on the requested withdrawal lands.

DOCUMENTATION

ADEQ. 2023. Yuma | Particulate Matter (PM-10) Nonattainment Area | ADEQ Arizona Department of Environmental Quality (azdeq.gov). https://azdeq.gov/yuma-particulate -matter-pm-10-nonattainment-area. Yuma | Ozone Nonattainment Area | ADEQ Arizona Department of Environmental Quality (azdeq.gov). Arizona Department of Environmental Quality.

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Ault, Toby R. et al. 2016. "Relative Impacts of Mitigation, Temperature, and Precipitation on 21st Century Megadrought Risk in the American Southwest." *Science Advances*. 2016; 2:e1600873, 5 Oct, 2016.

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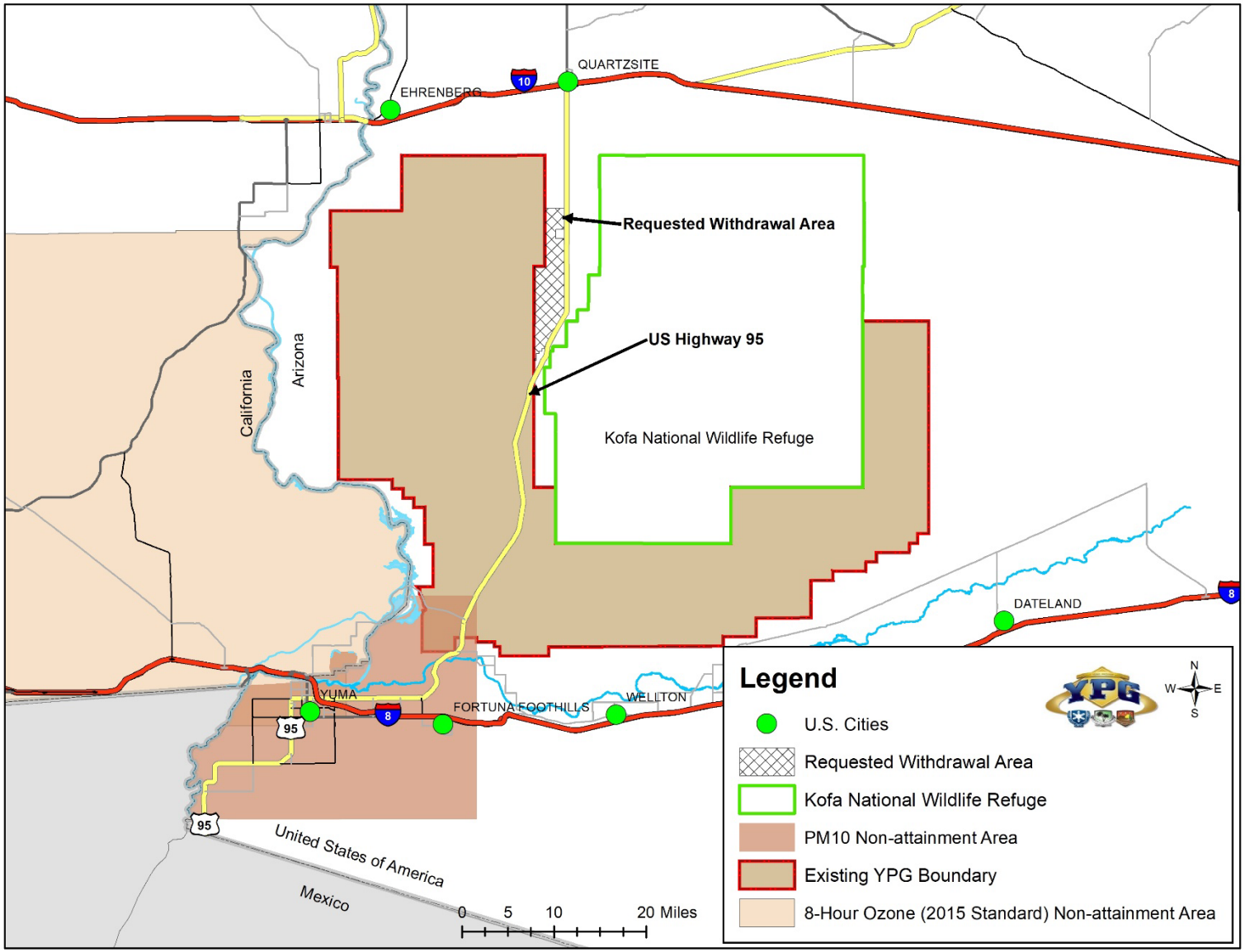

Figure 1. Yuma PM_{10} and Ozone Nonattainment Areas near the Project Area.

APPENDIX B.
AREAS OF CRITICAL ENVIRONMENTAL CONCERN

HIGHWAY 95 LAND WITHDRAWAL
LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT

Areas of Critical Environmental Concern Documentation

Legislative Environmental Impact Statement for the Highway 95 Land Withdrawal

U.S. Army Garrison Yuma Proving Ground
Yuma and La Paz Counties, Arizona

Contract Number: W912BV20C0024

Solicitation Number: W912BV20R0046

Lead Agency:

U.S. Department of the Army

Cooperating Agency:

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LIST OF ACRONYMS

ACEC	Areas of Critical Concern
BLM	Bureau of Land Management
RMP	Resource Management Plan
YPG	Yuma Proving Ground

PROJECT DESCRIPTION

This Army has requested the withdrawal and reservation of approximately 22,000 acres of public land managed by the U.S. Department of the Interior, Bureau of Land Management (BLM). This withdrawal would add to the existing 829,565 acres withdrawn for the Yuma Proving Ground (YPG). The land is located west of Highway 95 and abuts the current YPG boundary. The requested withdrawal area, which would extend a portion of the current boundary east to Highway 95, would establish the highway as a distinct physical landmark of the YPG boundary in that area. The additional land would accommodate larger Surface Safety Zones to allow for higher altitude parachute releases and provide an additional buffer area in case of release point errors and system failures.

RESOURCE DISCUSSION FOR AREAS OF CRITICAL ENVIRONMENTAL CONCERN

Guidance for Areas of Critical Environmental Concern (ACEC) management, which is included in the Federal Land Policy and Management Act of 1976, as amended, states that federal agencies are directed to protect and conserve ecosystems in need of "special management attention" by designating them as ACECs in their land use planning process. Areas qualifying for consideration as ACECs must have substantial significance and value, including qualities of more than local significance and special worth, consequence, meaning, distinctiveness, or cause for concern. The values for which ACECs are designated are considered the highest and best use for those lands, and protection of those values would take precedence over multiple uses. The requested withdrawal area falls under the BLM *Yuma Field Office Record of Decision Approved Resource Management Plan* (RMP; BLM 2010). The Approved RMP designates the following ACECs (as shown on Figure 1):

- Big Marias,
- Dripping Springs, and
- Sears Point.

There are no ACECs located within the requested withdrawal area.

DOCUMENTATION

BLM. 2010. *Yuma Field Office Record of Decision Approved Resource Management Plan*, Bureau of Land Management, January 2010.

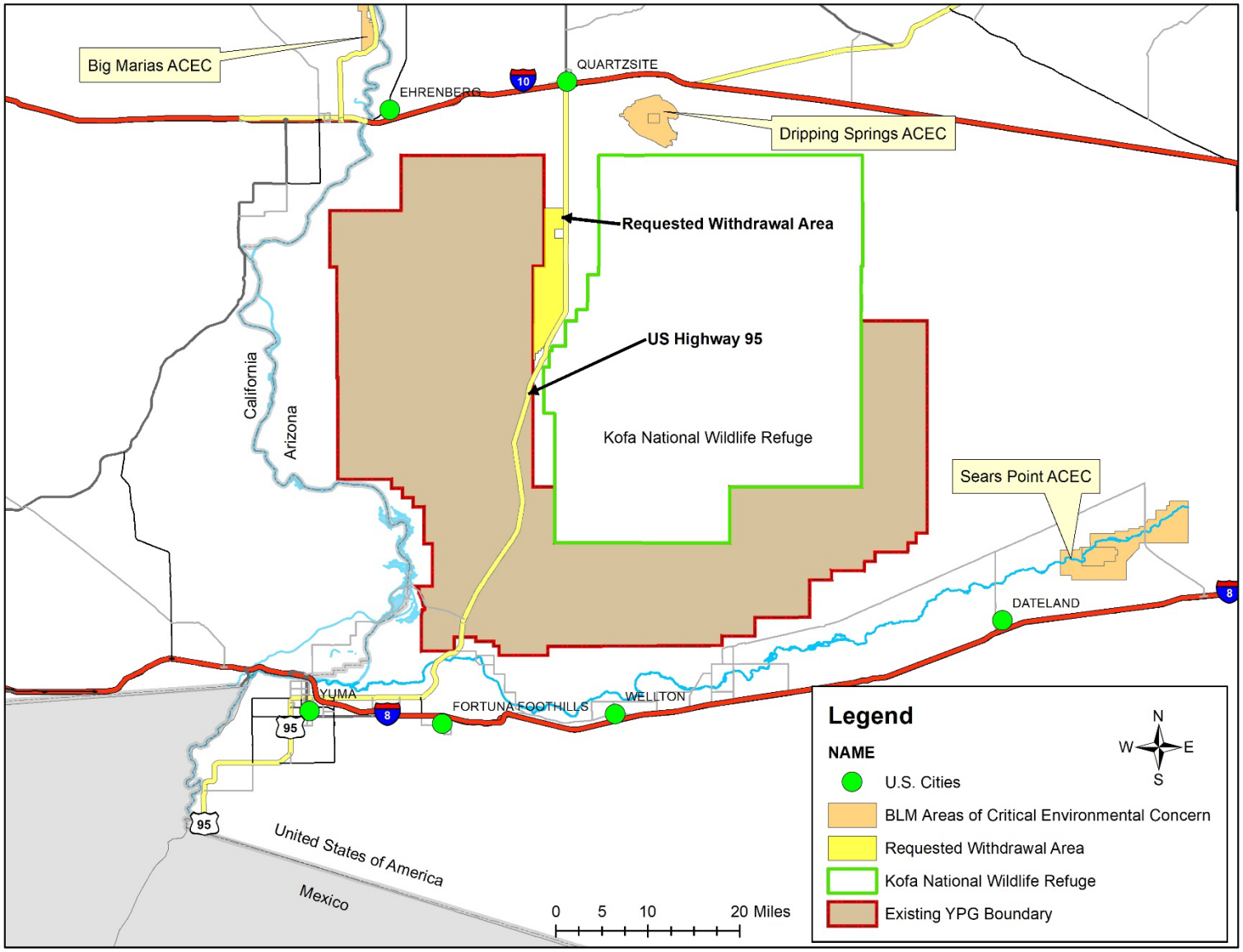

Figure 1. Location of ACECs.

APPENDIX C.
FLOODPLAINS

HIGHWAY 95 LAND WITHDRAWAL
LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT

Floodplains Impact Documentation

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RESOURCE DISCUSSION FOR FLOODPLAINS

The requested withdrawal area falls under the BLM *Yuma Field Office Record of Decision Approved Resource Management Plan* (RMP; BLM 2010). Direction in the RMP states that BLM is mandated by Executive Order 11988, *Floodplain Management*, to avoid development or occupancy on the 100-year floodplain wherever possible. The order also requires that BLM's standards and requirements for development in floodplains be consistent with the National Floodplain Insurance Program requirements administered by the Federal Emergency Management Agency (FEMA). Accepted flood proofing measures and other flood protection measures must be applied to any new construction or rehabilitation of structures and facilities in the floodplain.

The data used to evaluate floodplains included a compilation of existing data from different sources. These sources included the FEMA Flood Insurance Rate Maps, which include portions of panels within the Yuma County Unincorporated area (Panel numbers 04027C0025E, 04027C0250E, 04027C0275E, 0427C0475E, and 04027C0050E) and La Paz County Unincorporated area (Panel number 04012C1875C). All of these panels were identified as occurring within Zone X areas, which are defined as areas in which flood hazards are undetermined but possible (FEMA 2014). The data review indicated that the area is classified as an area of Minimal Flood Hazard; there is the potential for flooding during extreme weather events that could result in floods within the ephemeral washes.

Flooding events in the area vary widely in both intensity and frequency. The dry washes and dry arroyos that occur throughout the project area may flow following localized summer thunderstorms or regional winter storms; however, some arroyos may have no surface water for an entire year. Although these areas are subject to short-term flash flooding from storm events, the lateral extent of flood flows that exceed channel capacity (i.e., the floodplain boundary) were not available for the project area. Therefore, the determination of floodplains in the project area is limited to stating that floodplains may exist adjacent to the ephemeral drainage network. The gravely and sandy nature of the soils within the project area would aid in any flood activity rapidly infiltrating into the ground, reducing the period of time that water would be pooled or ponded on the ground surface.

The project area would be used as an increased safety buffer zone around the existing drop zone to the west, and would be accessed during recovery efforts if a load were to land in the area. Use of the project area as a buffer would not be expected to alter the existing drainage pattern in a manner that would alter the existing floodplain. No ground-disturbing activities are planned that would be associated with occupancy or modification of floodplains or would support floodplain development. There would be no impact to floodplains associated with the requested withdrawal action.

DOCUMENTATION

BLM. 2010. *Yuma Field Office Record of Decision Approved Resource Management Plan*, Bureau of Land Management, January 2010.

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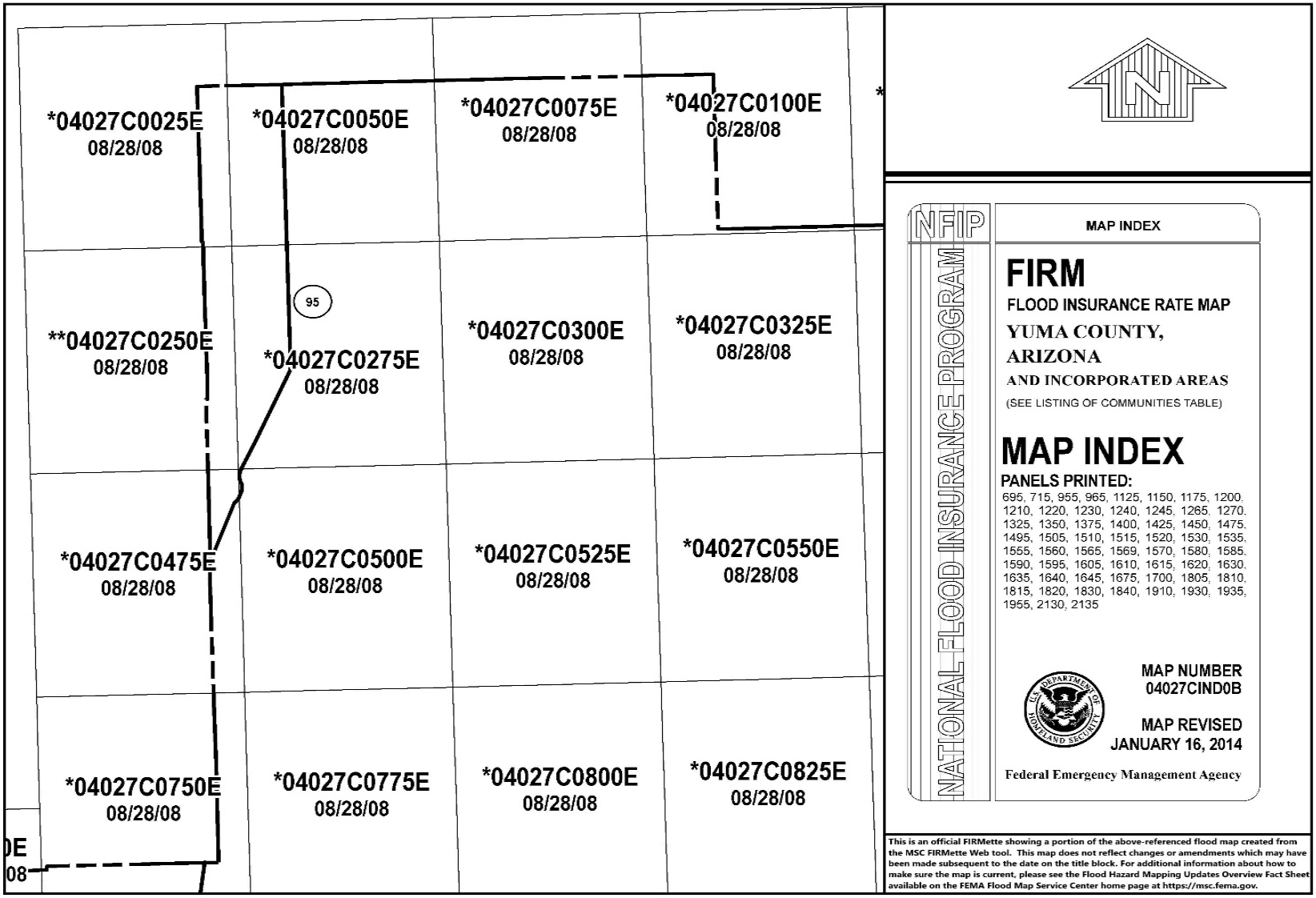
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08/28/08
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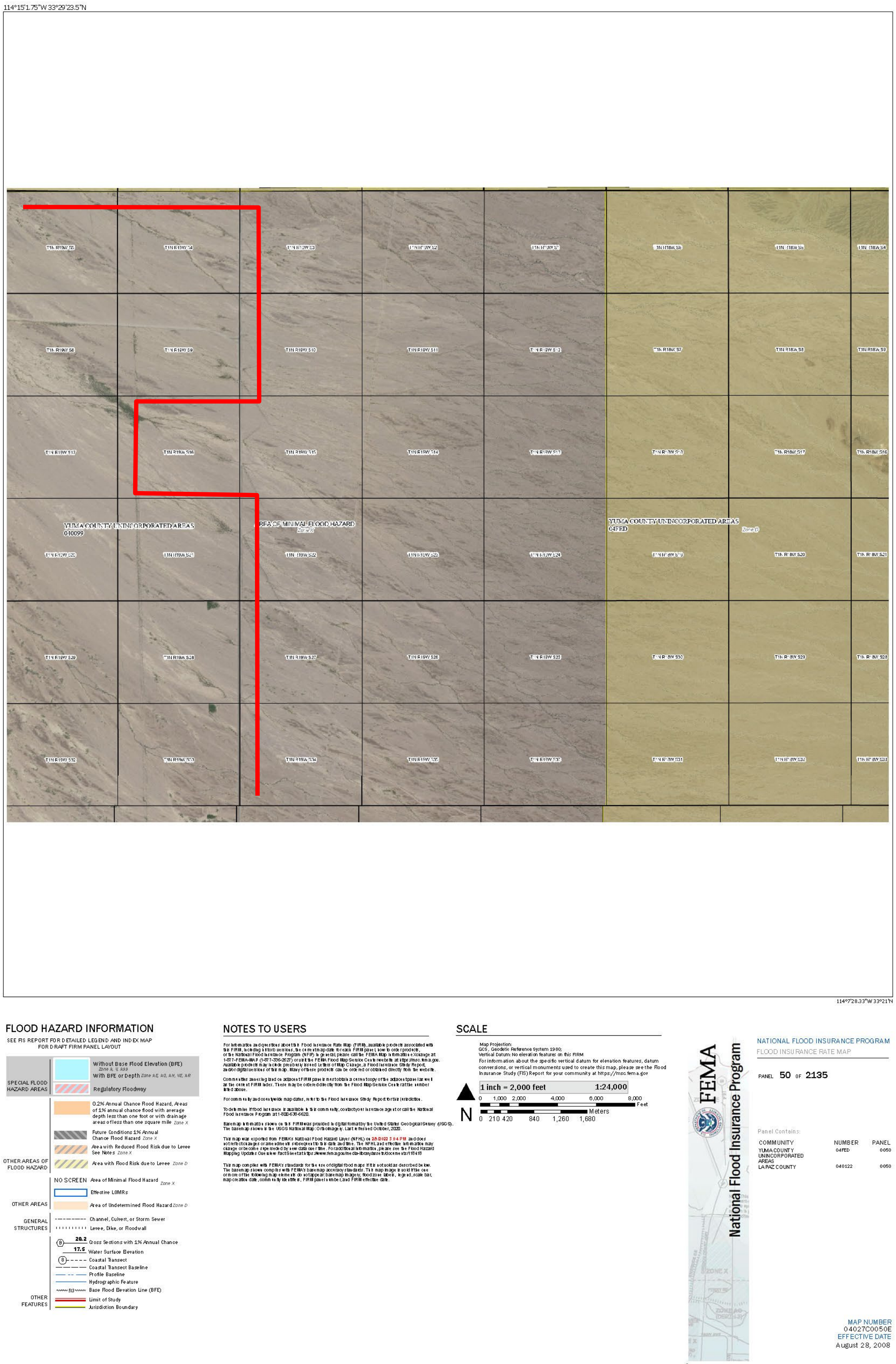
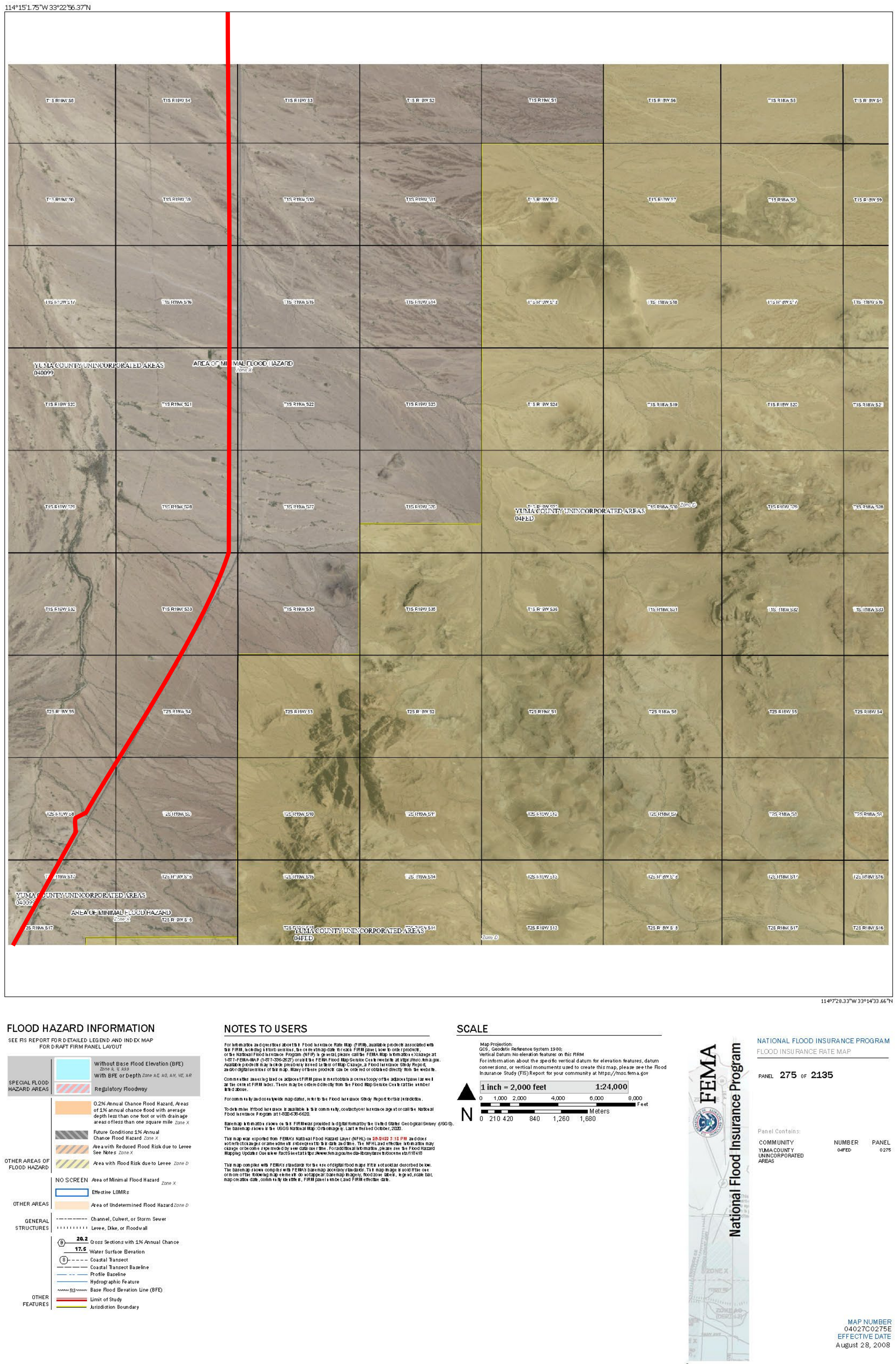
08/28/08
NFIP
NATIONAL FLOOD INSURANCE PROGRAM
MAP INDEX
FIRM
FLOOD INSURANCE RATE MAP
YUMA COUNTY, ARIZONA
AND INCORPORATED AREAS
(SEE LISTING OF COMMUNITIES TABLE)
MAP INDEX
PANELS PRINTED:
695, 715, 955, 965, 1125, 1150, 1175, 1200, 1210, 1220, 1230, 1240, 1245, 1265, 1270, 1325, 1350, 1375, 1400, 1425, 1450, 1475, 1495, 1505, 1510, 1515, 1520, 1530, 1535, 1555, 1560, 1565, 1569, 1570, 1580, 1585, 1590, 1595, 1605, 1610, 1615, 1620, 1630, 1635, 1640, 1645, 1675, 1700, 1805, 1810, 1815, 1820, 1830, 1840, 1910, 1930, 1935, 1955, 2130, 2135
MAP NUMBER
04027CIND0B
MAP REVISED
JANUARY 16, 2014
Federal Emergency Management Agency
This is an official FIRMette showing a portion of the above-referenced flood map created from the MSC FIRMette Web tool. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For additional information about how to make sure the map is current, please see the Flood Hazard Mapping Updates Overview Fact Sheet available on the FEMA Flood Map Service Center home page at https://msc.fema.gov.



114°15'1.75"W 33°29'23.5"N
YUMA COUNTY UNINCORPORATED AREAS
040099
AREA OF MINIMAL FLOOD HAZARD
Zone X
YUMA COUNTY UNINCORPORATED AREAS
04FED
Zone D
114°7'28.33"W 33°21'N
FLOOD HAZARD INFORMATION
SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR DRAFT FIRM PANEL LAYOUT
SPECIAL FLOOD HAZARD AREAS
Without Base Flood Elevation (BFE) Zone A, V, A99
With BFE or Depth Zone AE, AO, AH, VE, AR
Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD
0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
Future Conditions 1% Annual Chance Flood Hazard Zone X
Area with Reduced Flood Risk due to Levee See Notes Zone X
Area with Flood Risk due to Levee Zone D
NO SCREEN Area of Minimal Flood Hazard Zone X
Effective LOMRs
OTHER AREAS
Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES
Channel, Culvert, or Storm Sewer
Levee, Dike, or Floodwall
20.2
Cross Sections with 1% Annual Chance
17.5
Water Surface Elevation
Coastal Transect
Coastal Transect Baseline
Profile Baseline
Hydrographic Feature
513
Base Flood Elevation Line (BFE)
OTHER FEATURES
Limit of Study
Jurisdiction Boundary
NOTES TO USERS
SCALE
Map Projection:
GCS, Geodetic Reference System 1980;
Vertical Datum: No elevation features on this FIRM
For information about the specific vertical datum for elevation features, datum conversions, or vertical monuments used to create this map, please see the Flood Insurance Study (FIS) Report for your community at https://msc.fema.gov
1 inch = 2,000 feet 1:24,000
0 1,000 2,000 4,000 6,000 8,000 Feet
N
0 210 420 840 1,260 1,680 Meters
FEMA
National Flood Insurance Program
NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP
PANEL 50 OF 2135
Panel Contains:
COMMUNITY NUMBER PANEL
YUMA COUNTY UNINCORPORATED AREAS 04FED 0050
LA PAZ COUNTY 040122 0050
MAP NUMBER
04027C0050E
EFFECTIVE DATE
August 28, 2008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AREA OF MINIMAL FLOOD HAZARD
Zone X
YUMA COUNTY UNINCORPORATED AREAS
04FED
Zone D
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FLOOD HAZARD INFORMATION
SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR DRAFT FIRM PANEL LAYOUT
SPECIAL FLOOD HAZARD AREAS
Without Base Flood Elevation (BFE) Zone A, V, A99
With BFE or Depth Zone AE, AO, AH, VE, AR
Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD
0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
Future Conditions 1% Annual Chance Flood Hazard Zone X
Area with Reduced Flood Risk due to Levee See Notes Zone X
Area with Flood Risk due to Levee Zone D
OTHER AREAS
NO SCREEN Area of Minimal Flood Hazard Zone X
Effective LOMRs
Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES
Channel, Culvert, or Storm Sewer
Levee, Dike, or Floodwall
OTHER FEATURES
20.2 Cross Sections with 1% Annual Chance
17.5 Water Surface Elevation
Coastal Transect
Coastal Transect Baseline
Profile Baseline
Hydrographic Feature
513 Base Flood Elevation Line (BFE)
Limit of Study
Jurisdiction Boundary
NOTES TO USERS
For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at https://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.
Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.
For community and countywide map dates, refer to the Flood Insurance Study Report for this jurisdiction.
To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.
Basemap information shown on this FIRM was provided in digital format by the United States Geological Survey (USGS). The basemap shown is the USGS National Map: Orthoimagery. Last refreshed October, 2020.
This map was exported from FEMA's National Flood Hazard Layer (NFHL) on 2/9/2022 3:18 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time. For additional information, please see the Flood Hazard Mapping Updates Overview Fact Sheet at https://www.fema.gov/media-library/assets/documents/118418
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards. This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date.
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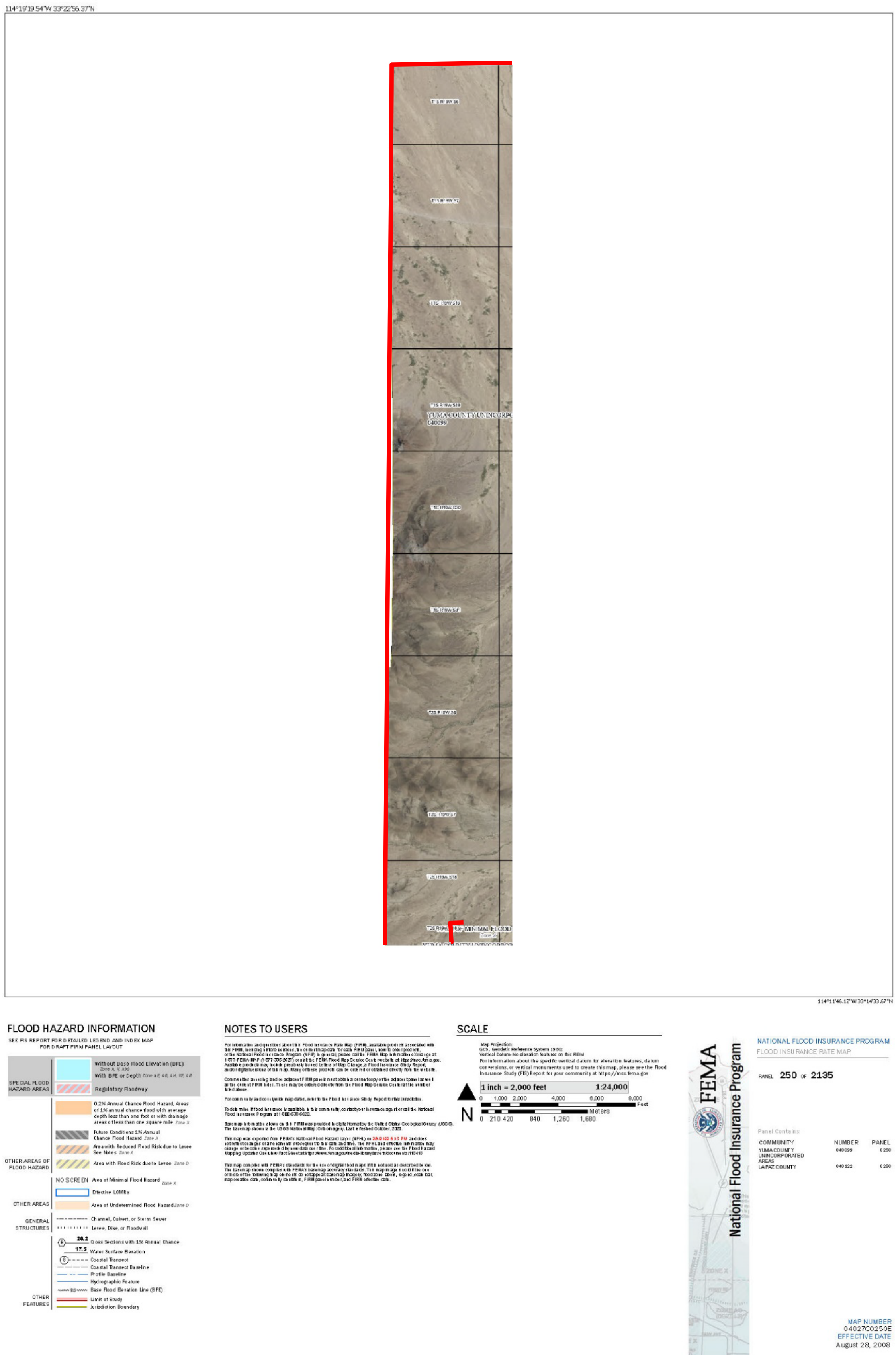
Map Projection:
GCS, Geodetic Reference System 1980;
Vertical Datum: No elevation features on this FIRM
For information about the specific vertical datum for elevation features, datum conversions, or vertical monuments used to create this map, please see the Flood Insurance Study (FIS) Report for your community at https://msc.fema.gov
1 inch = 2,000 feet 1:24,000
0 1,000 2,000 4,000 6,000 8,000 Feet
Meters
0 210 420 840 1,260 1,680
N
FEMA
National Flood Insurance Program
NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP
PANEL 275 OF 2135
Panel Contains:
COMMUNITY NUMBER PANEL
YUMA COUNTY UNINCORPORATED AREAS 04FED 0275
MAP NUMBER
04027C0275E
EFFECTIVE DATE
August 28, 2008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040099
114°11'46.12"W 33°14'33.67"N
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Jurisdiction Boundary
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0 1,000 2,000 4,000 6,000 8,000 Feet
Meters 0 210 420 840 1,260 1,680
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FEMA
National Flood Insurance Program
NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP
PANEL 250 OF 2135
Panel Contains:
COMMUNITY NUMBER PANEL
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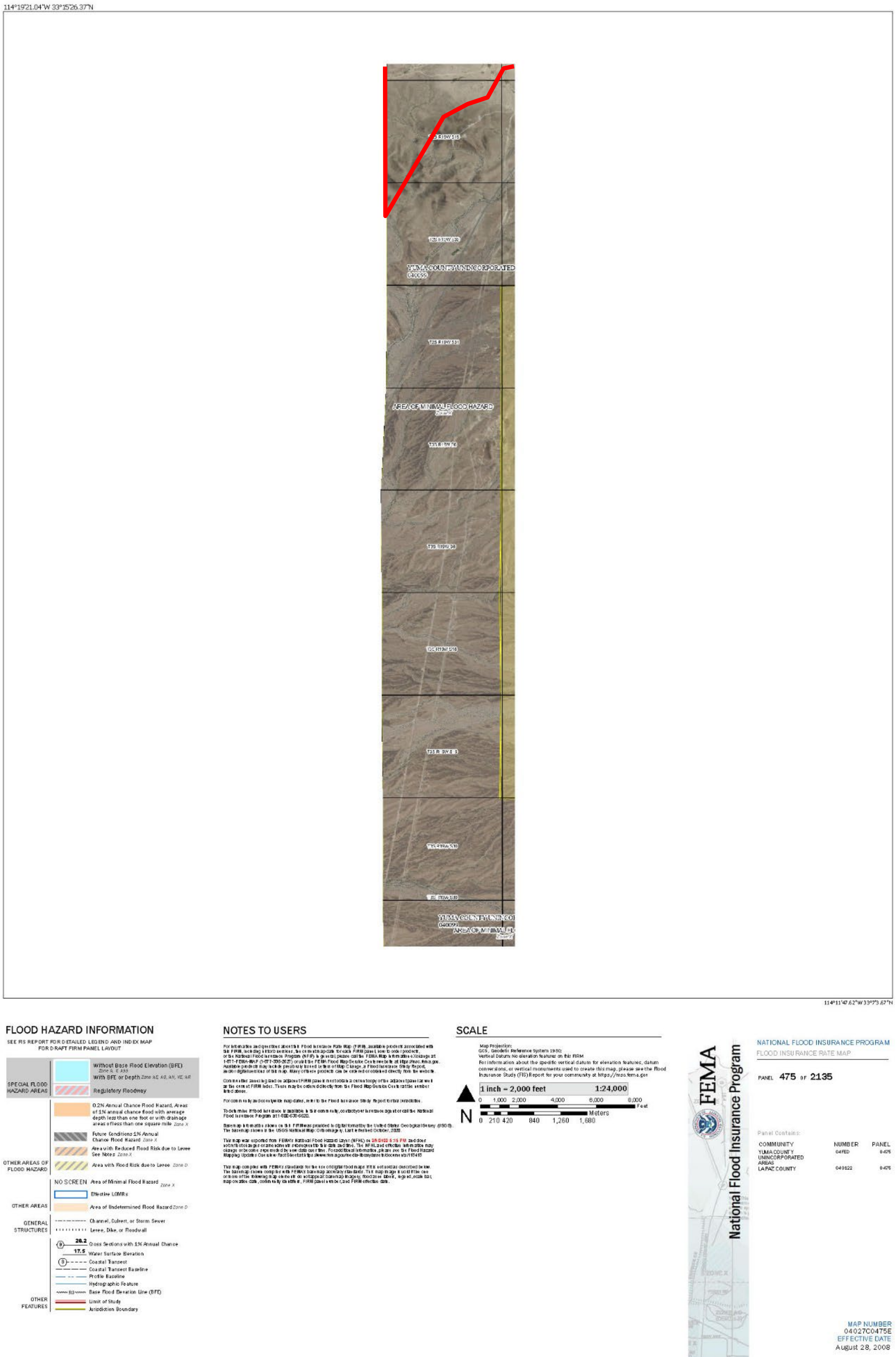
LA PAZ COUNTY 040122 0250
MAP NUMBER
04027C0250E
EFFECTIVE DATE
August 28, 2008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YUMA COUNTY UNINCORPORATED
AREA OF MINIMAL FLOOD HAZARD
114°11'47.62"W 33°7'3.67"N
FLOOD HAZARD INFORMATION
SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR DRAFT FIRM PANEL LAYOUT
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GCS, Geodetic Reference System 1980;
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0 210 420 840 1,260 1,680 Meters
N
FEMA
National Flood Insurance Program
NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP
PANEL 475 OF 2135
Panel Contains:
COMMUNITY NUMBER PANEL
YUMA COUNTY UNINCORPORATED AREAS 04FED 0475
LA PAZ COUNTY 040122 0475
MAP NUMBER
04027C0475E
EFFECTIVE DATE
August 28, 2008

APPENDIX D.
PUBLIC HEALTH AND SAFETY

HIGHWAY 95 LAND WITHDRAWAL
LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT

Public Health and Safety Impact Documentation

Legislative Environmental Impact Statement
for the Highway 95 Land Withdrawal

U.S. Army Garrison Yuma Proving Ground
Yuma and La Paz Counties, Arizona

Contract Number: W912BV20C0024

Solicitation Number: W912BV20R0046

Lead Agency:

U.S. Department of the Army

Cooperating Agency:

U.S. Department of the Interior
Bureau of Land Management

Prepared by:

North Wind Resource Consulting, LLC
1425 Higham Street
Idaho Falls, ID 83402

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LIST OF ACRONYMS

ADEQ	Arizona Department of Environmental Quality
ADWR	Arizona Department of Water Resources
AST	Aboveground Storage Tank
BLM	Bureau of Land Management
EBS	Environmental Baseline Study
FUDS	Formerly Used Defense Site
LUST	Leaking Underground Storage Tank
MEC	Munitions and Explosives of Concern
MRS	Munitions Response Site
RMP	Resource Management Plan
SOP	Standard Operating Procedure
SSZ	Surface Safety Zone
USACE	U.S. Army Corps of Engineers
UST	Underground Storage Tank
UXO	Unexploded Ordnance
YPG	Yuma Proving Ground

PROJECT DESCRIPTION

The Army has requested the withdrawal and reservation of approximately 22,000 acres of public land managed by the U.S. Department of the Interior, Bureau of Land Management (BLM). This withdrawal would add to the existing 829,565 acres withdrawn for Yuma Proving Ground (YPG). The land is located west of Highway 95 and abuts the current YPG boundary. The requested withdrawal area (hereinafter referred to as "project area"), which would extend a portion of the current boundary east to Highway 95, would establish the highway as a distinct physical landmark of the YPG boundary in that area. The additional land would accommodate larger Surface Safety Zones (SSZs) to allow for higher altitude parachute releases and provide an additional buffer area in case of release point errors and system failures.

RESOURCE DISCUSSION FOR HEALTH AND SAFETY

The project area falls under the BLM *Yuma Field Office Record of Decision and Approved Resource Management Plan* (RMP; BLM 2010). The RMP includes Yuma Field Office identified areas or hazards that have potential impacts to public health and safety. Identified health and safety concerns discussed in the RMP include abandoned mines, unexploded ordnance (UXO), international boundary issues, and hazardous materials. The project area is not near the international boundary and no hazardous abandoned mine features have been identified in the project area; therefore, those concerns are not relevant to the impact discussion. UXO consists of military materials used in tests and on training ranges, and may include, but is not limited to, bombs, mortars, artillery shells, rockets, submunitions, and landmines.

FORMERLY USED DEFENSE SITE

The project area lies within a U.S. Army Corps of Engineers (USACE) designated Los Angeles District Formerly Used Defense Site (FUDS) (J09AZ043910), known as Laguna Maneuver Area No. 10, which has been identified as having the potential presence of explosive hazards (U.S. Army 2022). The former Laguna Maneuver Area was used from 1942 to 1944 as part of the California Arizona Maneuver Area to train troops and test equipment for fighting in a desert environment. The property was also used for bombing and air-to-ground gunnery training by personnel stationed at the former Blythe Army Airfield. Laguna Maneuver Area No. 10 consists of two Munitions Response Sites (MRSs)[2]: Stone Cabin Impact Area (MRS01) and Maneuver Area #1 (MRS02)[3].

Approximately 2,000 acres of the project area is included within the MRS01 site, as shown on Figure 1. The MRS01 site has been identified through historical research and site visits as having potential explosive hazards. The munitions known or suspected to have been used include medium to large caliber munitions and mortars. The BLM has also classified this area as a UXO contaminated area. Risk remains at MRS01 for munitions and explosives of concern (MEC). The 2010 Final Site Inspection Report did not identify MEC at MRS01 (USACE 2010); however, munitions debris from 60-millimeter (mm) high explosive mortars were found. The confirmed presence of high explosive munitions debris warranted a remedial investigation for MRS01 and the Arizona Department of Environmental Quality (ADEQ) recommended expanding the eastern boundary of MRS01 further east to comprise areas where MRS01 associated munitions debris was observed. To date, the USACE has not acquired funding to initiate the remedial investigation at the MRS01 – Stone Cabin Impact Area. The site is on the USACE's list of interim risk management properties and will remain on the list until funding becomes available to address the debris and the debris is removed. Until that time, notification and safety education brochures are mailed to the BLM every 5 years, at a minimum (U.S. Army 2022).

[2] Any area on a defense site that is known or suspected to contain UXO, discarded military munitions, or munitions constituents. A munitions response area is comprised of one or more munitions response sites. (Definitions Related to Munitions Response Actions, Dec 18, 2003, Office of the Under Secretary of Defense.)
[3] No identified risk remains at Maneuver Area #1 (MRS02).

HAZARDOUS MATERIALS AND WASTES

The project area is vacant, undeveloped desert land where no current use of hazardous materials is known to occur. There was no evidence of hazardous materials or petroleum products (e.g., gasoline, diesel fuel, lubricants, or fuel oil) observed and no evidence of hazardous materials associated with historic mine sites, shafts, structures, or mine tailings or waste was found (U.S. Army 2022).

Hazardous materials consist of chemicals and materials that have the potential to adversely impact human health and the environment. A site reconnaissance was performed on February 26, 2020 to observe general conditions in the project area, as well as adjacent properties as they relate to potential hazardous substances (U.S. Army 2022). The purpose of the site reconnaissance was to visually identify, to the extent possible, current and past uses, site improvements (e.g., buildings, structures, or pipelines), and any evidence of existing and historical hazardous material use, disposal, storage, and release on the project area and adjacent properties. The project area and adjoining properties were observed from accessible public roads, and the results of this site reconnaissance were documented in the *Environmental Baseline Study (EBS) for the Highway 95 Land Withdrawal* (U.S. Army 2022), incorporated herein by reference.

No hazardous materials were observed during the site reconnaissance (U.S. Army 2022). Additionally, no aboveground storage tanks (ASTs) or underground storage tanks (USTs), or evidence of ASTs or USTs, were observed on the project area or adjoining properties. Based on results of the Environmental Database Resources Radius Report contained in the EBS (U.S. Army 2022), one leaking underground storage tank (LUST) and multiple USTs were identified at the adjacent Stone Cabin site, located east of the project area on private land associated with a former gas station. Historically, there were four USTs installed at the Stone Cabin site. Two tanks were installed in 1966 and two were installed in 1976. The four USTs were permanently closed and removed on April 24, 2019, with closure being confirmed by ADEQ. The LUST at Stone Cabin was reported on May 07, 2019, and the release closure was documented by ADEQ on January 29, 2021 (ADEQ 2022). Documentation of the closure requires that no evidence of soil contamination or hazardous waste migration associated with the LUST is present; therefore, past contamination from this site would not affect the project area.

Within the project area, electric powerlines and power poles are present along Highway 95, Road 89, and Cibola Lake Road. There are three 144-kilovolt (kv) pole-mounted transformers located within the project area. No staining, leaking, or evidence of hazardous materials contamination was observed near the power lines, transmission lines, or transformers on the project area or adjoining properties (U.S. Army 2022).

There is one well located west of Highway 95 within the Stone Cabin site. The well is listed on the Arizona Department of Water Resources (ADWR) Well Registry as a private, domestic water well that was constructed in 2003 (ADWR 2020). The well is not within the project area. There were no monitoring wells, irrigation wells, or oil and gas, or geothermal wells identified in the project area. Areas of stains, spills, leaks, pools of liquid, or corrosion were not observed on the project area or adjoining properties at the time of the site visit. There was no evidence of hazardous materials or petroleum product containers, leaks, or spills. An oil leak that was identified approximately 8 miles north of the project area is in a localized area and not at risk of migrating onto the project area (U.S. Army 2022).

Solid waste disposal was not observed on the project area at the time of the site reconnaissance. A minimal amount of surface litter was concentrated primarily along the west side of Highway 95. The solid waste included aluminum cans, plastic bottles, and paper. A few old, rusted cans were also present at the time of the site reconnaissance. Materials that typically accumulate at dumping sites on public lands include discarded tires, household trash, and commercial waste and materials. No illegal dumping sites were observed within the project area, and evidence of unauthorized uses was not observed (U.S. Army 2022).

Based on information collected during the environmental records review and site reconnaissance, it was concluded that there are no areas within the project area or adjoining properties where the release, disposal, or migration of hazardous substances or petroleum products has occurred. Based on results of the EBS, it has been determined that the environmental condition of property would be considered an Area Type 1, which is comprised of areas where no release or disposal of hazardous substances or petroleum products has occurred, including no migration of these substances from adjacent areas (U.S. Army Public Health Command 2012).

Recognized environmental conditions are the presence, or likely presence, of any hazardous substances or petroleum products on the property under conditions that indicate an existing release, a past release, or a material threat of a release on the property or into the ground, groundwater, or surface water of the property. De minimis (small or insignificant) conditions are excluded, as they do not generally present a material risk or harm to public health or the environment and would not be the subject of enforcement actions by appropriate government agencies. The Stone Cabin site (unrelated to the Stone Cabin Impact Area), which occurs adjacent to the project area, historically had the potential to cause an environmental risk of recognized environmental conditions. These materials have been removed from that property by the current and previous owner and no recognized environmental conditions were observed during the review of environmental conditions on the Stone Cabin site.

EFFECTS

Health and safety concerns are currently managed by the BLM through the implementation of Public Health and Safety Management objectives found in Section 2.2 of the RMP (BLM 2010). If the requested withdrawal is enacted by Congress, transfer of management of the withdrawal lands would not directly affect public health and safety. The YPG would continue to work to ensure public safety during cargo drops through risk management protocols and changing test parameters. Crew airdrop release point errors and system failures, while rare, do occur and would present a risk to public health and safety. The larger SSZ provided by the project area allows for the exclusion of the public and other non-participating persons, thereby reducing risks from higher altitude drops.

Public intrusions to YPG land space pose a risk to public safety and may result in testing delays that increase costs and delay test programs (USACE 2023). Having Highway 95 as a physically identifiable boundary for the installation would decrease the probability of unintended access and therefore increase public safety. By withdrawing these additional lands west of Highway 95, the YPG boundary could be posted along Highway 95, making the highway a clear physical landmark. The additional land space would reduce the likelihood of individuals accessing restricted areas, improving the security of test missions (USACE 2023). Additionally, HWY 95 could be a visual aid to aircrews for the boundary of the installation. As a safety buffer between the drop zones and publicly accessible land, the Army would place restrictions on access to the area by the general public, preventing individuals from being present if a load potentially veers off course and lands within the safety buffer area. This effort would include coordinating with the applicable county offices for the temporary closure of Cibola Lake Road.

In accordance with the Sikes Act, public access to the project area would be permitted to the extent that it would be consistent with the safety and security requirements of the military purposes of the land. To safeguard public health and safety, this access would be limited to hunting access during defined seasons through permits administered through the YPG Installation Hunting Regulation (YPGR 210-11; U.S. Army YPG 2022).

Transfer of management of the withdrawal land would not result in any changes to hazardous materials present in the project area. There would be no activities that would result in long-term storage or use of hazardous materials or wastes within the project area.

Loads landing within the project area would be the result of unintended failures of equipment and are expected to be rare. Recovery of any airdrop loads that inadvertently land within the SSZ encompassing the project area has the potential to affect hazardous materials until the point that the area is cleared from any possible MEC materials. Potential effects would be associated with the possibility of both hazardous materials being present within the loads being recovered and materials being released from the vehicles present during recovery efforts. There is the potential for effects to human safety until the point that the area is cleared from any possible MEC materials. The Army would follow established YPG procedures to remove any materials that present a hazard to public health and safety within YPG boundaries. YPG has standard operating procedures (SOPs) in place for air delivery operations (YPYTAP-P-3001), and the activity would be conducted in compliance with applicable range safety protocols, such as the YPG SOP for range operations (YPY-RO-P-1000).

Vehicle use during recovery operations would introduce potential hazardous materials into the area in the way of fuel and oils used in the vehicles. Given the expected rare and sporadic use of vehicles for recovery and the expected limited area affected, risk of spills and discharge of hazardous materials would be minimal. These risks would occur anytime a recovery vehicle enters the area to recover a load; however, the exact potentially impacted area is unknown and is anticipated to be scattered throughout the area. Any recovery operations would use established roads, washes, and adjacent surfaces to the maximum extent possible. Off-road excursions for any such operation would be minimized. Occasional mechanical breakdown could result in leaks of petroleum, oils, and lubricants. However, spills would be contained and cleaned per applicable hazardous materials management procedures.

These risks would be minimized with appropriate mitigations, as described in existing YPG environmental plans, including the Integrated Natural Resources Management Plan (YPG 2023), the Spill Prevention Control and Countermeasures Plan (YPG 2020), Hazardous Waste Management Plan (YPG 2018), and the Resource Conservation and Recovery Act Contingency Plan (YPG 2019), among others. Through implementation of SOPs and best management practices, impacts to public health and safety would be minimized.

DOCUMENTATION

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YPG. 2023. *Integrated Natural Resources Management Plan Fiscal Years 2023-2027*. U.S. Army Yuma Proving Ground, Yuma and La Paz Counties, Arizona.

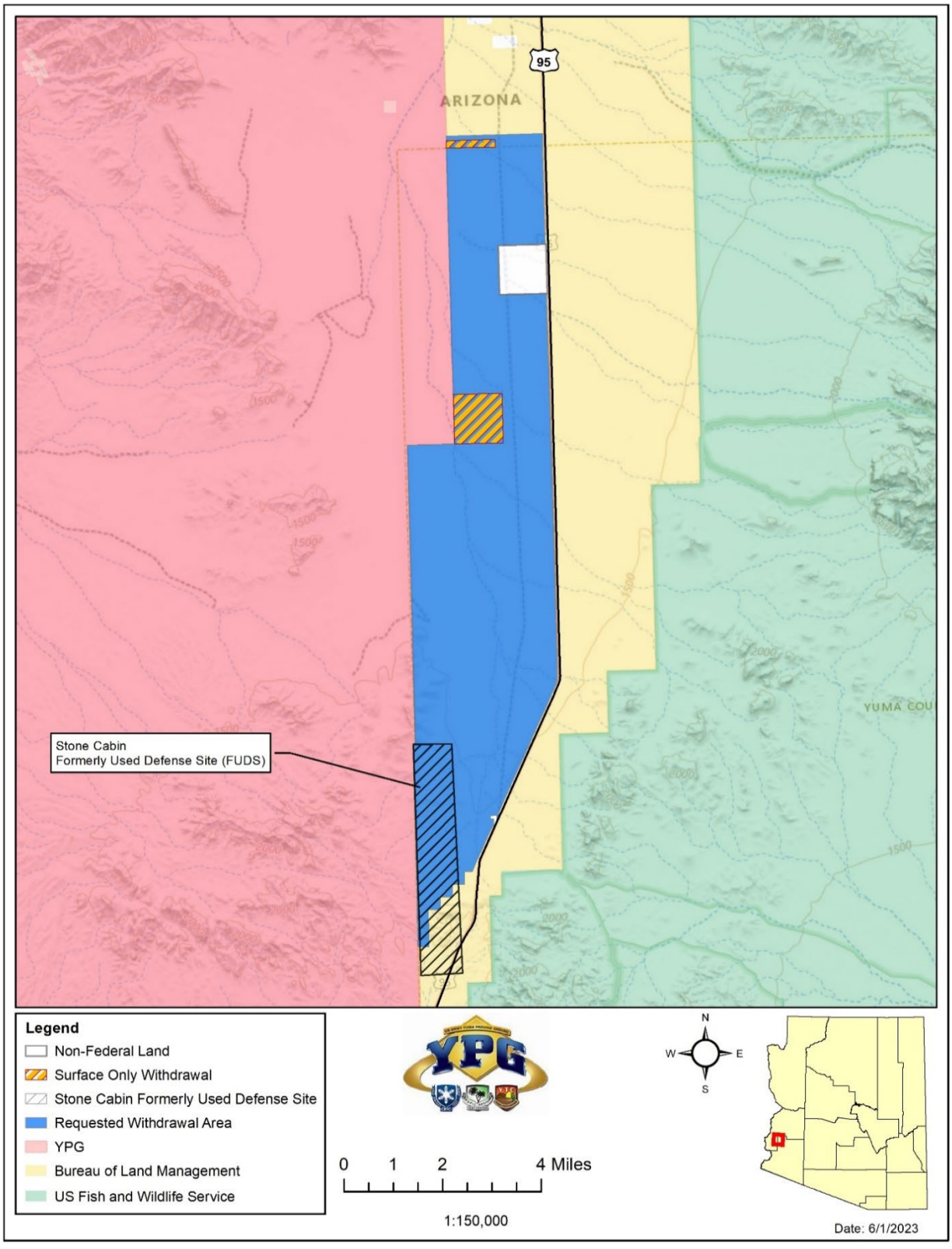

Figure 1. Stone Cabin FUDS and BLM Arizona Contamination Classification in the Project Area.

APPENDIX E.
LIVESTOCK GRAZING

HIGHWAY 95 LAND WITHDRAWAL
LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT

Livestock Grazing Resource Documentation

Legislative Environmental Impact Statement
for the Highway 95 Land Withdrawal

U.S. Army Garrison Yuma Proving Ground
Yuma and La Paz Counties, Arizona

Contract Number: W912BV20C0024

Solicitation Number: W912BV20R0046

Lead Agency:

U.S. Department of the Army

Cooperating Agency:

U.S. Department of the Interior
Bureau of Land Management

Prepared by:

North Wind Resource Consulting, LLC
1425 Higham Street
Idaho Falls, ID 83402

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LIST OF ACRONYMS

BLM	Bureau of Land Management
RMP	Resource Management Plan
YPG	Yuma Proving Ground

PROJECT DESCRIPTION

This Army has requested the withdrawal and reservation of approximately 22,000 acres of public land managed by the U.S. Department of the Interior, Bureau of Land Management (BLM). This withdrawal would add to the existing 829,565 acres withdrawn for the Yuma Proving Ground (YPG). The land is located west of Highway 95 and abuts the current YPG boundary. The requested withdrawal area, which would extend a portion of the current boundary east to Highway 95, would establish the highway as a distinct physical landmark of the YPG boundary in that area. The additional land would accommodate larger Surface Safety Zones to allow for higher altitude parachute releases and provide an additional buffer area in case of release point errors and system failures.

RESOURCE DISCUSSION FOR LIVESTOCK GRAZING

The requested withdrawal area falls under the BLM *Yuma Field Office Record of Decision Approved Resource Management Plan* (RMP; BLM 2010). There are two grazing allotments overlapping the requested withdrawal area: (1) the Scott Allotment is located in the northerly portion of the Highway 95 withdrawal area, and (2) the Morton Allotment is located in the southerly portion of the Highway 95 withdrawal area (Figure 1). Both of these allotments are identified as unavailable for livestock grazing under the RMP. The southerly tip of the Highway 95 withdrawal area is not within a grazing allotment (see Figure 1). The Scott and Morton Allotments were classified as unavailable in 2010 when the Yuma RMP was approved. It is unlikely that these allotments would be made available again in the future; an RMP Amendment would be required, or it could be considered when the RMP is updated, if someone expressed an interest in grazing in the area. Because livestock grazing is currently unavailable and unexpected to occur in the foreseeable future, there would be no impacts to livestock grazing from the requested withdrawal.

DOCUMENTATION

BLM. 2010. *Yuma Field Office Record of Decision Approved Resource Management Plan*, Bureau of Land Management, January 2010.

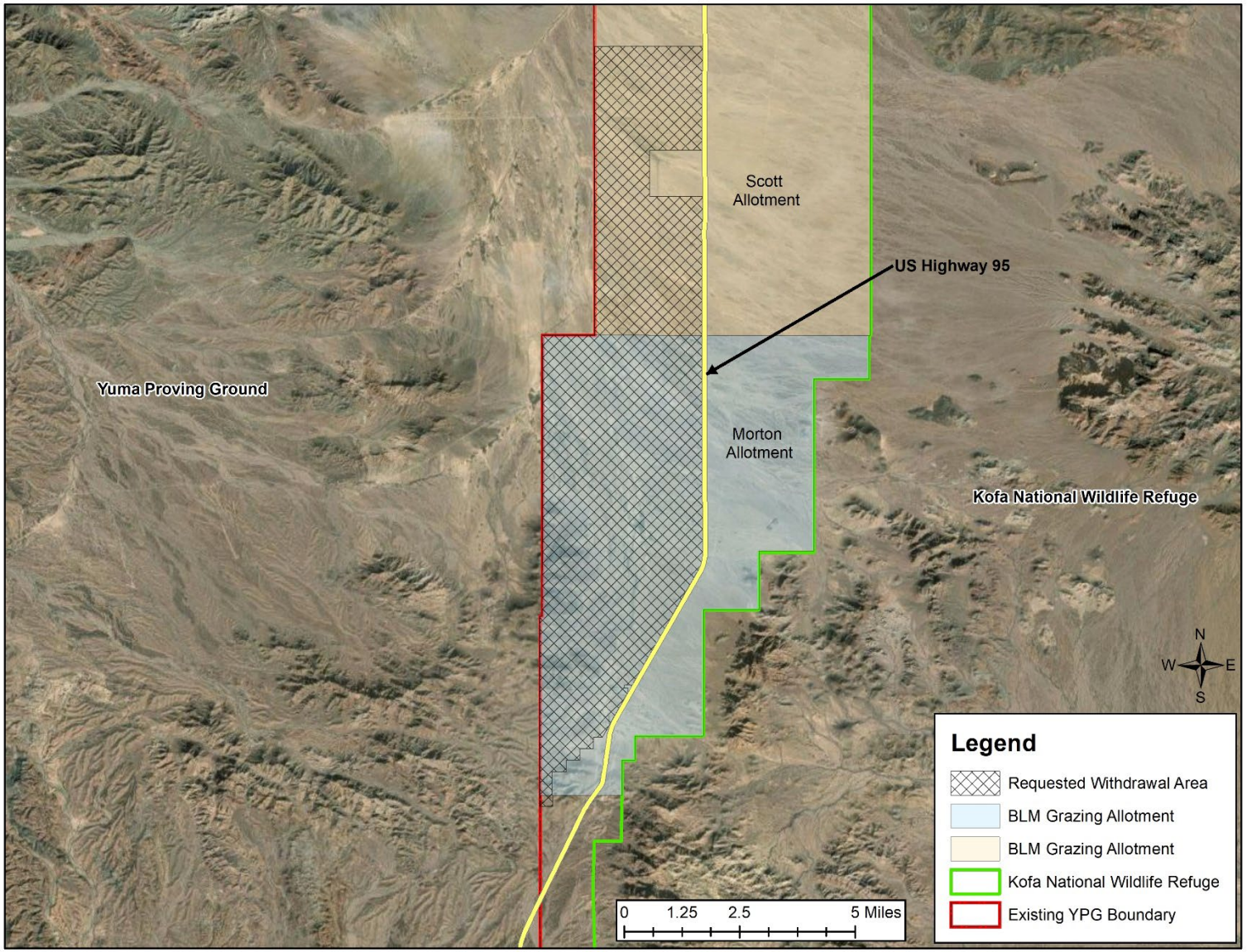

Figure 2. Grazing Allotments in the Project Area

APPENDIX F.
MINERALS

HIGHWAY 95 LAND WITHDRAWAL
LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT

Mineral Resources Impact Documentation

Legislative Environmental Impact Statement
for the Highway 95 Land Withdrawal

U.S. Army Garrison Yuma Proving Ground
Yuma and La Paz Counties, Arizona

Contract Number: W912BV20C0024

Solicitation Number: W912BV20R0046

Lead Agency:

U.S. Department of the Army

Cooperating Agency:

U.S. Department of the Interior
Bureau of Land Management

Prepared by:

North Wind Resource Consulting, LLC
1425 Higham Street
Idaho Falls, ID 83402

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BLM	Bureau of Land Management
USGS	United States Geological Survey
YPG	Yuma Proving Ground

PROJECT DESCRIPTION

The U.S. Army has requested the withdrawal and reservation of approximately 22,000 acres of public land managed by the U.S. Department of the Interior, Bureau of Land Management (BLM). This withdrawal would add to the existing 829,565 acres withdrawn for the Yuma Proving Ground (YPG). The land is located west of Highway 95 and abuts the current YPG boundary. The requested withdrawal area (hereinafter referred to as "project area"), which would extend a portion of the current boundary east to Highway 95, would establish the highway as a distinct physical landmark of the YPG boundary in that area. The additional land would accommodate larger Surface Safety Zones to allow for higher altitude parachute releases, and provide an additional buffer area in case of release point errors and system failures.

RESOURCE DISCUSSION FOR MINERAL RESOURCES

The project area falls under the *Yuma Field Office Record of Decision Approved Resource Management Plan* (BLM 2010). Because 21,200 acres of these lands are requested to be segregated from all forms of appropriation under the public land laws (including the United States mining and the mineral and geothermal leasing laws), the mineral potential of the project area has been evaluated in the *Mineral Potential Report Proposed Land Withdrawal, Yuma County and La Paz County* (BLM 2022) developed for this project and incorporated herein by reference. There are currently no salable mineral actions, active unpatented lode mining claims, or mineral leases encumbering the subject lands.

Locatable minerals include most metallic mineral deposits, as well as certain nonmetal and industrial minerals available for location and entry under the General Mining Law of 1872, as amended. Critical minerals are a select group of generally locatable minerals that are considered essential for use in defense, civilian, and industrial applications under the National Defense Stockpile Program. A list of critical minerals was developed by the United States Geological Survey (USGS) (Fortier et al. 2017) in response to Secretarial Order No. 3359, *Critical Mineral Independence and Security* (December 21, 2017). Leasable minerals are generally energy minerals (i.e., coal, oil, and natural gas), as well as extensive bedded deposits (including potash and phosphates), and are available by the sale of leases. Salable minerals are common variety 'mineral materials' that are generally used in construction and landscaping and are sold to the public at a fair market value.

Leasable Minerals

A review of the available literature for the *Mineral Potential Report Proposed Land Withdrawal, Yuma County and La Paz County* (BLM 2022) did not indicate the potential for leasable mineral deposits. There are no known leasable mineral deposits, oil/gas wells, or records of any leasable mineral operations within the project area or immediate vicinity (Pierce and Wilt 1970; Rauzi 2001 and 2002, as cited in BLM 2022).

Locatable Minerals – Known Prospects, Mineral Occurrences, Mineralized Areas, and Development Potential

Pursuant to Executive Order 13817, *A Federal Strategy to Ensure Secure and Reliable Supplies of Critical Minerals* (December 20, 2017), a review of published and unpublished literature and BLM records was conducted for strategic or critical minerals. There were no specific references to the existence of strategic or critical mineral occurrences or deposits in the vicinity of the project area (BLM 2022).

There are no prospect pits or claims within the project area, and it is not within or adjacent to a known metallic mineral district (Keith et al. 1983, as cited in BLM 2022). No locatable mining or mineral production has occurred within the project area or the nearby vicinity. Additionally, a review of the

available literature and a field examination (conducted on July 19, 2021) indicated no potential for locatable (i.e., metallic) mineral deposits on the subject land (BLM 2022). A review of the available literature did not indicate the potential for locatable mineral deposits. There are no significant mineral occurrences or mineralized areas and no known locatable mineral deposits within the project area or local area (BLM 2022).

There are no active or pending mining claims on the project area. Based on the lack of mineralization in or near the requested project area, the lack of any record of commercial mining production, and the lack of any exploration in or near the project area, the likelihood of an economically viable locatable minerals mining operation being developed is negligible.

During the review of published and unpublished literature and BLM records relating to the subject lands, there was no reference to strategic and critical mineral occurrences or deposits in the vicinity of the project area (BLM 2022).

Salable Minerals

Salable minerals are those that are generally used in construction and landscaping and are sold to the public at fair market value. A review of the available literature and a field examination conducted on July 19, 2021, indicated a low potential for salable mineral deposits within the project area (BLM 2022). There are no producing aggregate quarries within the project area or the nearby vicinity nor any evidence of past production (BLM 2022). There is a low potential for salable mineral occurrence within the project area, and the materials that are present do not have any qualities that would make them better suited for aggregate development than other materials in the surrounding area. Therefore, the potential for salable minerals development was determined to be low (BLM 2022).

Mining Claims and Leases

A search of BLM records found that no mineral-related actions have occurred on or within the project area (BLM 2022). There are no active mining exploration or operations in the requested withdrawal area. Therefore, due to no current activities and the low potential for occurrence there would be no impacts to mineral resources as a result of the withdrawal.

Potential for the Occurrence of Mineral Resources

The mineral potential of the subject parcel was rated using the criteria in "Manual 3031 - Energy and Mineral Resource Assessment" (BLM 1985). Development potential is whether an occurrence or potential occurrence is likely to be explored or developed within a specified timespan under specified geologic and non-geologic assumptions and conditions.

Based on a review of existing literature, USGS geological maps, and field observations of the project area, the lands have:

- Low potential for the occurrence of locatable minerals,
- Low potential for the occurrence of salable minerals, and
- Moderate potential for the occurrence of leasable minerals.

No surface interference related to potential mineral development and proposed surface uses is anticipated. The mineral potential of the subject lands should not be considered a limiting factor in processing or executing the requested land withdrawal.

DOCUMENTATION

BLM. 1985. "Manual 3031 - Energy and Mineral Resource Assessment," Bureau of Land Management. June 1985.

BLM. 2010. *Yuma Field Office, Record of Decision, Approved Resource Management Plan*, Bureau of Land Management. January 2010.

BLM. 2022. *Mineral Potential Report Proposed Land Withdrawal, Yuma County and La Paz County*. O.C. Eke, Bureau of Land Management.

Fortier, S.M., J.M. Hammarstrom, S.J. Ryker, W.C. Day, and R.R. Seal. 2017. *USGS Critical Minerals Review. Mining Engineering*. Eastern Mineral and Environmental Resources Science Center; National Minerals Information Center.

Keith, S.B., D.E. Gest, E. DeWitt, N.W. Toll, B.A. Everson. 1983. “Metallic Mineral Districts and Production in Arizona,” Bulletin 194, *Arizona Bureau of Geology and Mineral Technology*.

Pierce, H.W. and Wilt, J.C., 1970, “Oil, Natural Gas and Helium, in Pierce, H.W., Keith, S.B., and Wilt, J.C., eds., Coal, Oil, Natural Gas, Helium and Uranium,” *Arizona Bureau of Mines*, Bulletin 182, online.

Rauzi, S.L., 2001, *Arizona has Oil & Gas Potential: Arizona Geological Survey Circular 29*, 40p., online.

Rauzi, S.L., 2002, *Arizona has Salt: Arizona Geological Survey Circular 30*, 36p., online.

APPENDIX G.
NOISE

HIGHWAY 95 LAND WITHDRAWAL
LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT

Noise Impact Documentation

Legislative Environmental Impact Statement
for the Highway 95 Land Withdrawal

U.S. Army Garrison Yuma Proving Ground
Yuma and La Paz Counties, Arizona

Contract Number: W912BV20C0024

Solicitation Number: W912BV20R0046

Lead Agency:

U.S. Department of the Army

Cooperating Agency:

U.S. Department of the Interior
Bureau of Land Management

Prepared by:

North Wind Resource Consulting, LLC
1425 Higham Street
Idaho Falls, ID 83402

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LIST OF ACRONYMS

BLM	Bureau of Land Management
OHV	off-highway vehicle
YPG	Yuma Proving Ground

PROJECT DESCRIPTION

The Army has requested the withdrawal and reservation of approximately 22,000 acres of public land managed by the U.S. Department of the Interior, Bureau of Land Management (BLM). This withdrawal would add to the existing 829,565 acres withdrawn for the Yuma Proving Ground (YPG). The land is located west of Highway 95 and abuts the current YPG boundary. The requested withdrawal area (hereinafter referred to as "project area"), which would extend a portion of the current boundary east to Highway 95, would establish the highway as a distinct physical landmark of the YPG boundary in that area. The additional land would accommodate larger Surface Safety Zones to allow for higher altitude parachute releases and provide an additional buffer area in case of release point errors and system failures.

RESOURCE DISCUSSION FOR NOISE

The project area is currently managed under the *Yuma Field Office Record of Decision Approved Resource Management Plan* (BLM 2010). Military training aircraft overflights and vehicle traffic from Highway 95 and occasional off-highway vehicles (OHVs) are the most common sources of noise within the project area. Weapons testing and live munitions firing are generally confined to the interior of YPG where operational ranges are located. The La Posa West Impact Area is located approximately 2 miles west of the project area boundary. The nearest firing ranges to the project area are located within the Cibola Range complex, with the closest located approximately 6 miles west-southwest of the project area (Defense Centers for Public Health 2023).

If the requested withdrawal is enacted by Congress, transfer of management of the withdrawal land would not generate any new sources of noise. Noise levels would increase temporarily when personnel are in the area preparing for any recovery operations (which are expected to be rare). Ground-disturbing activities during recovery would not generate sufficient noise to leave the area or affect members of the public. Noise impacts would be intermittent and minor compared to current ongoing activities at YPG or vehicle traffic along Highway 95. In general, the area is remote and noise levels from equipment or vehicle noise would be below existing noise levels from vehicles and other sources associated with populated areas. Additionally, these activities are short in duration, and the noise environment would return to ambient levels following any recovery activities. Furthermore, they would be offset by the reduction of OHV use in the project area by the public. There are no permanent residences in the vicinity that would perceive any temporary increase in noise. People recreating nearby and those traveling on the highway would be the only ones to observe the temporary noise. Noise impacts from the Proposed Action would be intermittent and negligible.

DOCUMENTATION/REFERENCES

BLM. 2010. *Yuma Field Office Record of Decision and Approved Resource Management Plan*. Yuma Field Office. Signed January 29, 2010.

Defense Centers for Public Health. 2023. Yuma Proving Ground Installation Compatible Use Zone Study. Environmental Noise Branch, Environmental Health Sciences Division, Defense Centers for Public Health – Aberdeen. June.

APPENDIX H.
PALEONTOLOGICAL RESOURCES

HIGHWAY 95 LAND WITHDRAWAL
LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT

Paleontological Resources Impact Documentation

Legislative Environmental Impact Statement
for the Highway 95 Land Withdrawal

U.S. Army Garrison Yuma Proving Ground
Yuma and La Paz Counties, Arizona

Contract Number: W912BV20C0024

Solicitation Number: W912BV20R0046

Lead Agency:

U.S. Department of the Army

Cooperating Agency:

U.S. Department of the Interior
Bureau of Land Management

Prepared by:

North Wind Resource Consulting, LLC
1425 Higham Street
Idaho Falls, ID 83402

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LIST OF ACRONYMS

BLM	Bureau of Land Management
PFYC	Potential Fossil Yield Classifications
YPG	Yuma Proving Ground

PROJECT DESCRIPTION

This Army has requested the withdrawal and reservation of approximately 22,000 acres of public land managed by the U.S. Department of the Interior, Bureau of Land Management (BLM). This withdrawal would add to the existing 829,565 acres withdrawn for the Yuma Proving Ground (YPG). The land is located west of Highway 95 and abuts the current YPG boundary. The requested withdrawal area (hereinafter referred to as "project area"), which would extend a portion of the current boundary east to Highway 95, would establish the highway as a distinct physical landmark of the YPG boundary in that area. The additional land would accommodate larger Surface Safety Zones to allow for higher altitude parachute releases and provide an additional buffer area in case of release point errors and system failures.

RESOURCE DISCUSSION FOR PALEONTOLOGICAL RESOURCES

The project area falls under the *Yuma Field Office Record of Decision and Approved Resource Management Plan* (RMP; BLM 2010). According to the RMP, paleontological resources found on public lands are recognized as constituting a "fragile and nonrenewable scientific record of the history of life on earth." As such, they represent an "important component of America's natural heritage." BLM manages these resources principally under the following authorities: BLM Manual 8270—Paleontological Resources Management; BLM Handbook H-8270-1—General Procedural Guidance for Paleontological Resources Management, Secretarial Order 3104; the Federal Cave Resources Protection Act of 1988; as well as the Federal Land Policy Management Act of 1976 and the National Environmental Policy Act of 1969; and other various laws and regulations. Lands within the Yuma Field Office planning area are classified as high, moderate, or low sensitivity for paleontological resources, based on their potential to contain vertebrate fossils or noteworthy occurrences of invertebrate or plant fossils. These classifications follow the guidance outlined in BLM Manual 8270 and BLM Handbook H-8270-1.

The requested withdrawal area contains two Potential Fossil Yield Classifications (PFYC) (BLM Instruction Memorandum 2016-124 Potential Fossil Yield Classification (PFYC) System for Paleontological Resources on Public Lands - https://www.blm.gov/policy/im-2016-124#:~:text=Policy%2FAction%3A%20The%20Potential%20Fossil,actions%20that%20involve%20surface%20disturbance%2C). Primarily the area contains PFYC U which is "Unknown Potential" (shown as Qs on the map). This class makes up approximately 90% of the requested withdrawal area. These are geologic units that cannot receive an informed PFYC assignment and consist mainly of alluvial gravel, sand and silt in flood plains, terraces, fans and pediment cappings, but locally includes dune sand, lake deposits and landslide masses. Additionally, the requested withdrawal area includes areas with PFYC 2 which is "Low Potential" (shown as Qr and Ka on the map). This class makes up approximately 10% of the requested withdrawal area. These are geologic units that are not likely to contain paleontological resources. These areas shown as Qr on the map are comprised of rhyolitic flows and tuffs resting on a sedimentary deposit which is recognized only in Yuma County (Hirschberg and Pitts, 2000; OFR 00-409 (USGS); Arizona State 500K). In this PFYC 2 area, there are also geologic units shown as Ka on the map which are comprised of predominantly andesitic flows and tuffs.

The requested withdrawal would be a federal-to-federal action therefore no adverse effects to paleontological resources are anticipated. However, the Army and YPG would be responsible for adhering to Paleontological Resources Preservation Act (16 U.S.C. 470aaa – 470aaa-11) as well as C.F.R. 43 Subtitle Part 49, Paleontological Resources Preservation for any future ground disturbing activities in this area.

DOCUMENTATION/REFERENCES

BLM. 2010. *Yuma Field Office Record of Decision Approved Resource Management Plan*. Yuma Field Office. Bureau of Land Management, Signed January 29, 2010.

Hirschberg, D.M., and G.S. Pitts. 2000. Digital geologic map of Arizona: a digital database derived from the 1983 printing of the Wilson, Moore, and Cooper 1:500,000-scale map. http://geopubs.wr.usgs.gov/open-file/of00-409/

BLM IM 2016-124. Potential Fossil Yield Classification (Pfyc) System for Paleontological Resources on Public Lands. United States Department of The Interior, Bureau of Land Management, Washington, D.C. 20240. July 8, 2016.

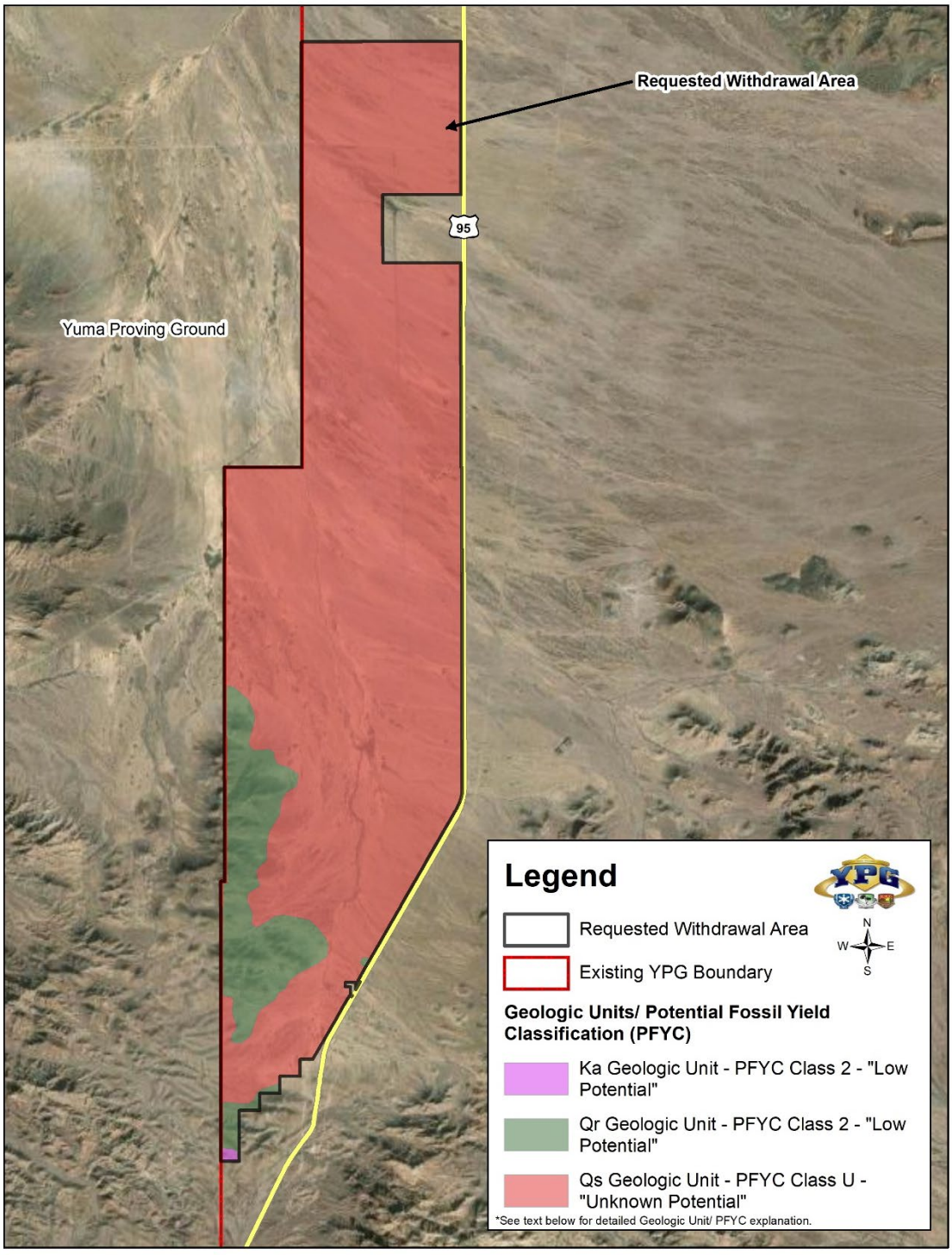

Figure 1. Geological Units/Potential Fossil Yield Classification in the Requested Withdrawal Area.

APPENDIX I.
PRIME AND UNIQUE FARMLANDS

HIGHWAY 95 LAND WITHDRAWAL
LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT

Prime and Unique Farmlands Impact Documentation

Legislative Environmental Impact Statement
for the Highway 95 Land Withdrawal

U.S. Army Garrison Yuma Proving Ground
Yuma and La Paz Counties, Arizona

Contract Number: W912BV20C0024

Solicitation Number: W912BV20R0046

Lead Agency:

U.S. Department of the Army

Cooperating Agency:

U.S. Department of the Interior
Bureau of Land Management

Prepared by:

North Wind Resource Consulting, LLC
1425 Higham Street
Idaho Falls, ID 83402

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LIST OF ACRONYMS

BLM	Bureau of Land Management
NRCS	National Resources Conservation Service
YPG	Yuma Proving Ground

PROJECT DESCRIPTION

This Army has requested the withdrawal and reservation of approximately 22,000 acres of public land managed by the U.S. Department of the Interior, Bureau of Land Management (BLM). This withdrawal would add to the existing 829,565 acres withdrawn for the Yuma Proving Ground (YPG). The land is located west of Highway 95 and abuts the current YPG boundary. The requested withdrawal area (hereinafter referred to as "project area"), which would extend a portion of the current boundary east to Highway 95, would establish the highway as a distinct physical landmark of the YPG boundary in that area. The additional land would accommodate larger Surface Safety Zones to allow for higher altitude parachute releases and provide an additional buffer area in case of release point errors and system failures.

RESOURCE DISCUSSION FOR PRIME/UNIQUE FARMLANDS

The project area falls under the *Yuma Field Office Record of Decision Approved Resource Management Plan* (BLM 2010). The U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) has defined Important Farmlands in Yuma and La Paz County into three categories: (1) Prime Farmland, (2) Unique Farmland, and (3) Additional Irrigated Farmland (BLM 2008). Prime Farmland is described as one of the most important resources of the Nation. This land can be farmed continuously or nearly continuously without degrading the environment. Unique Farmlands are land other than Prime Farmland that is used for production of specific high-value food and fiber crops. It has the special combination of soil quality, location, growing season, and moisture supply needed to produce sustained high-quality and/or high yields of a specific crop when treated and managed according to modern farming methods. All agricultural leases within the BLM Yuma Field Office are Prime or Unique farmland. All cropland in the field office is irrigated cropland due to limited rainfall (≤3 inches per year) (BLM 2010). There are no agricultural leases within the project area. Furthermore, none of these lands could be considered as prime/unique farmland because it is all undeveloped desert with no irrigation or other agricultural infrastructure. The farmland classification information maintained by the NRCS Web Soil Survey was reviewed for the requested withdrawal (USDA NRCS 2022), as shown on Figure 1. Upon review, none of the lands within the project area are classified as prime or unique farmlands.

DOCUMENTATION

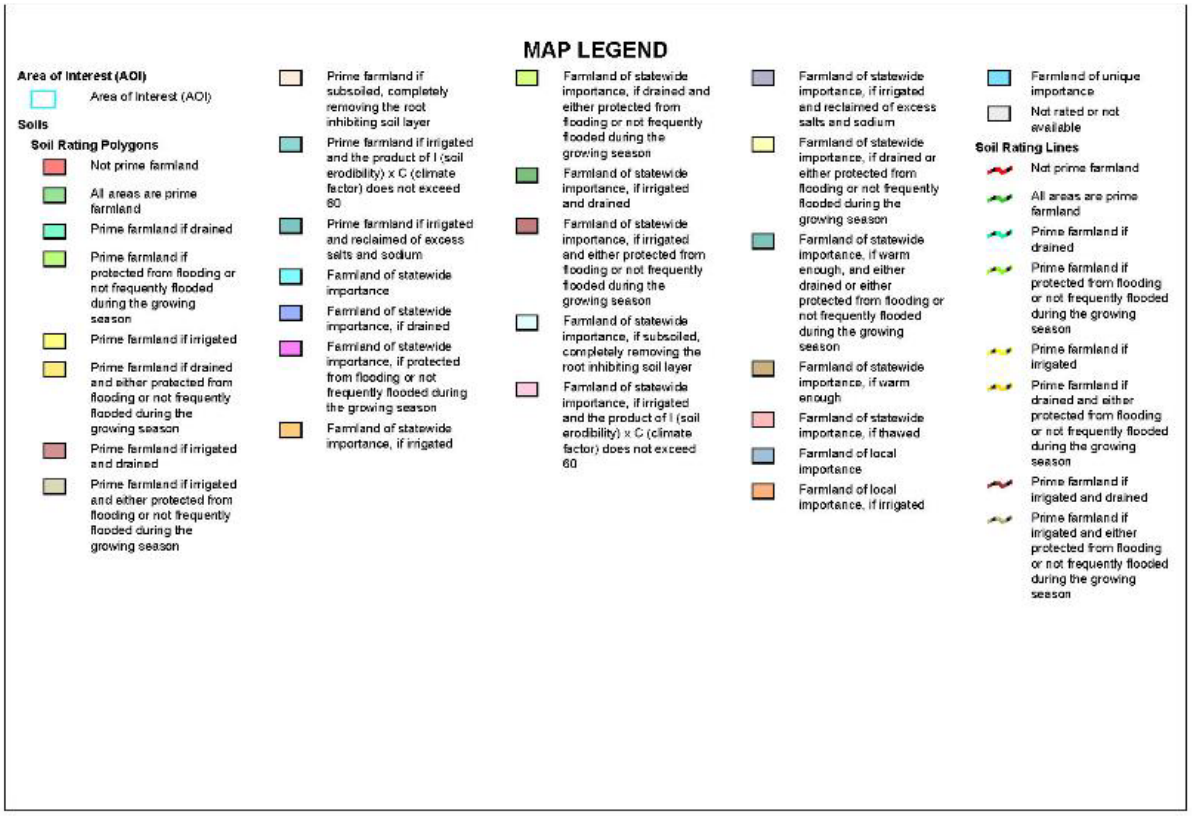
BLM. 2008. *Yuma Field Office Proposed Resource Management Plan and Final Environmental Impact Statement*. Yuma Field Office. Bureau of Land Management, April 2008.

BLM. 2010. *Yuma Field Office Record of Decision Approved Resource Management Plan*. Yuma Field Office. Bureau of Land Management, Signed January 29, 2010.

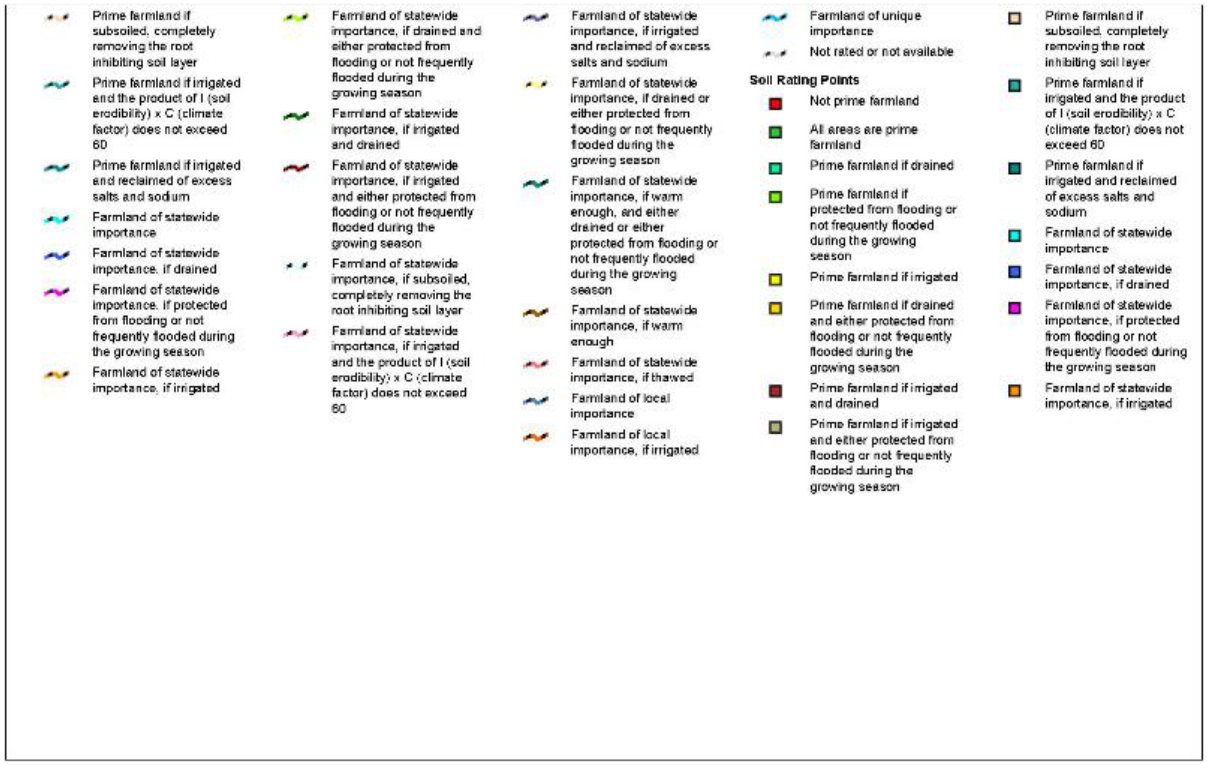
USDA NRCS. 2022. Web Soil Survey, database for prime and unique farmlands. U.S. Department of Agriculture, Natural Resources Conservation Service, Accessed February 10, 2022.

Figure 1. Farmland Classification in the Project Area.

Farmland Classification—Kofa Area, Arizona, Parts of La Paz and Yuma Counties
(Prime Farmland Classifications)



Farmland Classification—Kofa Area, Arizona, Parts of La Paz and Yuma Counties
(Prime Farmland Classifications)



Farmland Classification—Kofa Area, Arizona, Parts of La Paz and Yuma Counties
(Prime Farmland Classifications)

- Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated and drained
- Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
- Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough
- Farmland of statewide importance, if thawed
- Farmland of local importance
- Farmland of local importance, if irrigated
- Farmland of unique importance
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Kofa Area, Arizona, Parts of La Paz and Yuma Counties
Survey Area Data: Version 9, Sep 16, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 1, 1999—Dec 31, 2003

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Farmland Classification

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
205	Denure-Pahaka-Wellton complex, 0 to 3 percent slopes	Not prime farmland	376.7	1.6%
210	Brios-Riverwash complex, 0 to 1 percent slopes	Not prime farmland	56.1	0.2%
220	Momoli-Carrizo family complex, 1 to 5 percent slopes	Not prime farmland	57.9	0.2%
225	Coolidge-Rillito complex, 1 to 5 percent slopes	Not prime farmland	5,048.7	20.8%
255	Glenbar-Gilman complex, 0 to 1 percent slopes	Not prime farmland	2,953.3	12.2%
265	Hickiwan-Gunsight complex, 3 to 30 percent slopes	Not prime farmland	10.8	0.0%
275	Denure-Rillito-Pahaka complex, 0 to 1 percent slopes	Not prime farmland	7,406.0	30.6%
325	Dateland-Denure complex, 0 to 2 percent slopes	Not prime farmland	570.2	2.4%
330	Gunsight-Rillito complex, 1 to 10 percent slopes	Not prime farmland	1,782.4	7.4%
355	Wintersburg-Laveen complex, 0 to 3 percent slopes	Not prime farmland	2,605.5	10.8%
390	Carrizo family-Riverbend family-Riverwash complex, dry, 0 to 3 percent slopes	Not prime farmland	34.5	0.1%
400	Gilman-Carrizo family complex, dry, 0 to 3 percent slopes	Not prime farmland	43.3	0.2%
600	Gunsight, Guvo and Hyder soils, and rock outcrop, 5 to 90 percent slopes	Not prime farmland	1,535.1	6.3%
603	Gunsight, Guvo and Hyder soils, and rock outcrop, dry, 5 to 90 percent slopes	Not prime farmland	331.5	1.4%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
605	Gunsight, Guvo and Hickiwan soils, 2 to 35 percent slopes	Not prime farmland	1,415.5	5.8%
607	Gunsight, Guvo and Hickiwan soils, dry, 2 to 35 percent slopes	Not prime farmland	0.4	0.0%
Totals for Area of Interest			**24,227.8**	**100.0%**

Description

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Rating Options

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

APPENDIX J.
SOILS

HIGHWAY 95 LAND WITHDRAWAL
LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT

Earth Resources Impact Documentation

Legislative Environmental Impact Statement
for the Highway 95 Land Withdrawal

U.S. Army Garrison Yuma Proving Ground
Yuma and La Paz Counties, Arizona

Contract Number: W912BV20C0024

Solicitation Number: W912BV20R0046

Lead Agency:

U.S. Department of the Army

Cooperating Agency:

U.S. Department of the Interior
Bureau of Land Management

Prepared by:

North Wind Resource Consulting, LLC
1425 Higham Street
Idaho Falls, ID 83402

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LIST OF ACRONYMS

BLM	Bureau of Land Management
BMP	best management practice
NRCS	Natural Resources Conservation Service
SSZ	Surface Safety Zone
YPG	Yuma Proving Ground

PROJECT DESCRIPTION

The Army has requested the withdrawal and reservation of approximately 22,000 acres of public land managed by the U.S. Department of the Interior, Bureau of Land Management (BLM). This withdrawal would add to the existing 829,565 acres withdrawn for the Yuma Proving Ground (YPG). The land is located west of Highway 95 and abuts the current YPG boundary. The requested withdrawal area (hereinafter referred to as the "project area"), which would extend a portion of the current boundary east to Highway 95, would establish the highway as a distinct physical landmark of the YPG boundary in that area. The additional land would accommodate larger Surface Safety Zones (SSZs) to allow for higher altitude parachute releases and provide an additional buffer area in case of release point errors and system failures.

RESOURCE DISCUSSION FOR EARTH RESOURCES (SOILS, GEOLOGY)

The project area falls under the *Yuma Field Office Record of Decision Approved Resource Management Plan* (BLM 2010). The requested withdrawal is located in the Colorado-Lower Gila Watershed within the Basin and Range physiographic province of the southwestern United States and northwestern Mexico, which is characterized by a series of tilted fault blocks forming north-northwest trending mountain ranges separated by deep, alluvial basins (Spencer and Reynolds 1989). Most of the surface geology of the Colorado-Lower Gila Watershed consists of relatively recent Tertiary and Quaternary deposits. Surface deposits along the Lower Gila River are primarily Middle Pleistocene and Holocene sands and gravels (Amesbury et al. 2010). The withdrawal area is characterized by numerous short, rugged mountain ranges that trend northwest to southeast and rise abruptly from the gently sloping desert plains and river valley floors. Mountain ranges visible from the withdrawal include the Trigo, Dome Rock, Kofa, Castle Dome, Chocolate, and Middle Mountains. These mountain ranges consist primarily of Cretaceous and Quaternary intrusive rocks (e.g., gneiss, schist, and granite) and volcanic igneous rocks (e.g., tuffs, basalt, and andesite), and make up the consolidated rock units and bedrock beneath YPG (NWRC 2019). The project area consists of primarily Quaternary surficial deposits that comprise material eroded from the hills located southeast and southwest of the proposed area of interest. The project area is characterized by sloping plains, broad valleys, and small areas of rugged mountains. Elevations range from 1,260 to 1,640 feet above sea level. The majority of the area associated with the withdrawal request is made up of the narrow La Posa Plain (BLM 2010).

The geologic age of the rock formations within the area are of the Cenozoic Era and are comprised of the Quaternary Period and late stages of the Tertiary Period. Much of the project area consists of unconsolidated deposits associated with modern fluvial systems, unconsolidated to strongly consolidated alluvial and eolian deposits, and subsequently unconsolidated to weakly consolidated alluvial fan, terrace, and basin-floor deposits with moderate to strong soil development. According to an Arizona Department of Water Resources Well Driller Report, clay, sand, and gravel were logged from the surface to approximately 380 feet. This correlates with the presence of unconsolidated Holocene surficial deposits (BLM 2022). Cemented material, including volcanic clasts, transitions to the Bouse Formation at a depth of approximately 800 feet. Mineralization is likely present between depths of approximately 1,143 feet and 1,195 feet due to the presence of rhyolite, purplish andesite, and porphyritic rhyolite in descending order. Water was encountered between depths of approximately 1,135 feet to the bottom of 1,240 feet (BLM 2022).

Soils within the BLM Yuma Field Office are associated with a variety of climates, vegetative cover, topography, and geology. The surface soils of the area were mapped and described by the U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) and have been classified as aridic and hyperthermic. The predominant soils in deserts are Aridisols, which are defined primarily by the lack of plants, indicating the available soil moisture for most of the growing season. Aridisols are commonly found in dry environments that are low in organic matter and rich in deposited salts. Over

time, dry conditions give rise to characteristic accumulations of soluble salts, carbonates, and clay; however, organic matter deposition is minimal or lacking. As these soils mature, cemented soil layers of salts and carbonate, commonly known as caliches and hardpans, may form. The majority of soils in the area range from extremely gravelly or cobbled sand to very fine, sandy loam. These desert soils are protected from erosion by the presence of cryptogamic crusts, desert pavement, and vegetation. The majority of the soils in the project area are associated with fan remnant, alluvial fans, and floodplains (NRCS 2022). Some of the soils in the project area have been previously disturbed by off-road travel and are not in a pristine state.

If the requested withdrawal is enacted by Congress, transfer of management of the withdrawal land would not result in an alteration of the topography or geography of the area. As a safety buffer, ground disturbance in the requested withdrawal area would be minimal and similar to what already occurs within the project area. Recovery of any airdrop loads that inadvertently land within the SSZ encompassing the project area has the potential to affect soils. Loads landing within the project area would be the result of unintended failures of equipment and are expected to be rare. Any recovery operations would use established roads, washes, and adjacent surfaces to the maximum extent possible. Off-road excursions for any such operation would be minimized. Vehicle use during recovery operations would loosen soils and produce fine dust. The loosened soils and dust would be susceptible to wind and water erosion. Given the expected rare and sporadic use of vehicles for recovery and the expected limited area affected, impacts to soils and erosion would be minimal. Disturbance and compaction of soils would occur if recovery vehicles and equipment leave the established roads and traverse the desert pavement to pick up airdrop loads. Each airdrop retrieval would leave an impression in the soil surface. The location of any impacts is unknown; however, any impacts would likely be scattered throughout the area. The potential for soil erosion would be limited by the relatively flat topography and infrequent, small amount of ground disturbance anticipated. Adverse impacts to soil resources as a result of implementation of the proposed action would be minimized with appropriate mitigation, as described in existing YPG environmental plans including the Integrated Natural Resources Management Plan. Through the implementation of proper procedures and BMPs, impacts to soil resources would be minimized. It is expected that the existing environmental programs at YPG and proposed mitigation measures would reduce the potential impacts of the proposed action on soils, which would be localized and minor; therefore, this resource is dismissed from detailed analysis.

DOCUMENTATION

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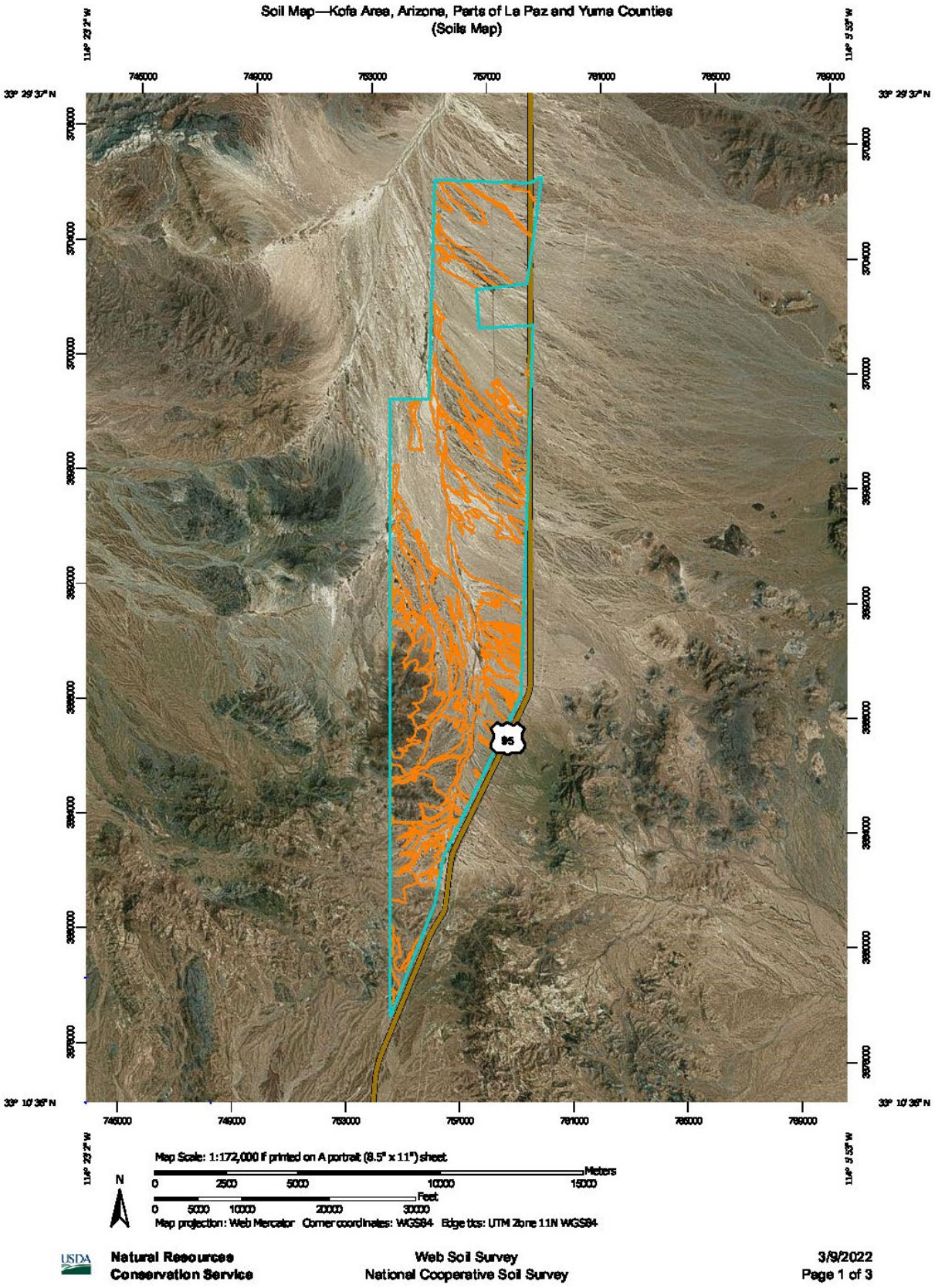
Soil Map—Kofa Area, Arizona, Parts of La Paz and Yuma Counties
(Soils Map)
114° 29' 2" W
114° 9' 55" W
33° 29' 37" N
33° 10' 36" N
746000
749000
753000
757000
761000
765000
769000
3708000
3704000
3700000
3696000
3692000
3688000
3684000
3680000
3676000
95
Map Scale: 1:172,000 if printed on A portrait (8.5" x 11") sheet.
Meters
0 2500 5000 10000 15000
Feet
0 5000 10000 20000 30000
N
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84
USDA
Natural Resources Conservation Service
Web Soil Survey
National Cooperative Soil Survey
3/9/2022
Page 1 of 3

Soil Map—Kofa Area, Arizona, Parts of La Paz and Yuma Counties
(Soils Map)

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Kofa Area, Arizona, Parts of La Paz and Yuma Counties
Survey Area Data: Version 9, Sep 16, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 1, 1999—Dec 31, 2003

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
205	Denure-Pahaka-Wellton complex, 0 to 3 percent slopes	376.7	1.6%
210	Brios-Riverwash complex, 0 to 1 percent slopes	38.8	0.2%
220	Momoli-Carrizo family complex, 1 to 5 percent slopes	63.6	0.3%
225	Coolidge-Rillito complex, 1 to 5 percent slopes	5,069.9	21.1%
255	Glenbar-Gilman complex, 0 to 1 percent slopes	3,024.0	12.6%
275	Denure-Rillito-Pahaka complex, 0 to 1 percent slopes	7,168.5	29.8%
325	Dateland-Denure complex, 0 to 2 percent slopes	570.2	2.4%
330	Gunsight-Rillito complex, 1 to 10 percent slopes	1,256.9	5.2%
350	Gunsight-Cristobal complex, dry, 1 to 10 percent slopes	17.7	0.1%
355	Wintersburg-Laveen complex, 0 to 3 percent slopes	2,436.8	10.1%
390	Carrizo family-Riverbend family-Riverwash complex, dry, 0 to 3 percent slopes	179.1	0.7%
400	Gilman-Carrizo family complex, dry, 0 to 3 percent slopes	24.2	0.1%
600	Gunsight, Guvo and Hyder soils, and rock outcrop, 5 to 90 percent slopes	1,579.7	6.6%
603	Gunsight, Guvo and Hyder soils, and rock outcrop, dry, 5 to 90 percent slopes	690.8	2.9%
605	Gunsight, Guvo and Hickiwan soils, 2 to 35 percent slopes	1,480.7	6.2%
607	Gunsight, Guvo and Hickiwan soils, dry, 2 to 35 percent slopes	68.0	0.3%
Totals for Area of Interest		**24,045.7**	**100.0%**

APPENDIX K.
VISUAL RESOURCES

HIGHWAY 95 LAND WITHDRAWAL
LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT

Visual Resources Impact Documentation

Legislative Environmental Impact Statement
for the Highway 95 Land Withdrawal

U.S. Army Garrison Yuma Proving Ground
Yuma and La Paz Counties, Arizona

Contract Number: W912BV20C0024

Solicitation Number: W912BV20R0046

Lead Agency:

U.S. Department of the Army

Cooperating Agency:

U.S. Department of the Interior
Bureau of Land Management

Prepared by:

North Wind Resource Consulting, LLC
1425 Higham Street
Idaho Falls, ID 83402

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LIST OF ACRONYMS

BLM	Bureau of Land Management
RMP	Resource Management Plan
VRM	Visual Resource Management
YPG	Yuma Proving Ground

PROJECT DESCRIPTION

The Army has requested the withdrawal and reservation of approximately 22,000 acres of public land managed by the U.S. Department of the Interior, Bureau of Land Management (BLM). This withdrawal would add to the existing 829,565 acres withdrawn for the Yuma Proving Ground (YPG). The land is located west of Highway 95 and abuts the current YPG boundary. The requested withdrawal area (hereinafter referred to as the "project area"), which would extend a portion of the current boundary east to Highway 95, would establish the highway as a distinct physical landmark of the YPG boundary in that area. The additional land would accommodate larger Surface Safety Zones to allow for higher altitude parachute releases and provide an additional buffer area in case of release point errors and system failures.

RESOURCE DISCUSSION FOR VISUAL RESOURCES

The project area falls under the BLM *Yuma Field Office Record of Decision Approved Resource Management Plan* (RMP; BLM 2010). According to the RMP, the lands in the project area are categorized as Class II and Class III Visual Resource Management (VRM) areas (BLM 2010), as shown on Figure 1. The project area is primarily Class II (approximately 17,386 acres), except for an 0.5-mile buffer of Class III lands (approximately 4,428 acres) along Highway 95, which correlates with the Parker-Blaisdell utility corridor along Highway 95. BLM currently manages the visual resources located on the project area in accordance with these VRM classifications, the objective of which is to retain or partially retain the existing character of the landscape. Class II allows a low level of change that does not attract the attention of a casual observer, and Class III allows a moderate level of change (BLM 2010). The analysis of visual resources depends upon the visual character of the surroundings, viewer perceptions, and the public value or role of the affected landscape. The BLM uses a systematic process to evaluate landscapes and to describe and estimate visual impacts of a proposed project. The main principle of the process is to assess the visual contrast created between a proposed project and the existing landscape.

Visual resources include both natural and man-made features of the landscape visible from public viewpoints. The landscape of the project area is characterized by broad alluvial plains and sparse desert vegetation within the Lower Colorado Valley Subdivision of the Sonoran Desert. Elevations range from 200 feet in the valleys and foothills of the lower Sonoran Desert to 2,500 feet in the rugged mountains surrounding the area. The project area, which is entirely vacant, is undeveloped desert land with sporadic roads crossing the area. There are no residences near the area. A portion of the area is visible to the public due to its proximity to Highway 95, as well as other roads traversing the project area, and the relatively flat topography adjacent to the roads. Foreground and middleground views for people traveling along these routes would be of desert vegetation, roads or trails, and transmission lines and other development (i.e., signage located in the Parker-Blaisdell utility corridor adjacent to Highway 95), and background views would be of distant mountains (Photographs 1 through 8). Viewer sensitivity, or the level of anticipated public concern for changes to the scenic quality, is considered to be low in this area because the scenery is similar to that on surrounding lands, and there are no unique scenic resources.

If the requested withdrawal is authorized by Congress, the Army's management of visual resources would be guided by Army Regulation 200-1, and YPG's Integrated Natural Resources Management Plan and Integrated Cultural Resources Management Plan.

Since the Army is not proposing any development in the project area or any modifications that would alter the character of the visual landscape, there would be no direct impact to the visual character. The project area is proposed to be used as an increased buffer zone around the existing drop zone to the west. Use of the area as a safety buffer would not alter the existing visual resources. The area would be

accessed during recovery efforts if a load were to land in the area; recovery activities could cause minimal surface disturbance that would not modify the natural landscape. If recovery efforts were to result in ground disturbance, the Army would follow standard operating procedures and best management practices to minimize impacts. Surface disturbance resulting from recovery of inadvertent loads dropped in the project area would not change the existing character of the landscape or attract the attention of a casual observer. The proposed action would not obstruct, damage, dominate, or modify the view from public viewing areas and would not have an effect on the resource.

DOCUMENTATION

BLM. 2010. *Yuma Field Office Record of Decision Approved Resource Management Plan*, Bureau of Land Management, January 2010.

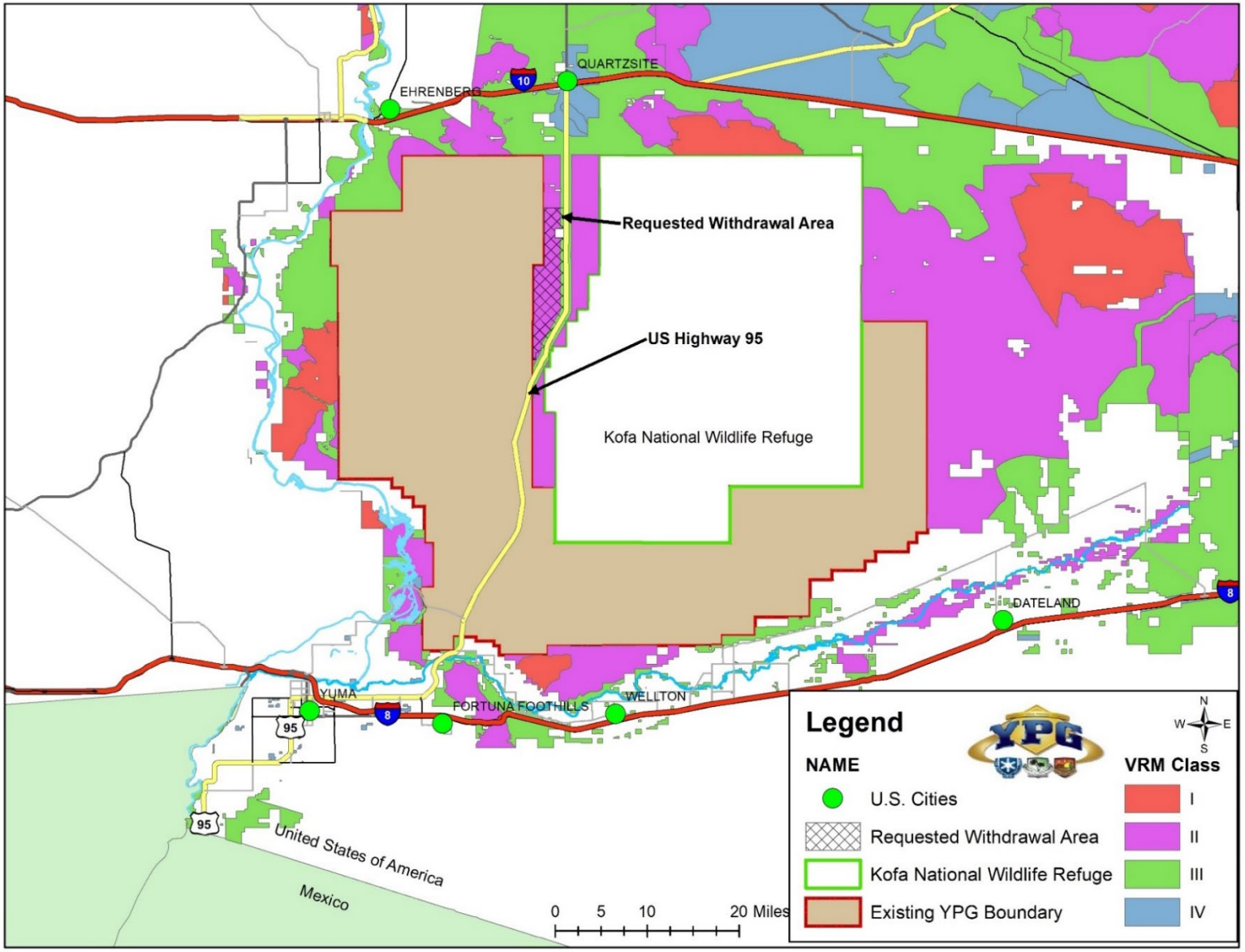

Figure 2. Visual Resource Management Classes in the Project Area.

Photograph 1. Views of the withdrawal area and surrounding lands from Highway 95.

Photograph 2. Views of the withdrawal area and surrounding lands from Highway 95.

Photograph 3. Views of the withdrawal area and surrounding lands from Highway 95.

Photograph 4. Views of the withdrawal area and surrounding lands from Highway 95.

Photograph 5. Views of the withdrawal area and surrounding lands from Highway 95.

Photograph 6. Views of the withdrawal area and surrounding lands from Highway 95.

Photograph 7. Views of the withdrawal area and surrounding lands from Highway 95.

Photograph 8. Views of the withdrawal area and surrounding lands from Highway 95.

APPENDIX L.
WATER RESOURCES

HIGHWAY 95 LAND WITHDRAWAL
LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT

Water Resources Impact Documentation

Legislative Environmental Impact Statement
for the Highway 95 Land Withdrawal

U.S. Army Garrison Yuma Proving Ground
Yuma and La Paz Counties, Arizona

Contract Number: W912BV20C0024

Solicitation Number: W912BV20R0046

Lead Agency:

U.S. Department of the Army

Cooperating Agency:

U.S. Department of the Interior
Bureau of Land Management

Prepared by:

North Wind Resource Consulting, LLC
1425 Higham Street
Idaho Falls, ID 83402

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LIST OF ACRONYMS

ADWR	Arizona Department of Water Resources
BLM	Bureau of Land Management
BMP	Best Management Practice
EPA	Environmental Protection Agency
FEIS	Final Environmental Impact Statement
INRMP	Integrated Natural Resources Management Plan
NWRC	North Wind Resource Consulting
PRMP	Proposed Research Management Plan
SOP	Standard Operating Procedure
SSZ	Surface Safety Zone
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
YPG	Yuma Proving Ground

PROJECT DESCRIPTION

The Army has requested the withdrawal and reservation of approximately 22,000 acres of public land managed by the U.S. Department of the Interior, Bureau of Land Management (BLM). This withdrawal would add to the existing 829,565 acres withdrawn for the Yuma Proving Ground (YPG). The land is located west of Highway 95 and abuts the current YPG boundary. The requested withdrawal area (hereinafter referred to as the "project area"), which would extend a portion of the current boundary east to Highway 95, would establish the highway as a distinct physical landmark of the YPG boundary in that area. The additional land would accommodate larger Surface Safety Zones (SSZs) to allow for higher altitude parachute releases and provide an additional buffer area in case of release point errors and system failures.

RESOURCE DISCUSSION FOR WATER RESOURCES

The Colorado River (located approximately 24 miles to the west) and the lower Gila River (located approximately 37 miles to the south) are the principal drainages near the project area. There are no perennial lakes, streams, or mountain springs within the project area; however, ephemeral washes occur throughout (Figure 1). The largest of these, Tyson Wash, runs through the project area, and drains to the Colorado River (Environmental Protection Agency [EPA] 2020). There are also several unnamed east-west trending drainages and minor washes originating from the Castle Dome and Chocolate mountains that extend through the project area. The washes are ephemeral or intermittent and flow in response to rain events. They are produced by localized high intensity thunderstorms resulting in rapid surface runoff and flash floods. These desert watersheds are dry most of the year as a result of infrequent rainfall, characteristic of Sonoran Desert precipitation patterns. Average rainfall for the area is 3.5 inches per year, and the pan evaporation rate is 107 inches per year (YPG 2001). Surface water can be present as a result of ephemeral pooling after rain events that concentrates temporarily in locations where obstruction or depressions can hold water. These include several legacy earthen berm catchment basins that may be related to legacy livestock operations (U.S. Army Corps of Engineers [USACE] 2023). There are no designated wetlands or permanent surface waters identified by the U.S. Fish and Wildlife Service National Wetlands Inventory within the project area (U.S. Fish and Wildlife Service [USFWS] 2019).

The Colorado and Gila Rivers replenish groundwater for the Yuma region, with the Colorado River being the primary source. The Gila River (located 35 miles south of the project area) flows occasionally; however, most of the lower Gila River is ephemeral and flows only when there is precipitation or water releases from upstream dams, and thus it is a source of short-term recharge during periods of flooding (Arizona Department of Water Resources [ADWR] 2005 in BLM 2008). The BLM Yuma Field Office Proposed Resource Management Plan (PRMP)/Final Environmental Impact Statement (FEIS) indicates the project area is in the La Posa Plain sub-basin of the Parker basin (BLM 2008). Groundwater in this sub-basin is generally in hydraulic connection to the river.

Depth to groundwater in the area surrounding the project area varies dependent upon geology, location, and thickness of basin alluvium. Known depths to groundwater on YPG range from 30 feet in the southwest Laguna Region to more than 1,240 feet in the Cibola Region, and wells in the Kofa Region range from more than 150 feet near the eastern boundary of YPG to greater than 800 feet in the central portion of the Kofa Region. Groundwater levels are approximately 900 feet at the La Posa Well, located at the southeast corner of the La Posa and Robbie Drop Zone, west of the project area (J. Glover, personal communication, 2020 [referenced in Draft Environmental Baseline Study]). There were no domestic, irrigation, or monitoring wells observed within the project area; one private, domestic well is located west of Highway 95, outside of the project area in the Stone Cabin site (ADWR 2020).

The isotopic composition and general chemistry from 15 groundwater wells across YPG were investigated in 2019 to determine the age of groundwater and better understand the origin, flow, and recharge of the aquifer system beneath YPG (North Wind Resource Consulting [NWRC] 2019). The results of the investigation were used to evaluate the potential for contaminant migration from past and/or present surface activities at YPG to local groundwater supplies in the subsurface. The direction of groundwater flow beneath the project area is generally west to southwest towards the Colorado and Gila Rivers. The great depth to groundwater in most areas, low precipitation, and high evaporation rates are all great assets in preventing the migration of possible surface contaminants to the subsurface (NWRC 2019).

If the requested withdrawal is enacted by Congress, transfer of management of the project area would not result in any impacts to water resources. As a safety buffer, ground disturbance in the project area would be minimal and similar to what already occurs within the project area. Recovery of any airdrop loads that inadvertently land within the SSZ encompassing the project area has the potential to cause ground disturbance in localized areas. Loads landing within the project area would be the result of unintended failures of equipment and are expected to be rare. Any recovery operations would use established roads, washes, and adjacent surfaces to the maximum extent possible. Off-road excursions for any such operation would be minimized.

Disturbance of soils would occur if recovery vehicles and equipment leave established roads to pick up airdrop loads. Each airdrop retrieval would leave an impression in the soil surface. Sediment in storm water runoff may be increased by impacting the soil surface, plant cover, or the natural drainage system. Soil surfaces that lose their protective rock and vegetative cover can increase stormwater runoff velocity and promote accelerated erosion. The location of any impacts is unknown but would likely be scattered throughout the area. The potential for soil erosion would be limited by the relatively flat topography and infrequent, small amount of ground disturbance anticipated. Furthermore, adverse impacts to water resources as a result of implementation of the Proposed Action would be minimized through implementation of Standard Operating Procedures (SOPs) and Best Management Practices (BMPs) described in existing YPG environmental plans, including the Integrated Natural Resources Management Plan (INRMP; YPG 2023), that would minimize potential ground disturbance. Since the area receives rain very infrequently, it is equally infrequent that the washes will be flowing. Only after significant rainfall events do these washes carry surface drainage from the area towards the Colorado River to the south and southwest. The combination of low precipitation and high evaporation reduces surface water build-up and/or infiltration into the soil minimizing the risk of surface water contamination from the Proposed Action.

Based on the depth to water in the project area, lack of rainfall (averages 3.5 inches annually), high rate of evaporation (>100-inches annually), and anticipated project area use, groundwater impacts from the Proposed Action are not anticipated.

There would be no change for water requirements in the project area, similar to the existing withdrawal under Public Land Order No. 848 regarding water use. All surface and groundwater rights currently utilized by the Army have been properly appropriated through the State of Arizona. The Army does not require additional water rights associated with the Proposed Action.

DOCUMENTATION

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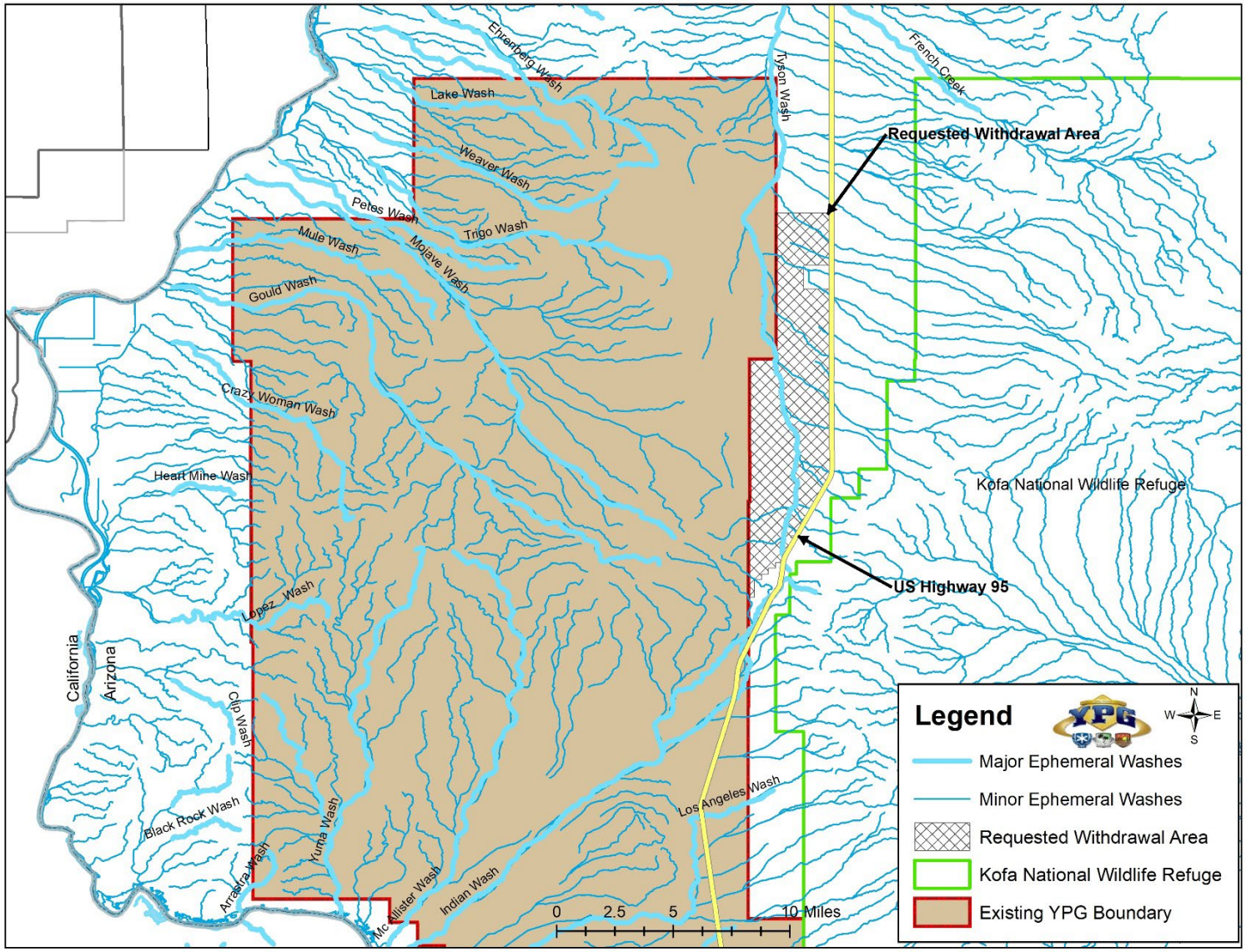

Figure 1. Major and Minor Ephemeral Washes in the Project Area.

APPENDIX M.
WILD HORSE AND BURROS

HIGHWAY 95 LAND WITHDRAWAL
LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT

Wild Horse and Burro Impact Documentation

Legislative Environmental Impact Statement
for the Highway 95 Land Withdrawal

U.S. Army Garrison Yuma Proving Ground
Yuma and La Paz Counties, Arizona

Contract Number: W912BV20C0024

Solicitation Number: W912BV20R0046

Lead Agency:

U.S. Department of the Army

Cooperating Agency:

U.S. Department of the Interior
Bureau of Land Management

Prepared by:

North Wind Resource Consulting, LLC
1425 Higham Street
Idaho Falls, ID 83402

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LIST OF ACRONYMS

BLM	Bureau of Land Management
HMA	Herd Management Area
MOU	Memorandum of Understanding
RMP	Resource Management Plan
YPG	Yuma Proving Ground

PROJECT DESCRIPTION

The Army has requested the withdrawal and reservation of approximately 22,000 acres of public land managed by the U.S. Department of the Interior, Bureau of Land Management (BLM). This withdrawal would add to the existing 829,565 acres withdrawn for the Yuma Proving Ground (YPG). The land is located west of Highway 95 and abuts the current YPG boundary. The requested withdrawal area, which would extend a portion of the current boundary east to Highway 95, would establish the highway as a distinct physical landmark of the YPG boundary in that area. The additional land would accommodate larger Surface Safety Zones to allow for higher altitude parachute releases, and provide an additional buffer area in case of release point errors and system failures.

RESOURCE DISCUSSION FOR WILD HORSE AND BURRO MANAGEMENT

The requested withdrawal area falls under the BLM *Yuma Field Office Record of Decision Approved Resource Management Plan* (RMP; BLM 2010). According to the RMP, BLM is the managing agency responsible for protecting wild horses and burros and their habitat on BLM-administered public lands. The management of wild horses and burros on public lands is accomplished at the minimum level necessary to ensure the herd's free-roaming character, health, and self-sustaining ability. The Yuma Field Office manages one Herd Area and one Herd Management Area (HMA) that share identical boundaries (the historic Herd Area and the Cibola-Trigo HMA), as shown on Figure 1. The Cibola-Trigo HMA supports both wild horses and burros. A small portion (approximately 2,876 acres) of the HMA is within the requested YPG Highway 95 withdrawal area. The BLM manages horse and burro populations and associated management activities within the HMA.

The existing 1978 YPG/BLM Wild Horse and Burro Memorandum of Understanding (MOU), as amended, provides management guidance for wild horses and burros on YPG. Future management under the requested withdrawal would be the same as existing management on YPG lands. BLM would continue to monitor wild horse and burro populations and strive to maintain the populations at the appropriate management level in accordance with the RMP. BLM expertise and resources are needed to continue managing the wild horse and burro populations in the project area, and the Army would continue to support the BLM management process. The Army and BLM would continue to manage horses and burros on these lands consistent with the MOU and revise, as needed.

DOCUMENTATION

BLM. 1978. YPG/BLM Wild Horse and Burro Memorandum of Understanding, as amended,

BLM. 2010. *Yuma Field Office Record of Decision Approved Resource Management Plan*, Bureau of Land Management, January 2010.

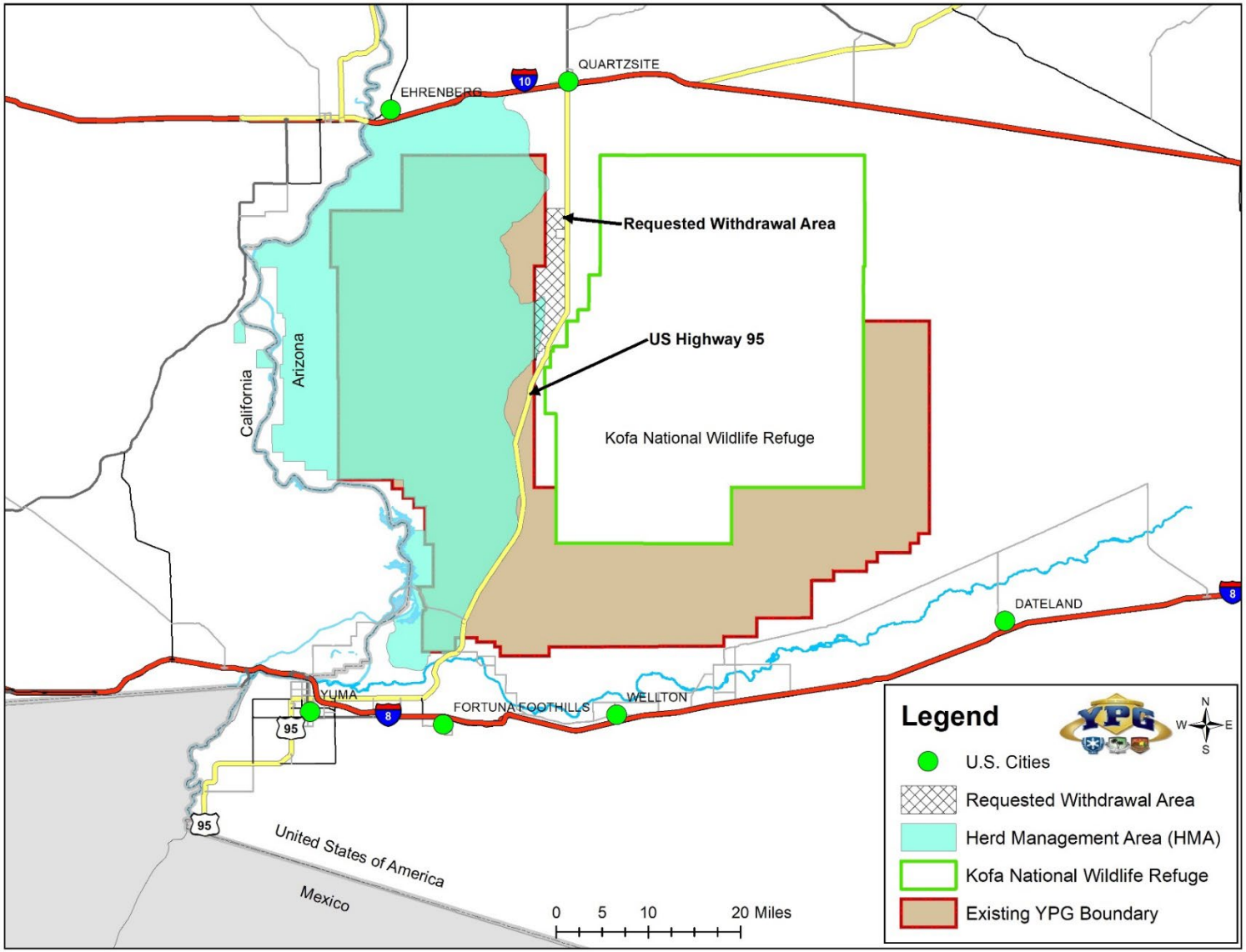
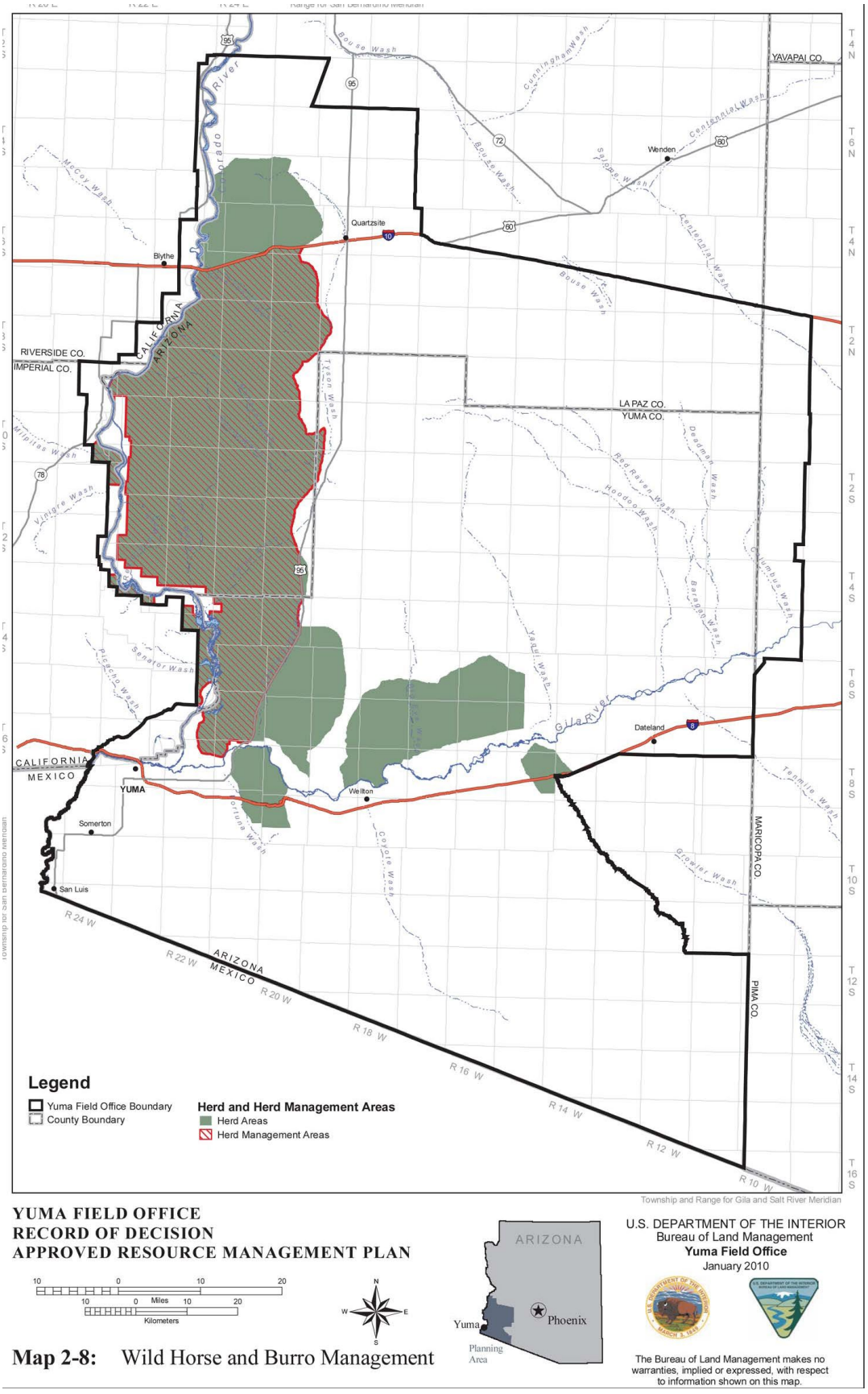


Figure 3. Herd Management Area in the Project Area.



Map 2-8: Wild Horse and Burro Management

APPENDIX N.
WILDERNESS

HIGHWAY 95 LAND WITHDRAWAL
LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT

Wilderness Resource Documentation

Legislative Environmental Impact Statement
for the Highway 95 Land Withdrawal

U.S. Army Garrison Yuma Proving Ground
Yuma and La Paz Counties, Arizona

Contract Number: W912BV20C0024

Solicitation Number: W912BV20R0046

Lead Agency:

U.S. Department of the Army

Cooperating Agency:

U.S. Department of the Interior
Bureau of Land Management

Prepared by:

North Wind Resource Consulting, LLC
1425 Higham Street
Idaho Falls, ID 83402

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LIST OF ACRONYMS

BLM	Bureau of Land Management
LEIS	Legislative Environmental Impact Statement
RMP	Resource Management Plan
YPG	Yuma Proving Ground

PROJECT DESCRIPTION

This Army has requested the withdrawal and reservation of approximately 22,000 acres of public land managed by the U.S. Department of the Interior, Bureau of Land Management (BLM). This withdrawal would add to the existing 829,565 acres withdrawn for the Yuma Proving Ground (YPG). The land is located west of Highway 95 and abuts the current YPG boundary. The requested withdrawal area (hereinafter referred to as the "project area"), which would extend a portion of the current boundary east to Highway 95, would establish the highway as a distinct physical landmark of the YPG boundary in that area. The additional land would accommodate larger Surface Safety Zones to allow for higher altitude parachute releases and provide an additional buffer area in case of release point errors and system failures.

RESOURCE DISCUSSION FOR WILDERNESS OR LANDS WITH WILDERNESS CHARACTERISTICS

The project area falls under the BLM *Yuma Field Office Record of Decision Approved Resource Management Plan* (RMP; BLM 2010). BLM manages designated wilderness according to the requirements of the Wilderness Act and provisions of designating legislation. Guidelines and operating procedures for all management activities in wilderness areas are provided in BLM Manual 8560, *Management of Designated Wilderness Areas* (BLM 1988), and in wilderness management plans, where completed for specific wilderness areas. Wilderness areas within BLM lands managed by the Yuma Field Office are identified in the RMP (Figure 1). The BLM Yuma Field Office also identified lands to be managed to maintain wilderness characteristics in the RMP (Figure 2). Section 201 of the Federal Land Policy Management Act provides BLM with the authority to inventory features of the land, including those associated with the concept of wilderness or wilderness characteristics. BLM Manual 6320, *Considering Lands with Wilderness Characteristics in the BLM Land Use Planning Process* (BLM 2012) generally defines land with wilderness characteristics as lands possessing the following characteristics:

- Roadless areas with more than 5,000 acres of contiguous BLM lands, or smaller areas of sufficient size to make practicable the preservation of an unimpaired condition;
- Areas that appear to have been affected primarily by the forces of nature, and where the presence of human beings is substantially unnoticeable; and
- Outstanding opportunities for solitude or primitive and unconfined types of recreation.

As demonstrated in Figure 3 below, there are no roadless areas, to include roadless islands having wilderness characteristics, as described in the Wilderness Act of 1964 (16 U.S.C. 1131, et seq.), within the project area (43 CFR 2310.3-2(b)3(ii)). There are numerous roads and established-use trails in the project area, and there are no roadless islands with 5,000 acres of contiguous BLM lands. Past use of the area is evident and there are no exceptional natural qualities. There are no designated wilderness areas or lands with wilderness characteristics in the project area. This resource is not carried forward for full analysis in the Legislative Environmental Impact Statement (LEIS).

DOCUMENTATION

BLM. 2010. *Yuma Field Office Record of Decision Approved Resource Management Plan*, Bureau of Land Management, January 2010.

BLM. 1988. Manual 8560, *Management of Designated Wilderness Areas*, Bureau of Land Management.

BLM. 2012. Manual 6320, *Considering Lands with Wilderness Characteristics in the BLM Land Use Planning Process*, Bureau of Land Management.

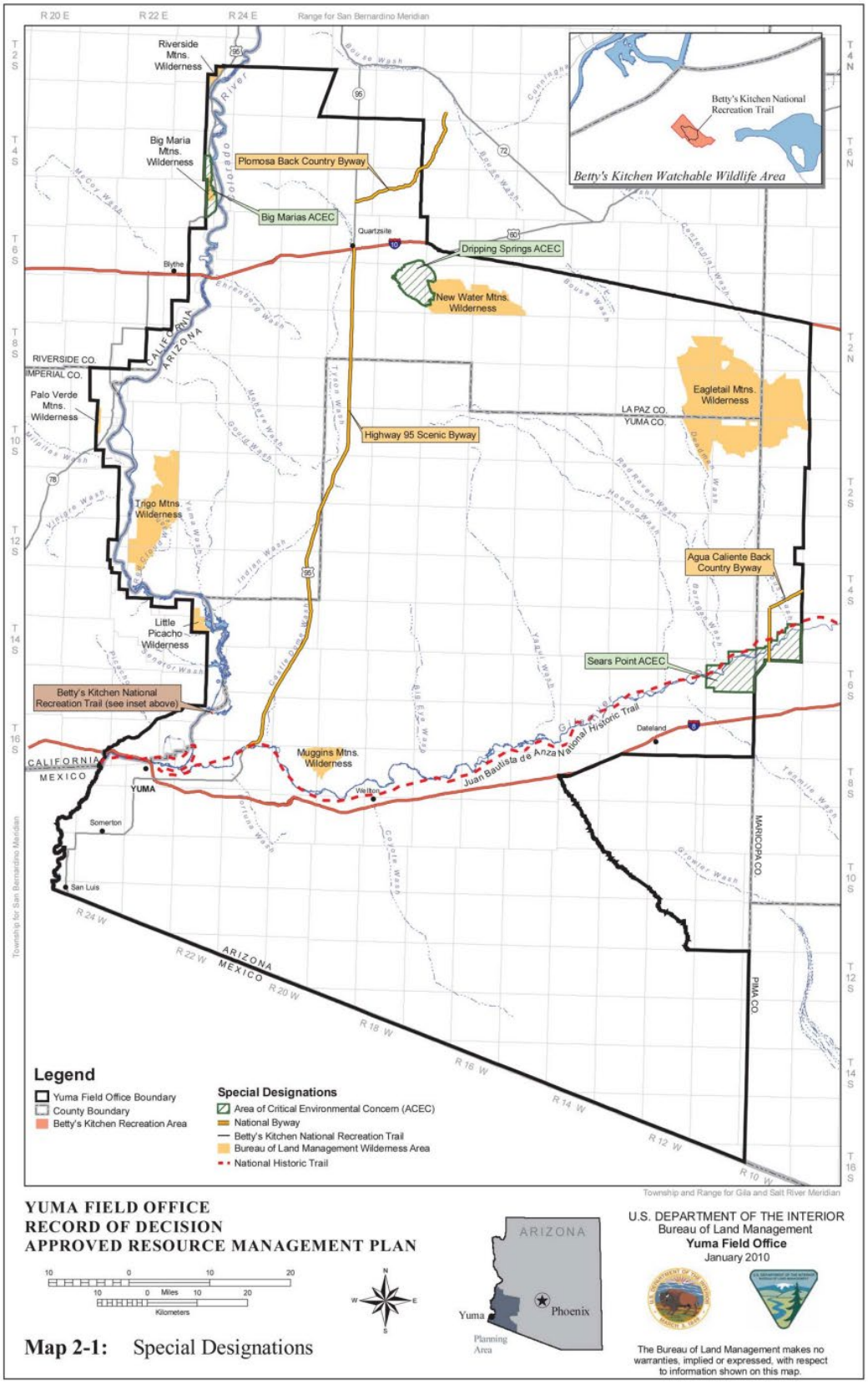

Figure 3. Wilderness Areas Near the Project Area.

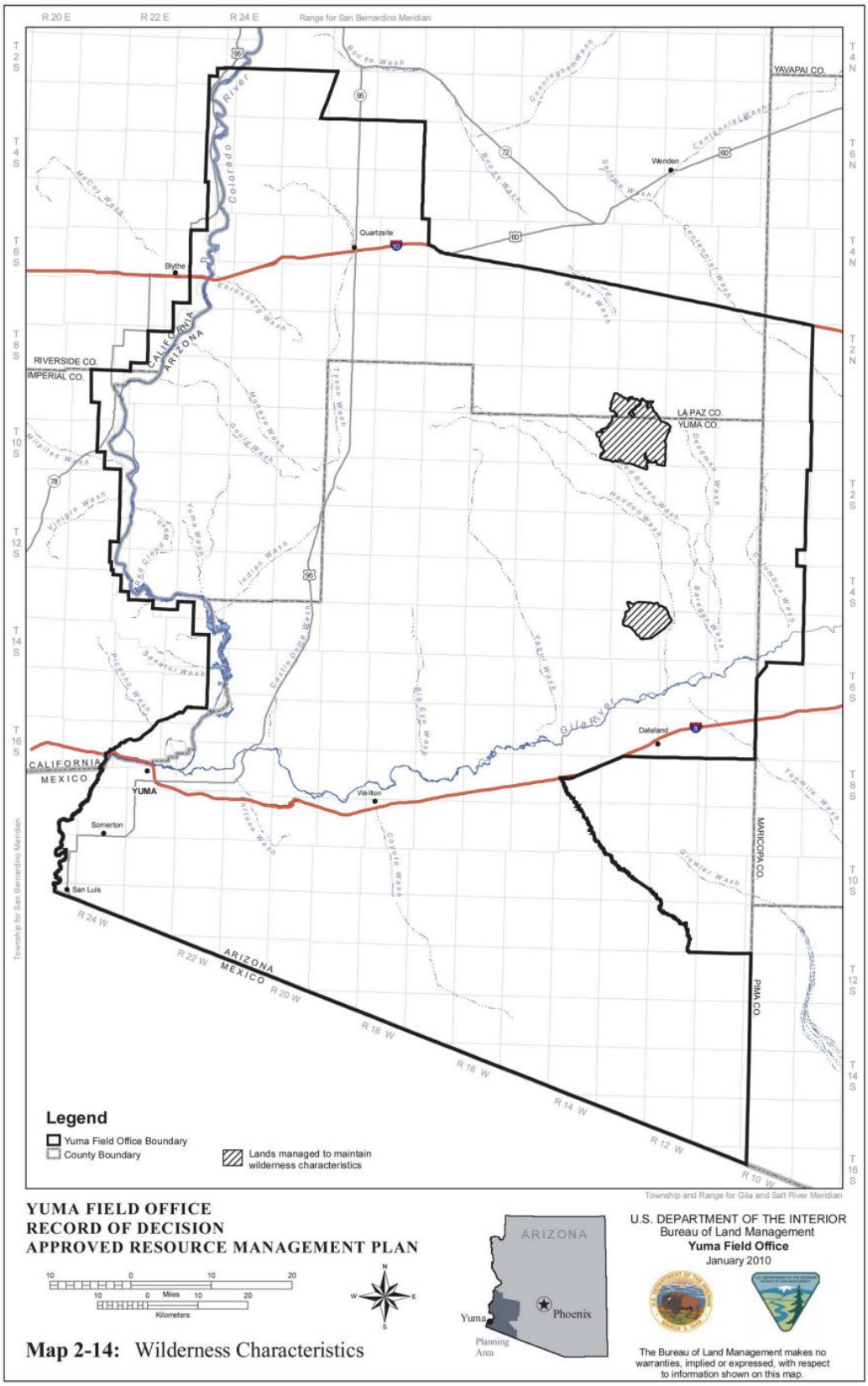

Figure 4. Land with Wilderness Characteristics.

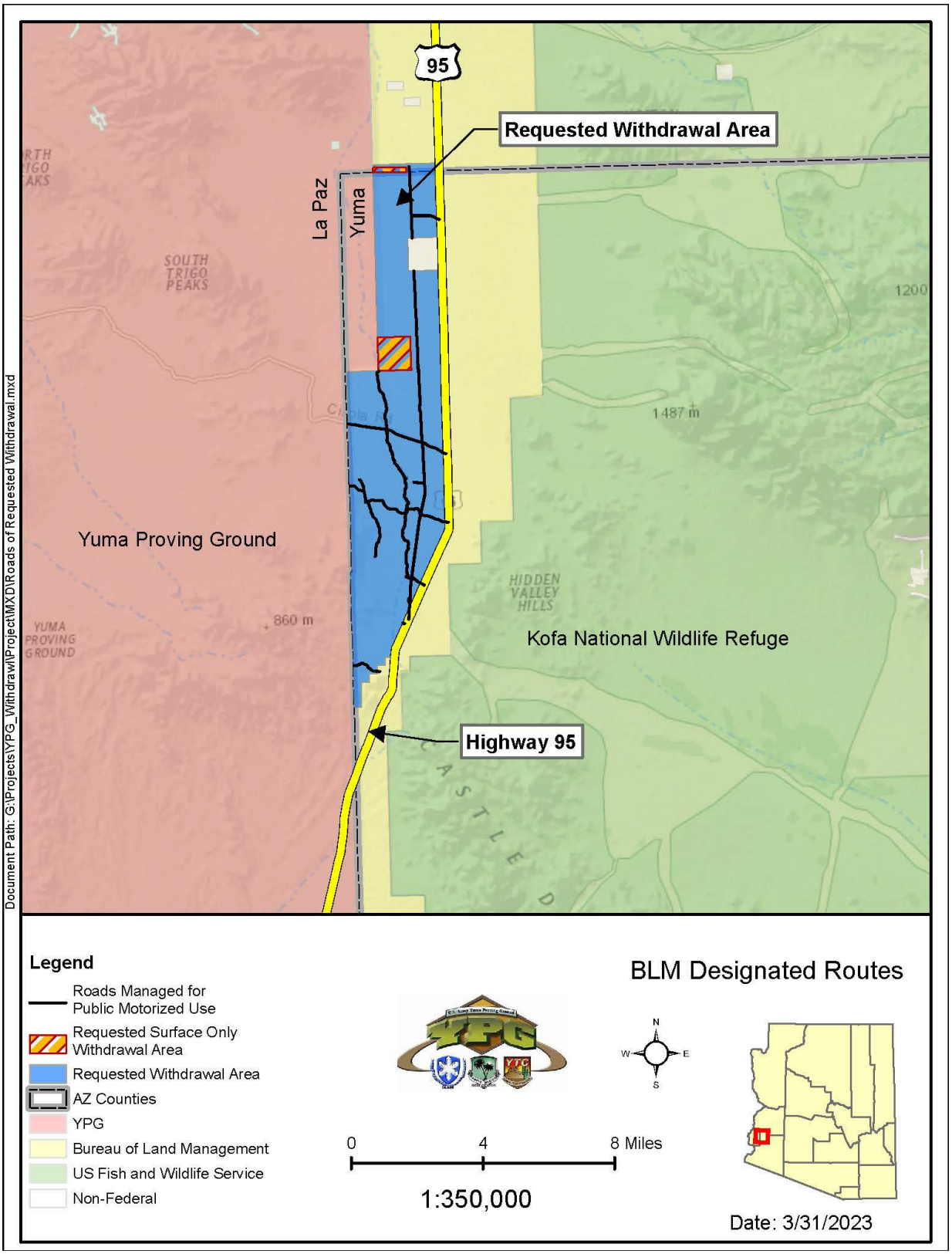

Figure 5. Designated Routes in the Project Area.

APPENDIX O.
BIOLOGICAL ASSESSMENT

DEPARTMENT OF THE ARMY
INSTALLATION MANAGEMENT COMMAND HEADQUARTERS
UNITED STATES ARMY GARRISON, YUMA
301 C STREET
YUMA AZ 85365-9498

REPLY TO
ATTENTION OF

6 June 2023

In Reply Refer To:
Environmental Sciences Division

Heather Whitlaw
Field Supervisor
Arizona Ecological Services Office
U.S. Fish and Wildlife Service
9828 N. 31st Avenue, Suite C3
Phoenix, Arizona 85051-2517

Dear Ms. Whitlaw:

The U.S. Army, on behalf of the U.S. Army Garrison Yuma Proving Ground (YPG), has requested a withdrawal and reservation for military purposes of approximately 22,000 acres of public land managed by the U.S Department of the Interior, Bureau of Land Management (BLM). This withdrawal, if approved by Congress, would add to the existing 829,565 acres previously withdrawn for YPG and would extend the YPG boundary to Highway 95. The Army requires this additional land as a safety buffer for testing of advanced air delivery technologies and aviation systems, as well as more complex air delivery and tactical scenarios on existing drop zones on YPG. The Army, with BLM as a cooperating agency, is preparing a Legislative Environmental Impact Statement to address the regulatory requirements of the withdrawal process.

Pursuant to 43 CFR 2310.3-2(b)(3)(iv) the Army must prepare a biological assessment (BA) of any listed or proposed endangered or threatened species, and their critical habitat, which may occur on or in the vicinity of the requested withdrawal area in accordance with section 7 of the Endangered Species Act of 1793, as amended (16 U.S.C. 1536) (ESA). As an administrative function, the land withdrawal, if approved by Congress, would not alter the existing land use within the requested Highway 95 withdrawal area and there would be no additional impacts to listed species that were not already addressed in previous Section 7 Consultation (BO 22410-2007-F-0196 issued to BLM, and 02EAAZ00-2014-F-0161 issued to YPG). We are providing the attached BA as a thorough evaluation of these lands for potential affects to ESA-listed species. Any future actions within this area would require project-specific compliance with the National Environmental Policy Act and the ESA.

Table 1 provides a summary of ESA status and determination of effects. This species list was generated from an IPaC query. Some of those species were determined not to be present in the action area due to a lack of suitable habitat.

Table 1. Summary of ESA Status and Determinations

Common Name		Status	Determination	Reason
Sonoran Pronghorn	*Antilocapra americana sonoriensis*	Endangered, Experimental Population, Non-Essential	No Affect	Action is administrative in nature. Current BO addresses ongoing activities that will not change under this action. Any future actions would be consulted on as appropriate.
Sonoran Pronghorn	*Antilocapra americana sonoriensis*	Experimental, Non-Essential Population Kofa NWR (Treated as Threatened)	No Affect	Action is administrative in nature. Current BO addresses ongoing activities that will not change under this action. Any future actions would be consulted on as appropriate.
Yellow-billed Cuckoo	*Coccyzus americanus*	Threatened	No Affect	No suitable habitat in proximity to the project area.
Northern Mexican Garter Snake	*Thamnophis eques megalops*	Threatened	No Affect	No suitable habitat in proximity to the project area.

Per the Sikes Act, military management of these lands would be guided under the YPG Integrated Natural Resource Management Plan. YPG is committed to the collaborative approach to natural resource management presented in the plan. We look forward to continued cooperation with the USFWS, Arizona Game and Fish Department, and BLM for its implementation.

The non-essential experimental population of pronghorn, for purposes of section 7(a)(2) consultation treated as proposed for listing outside the Kofa National Wildlife Refuge, while on the refuge it is treated as threatened. By definition, a "nonessential experimental population" is not essential to the continued existence of the species. Therefore, no proposed action impacting a population so designated could lead to a jeopardy determination for the entire species.

The analysis of potential effects of the requested public land withdrawal to Sonoran pronghorn (on Kofa National Wildlife Refuge), yellow-billed cuckoo, and northern Mexican Garter Snake resulted in ESA no effect determinations. Therefore, this letter is provided as a courtesy to document these determinations and to facilitate continued transparency and cooperation in the management of ESA-listed species on YPG. If you have any questions or concerns, please contact Daniel Steward, Wildlife Biologist at 928-328-2125, email Daniel.m.steward.civ@army.mil. Thank you for your assistance in this effort.

Sincerely,

Patrick J. Driscoll
Acting Garrison Manager

Enclosure

BIOLOGICAL ASSESSMENT FOR THE REQUESTED HIGHWAY 95 LAND WITHDRAWAL

U.S. ARMY GARRISON
YUMA PROVING GROUND

June 2023

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

BIOLOGICAL ASSESSMENT FOR THE YPG HIGHWAY 95 LAND WITHDRAWAL

INTRODUCTION

The U.S. Army, on behalf of the Yuma Proving Ground (YPG), has requested a land withdrawal and military reservation of 22,000 acres of Bureau of Land Management (BLM) administered public lands adjacent to YPG in Yuma and La Paz counties, AZ. The U.S. Army (Army) requires this additional land as a safety buffer for testing of advanced air delivery technologies and aviation systems, as well as more complex air delivery and tactical scenarios, on existing drop zones on YPG. In particular, global positioning system (GPS)-guided parachute systems are requiring larger surface safety zones than are currently available at YPG. The additional land space would allow for higher altitude parachute release and provide an additional buffer area in case of release point errors and system failures; this would serve to meet test and training requirements and improve public safety.

The requested withdrawal is known as the Highway 95 Withdrawal since the requested withdrawal area (herein after referred to as "project area") is located westerly of Highway 95 and easterly of the present-day YPG boundary. Per the Engle Act of 1958, any withdrawal request over 5,000 acres in size must be approved by the U.S. Congress. The withdrawal and reservation of these lands itself would not result in any on the ground impacts, however, the subsequent management by YPG would be subject to the requirements of the ESA. As a safety buffer zone, the lands would not be impacted by military activity in a way that does not already occur. Public use would be restricted during military activities, however.

These lands are currently subject to management under the BLM Yuma Field Office's Approved Resource Management Plan and associated Biological Opinion (BO 22410-2007-F-0196) and terms and conditions. If Congress approves the requested withdrawal and reservation for military purposes, the lands would be subject to management under YPG's Integrated Natural Resource Management Plan (INRMP) as well as Army Regulation, Policies and Procedures. Military activities on YPG are identified in the Programmatic Environmental Impact Statement for Activities and Operations on YPG and the associated BO (02EAAZ00-2014-F-0161). Future actions on these lands would undergo Section 7 consultation as appropriate. YPG will continue coordination with the U.S. Fish and Wildlife Service (USFWS) for implementation of the INRMP and conduct Section 7 consultation on subsequent revisions, as needed.

After coordinating with natural resource managers of cooperating agencies and searching the USFWS Information, Planning, and Consultation System (IPAC) database, we determined that federally endangered Sonoran pronghorn (*Antilocapra americana sonoriensis*), and candidate species, monarch butterfly (*Danaus plexipius*), may occur within the proposed action area. Sonoran desert tortoise (*Gopherus m*orafkai) was formerly a candidate species however in February 2022, USFWS determined that listing was not warranted (87 FR 7077). This species is currently managed under a Candidate Conservation Agreement (AIDTT 2015). The analysis in this biological assessment is focused on species that are already listed as threatened, endangered, or proposed.

The action is located with the Non-Essential, Experimental Population (NEP) for Sonoran Pronghorn (76 FR 25593). In accordance with the ESA Section 10(j), for the purposes of Section 7 consultation, Sonoran pronghorn are treated as Proposed. Conference between the USFWS and the action agency is only required for projects that may jeopardize their continued existence. Because the NEP is, by definition, not essential to the continued existence of the species, then the effects of proposed actions on the NEP would generally not rise to the level of jeopardy. As a result, a formal conference is not required. This BA is prepared as required under 43 CFR 43 CFR 2310.3 2(b)(3)(iv).

PROPOSED ACTION

The Proposed Action is the withdrawal and reservation of approximately 22,000 acres of BLM managed public lands for military use associated with YPG located west of Highway 95 and adjacent to YPG's North Cibola Range (Figure 1). Highway 95 would provide a physically identifiable boundary for the installation. Signage would be added similar to that along the existing boundary; however, no fence would be installed. As explained above, this requested withdrawal action may only be approved by Congress. The Army requests that Congress withdraw and reserve these lands for an indefinite period, until there is no longer a military need for these lands. Withdrawing these lands for an indefinite period would be beneficial for multiple reasons. As discussed in Section 1.2, there is a continuing need (with no foreseeable end) for the additional land to support testing of current and future military air delivery advancements, and the existing withdrawal for YPG (authorized by PLO No. 848, as amended) is for an indefinite term. A withdrawal for an indefinite period would better accommodate long-term planning and testing and training requirements to support these emerging technologies. There will always be improvements in aerial delivery systems that will require testing, as well as more complex air delivery and tactical scenarios, on existing drop zones on YPG. In particular, global positioning system (GPS)-guided parachute systems are requiring larger surface safety zones than are currently available at YPG. The additional land space would allow for higher altitude parachute release and provide an additional buffer area in case of release point errors and system failures; this would serve to meet test and training requirements and improve public safety.

The continued testing capabilities provided by these lands would be vital to the enduring readiness and preparation for future technological developments to support the Army. Additionally, the withdrawal of these land for an indefinite period would reduce the time consuming and expensive process required to extend the land withdrawal periodically (see discussion in Section 2.3). If the demonstrated military need for the YPG addition should end, the Army would prepare to relinquish the land to the Secretary of the Interior according to a well-established process, or as Congress may direct.

The 22,000 acres requested for withdrawal are located adjacent to the current boundaries of YPG (Figure 1). The La Posa Drop Zone, which adjoins the BLM-managed lands, was specifically established due to its soil attributes that reduce risk of injury to parachutists and damage to air-delivered cargo loads. The Corral and Mojave Drop Zones are centrally located in the Cibola Range to maximize land and airspace to accommodate air delivery testing with larger surface safety zones (SSZs). The additional safety buffer provided by the project area would enable more efficient use of these existing Drop Zones by allowing additional SSZ scenarios.

YPG works to ensure public safety during cargo drops through risk management protocols and changing test parameters. Crew airdrop release point errors and system failures, while rare, do occur. YPG establishes a SSZ as an exclusion area before any test event to ensure that people do not enter an area where a potential hazard such as an errant parachute load could fall. Higher altitudes and offset distances from the targeted location are needed for more complex testing scenarios in order to test the full capabilities of the parachute systems. YPG would continue to use the Drop Zones and infrastructure they have in place; however, as altitude and guidance capabilities for parachutes continue to increase, additional land space is required to encompass the SSZ associated with the airdrops and provide a buffer between the Drop Zone and publicly accessible land.

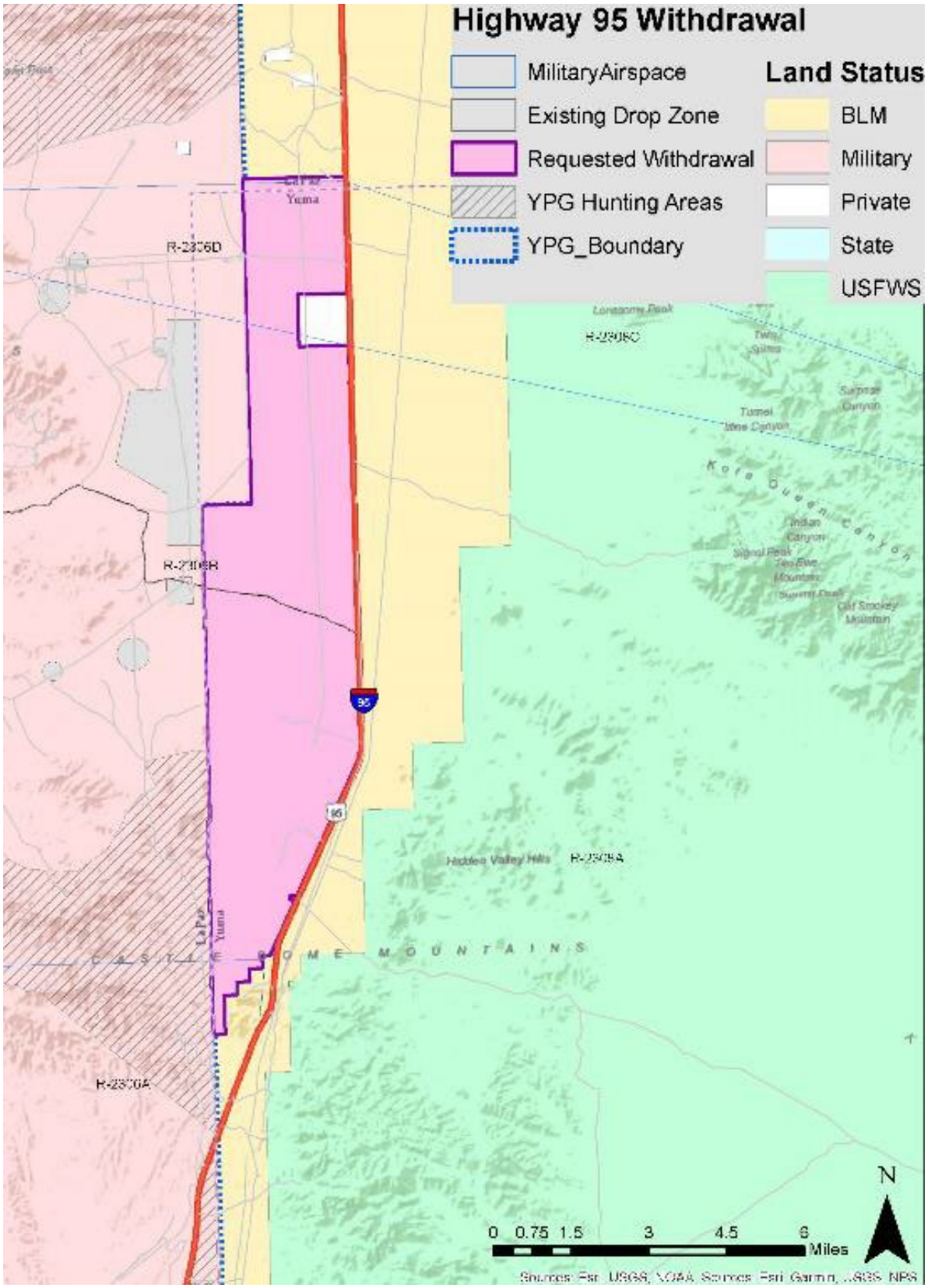

Figure 1. Requested Withdrawal Area

Figure 2 illustrates that with the additional safety buffer area, YPG could increase the testing altitude and the corresponding SSZ. In the scenario depicted, two bundles dropped from 25,000 feet at the red dot would be guided by parachute to the primary target (green dot) or the secondary target (blue dot), which are on existing Drop Zones on YPG. The SSZ for the current land boundary is the light green outline circle, which represents the total area the payload could drift to in the event of a failure or malfunction from a 25,000-foot drop. Future testing, which would have a greater capability for dropping higher or having longer glide distances, would require a larger SSZ. The light blue circle on Figure 2 depicts the SSZ for these higher drops.

If withdrawn, this area would provide the capability to test at current and future airdrop altitudes that are not currently achievable, as well as complex test scenarios (i.e., airdrops to multiple Drop Zones) that are also not currently achievable. Range test capacity would be increased, and tests could be completed on existing infrastructure and terrain that meet individual testing needs.

The legislative withdrawal and reservation of the project area for the Army would not compromise natural resource protection, conservation, and management. Furthermore, it would not prevent Tribal, intergovernmental, and public review and comment opportunities on future actions proposed by the Army or compliance with other legally required processes. Lands withdrawn to the Army would be managed in accordance with the Sikes Act (P.L. 86-797); Army Regulation (AR) 200-1, *Environmental Protection and Enhancement*; 32 CFR Part 651; Army policies and plans; other applicable resource management and environmental statutes; and YPG-specific management plans and standard operating procedures.

Stakeholders already have frequent opportunities to review and comment on how the Army is managing public access, as well as the natural and cultural resources at YPG. Should Congress withdraw the lands for Army use, not only would the Army provide for appropriate public reviews of NEPA documents for new proposals, public review and comment opportunities would continue through future revisions of the INRMP to incorporate the new withdrawn lands.

The Sikes Act includes resource management policies and guidance for U.S. military installations and requires that the Secretary of Defense carry out a program to provide for the conservation and rehabilitation of natural resources on military installations. Furthermore, the Sikes Act supports the sustainable multipurpose use of the resources, which includes hunting, fishing, trapping, and non-consumptive uses, which are subject to safety requirements and military security (16 U.S.C. 670a (a)(3)). In accordance with the Sikes Act, public access to YPG would continue to be permitted to the extent that it would be consistent with the safety and security requirements of the military purposes of the land. The YPG INRMP, which has been prepared to facilitate implementation of the natural resource program, provides detailed guidance on how the natural resources of the installation will be managed. The INRMP would be revised in accordance with DoD Instruction 4715.03 regulations, including annual reviews and updates no less than every 5 years. For valid existing rights-of-way, and for any future non-military uses of these lands, to include the Parker Blaisdell utility corridor that overlaps the easterly portion of the project area, the BLM will administer these uses per the Federal Land Policy and Management Act of 1976, as amended.

The purpose of this BA is to establish a baseline for the project area should these lands enter military management. All future actions would be specifically addressed through the INRMP and/or subsequent action planning process, including consultation with USFWS as it relates to the Endangered Species Act.

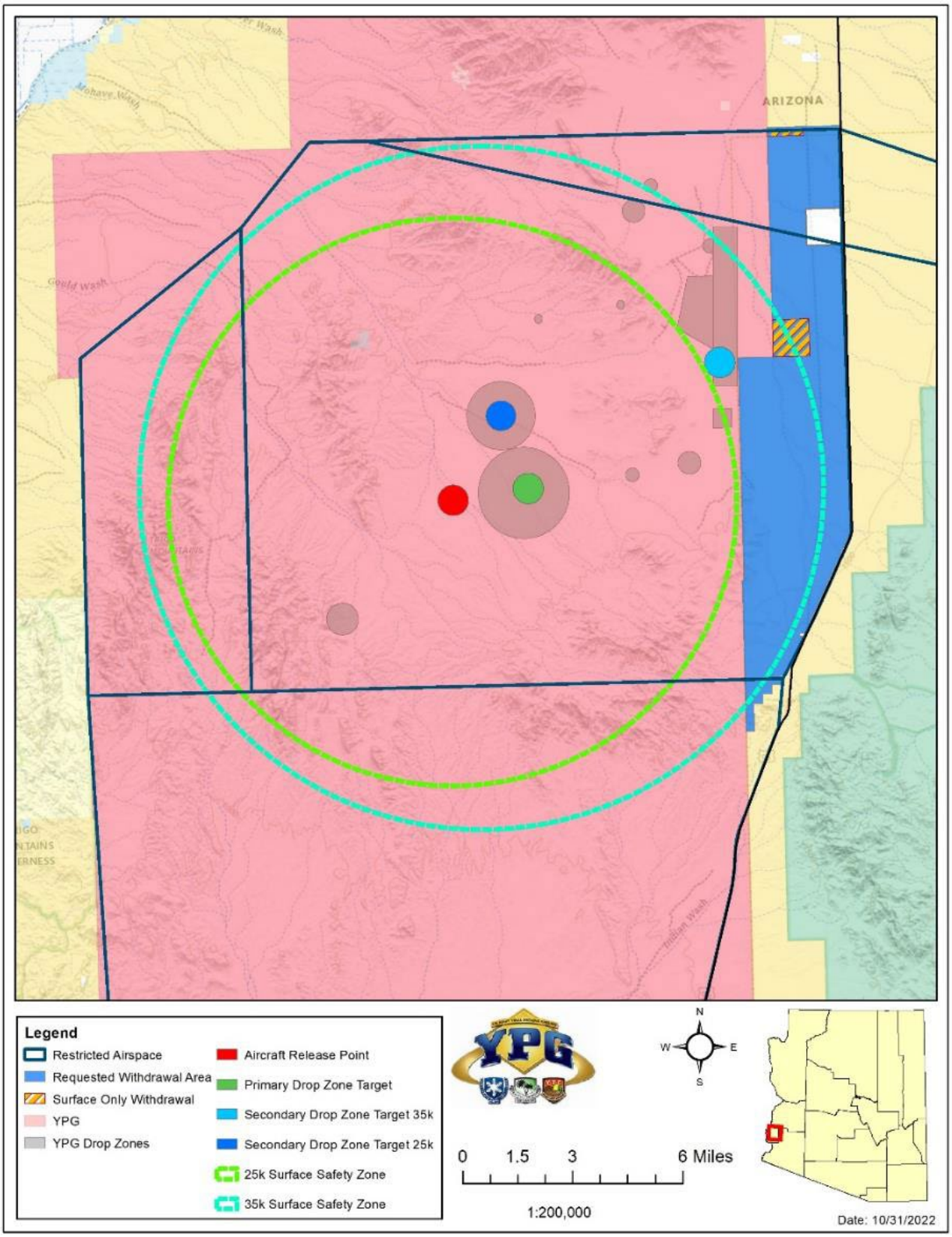

Figure 2. Example of a Surface Safety Zone that can be supported with the Requested Withdrawal Area.

Action Area

The project area consists of approximately 22,000 acres of undeveloped land that lies between the YPG North Cibola Range and Highway 95. Most of the area lies on the La Posa Plain, while the southwest corner is within the Chocolate Mountains. There are several small mesquite bosques within the project area resulting from water flow patterns and landscape alterations such as borrow pits or berms that have slowed surface flow to allow enhanced vegetation. Tyson Wash flows south to north in the center of the project area and provides a xeric riparian woodland network on these lands. Common plant species present in the project area include creosote, blue paloverde, ironwood, and mesquite.

YPG has consulted with the USFWS on past actions on the installation such as our Pragmatic Environmental Impact Statement for Activities and Operations and our Real Property Master Plan. The conservation measures identified in these prior consultations continue to be relevant for ongoing activities on YPG. Table 1 is provided as reference to previous consultations.

CONSERVATION MEASURES

Conservation measures applicable to future management of the project area lands are incorporated from those identified in previous planning efforts and from Biological Opinion 02EAAZ00-2014-F-0161. These include:

- Future Army management of any additional YPG withdrawn lands would be under YPG's Integrated Natural Resource Management Plan (2023).

- YPG would implement the Incident Response Protocol for Sonoran Pronghorn, which includes: a) notifying USFWS and other appropriate parties as outlined in the protocol as soon as possible if Sonoran pronghorn are observed on YPG that are injured, sick or dead; and b) coordinating range access for USFWS and AZGFD as appropriate for capture of sick or injured pronghorn, as well as recovery of dead individuals if necessary. Coordination will involve adherence to range safety and security procedures.

- YPG would avoid placing activities in proximity to artificial water sources (suitable for Sonoran pronghorn) to the extent that such action is consistent with the military mission.

- YPG would adhere to the terms of the Memorandum of Understanding between the Kofa NWR, Imperial NWR, Bureau of Land Management, and YPG, which provides procedures and guidance for cooperation and collaboration on wildland fire issues. This includes notifying interagency dispatch of any wildfire on YPG lands.

- YPG will collaborate with Arizona Interagency Desert Tortoise Team in Implementing the Candidate Conservation Agreement for Sonoran Desert Tortoise.

- YPG will conduct any tortoise relocations in accordance with Guidelines for Handling Desert Tortoises Encountered on Development Projects (AZGFD 2014).

Table 1. Consultation History for YPG for ongoing actions

Date	Description	Species	Determination	Reason
9/9/2014	Formal Section 7 Consultation on Activities and Operations at the United States Army Garrison Yuma Proving Ground, Yuma and La Paz Counties, Arizona	Sonoran Pronghorn	LAA on Kofa NWR	Adverse effects to pronghorn on Kofa National Wildlife Refuge (NWR) NWR from activities on Kofa Firing Range
8/4/2016	Compatibility Determination for Implementation of the Real Property Master Plan on the United States Army Garrison Yuma Proving Ground, Yuma and La Paz Counties, Arizona	Southwestern Willow Flycatcher	No Effect	Riparian habitat not present on YPG
		Yellow Billed Cuckoo	No Effect	Riparian woodlands not present on YPG
		Ridgeway's Clapper Rail	No Effect	Wetlands are not present on YPG
		Boneytail Chub	No Effect	No aquatic habitat on YPG
		Roundtail Chub	No Effect	No aquatic habitat on YPG
		Razorback Sucker	No Effect	No aquatic habitat on YPG
		Northern Mexican Garter Snake	No Effect	No appropriate riparian or aquatic habitat on YPG
		Sonoran Pronghorn	LAA on Kofa NWR	Adverse effects to pronghorn on Kofa NWR from activities on Kofa Firing Range
7/3/2018	FMWR Travel Camp Expansion Informal Consultation	Sonoran Pronghorn	No Effect	Does not occupy the proposed project area. No indication that pronghorn would occupy this area in the foreseeable future.
		Southwestern Willow Flycatcher	NLAA	Construction and operation activity is great enough distance from nearby canal and riparian woodland habitat to make any impact insignificant or discountable.
		Yellow Billed Cuckoo	NLAA	Construction and operation activity is great enough distance from nearby canal and riparian woodland habitat to make any impact insignificant or discountable.
		Ridgeway's Clapper Rail	No Effect	No suitable habitat for this species near the project area. The nearest suitable wetland habitat for this species is over 1/2 mile to the west and would be unaffected by noise and light from the proposed action
		Razorback Sucker	No Effect	No suitable habitat for this species near the project area.

STATUS/DESCRIPTION OF LISTED 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 October 6, 2021. The species in Table 2 were identified by the USFWS as potentially occurring in the project area.

Two candidate species were identified: Sonoran desert tortoise and monarch butterfly. The action area is within the 10(j) population area for Sonoran pronghorn, as such they would be treated as proposed for listing for the purpose of this Section 7 consultation.

Table 2. Federally listed species in vicinity to the project area.

Common Name	Scientific Name	Status
Sonoran Pronghorn	*Antilocapra americana sonoriensis*	Endangered, Experimental Population, Non-Essential
Yellow-billed Cuckoo	*Coccyzus americanus*	Threatened
Northern Mexican Garter Snake	*Thamnophis eques megalops*	Threatened

The yellow-billed cuckoo and Northern Mexican Garter snake are species associated with rivers, or wetlands and woodlands. The requested withdrawal is approximately 20 miles east of the Colorado River. There is no surface water or wetlands on the project area. There is no habitat or critical habitat present for any of these species within the requested withdrawal area and the distance to the river is too great for any disturbance from YPG actions to impact these species. The proposed action would have no effect on these species and they are excluded from this analysis.

Sonoran Pronghorn

Description of Species Biology

The Sonoran pronghorn is a subspecies of the American pronghorn. The species exhibits conspicuous white areas on the rump, face, and belly, and also white bands on the throat. The hooves have 2 toes and lack the dewclaw common to most ungulates. Males are distinguished from females by the presence of pronged horns exhibited by males and a black cheek patch. The Sonoran pronghorn is the smallest subspecies of pronghorn with an average height of 3 feet and weight between 75 and 130 lbs. It is also generally paler in coloration than the other subspecies (AZGFD HDMS 2021).

Sonoran pronghorn inhabit one of the hottest and driest portions of the Sonoran Desert. They forage on a large variety of perennial and annual plant species (Hughes and Smith 1990, Hervert et al. 1997b, and U.S. Fish and Wildlife Service 1998). During drought years, Hughes and Smith (1990) reported cacti were the major dietary component (44 percent). Consumption of cacti, especially chain fruit cholla (*Cylindropuntia fulgida*, Pinkava 1999), provides a source of water during hot, dry conditions (Hervert et al. 1997b). Other important plant species in the pronghorn's diet include pigweed (*Amaranthus palmeri*), ragweed (*Ambrosia sp.*), locoweed (*Astragalus sp.*), brome (*Bromus sp*.), and snakeweed (*Gutierrezia sarothrae*) (U.S. Fish and Wildlife Service 1998). Pronghorn will move in response to spatial limitations in forage availability (Hervert et al. 1997a). At times, water intake from forage is not adequate to meet minimum water requirements (Fox et al. 2000), hence pronghorn need, and readily use, both natural and artificial water sources (Morgart et al. 2005).

Sonoran pronghorn rut from July to September. Does have been observed with newborn fawns from February to May. Parturition corresponds with annual spring forage abundance. Does usually have twins, and fawns suckle for about two months. Does gather with fawns sometimes forming nursery groups (U.S. Fish and Wildlife Service 1998). Sonoran pronghorn may form small herds of more than 20 animals (Wright and deVos 1986).

Current Conditions

Rangewide

The Sonoran pronghorn was included on the first list of endangered species in 1967 under the Endangered Species Preservation Act of 1966. With the passage of the Endangered Species Act (ESA) this subspecies was listed as endangered.

In 2010, the USFWS designated the Sonoran pronghorn as a nonessential experimental population, as defined under section 10(j) of the ESA within a portion of their historic range. This area is located north of Interstate 8 and south of Interstate 10 and east of State Route 85 in Arizona (Figure 3). In order to restore pronghorn to their historic breeding range, the USFWS with the agency partner Recovery Team has been releasing pronghorn from semi-captive breeding pens on CPNWR and KNWR into portions of the CPNWR, KNWR, BMGR East/West, OPNM and YPG since 2013.

The USFWS developed a Recovery Plan for Sonoran pronghorn to conserve and protect the species and its habitat so that its long-term survival is secured, to ensure population capability to sustain threats, and to delist. A recovery team was established with representatives from numerous federal and state agencies, including YPG. The team strives to implement the recovery goals identified in the plan.

Historic records show Sonoran pronghorn ranged as far north as present-day Interstate 10 and as far south as Kino Bay and Hermosillo in Sonora, Mexico. Pronghorn ranged westward to the Imperial Valley, California, and Baja California, Mexico, and eastward to the Baboquivari Mountains and the Santa Cruz River in Arizona. In the1800s, habitat alteration from fencing and livestock, coupled with unregulated hunting and drought lead to massive declines in the distribution and number of Sonoran pronghorn (USFWS 2010).

Presently, Sonoran pronghorn only occupy approximately 12 percent of their historical range. Their current range (Figure 3) is limited to approximately 17,224 km^2 (6,660 mi^2), of which 4,057 km^2 (1,566 mi^2) are in Mexico and 13,167 km^2 (5,094 mi^2) are within the U.S. There are a total of five wild populations of the Sonoran pronghorn, of which two populations, Pinacate and Quitovac, occur in northwestern Sonora, Mexico; and three populations, the Cabeza Prieta, Kofa, and Sauceda, occur in southwestern Arizona, U.S. (USFWS 2016) Figure 3.

In the U.S., Sonoran pronghorn inhabit the region southeast of YPG encompassed by BMGR, CPNWR, and Organ Pipe Cactus National Monument (OPCNM); pronghorn occasionally occur on Bureau of Land Management and Tohono O'odham Nation lands. In Mexico, Sonoran pronghorn currently only occur in northwestern Sonora.

The USFWS maintains captive breeding pens for Sonoran pronghorn in Kofa NWR (KNWR) and CPNWR. The USFWS have released pronghorn from these pens into KNWR, CPNWR, BMGR, OPCNM, and YPG. Some of these pronghorn released on KNWR, and their wild-born offspring, are observed regularly on the East Kofa Range on YPG and along Highway 95 near Stone Cabin. In addition, pronghorn released on BMGR East (East of Hwy 85) now form the Sauceda population.

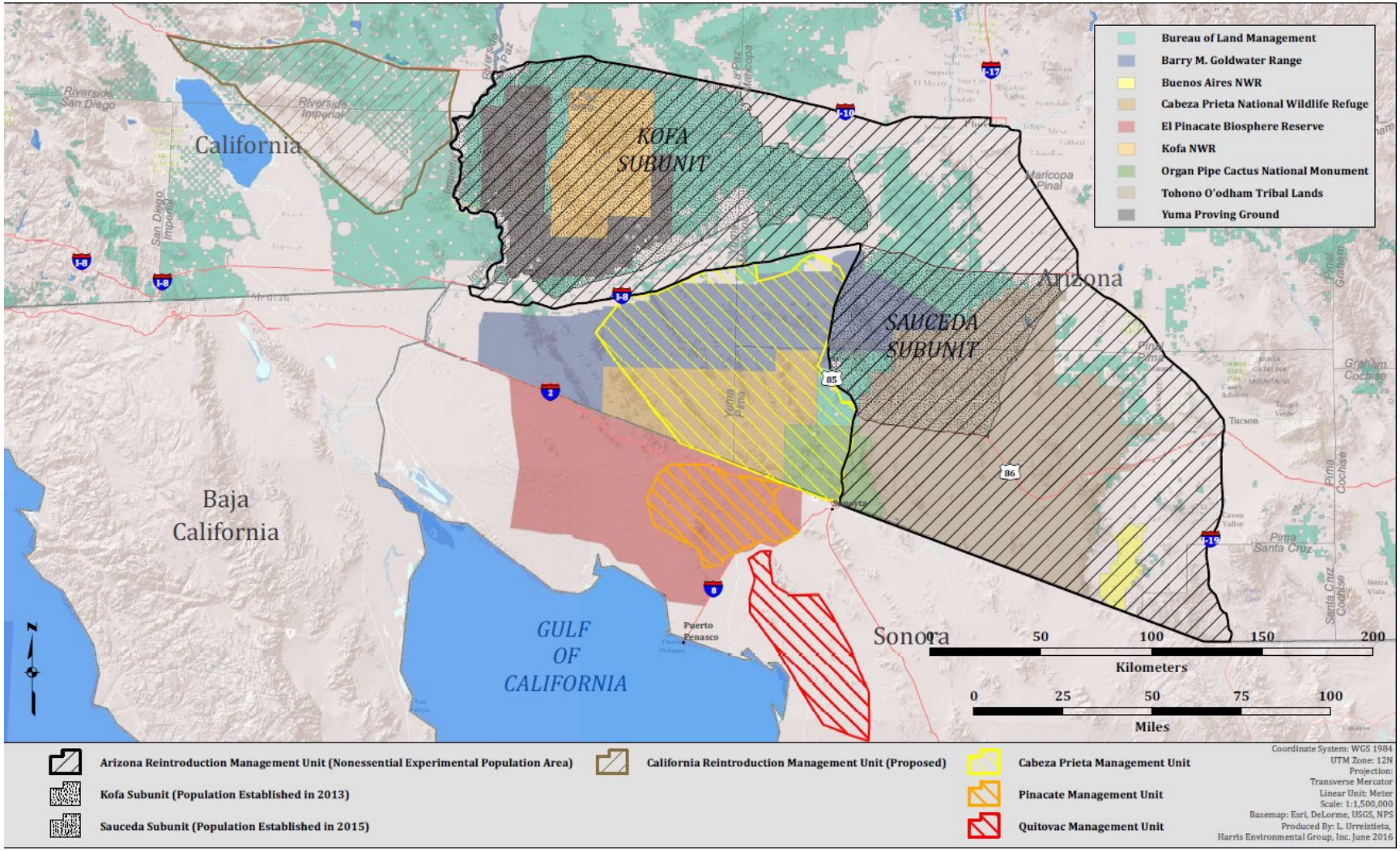

Figure 3. Sonoran Pronghorn Range and Management Unit

In Project Area (Environmental Baseline)

The project area is on the East Side of the YPG Cibola Range adjacent to Highway 95 and approximately 3 miles west of the Kofa National Wildlife Refuge (KNWR). The action area is located within the La Posa Plain which is a large, open expanse of creosote scrub intermixed with smaller mesquite bosques and xeric washes. Pronghorn have been observed in this area. They also occupy the KNWR, east of the project area, and they are frequently observed along Highway 95 in the vicinity of the proposed action. In recent years, there have been several pronghorn killed along this portion of Highway 95, and as a result, AZGFD periodically provides supplemental food and water to pronghorn east of the highway in an effort to prevent them venturing onto the highway. With ongoing recovery efforts for Sonoran pronghorn, the population is continuing to increase, and as such it is likely that pronghorn will occupy these lands more frequently in the future.

The project area is located within the non-essential experimental population area for SPH. Management within the action area is almost entirely by Federal agencies with YPG, BLM, and KNWR managing most of these lands. Highway 95 is a notable feature in this region as this is the only major highway connecting the communities of Yuma and Quartzite. There has been considerable mortality for pronghorn along the highway and as SPH populations increase, it is likely that mortality would increase as well.

Future actions by federal agencies would be addressed through subsequent section 7 consultation as appropriate. These agencies are all part of the Sonoran Pronghorn Recovery Team and play an active role in executing recovery actions to support the recovery of Sonoran Pronghorn. As such, YPG contributes funding, labor, and range support for recovery and management of pronghorn as implementation of the INRMP. YPG provides support for recovery efforts both on YPG lands and rangewide.

Surveys in January 2023 estimated up to 212 pronghorn between Kofa NWR and YPG. The Palomas Plane had a minimum of 34 pronghorn (Hervert, personal communication).

Consultation History

See Table 1 for consultation history.

a. Critical Habitat

No critical habitat has been established for Sonoran Pronghorn.

b. Effects of Proposed Action

The action area is located within the nonessential experimental population (or 10(j)) range of the Sonoran pronghorn, and therefore, for section 7 consultation purposes, the population of Sonoran pronghorn on YPG is treated as a species proposed to be listed. Pronghorn located on National Wildlife Refuge lands would be treated as Threatened for Section 7 Consultation. The withdrawal of 22,000 acres for use as a safety buffer for YPG would have no effect on pronghorn within the Kofa NWR. The withdrawal is an administrative action, thus would have no physical impacts. The future land use would be as a safety buffer for continued testing on existing YPG drop zones several miles from Kofa NWR.

The proposed action would not present any impacts to pronghorn within the NEP area (including on Kofa NWR), however, future management of those lands by YPG could. Since these lands would be used primarily as a safety buffer there would be minimal intrusion for military testing purposes. The anticipated ground access for military test activity would be for pickup of air delivery loads that land off course. This may result in off-road travel with heavy equipment (tracked or wheeled), but the duration would be very short, typically less than 1 day. These activities would not result in any alteration of habitat

and only minimal surface disturbance. YPG would authorize continued public use of these lands for hunting. Other public uses, such as recreational OHV use, would be restricted. All future actions on these lands would be subject to section 7 consultation as appropriate.

YPG would include the additional 22,000 acres in the Integrated Natural Resource Management Plan (INRMP). As such, YPG in coordination with AZGFD and USFWS, would implement actions to conserve natural resources on these lands including management for special status species.

Impacts from human presence and habitat disturbance would be insignificant because there would not be an appreciable increase in human activity in the area. Future management under the YPG INRMP could have beneficial effects from implementation of the plan on the proposed withdrawal area.

CUMULATIVE EFFECTS OF STATE AND PRIVATE ACTIONS

Cumulative effects are those effects of future State or private activities, with no federal nexus, that are reasonably certain to occur within the action area. The vast majority of lands in the vicinity of the project area are federal with past and future actions undergoing section 7 consultation. A few isolated parcels of state and private lands are located east and north in the vicinity of the project area. The communities of Quartzsite and La Paz are approximately 15 miles north of the project area. These communities have an influx of winter visitors each year, many of whom camp long term in both private and federal campgrounds in the Quartzsite area. These lands are mostly undeveloped and at a landscape scale would be insignificant to the management of threatened and endangered species in comparison with the surrounding federal lands.

CONCLUSION AND DETERMINATION OF EFFECTS FOR EACH LISTED SPECIES

YPG, in coordination with BLM, makes the following impact determinations to listed species analyzed in this Biological Assessment. Table 3 summarizes our determination. Since the requested withdrawal is essentially an administrative action there would be no additional impacts that are not already occurring in the action area. Should Congress approve the withdrawal request, then the Army would consult as appropriate on future actions.

Table 3. Summary of Determinations

Common Name	Scientific Name	Status	Determination of Affect
Sonoran Pronghorn	*Antilocapra americana sonoriensis*	Endangered, Experimental Population, Non-Essential	No Effect
Sonoran Pronghorn	*Antilocapra americana sonoriensis*	Endangered, Experimental Population, Non-Essential on Kofa NWR	No effect
Yellow Billed Cuckoo	*Coccyzus americanus*	Threatened	No Effect
Northern Mexican Garter Snake	*Thamnophis eques megalops*	Threatened	No Effect

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APPENDIX P.
BLM ARIZONA – YPG HIGHWAY 95
WITHDRAWAL UTILITY CORRIDOR LETTER

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Arizona State Office
One North Central Avenue, Suite 800
Phoenix, Arizona 85004-4427
www.blm.gov/az/

March 30, 2023

In Reply Refer To:
2310 (9200)
AZA-38426

Colonel Ben McFall III
Commander
Yuma Proving Ground
301 C Street, Bldg 2105
Yuma AZ, 85365

Dear Colonel McFall,

The United States (U.S.) Army has applied for a 22,000-acre withdrawal at Yuma Proving Ground (YPG). Any such withdrawal would require an act of Congress. The requested withdrawal, "Highway (Hwy) 95 withdrawal" would, if approved, overlap the one-mile-wide Parker-Blaisdell utility corridor centered on Hwy 95 (Exhibit A), designated in the Bureau of Land Management's (BLM) Yuma Field Office Record of Decision/Approved Resource Management Plan (January 2010). BLM Arizona is aware of YPG's requirement for a precision air delivery system safety buffer in this area, and the importance of keeping this withdrawal area unencumbered by other future uses that could interfere with the Army's intended use of these lands. However, in addition to the Army's safety buffer requirement, the U.S. Department of Energy (DOE) has identified a pressing need for new transmission infrastructure in the Southwest (Exhibit B).

At present, BLM Arizona is unaware of any pending transmission line requests for this utility corridor. In the future, if BLM Arizona receives a request for a regionally significant transmission line within this utility corridor, we would like to retain the ability to issue a right-of-way (ROW) for such transmission line within the Hwy 95 withdrawal area. Specifically, BLM Arizona requests that any legislative proposal for the Army's YPG Hwy 95 withdrawal specify that the BLM Arizona State Director may issue ROWs within the BLM-designated Parker-Blaisdell utility corridor for any critical regional-grid level utility infrastructure, to include above-ground transmission lines, subject to the following:

1) BLM Arizona, in consultation with the Army, will incorporate conditions in any authorization of utility use as much as practicable to minimize impacts to the Army's mission; and
2) The decision to authorize the installation and maintenance of such critical infrastructure within the Parker-Blaisdell utility corridor shall be reserved for the BLM Arizona State Director without the possibility for delegation.

BLM Arizona appreciates the cooperative relationship we share with the Army at the YPG, as we work together to process the Army's withdrawal application and corresponding Legislative Environmental Impact Statement. If you have any questions regarding this request, please contact Mr. Mark Morberg, the BLM Arizona Deputy State Director for Lands, Minerals, Energy and Cadastral Survey at mmorberg@blm.gov or 602-417-9301.

Respectfully,

RAYMOND SUAZO

Digitally signed by RAYMOND SUAZO
Date: 2023.03.30 10:59:10 -07'00'

Raymond Suazo
State Director

Enclosures (2)

1) Exhibit A – YPG Highway 95 Withdrawal Area, Designated Parker-Blaisdell Utility Corridor
2) Exhibit B – U.S. Department of Energy Grid Development Office, Regional Energy Transmission Needs Map

EXHIBIT A

YPG HIGHWAY 95 WITHDRAWAL AREA
DESIGNATED PARKER-BLAISDELL UTILITY CORRIDOR

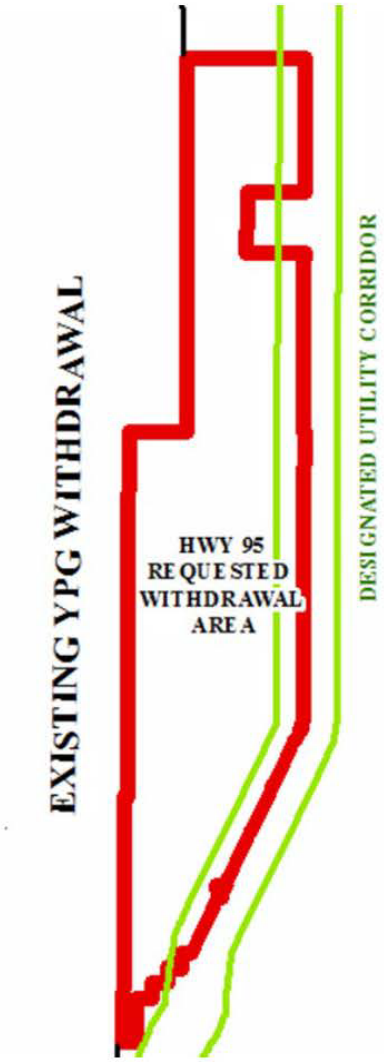
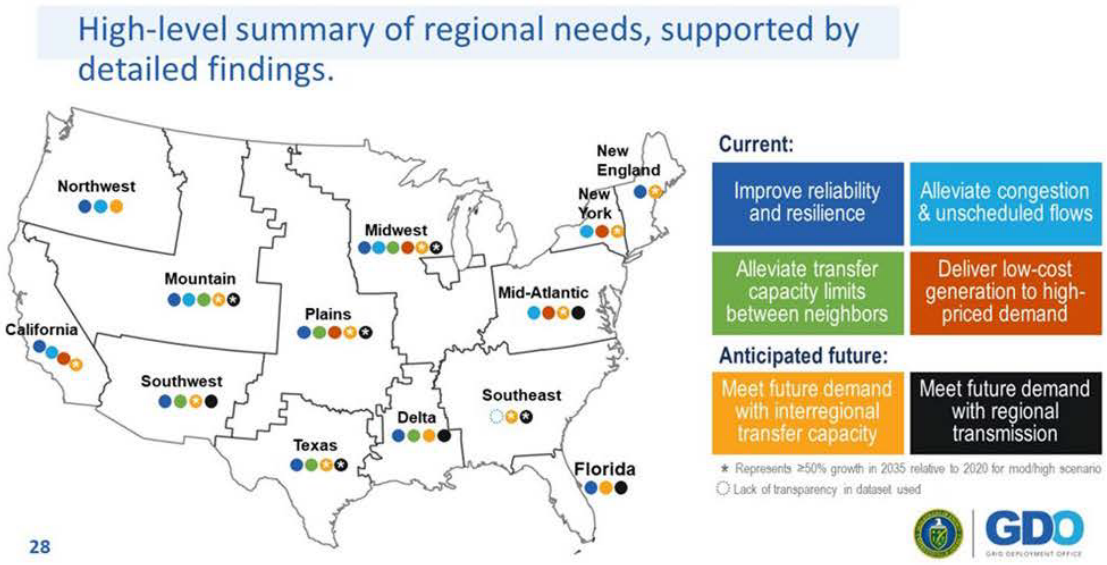


EXHIBIT B

U.S. DEPARTMENT OF ENERGY GRID DEPLOYMENT OFFICE
REGIONAL ENERGY TRANSMISSION NEEDS MAP



APPENDIX Q.
SOCIOECONOMIC AND ENVIRONMENTAL JUSTICE ANALYSIS

Socioeconomic and Environmental Justice Analysis

Regulations and Definitions

Subsequent to the publication of Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (1994), the Council on Environmental Quality (CEQ), part of the Executive Office of the President, issued guidance for use in considering environmental justice concerns within the National Environmental Policy Act process (CEQ 1997). This guidance defines "minorities" for consideration in evaluating environmental justice, or the environmental justice (EJ) population, as all persons who self-identify as Hispanic or as a race other than white; that is, all persons other than non-Hispanic white. The CEQ guidance also requires that minority populations should be identified for consideration of environmental justice where either: (a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis. In addition, the BLM has adopted the following five criteria in determining whether a community is an environmental justice community.

- EJ community criterion 1: minority population higher than 50%
- EJ community criterion 2: minority population higher than 110% of reference area
- EJ community criterion 3: poverty rate higher than 50%
- EJ community criterion 4: poverty rate higher than 100% of reference area
- EJ community criterion 5: tribal communities.

If at least one answer to the above 5 criteria is yes, then overall the community is an EJ community. Executive Order 14096, *Revitalizing Our Nation's Commitment to Environmental Justice for All*, which was signed April 21, 2023, places new emphasis on advancing Environmental Justice.

Geographical Context

Through utilizing the Community-Level Socioeconomic Scoping Tool (BLM Sun-Zone Socioeconomics Program) the following six communities in the State of Arizona surrounding the Highway 95 withdrawal area are identified.

(1) Cibola CDP (census designated place)

(2) La Paz Valley CDP

(3) Quartzsite Town

(4) Ehrenberg CDP

(5) Fortuna Foothills CDP

(6) Yuma City.

Additionally, census tracts which encompass parts of Native American Reservations surrounding the Highway 95 withdrawal area within Arizona have been identified. The Cocopah Indian Reservation covers 6% of census tract 040270110.00 and 23% of census tract 040270115.01 in Yuma County. The Fort Yuma Indian Reservation covers 3% of census tract 040270109.14 in Yuma County. The Colorado River Indian Reservation covers 99% of census tract 040129403.00 in La Paz County. These tracts are identified as follows:

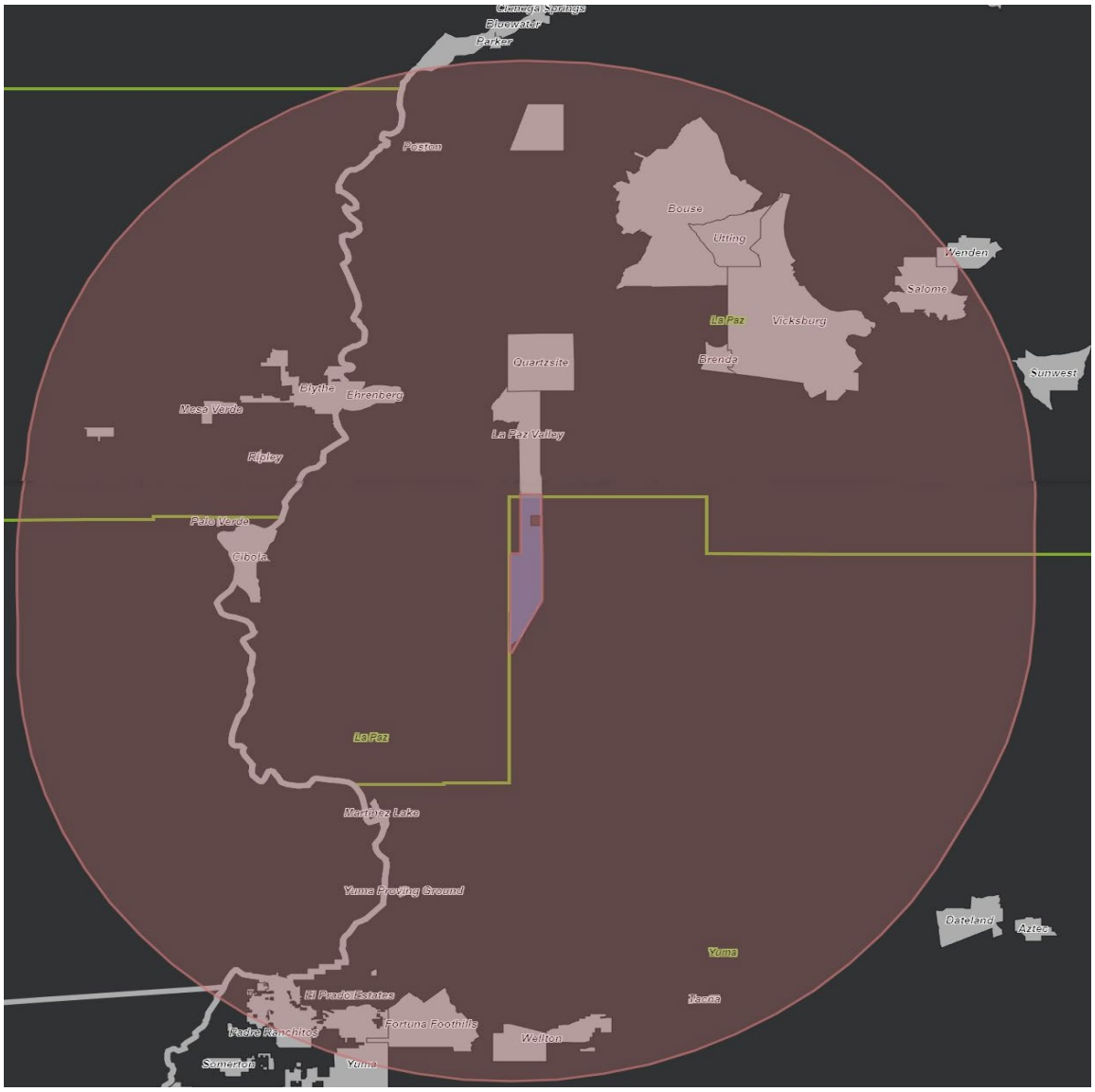
(7) Cocopah Indian Reservation Tract 110

(8) Cocopah Indian Reservation Tract 115.01

(9) Fort Yuma Indian Reservation Tract 109.14

(10) Colorado River Indian Reservation Tract 9403

These communities are all located within La Paz and Yuma Counties, Arizona, and within a radius of 45 miles from the Project area.



Map 1. Analysis Area: Communities

(Data source: developed based on USCB 2022c)

Data Sources

The data source for this analysis is the American Community Survey (ACS) 5-Year Estimates published every year by the U.S. Census Bureau. The primary rationale for using this data source is listed below.

> "The American Community Survey provides a wide range of important statistics about people and housing for every community in the nation. This survey is the only source of local estimates for most of the more than 40 topics it covers for communities across the nation. For example, it produces statistics for language, education, commuting, employment, mortgage status and rent, as well as income, poverty and health insurance." (USCB 2022b)

> "ACS 1-year estimates are data that have been collected over a 12-month period and are available for geographic areas with at least 65,000 people.…The Census Bureau combines 5 consecutive years of ACS data to produce multiyear estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months…. For data users interested in obtaining detailed ACS data for small geographic areas (areas with fewer than 65,000 residents), ACS 5-year estimates are the only option. However, data users interested in estimates for areas with populations of 65,000 or more have a choice between the 1-year and 5-year data series." (USCB 2020)

Statistical Units

The statistical units for this analysis are places (including CDPs) and census tracts. The U.S. Census Bureau provides the following definitions for census tracts as one of the key statistical units for census data (USCB 2022d):

> "Places always are within a single state or equivalent entity but may extend across county and county subdivision boundaries. An incorporated place usually is a city, town, village, or borough, but can have other legal descriptions."

> "Census Designated Places (CDPs) are the statistical counterparts of incorporated places and are delineated to provide data for settled concentrations of population that are identifiable by name but are not legally incorporated under the laws of the state in which they are located. The boundaries usually are defined in cooperation with local or tribal officials and generally updated prior to each decennial census."

> "Census Tracts are small, relatively permanent statistical subdivisions of a county or statistically equivalent entity that can be updated by local participants prior to each decennial census as part of the Census Bureau's Participant Statistical Areas Program (PSAP). The Census Bureau delineates census tracts in situations where no local participant responded or where state, local, or tribal governments declined to participate. The primary purpose of census tracts is to provide a stable set of geographic units for the presentation of statistical data.

> Census tracts generally have a population size between 1,200 and 8,000 people, with an optimum size of 4,000 people. A census tract usually covers a contiguous area; however, the spatial size of census tracts varies widely depending on the density of settlement. Census tract boundaries are delineated with the intention of being maintained over a long time so that statistical comparisons can be made from census to census. Census tracts occasionally are split due to population growth or merged as a result of substantial population decline."

Data for Communities

As contained within the Community-Level Socioeconomic Decision Tool (BLM Sun-Zone Socioeconomics Program), datasets from both the latest 2016-2020 American Community Survey 5-Year Estimates and 2011-2015 American Community Survey 5-Year Estimates (USCB 2022a) are compiled for the following key indicators.

(A) Population

(B) Median household income

(C) Poverty rate

(D) Ethnicity composition

(E) Unemployment rate

(F) Population composition by age

(G) Population with less than high school education (i.e., percent of individuals aged 25 and over with less than high school degree.

(H) Linguistic isolation rate (i.e., percent of individuals aged 5 and over who speak languages other than English at home or speak English less than very well).

The results of the datasets are presented in Table 1 through Table 5 and Figure 1 through Figure 2. The indicator "minority population" is calculated based on the definition provided in CEQ (1997); that is, the difference between "Total population" and "Not Hispanic or Latino (white alone)."

- Table 1. Reference Area: Environmental Justice Considerations
- Table 2. Analysis Area: Environmental Justice Considerations
- Table 3. Analysis Area: Primary Socioeconomic Indicators
- Table 4. Analysis Area: Additional Socioeconomic Indicators
- Table 5. Analysis Area: Employment by Sector
- Figure 1. Analysis Area: Primary Socioeconomic Indicators
- Figure 2. Analysis Area: Primary Socioeconomic Indicators – Tribal Lands
- Figure 3. Analysis Area: Additional Socioeconomic Indicators
- Figure 4. Analysis Area: Additional Socioeconomic Indicators – Tribal Lands.

Table 1. Reference Area: Environmental Justice Considerations

Reference area	La Paz County	Yuma County	Arizona	United States
Total population in 2020	21,035	211,931	7,174,064	326,569,308
Median household incomes ($) in 2020	34,956	48,790	61,529	64,994
Poverty rates in 2020	22.9%	18.2%	14.1%	12.8%
Minority population in 2020	42.8%	69.4%	45.9%	39.9%

Data source: compiled based on U.S. Census Bureau, 2022. 2016-2020 American Community Survey 5-Year.

Table 2. Analysis Area: Environmental Justice Considerations

A.

Analysis Area	Cibola CDP	La Paz Valley CDP	Quartzsite town	Ehrenberg CDP	Fortuna Foothills CDP	Yuma City
Reference Area	La Paz County	La Paz County	La Paz County	La Paz County	Yuma County	Yuma County
Total population in 2020	286	515	3,756	1,005	29,297	97,428
Median household incomes ($) in 2020	38,113	30,423	17,083	38,393	49,129	52,183
Poverty rates in 2020	11.5%	23.5%	27.0%	26.8%	10.9%	16.7%
Minority population in 2020	45.5%	0.0%	18.5%	23.1%	32.1%	66.7%
EJ community criterion 1: minority population higher than 50%	NO	NO	NO	NO	NO	YES
EJ community criterion 2: minority population higher than 110% of reference area	NO	NO	NO	NO	NO	NO
EJ community criterion 3: poverty rate higher than 50%	NO	NO	NO	NO	NO	NO
EJ community criterion 4: poverty rate higher than 100% of reference area	NO	YES	YES	YES	NO	NO
EJ community criterion 5: tribal community	NO	NO	NO	YES	NO	YES
EJ community (overall)	NO	YES	YES	YES	NO	YES

B.

Analysis Area	Cocopah Indian Reservation Tract 110	Cocopah Indian Reservation Tract 115.01	Fort Yuma Indian Reservation Tract 109.14	Colorado River Indian Reservation Tract 9403
Reference Area	**Yuma County**	**Yuma County**	**Yuma County**	**La Paz County**
Total population in 2020	2,144	2,639	519	4,903
Median household incomes ($) in 2020	45,000	36,326	47,969	32,533
Poverty rates in 2020	25.6%	32.2%	26.8%	38.0%
Minority population in 2020	62.8%	93.0%	59.9%	81.8%
EJ community criterion 1: minority population higher than 50%	YES	YES	YES	YES
EJ community criterion 2: minority population higher than 110% of reference area	NO	YES	NO	YES
EJ community criterion 3: poverty rate higher than 50%	NO	NO	NO	NO
EJ community criterion 4: poverty rate higher than 100% of reference area	YES	YES	YES	YES
EJ community criterion 5: tribal community	YES	YES	YES	YES
EJ community (overall)	YES	YES	YES	YES

Note: "n/a" indicates that the data point is not available.

Data source: compiled based on U.S. Census Bureau, 2022. 2016-2020 American Community Survey 5-Year.

Table 3. Analysis Area: Primary Socioeconomic Indicators

A.

Analysis Area	Cibola CDP	La Paz Valley CDP	Quartzsite Town	Ehrenberg CDP	Fortuna Foothills CDP	Yuma city	La Paz County	Yuma County	Arizona	United States
Total population in 2015	393	469	3,665	979	27,487	93,812	20,335	202,987	6,641,928	316,515,021
Hispanic or Latino in 2015	38.4%	5.3%	4.2%	21.5%	19.6%	58.1%	25.5%	61.1%	30.3%	17.1%
Not Hispanic or Latino (white alone) population in 2015	59.0%	91.0%	95.7%	75.4%	75.9%	35.3%	59.9%	33.5%	56.5%	62.3%
Not Hispanic or Latino (other race) population in 2015	2.5%	3.6%	0.1%	3.2%	4.5%	6.7%	14.6%	5.4%	13.2%	20.5%
Median household incomes ($) in 2015	40,360	42,610	32,628	40,562	55,179	47,805	37,657	44,515	54,907	58,878
Poverty rates in 2015	14.8%	17.1%	10.1%	12.4%	10.3%	18.4%	19.1%	20.7%	18.2%	15.5%
Minority population in 2015	41.0%	9.0%	4.3%	24.6%	24.1%	64.7%	40.1%	66.5%	43.5%	37.7%
Total population in 2020	286	515	3,756	1,005	29,297	97,428	21,035	211,931	7,174,064	326,569,308
Hispanic or Latino population in 2020	40.9%	0.0%	16.9%	19.0%	27.4%	59.2%	27.7%	64.1%	31.5%	18.2%
Not Hispanic or Latino (white alone) population in 2020	54.5%	100.0%	81.5%	76.9%	67.9%	33.3%	57.2%	30.6%	54.1%	60.1%
Not Hispanic or Latino (other race) population in 2020	4.5%	0.0%	1.7%	4.1%	4.6%	7.5%	15.1%	5.3%	14.4%	21.7%
Median household incomes ($) in 2020	38,113	30,423	17,083	38,393	49,129	52,183	34,956	48,790	61,529	64,994
Poverty rates in 2020	11.5%	23.5%	27.0%	26.8%	10.9%	16.7%	22.9%	18.2%	14.1%	12.8%
Minority population in 2020	45.5%	0.0%	18.5%	23.1%	32.1%	66.7%	42.8%	69.4%	45.9%	39.9%

B.

Analysis Area	Cocopah Indian Reservation Tract 110	Cocopah Indian Reservation Tract 115.01	Fort Yuma Indian Reservation Tract 109.14	Colorado River Indian Reservation Tract 9403	Yuma County	La Paz County	Arizona	United States
Total population in 2015	2,120	2,511	494	5,045	202,987	20,335	6,641,928	316,515,021
Hispanic or Latino in 2015	57.1%	63.2%	46.0%	41.6%	61.1%	25.5%	30.3%	17.1%
Not Hispanic or Latino (white alone) population in 2015	32.7%	12.3%	54.0%	17.8%	33.5%	59.9%	56.5%	62.3%
Not Hispanic or Latino (other race) population in 2015	10.1%	24.5%	0.0%	40.6%	5.4%	14.6%	13.2%	20.5%
Median household incomes ($) in 2015	38,240	30,143	30,023	31,043	44,515	37,657	54,907	58,878
Poverty rates in 2015	30.4%	40.2%	15.6%	29.3%	20.7%	19.1%	18.2%	15.5%
Minority population in 2015	67.3%	87.7%	46.0%	82.2%	66.5%	40.1%	43.5%	37.7%
Total population in 2020	2,144	2,639	519	4,903	211,931	21,035	7,174,064	326,569,308
Hispanic or Latino population in 2020	59.2%	69.3%	51.6%	39.6%	64.1%	27.7%	31.5%	18.2%
Not Hispanic or Latino (white alone) population in 2020	37.2%	7.0%	40.1%	18.2%	30.6%	57.2%	54.1%	60.1%
Not Hispanic or Latino (other race) population in 2020	3.5%	23.6%	8.3%	42.2%	5.3%	15.1%	14.4%	21.7%
Median household incomes ($) in 2020	45,000	36,326	47,969	32,533	48,790	34,956	61,529	64,994
Poverty rates in 2020	25.6%	32.2%	26.8%	38.0%	18.2%	22.9%	14.1%	12.8%
Minority population in 2020	62.8%	93.0%	59.9%	81.8%	69.4%	42.8%	45.9%	39.9%

Note: "n/a" indicates that the data point is not available.
Data source: compiled based on U.S. Census Bureau, 2022. 2016-2020 American Community Survey 5-Year Estimates and 2011-2015 American Community Survey 5-Year Estimates. U.S. Bureau of Labor Statistics. 2021. Consumer Price Index Retroactive Series (R-CPI-U-RS), U.S. City Average, All Items.

Table 4. Analysis Area: Additional Socioeconomic Indicators

A.

Analysis Area	Cibola CDP	La Paz Valley CDP	Quartzsite town	Ehrenberg CDP	Fortuna Foothills CDP	Yuma City	La Paz County	Yuma County	Arizona	United States
Unemployment rates in 2015	13.1%	0.0%	1.8%	10.2%	3.6%	7.0%	4.7%	6.9%	5.3%	5.2%
Population under age 5 in 2015	9.9%	0.0%	0.0%	1.7%	5.0%	7.5%	4.6%	7.5%	6.5%	6.3%
Population age 5 to 64 in 2015	75.1%	0.0%	23.4%	86.2%	52.0%	78.6%	60.2%	75.7%	78.1%	79.6%
Population over age 64 in 2015	15.0%	100.0%	76.6%	12.1%	42.9%	13.9%	35.2%	16.9%	15.4%	14.1%
Population with less than high school education in 2015	50.5%	22.4%	19.0%	20.9%	13.4%	22.5%	24.1%	28.9%	14.0%	13.3%
Linguistic isolation rates in 2015	7.9%	0.0%	0.4%	2.6%	3.9%	14.4%	8.0%	21.6%	8.6%	8.0%
Unemployment rates in 2020	0.0%	0.0%	0.0%	10.0%	1.8%	4.7%	3.3%	4.5%	3.5%	3.4%
Population under age 5 in 2020	2.1%	0.0%	2.2%	7.1%	4.5%	7.5%	4.5%	7.1%	6.0%	6.0%
Population age 5 to 64 in 2020	85.0%	8.2%	40.1%	66.8%	50.0%	76.9%	55.7%	73.9%	76.4%	77.9%
Population over 64 in 2020	12.9%	91.8%	57.6%	26.2%	45.5%	15.6%	39.8%	19.1%	17.6%	16.0%
Population with less than high school education in 2020	40.6%	15.9%	18.4%	32.1%	12.9%	18.8%	19.5%	25.4%	12.1%	11.5%
Linguistic isolation rates in 2020	31.8%	0.0%	11.2%	0.0%	5.2%	13.5%	7.1%	18.4%	7.8%	7.8%

B.

Analysis Area	Cocopah Indian Reservation Tract 110	Cocopah Indian Reservation Tract 115.01	Fort Yuma Indian Reservation Tract 109.14	Colorado River Indian Reservation Tract 9403	Yuma County	La Paz County	Arizona	United States
Unemployment rates in 2015	10.8%	7.0%	11.4%	8.4%	6.9%	4.7%	5.3%	5.2%
Population under age 5 in 2015	5.3%	11.4%	7.1%	7.2%	7.5%	4.6%	6.5%	6.3%
Population age 5 to 64 in 2015	70.7%	78.6%	81.6%	78.9%	75.7%	60.2%	78.1%	79.6%
Population over age 64 in 2015	24.1%	10.1%	11.3%	13.9%	16.9%	35.2%	15.4%	14.1%
Population with less than high school education in 2015	34.2%	41.6%	34.7%	33.5%	28.9%	24.1%	14.0%	13.3%
Linguistic isolation rates in 2015	27.2%	29.0%	20.4%	14.5%	21.6%	8.0%	8.6%	8.0%
Unemployment rates in 2020	4.2%	5.3%	2.8%	9.1%	4.5%	3.3%	3.5%	3.4%
Population under age 5 in 2020	10.1%	14.7%	9.4%	8.6%	7.1%	4.5%	6.0%	6.0%
Population age 5 to 64 in 2020	59.3%	76.7%	68.8%	73.1%	73.9%	55.7%	76.4%	77.9%
Population over 64 in 2020	30.6%	8.5%	21.8%	18.2%	19.1%	39.8%	17.6%	16.0%
Population with less than high school education in 2020	29.8%	36.9%	13.9%	27.4%	25.4%	19.5%	12.1%	11.5%
Linguistic isolation rates in 2020	12.2%	25.9%	7.7%	7.8%	18.4%	7.1%	7.8%	7.8%

Note: "n/a" indicates that the data point is not available.
Data source: compiled based on U.S. Census Bureau, 2022. 2016-2020 American Community Survey 5-Year Estimates and 2011-2015 American Community Survey 5-Year Estimates.

Table 5. Analysis Area: Employment by Sector in 2020

A.

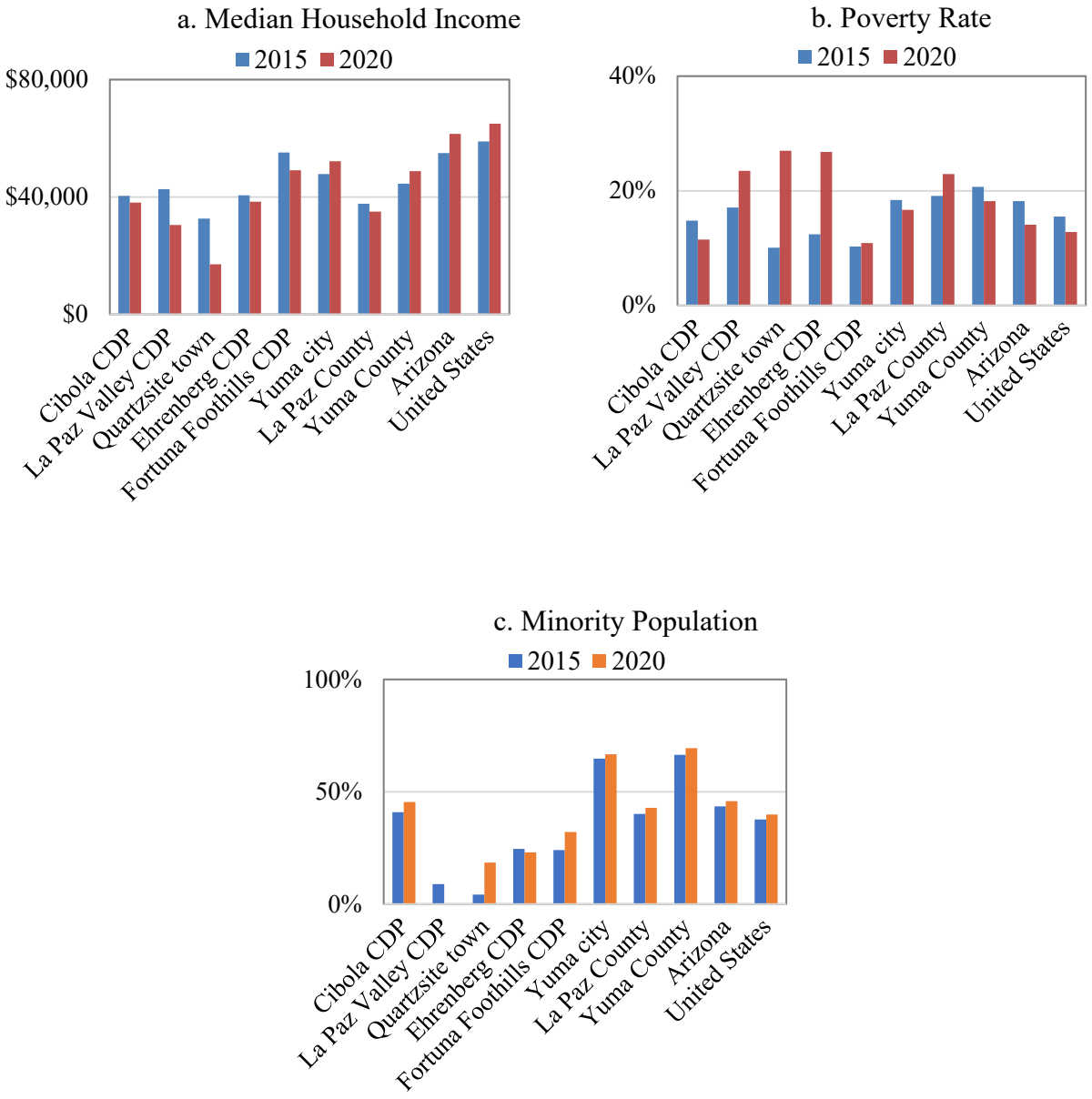
Analysis Area	Cibola CDP	La Paz Valley CDP	Quartzsite town	Ehrenberg CDP	Fortuna Foothills CDP	Yuma City	La Paz County	Yuma County	Arizona	United States
ADM (2015)	0%	n/a	0%	14%	23%	13%	13%	12%	6%	5%
ART (2015)	0%	n/a	47%	5%	5%	13%	18%	11%	11%	10%
CON (2015)	0%	n/a	0%	2%	4%	5%	4%	6%	7%	6%
EDU (2015)	9%	n/a	13%	12%	17%	23%	14%	20%	22%	23%
FIN (2015)	0%	n/a	28%	0%	4%	4%	5%	4%	8%	7%
INFO (2015)	0%	n/a	0%	0%	3%	1%	1%	1%	2%	2%
MANU (2015)	26%	n/a	0%	6%	3%	5%	4%	4%	7%	10%
NAT (2015)	25%	n/a	2%	21%	4%	6%	15%	11%	2%	2%
OTHER (2015)	21%	n/a	0%	10%	10%	5%	5%	5%	5%	5%
SCI (2015)	0%	n/a	10%	2%	8%	10%	5%	9%	12%	11%
TRADE (2015)	12%	n/a	0%	21%	16%	14%	12%	15%	15%	14%
TRANS (2015)	7%	n/a	0%	7%	5%	3%	5%	4%	5%	5%
ADM (2020)	12%	0%	0%	9%	13%	11%	11%	9%	5%	5%
ART (2020)	20%	34%	0%	15%	11%	11%	18%	11%	10%	9%
CON (2020)	0%	0%	0%	10%	5%	5%	6%	6%	7%	7%
EDU (2020)	0%	0%	7%	21%	16%	24%	15%	21%	22%	23%
FIN (2020)	17%	0%	0%	0%	4%	5%	4%	4%	9%	7%
INFO (2020)	0%	0%	0%	0%	1%	1%	1%	1%	2%	2%
MANU (2020)	0%	0%	5%	5%	7%	4%	3%	5%	7%	10%
NAT (2020)	40%	0%	0%	2%	5%	4%	9%	10%	1%	2%
OTHER (2020)	0%	0%	0%	0%	4%	5%	2%	4%	5%	5%
SCI (2020)	0%	0%	10%	0%	13%	8%	5%	8%	13%	12%
TRADE (2020)	11%	0%	58%	34%	16%	17%	20%	16%	14%	14%
TRANS (2020)	0%	66%	20%	4%	5%	5%	6%	5%	6%	6%

B.

Analysis Area	Cocopah Indian Reservation Tract 110	Cocopah Indian Reservation Tract 115.01	Fort Yuma Indian Reservation Tract 109.14	Colorado River Indian Reservation Tract 9403	Yuma County	La Paz County	Arizona	United States
ADM (2015)	6%	10%	9%	14%	12%	13%	6%	5%
ART (2015)	13%	15%	3%	18%	11%	18%	11%	10%
CON (2015)	9%	9%	8%	6%	6%	4%	7%	6%
EDU (2015)	24%	18%	14%	11%	20%	14%	22%	23%
FIN (2015)	3%	1%	0%	2%	4%	5%	8%	7%
INFO (2015)	2%	1%	0%	1%	1%	1%	2%	2%
MANU (2015)	6%	1%	0%	6%	4%	4%	7%	10%
NAT (2015)	9%	19%	10%	22%	11%	15%	2%	2%
OTHER (2015)	4%	5%	26%	2%	5%	5%	5%	5%
SCI (2015)	5%	8%	6%	5%	9%	5%	12%	11%
TRADE (2015)	13%	11%	17%	10%	15%	12%	15%	14%
TRANS (2015)	7%	3%	8%	4%	4%	5%	5%	5%
ADM (2020)	13%	7%	9%	10%	9%	11%	5%	5%
ART (2020)	16%	9%	17%	25%	11%	18%	10%	9%
CON (2020)	8%	5%	6%	6%	6%	6%	7%	7%
EDU (2020)	16%	21%	15%	16%	21%	15%	22%	23%
FIN (2020)	7%	2%	0%	0%	4%	4%	9%	7%
INFO (2020)	0%	2%	0%	1%	1%	1%	2%	2%
MANU (2020)	1%	4%	1%	3%	5%	3%	7%	10%
NAT (2020)	9%	34%	24%	11%	10%	9%	1%	2%
OTHER (2020)	0%	4%	0%	4%	4%	2%	5%	5%
SCI (2020)	3%	7%	9%	6%	8%	5%	13%	12%
TRADE (2020)	12%	6%	6%	16%	16%	20%	14%	14%
TRANS (2020)	16%	0%	15%	2%	5%	6%	6%	6%

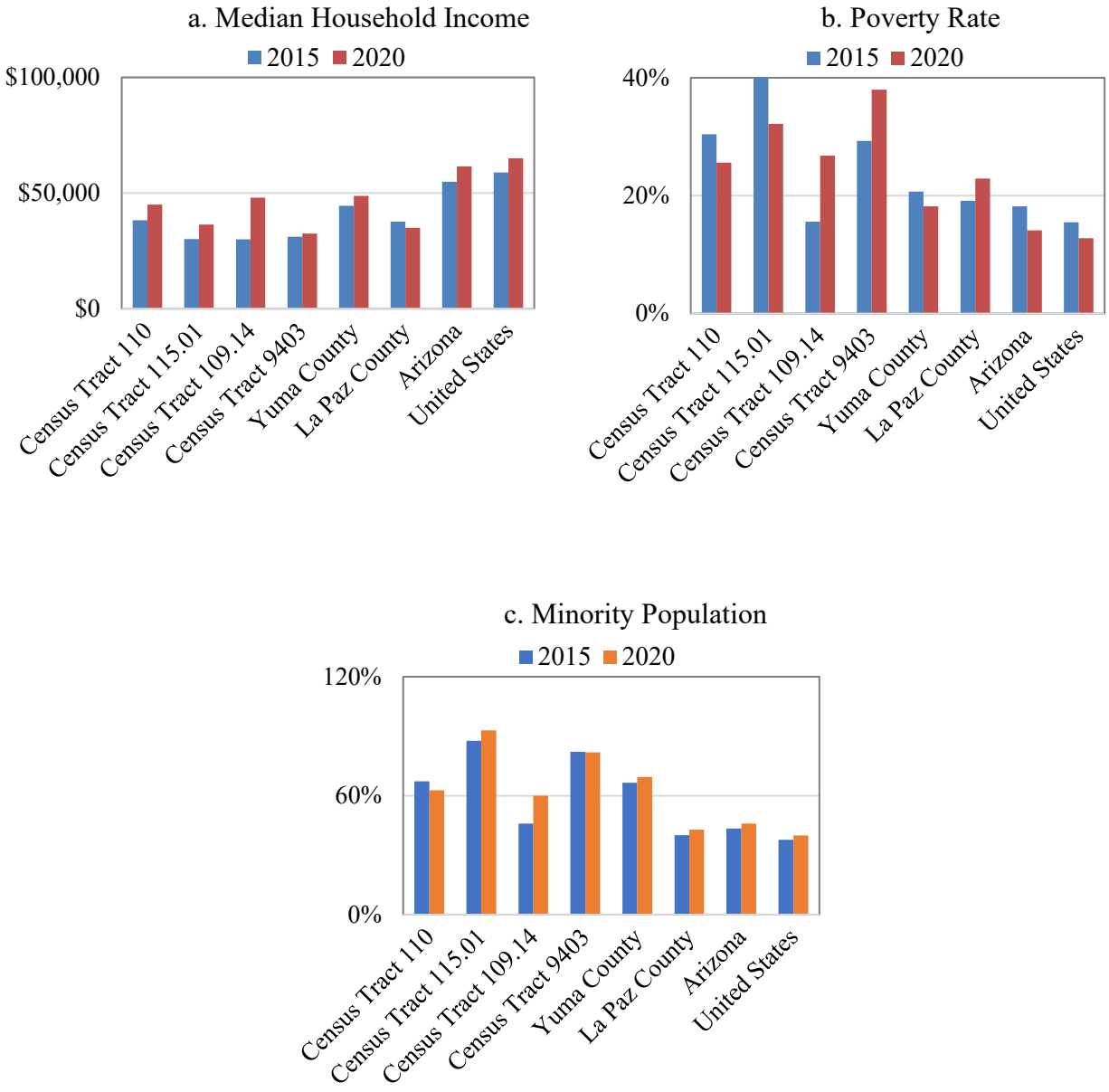
Notes: ADM – Public administration and government; ART – Arts, entertainment, recreation, accommodation and food services; CON – Construction; EDU – Educational services, health care and social assistance; FIN – Finance, insurance, real estate, rental and leasing; INFO – Information; MAN – Manufacturing; NAT – Natural resources, agriculture and mining; OTHER – Other services, except public administration; SCI – Professional, scientific, technical and managerial services; TRADE – Wholesale trade and retail trade; TRANS – Transportation and warehousing and utilities; highlights in orange color, blue color and green color represent the top 1 through top 3 employment by population, respectively; "n/a" indicates that the data point is not available.
Data source: compiled based on U.S. Census Bureau, 2022. 2016-2020 American Community Survey 5-Year Estimates and 2011-2015 American Community Survey 5-Year Estimates.

Figure 1. Analysis Area: Primary Socioeconomic Indicators



Data source: compiled based on USCB, 2022a, 2016-2020 American Community Survey 5-Year Estimates and 2011-2015 American Community Survey 5-Year Estimates; U.S. Bureau of Labor Statistics, 2021, Consumer Price Index Retroactive Series (R-CPI-U-RS), U.S. City Average, All Items.

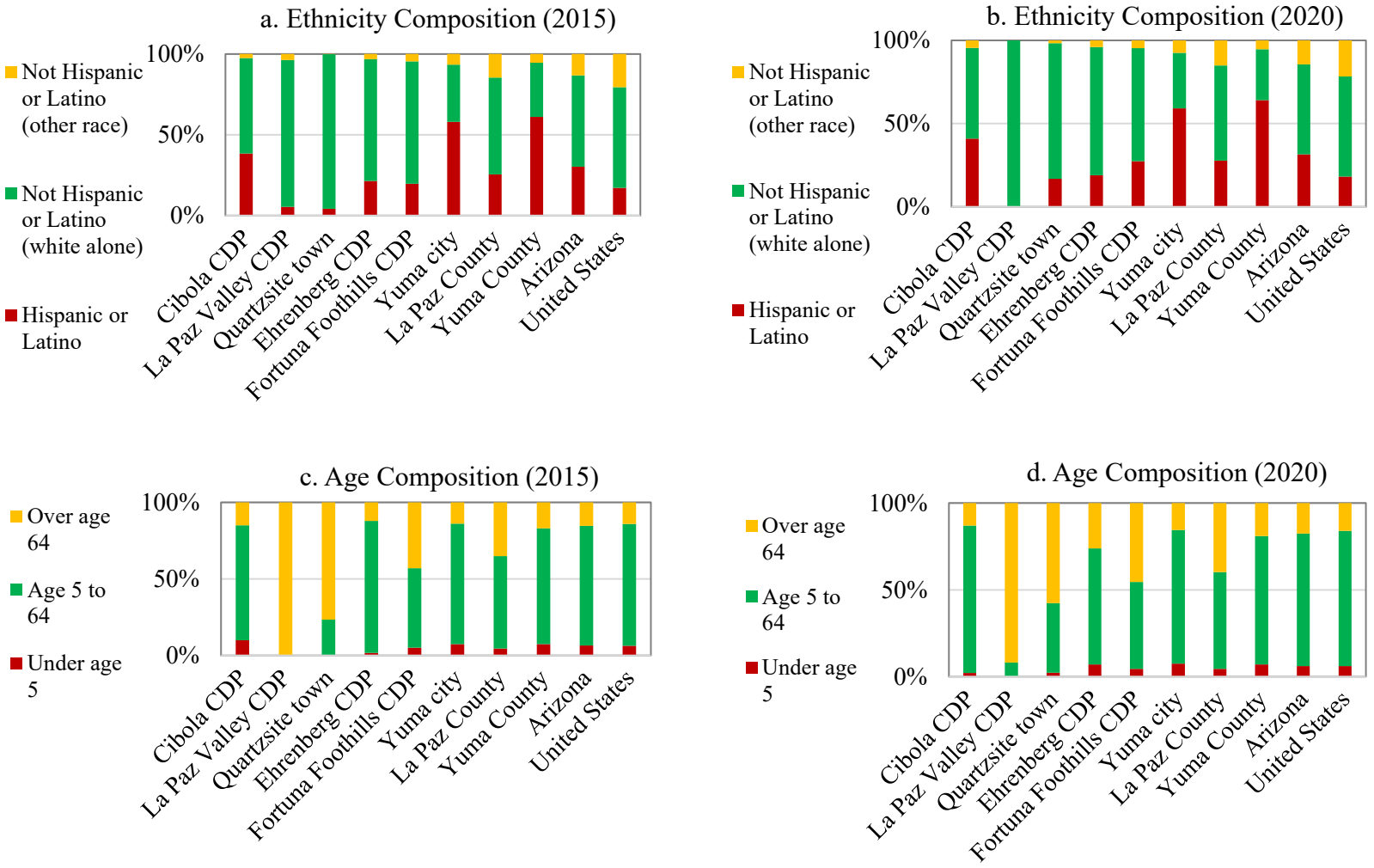
Figure 2. Analysis Area: Primary Socioeconomic Indicators – Tribal Tracts

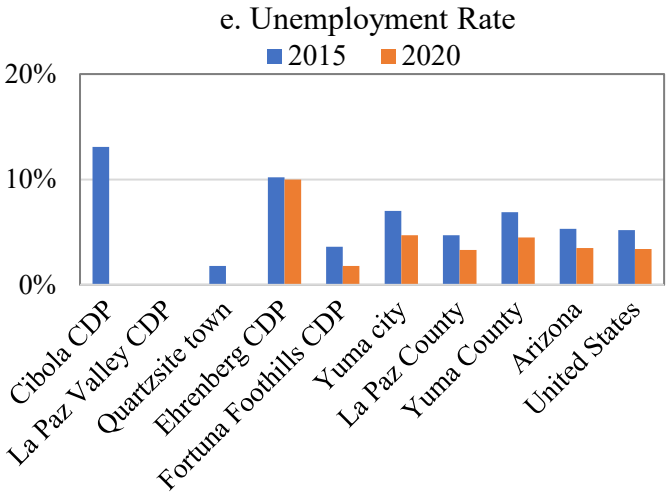


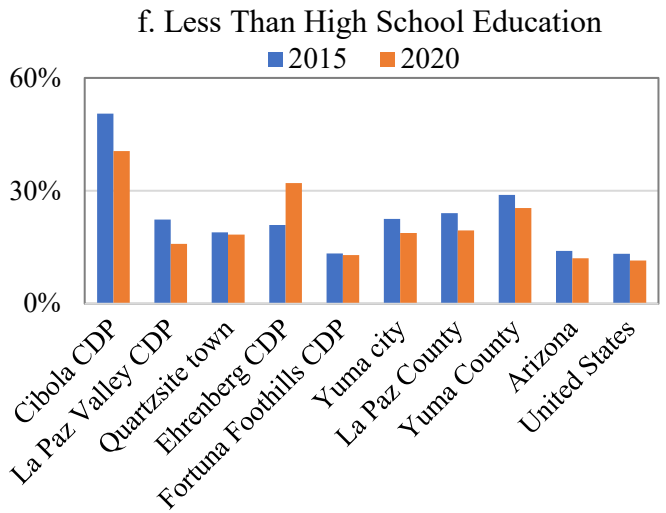
Notes: Census Tract 110 – Cocopah Indian Reservation, Census Tract 115.01 – Cocopah Indian Reservation, Census Tract 109.14 – Fort Yuma Indian Reservation, Census Tract 9403 – Colorado River Indian Reservation

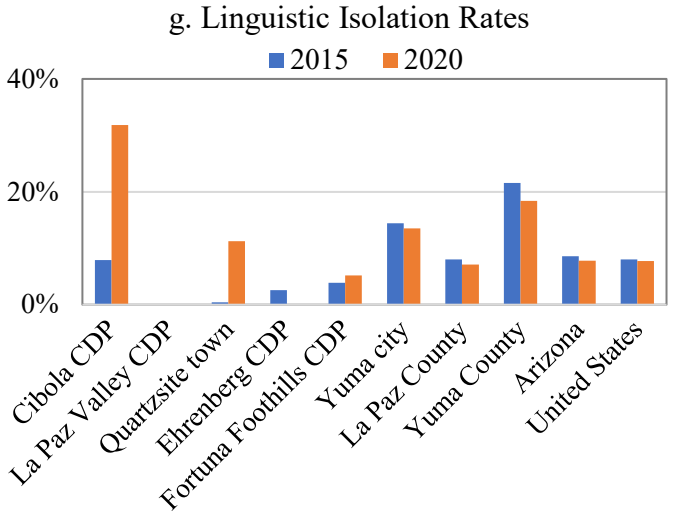
Data source: compiled based on USCB, 2022a, 2016-2020 American Community Survey 5-Year Estimates and 2011-2015 American Community Survey 5-Year Estimates; U.S. Bureau of Labor Statistics, 2021, Consumer Price Index Retroactive Series (R-CPI-U-RS), U.S. City Average, All Items.

Figure 3. Analysis Area: Additional Socioeconomic Indicators



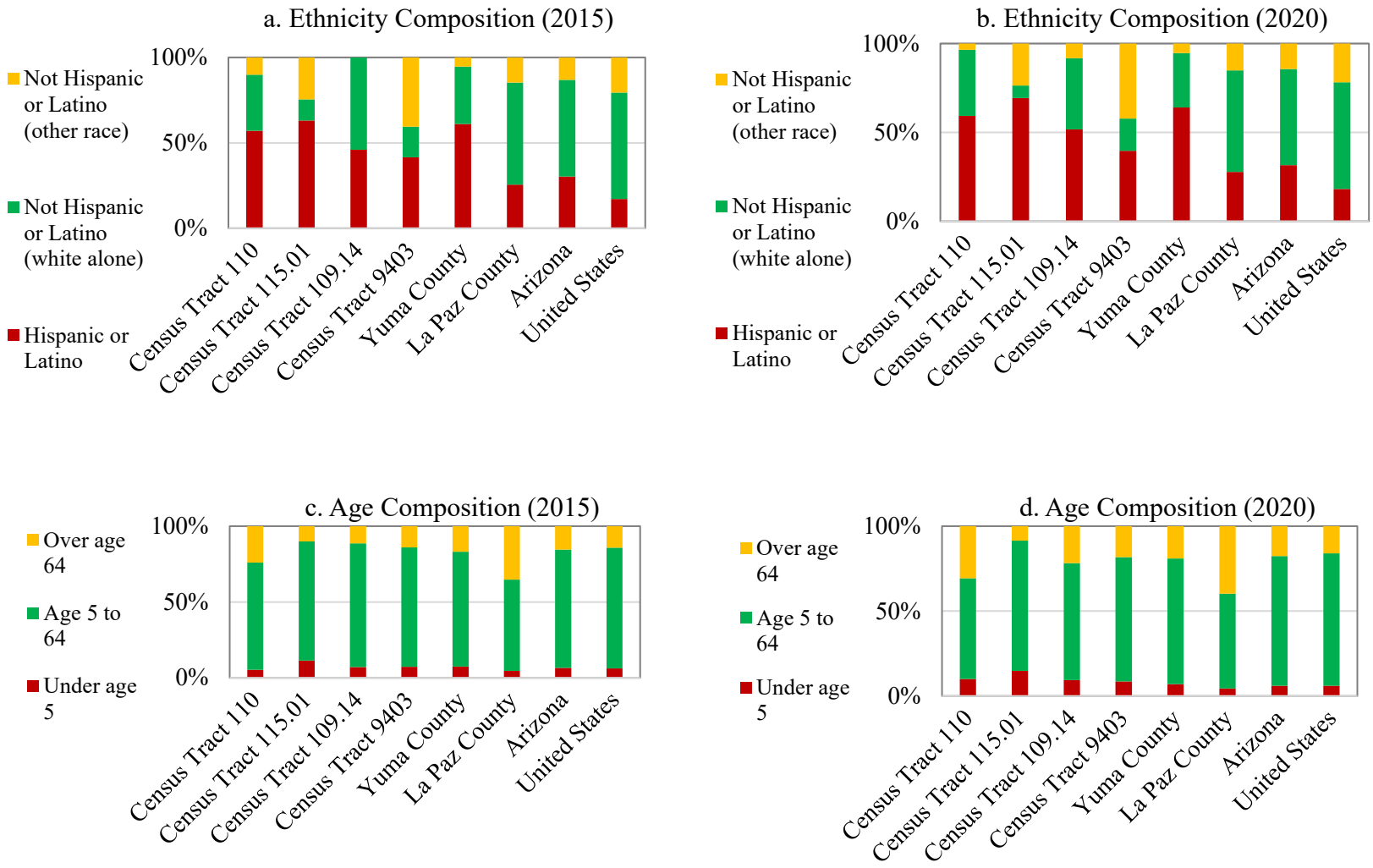


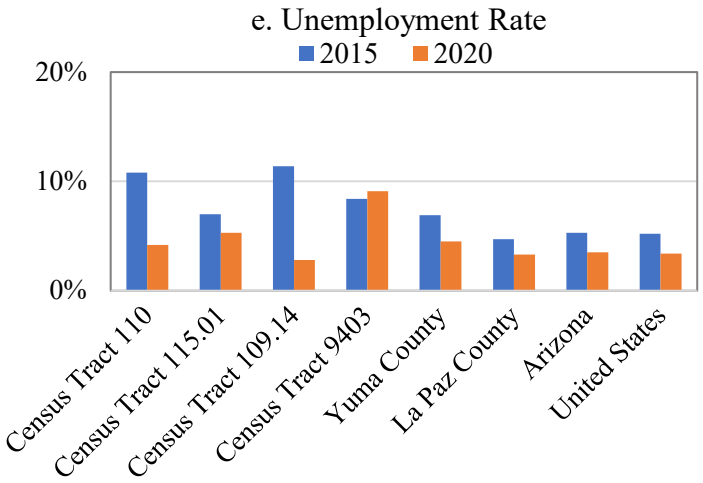


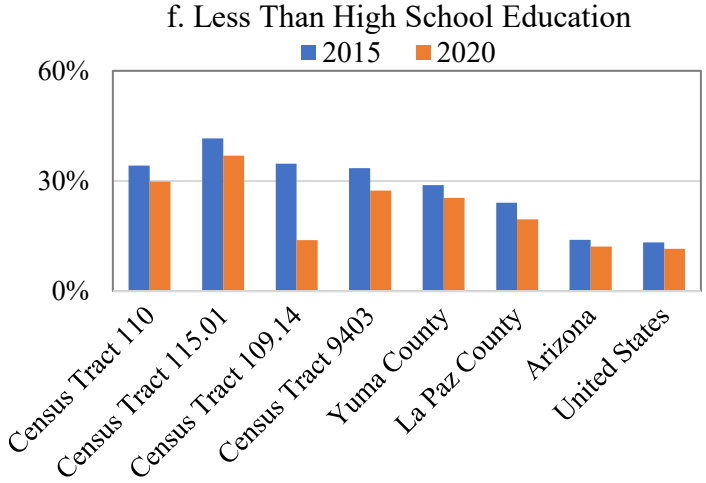


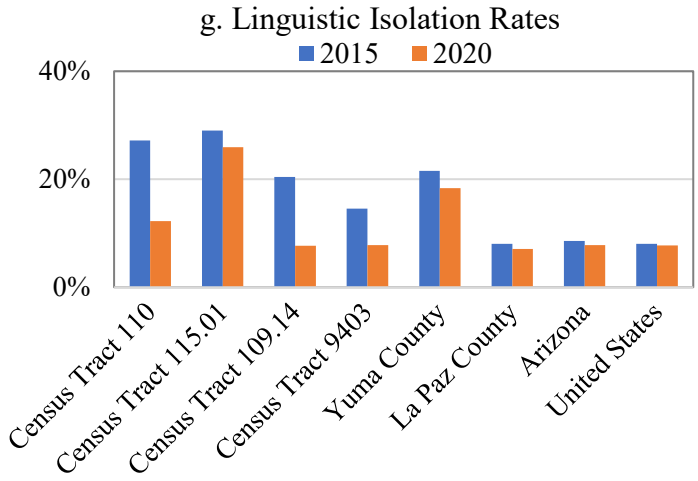
Data source: compiled based on USCB, 2022a, 2016-2020 American Community Survey 5-Year Estimates and 2011-2015 American Community Survey 5-Year Estimates

Figure 4. Analysis Area: Additional Socioeconomic Indicators – Tribal Lands









Notes: Census Tract 110 – Cocopah Indian Reservation, Census Tract 115.01 – Cocopah Indian Reservation, Census Tract 109.14 – Fort Yuma Indian Reservation, Census Tract 9403 – Colorado River Indian Reservation

Data source: compiled based on USCB, 2022a, 2016-2020 American Community Survey 5-Year Estimates and 2011-2015 American Community Survey 5-Year Estimates

Findings, Insights, and Conclusions

The data compiled, analyzed and presented in Map 1, Table 1, Table 2A, and Figure 1 indicate that, for the recent year 2020, four out of the six communities within a radius of 45 miles from the project area should be considered as environmental justice communities of concern (Table 2A).

- (2) La Paz Valley CDP based on EJ community criterion 4 (poverty rate higher than 100% of reference area)
- (3) Quartzsite town based on EJ community criterion 4 (poverty rate higher than 100% of reference area)
- (4) Ehrenberg CDP based on EJ community criterion 4 (poverty rate higher than 100% of reference area) and criterion 5 (tribal community)
- (6) Yuma City based on criterion 1 (minority population higher than 50%) and criterion 5 (tribal community).

In addition, Table 1, Table 2B, and Figure 2 indicate that, for the recent year 2020, all four tribal communities surrounding the project area should be considered as environmental justice communities of concern (Table 2B).

- (7) Cocopah Indian Reservation Tract 110 based on EJ community criterion 1 (minority population higher than 50%), EJ community criterion 4 (poverty rate higher than 100% of reference area), and EJ community criterion 5 (tribal community)
- (8) Cocopah Indian Reservation Tract 115.01 based on EJ community criterion 1 (minority population higher than 50%), EJ community criterion 2 (minority population higher than 110% of reference area), EJ community criterion 4 (poverty rate higher than 100% of reference area), and EJ community criterion 5 (tribal community)
- (9) Fort Yuma Indian Reservation Tract 109.14 based on EJ community criterion 1 (minority population higher than 50%), EJ community criterion 4 (poverty rate higher than 100% of reference area), and EJ community criterion 5 (tribal community)
- (10) Colorado River Indian Reservation Tract 9403 based on EJ community criterion 1 (minority population higher than 50%), EJ community criterion 2 (minority population higher than 110% of reference area), EJ community criterion 4 (poverty rate higher than 100% of reference area), and EJ community criterion 5 (tribal community).

The data compiled, analyzed, and presented in Map 1, Table 3A, Table 4A, Table 5A, and Figure 3 indicate the following key socioeconomic characteristics of the analysis area in the year 2015 and the year 2020:

- (2) La Paz Valley CDP, (3) Quartzsite town, and (4) Ehrenberg CDP have slightly higher poverty rates in 2020 (23.5%, 27% and 26.8% respectively) than La Paz County (22.9%), the reference area in which they are located.
- In 2020, Yuma City had a Minority population of 66.7%.
- (4) Ehrenberg CDP had a much higher unemployment rate in 2020 (10%) than the county and state in which it is located; that is, approximately 3 times higher than La Paz County (3.3%) and the state of Arizona (3.5%).

- In terms of preliminary education levels (that is less than high school education), (1) Cibola CDP has a remarkably higher rate in 2020 (40.6%) than those of the county and state in which it is located; that is, approximately twice and three times as those of La Paz County (19.5%) and the State of Arizona (12.1%).
- (1) Cibola CDP had a linguistic isolation rate (31.8%) that was approximately 4.5 times higher than La Paz County (7.1%) and the State of Arizona (7.8%). At 11.2% (3) Quartzsite town also had a higher linguistic isolation rate than the reference community.
- In terms of employed labor forces by sector in 2020, the six communities overall have major employment in four sectors: (A) wholesale trade and retail trade, (B) transportation, warehousing, and utilities, (C) arts, entertainment, recreation, accommodation, and food services, and (D) educational services, health care and social assistance.
- In terms of the changes of employed labor forces by sector from 2015 to 2020, the (B) transportation, warehousing and utilities sector increased by 450% and (A) wholesale trade and retail trade increased by over 200%. There was also an increase in (C) arts, entertainment, recreation, accommodation, and food services, but a slight decrease in (D) educational services, health care and social assistance.

In addition, the data compiled, analyzed, and presented in Table 3B, Table 4B, Table 5B, and Figure 4 indicate the following key socioeconomic characteristics of the Tribal communities within the analysis area in the year 2015 and the year 2020:

- (7) Cocopah Indian Reservation Tract 110, (8) Cocopah Indian Reservation Tract 115.01, (9) Fort Yuma Indian Reservation Tract 109.14, and (10) Colorado River Indian Reservation Tract 9403 have much higher poverty rates in 2020 (25.6%, 32,2%, 26.8%, and 38.0% respectively) than the reference area in which they are located, that is the poverty rates in these communities range from approximately 40% to 77% higher than the reference area in which they are located.
- In 2020, all four communities had minority populations that greatly exceed 50%.
- (10) Colorado River Indian Reservation Tract 9403 had a much higher unemployment rate in 2020 (9.1%) than the county and state in which it is located; that is, approximately 3 times higher than La Paz County (3.3%) and the state of Arizona (3.5%). (8) Cocopah Indian Reservation Tract 115.01 had a slightly higher unemployment rate in 2020 (5.3%) than the county and state in which it is located.
- In terms of preliminary education levels (that is less than high school education), (7) Cocopah Indian Reservation Tract 110, (8) Cocopah Indian Reservation Tract 115.01, and (10) Colorado River Indian Reservation Tract 9403 had higher rates in 2020 (29.8%, 36.9% and 27.4% respectively) than those of the county and state in which they are located.
- (2) Cocopah Indian Reservation Tract 115.01 had and (10) Colorado River Indian Reservation Tract 9403 had linguistic isolation rates (25.9% and 7.8% respectively) that exceeded the reference communities in which they are located.
- In terms of employed labor forces by sector in 2020, the four communities overall have major employment in four sectors: (A) natural resources, agriculture and mining, (B) educational services, health care and social assistance (C) arts, entertainment, recreation, accommodation, and food services, and (D) wholesale trade and retail trade.
- In terms of the changes of employed labor forces by sector from 2015 to 2020, the (A) natural resources sector increased by approximately 30% and (C) arts, entertainment, recreation, accommodation, and food services sector increased by approximately 40%. There was approximately a 20% decrease in increase in (D) wholesale trade and retail trade, but the (B) educational services, health care and social assistance sector remained the same.

These combinations of socioeconomic characteristics suggest that the following communities could be identified with priority concerns for benefiting from such programs that have the potential to enhance specific aspects of socioeconomic well-being:

- The communities in (2) La Paz Valley CDP, (3) Quartzsite town, (4) Ehrenberg CDP (7) Cocopah Indian Reservation Tract 110, (8) Cocopah Indian Reservation Tract 115.01, (9) Fort Yuma Indian Reservation Tract 109.14, and (10) Colorado River Indian Reservation Tract 9403 could be identified as having priority concerns that would benefit from programs that have the potential to increase income levels, and/or reduce poverty levels, and/or reduce unemployment levels.
- The communities in (1) Cibola CDP, (3) Quartzsite town (7) Cocopah Indian Reservation Tract 110, (8) Cocopah Indian Reservation Tract 115.01, and (10) Colorado River Indian Reservation Tract 9403 could be identified as having priority concerns that would benefit from programs that have the potential to improve education attainment level and/or linguistic connection.

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APPENDIX R.
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The individuals listed below contributed to the overall effort in the preparation of this Legislative Environmental Impact Statement (LEIS). The U.S. Army and U.S. Department of the Interior, Bureau of Land Management worked cooperatively to review and provide input on the LEIS chapters, appendices, and supporting documents.

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