

RECLAMATION

Managing Water in the West

Planet Ranch Conservation Area

Final Draft Environmental Assessment
Document No. LC-16-19

Planet Ranch, Arizona



U.S. Department of the Interior
Bureau of Reclamation
Lower Colorado Region
Boulder City, Nevada



U.S. Department of the Interior
Bureau of Land Management
Colorado River District
Lake Havasu City, Arizona

December 2017

Mission Statements

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

Cover Photo: Overview photo of Planet Ranch taken by the Multi-Species Conservation Program.

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List of Acronyms or Abbreviations

Acronym or Abbreviation	Term
2005 Biological Opinion	Biological and Conference Opinion on the Lower Colorado River Multi-Species Conservation Program, Arizona, California and Nevada
2011 Class I	Class I Cultural Resources Records Review for the 3,418-acre Planet Ranch Property for the U.S. Bureau of Reclamation-Lower Colorado Regional Office, La Paz and Mohave Counties, Arizona
Act	Bill Williams River Water Rights Settlement Act of 2014
ADEQ	Arizona Department of Environmental Quality
AFY	Acre-feet per Year
AGFC	Arizona Game and Fish Commission
AGFD	Arizona Game and Fish Department
ARMCO	Arizona Ranch and Metals Company
ASM	Arizona State Museum
Assessment	Phase I, II, and III Environmental Site Assessment
Bill Williams River NWR	Bill Williams River National Wildlife Refuge
BLM	Bureau of Land Management
BMP	Best Management Practices
BWR	Bill Williams River
CAA	Federal Clean Air Act, as amended
CAP	Central Arizona Project
CEQ	Council of Environmental Quality
CEQ Regulations	Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA
cfs	Cubic Feet Per Second
City	City of Scottsdale
CM	Conservation Measures
dBA	A-weighted decibels
DF	Design Features
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FONSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
Freeport	Freeport Minerals Corporation
GHG	Greenhouse Gases
HCP	Habitat Conservation Plan

Acronym or Abbreviation	Term
ITA	Indian Trust Assets
LCR	Lower Colorado River
LCR MSCP	Lower Colorado River Multi-Species Conservation Program
LCR MSCP FEIS/EIR	Lower Colorado River Multi-Species Conservation Plan, Final Programmatic Environmental Impact Statement/Environmental Impact Report
Lease	Lease for 3,418 acres of land and 5,549 AFY of associated water rights within Planet Ranch
Lease Area	3,418 acres of land included in Lease
MM	Minimization Measures
mph	Miles per Hour
MSCP	Multi-Species Conservation Program
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act of 1969, as amended
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
OHV	Off-Highway Vehicles
PM	Particulate Matter
Project Area	Planet Ranch Conservation Area Backwater Project
Proposed Action	Planet Ranch Conservation Area Backwater Project
RDA	Rural Development Area
Reclamation	Bureau of Reclamation
Review area	One-mile review buffer around Lease area studied in 2011 Class I
River	Bill Williams River
ROD	Record of Decision
SIP	State Implementation Plan
SWFL	Southwest Willow Flycatcher
TCP	Traditional Cultural Property
Tribe	Hualapai Tribe
U.S.	United States of America
USACE	U.S. Army Corps of Engineers
USBR	U.S. Bureau of Reclamation
YBCU	Yellow-billed Cuckoo

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prepared by

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December 2017

1.0 Purpose of and Need for the Action

1.1 Introduction

This Environmental Assessment (EA) was prepared by the Bureau of Reclamation as the lead Federal agency and the Bureau of Land Management (BLM) as a Cooperating Agency, in compliance with the National Environmental Policy Act (NEPA) and the Council of Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA (Council of Environmental Quality (CEQ) Regulations). The purpose of this EA is to evaluate the potential impacts of developing the Planet Ranch Conservation Area (Proposed Action) on the physical and human environment and determine if the impacts would be significant, warranting the preparation of an Environmental Impact Statement (EIS).

1.2 Background to the Purpose and Need

1.2.1 Lower Colorado River Multi-Species Conservation Program

The Lower Colorado River Multi-Species Conservation Program (LCR MSCP) is a 50-year (2005 to 2055) multi-stakeholder Federal and non-Federal partnership created to balance the use of Lower Colorado River (LCR) water resources with the conservation of native species and their habitats in compliance with the Endangered Species Act (ESA). The program is cooperatively funded by the Federal government and the states of Arizona, California, and Nevada including permittees within these states. This long-term effort works toward the recovery of listed species, and protect and maintain wildlife habitat along the LCR from the full pool elevation of Lake Mead to the Southerly International Boundary with Mexico through the implementation of a Habitat Conservation Plan (HCP).

The LCR MSCP's purpose and need/objectives are to conserve habitat and work towards the recovery of listed and included species within the 100-year floodplain of the LCR pursuant to the ESA to develop and implement a plan that would:

- Conserve habitat, recover threatened and endangered species, and reduce the likelihood of additional species being listed;
- Accommodate present water diversions and power production, and optimize opportunities for future water and power development, consistent with existing laws; and
- Provide the basis for incidental take authorizations.

Reclamation is responsible for implementing the LCR MSCP over the 50-year term of the program. The LCR MSCP is governed by a Steering Committee, which is an unincorporated association of more than 50 water and power users, State, Federal, local entities, and tribes. The

Steering Committee works with Reclamation to coordinate the implementation of the LCR MSCP.

A major component of the LCR MSCP is the creation and management of habitat to benefit 26 covered species. Habitat creation goals include the establishment of a total of 8,132 acres of habitat including:

- 5,940 acres of cottonwood-willow (*Populus fremontii*)
- 1,320 acres of honey mesquite (*Prosopis glandulosa*)
- 512 acres of marsh
- 360 acres of backwater

The following documents provide the framework and implementation of the LCR MSCP; they can be accessed at <http://www.lcrmscp.gov/>:

- Lower Colorado River Multi-Species Conservation Program, Final Programmatic Environmental Impact Statement/Environmental Impact Report (LCR MSCP FEIS/EIR) (LCR MSCP 2004b)
- Record of Decision, Lower Colorado River Multi Species Conservation Plan;
- Final HCP
- Final Biological Assessment
- Biological and Conference Opinion on the Lower Colorado River Multi-Species Conservation Program, Arizona, California and Nevada (LCR MSCP 2005a)
- Section 10 Endangered & Threatened Species
- LCR MSCP Funding and Management Agreement; and
- LCR MSCP Implementing Agreement (LCR MSCP 2005b).

The LCR MSCP FEIS/EIR is a programmatic document that identifies alternatives and the potential range of impacts associated with the implementation of the LCR MSCP and is intended to serve as the basis for future project-specific NEPA documents such as the Proposed Action described in this EA. The LCR MSCP FEIS/EIR included analysis of the lower Bill Williams River (River) as a potential location for implementation of the LCR MSCP Conservation Plan in the “Off-Site Conservation Area Alternative”. The LCR MSCP FEIS/EIR resulted in the *Record of Decision, Lower Colorado River Multi-Species Conservation Plan (ROD)*, which describes the selected alternative for the LCR MSCP (Figures 1 and 2). The selected alternative incorporated the “Off-Site Conservation Area Alternative”, thus identifying the lower Bill Williams River, specifically Planet Ranch and Bill Williams River National Wildlife Refuge (Bill Williams River NWR), as potential locations for implementation of the LCR MSCP. Planet Ranch is discussed further below.

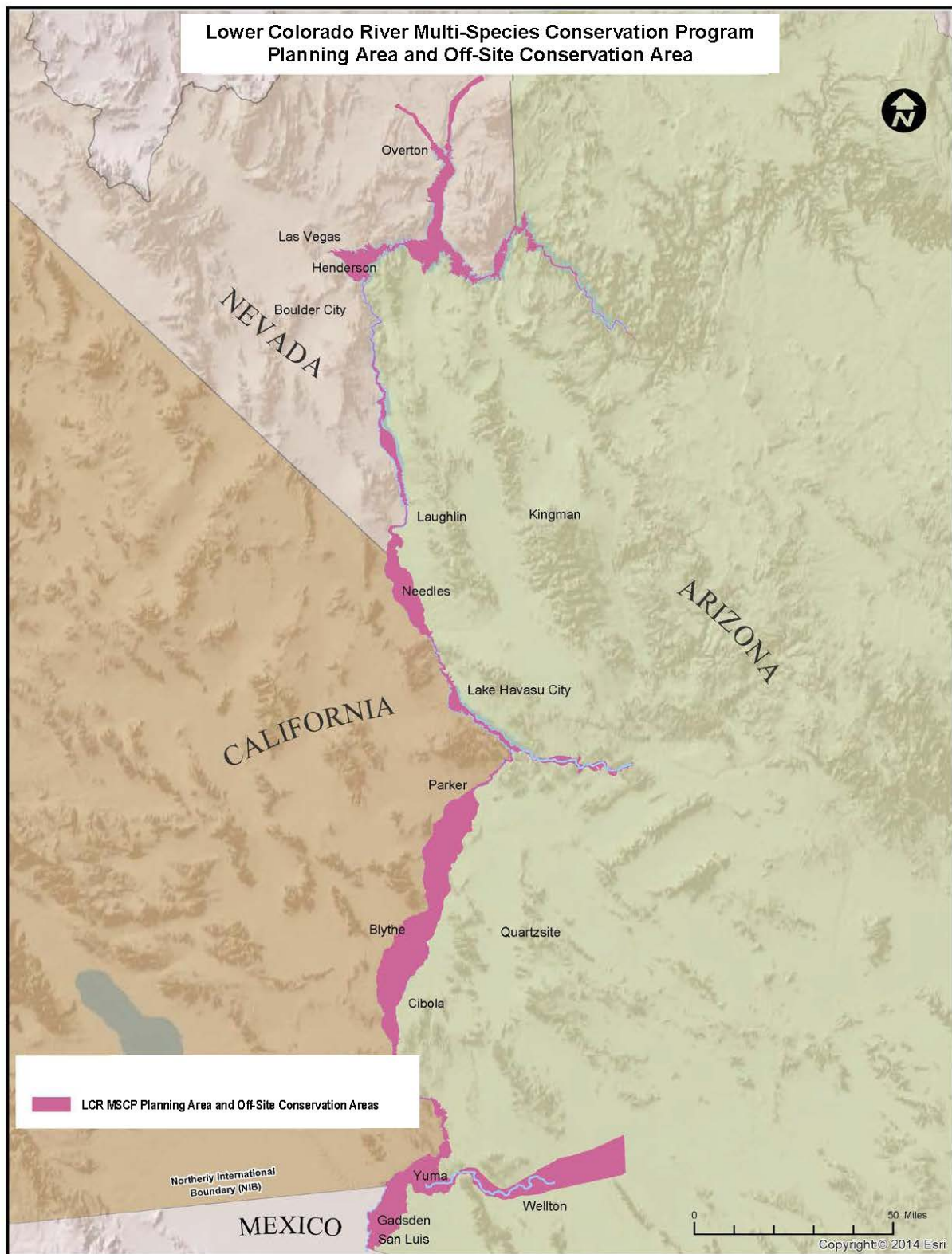


Figure 1. LCR MSCP Planning Area and Off-Site Conservation Areas.

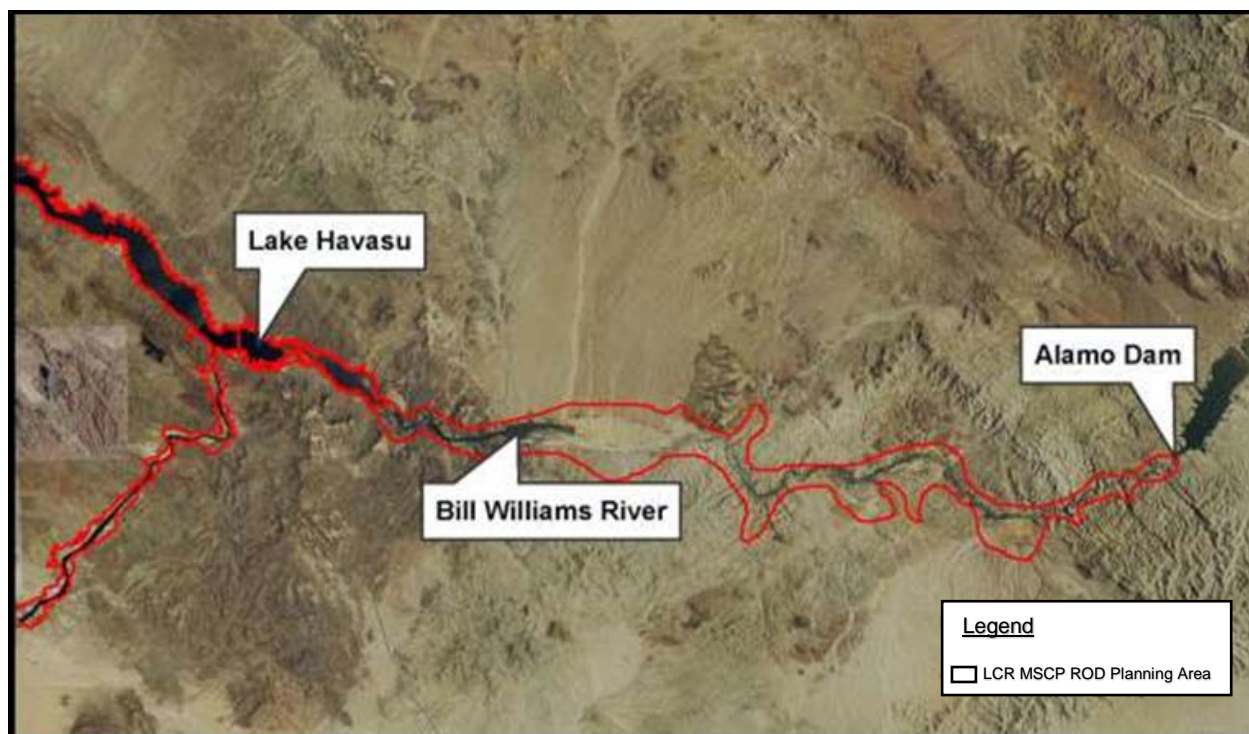


Figure 2. LCR MSCP ROD Planning Area on the Bill Williams River

1.2.2 Project Area Background

1.2.2.1 Planet Ranch, Arizona

Planet Ranch straddles the Bill Williams River, a tributary to the Colorado River in western Arizona, approximately 20 miles east of Parker, Arizona, in Mojave and LaPaz Counties. Planet Ranch is directly upstream of and shares a boundary with the Bill Williams River NWR (Figure 3). Planet Ranch occupies 8,389 acres on a wide alluvial valley, the Planet Valley, in the northern part of Reach 4 of the LCR MSCP planning area (Figure 3).

The entire Planet Ranch property was previously owned by Freeport Minerals Corporation (Freeport). The Secretary of the Interior entered into the *Big Sandy River-Planet Ranch Water Rights Settlement Agreement* (Big Sandy River-Planet Ranch Agreement) as authorized and directed by the *Bill Williams River Water Rights Settlement Act of 2014* (Act). One of the purposes of the Act and the Big Sandy River-Planet Ranch Agreement was Reclamation's acquisition of a lease from Freeport for 3,418 acres of land and 5,549 acre-feet per year (AFY) of associated water rights within Planet Ranch (Lease Area) to maintain habitat and implement future restoration projects toward achieving the goals of the LCR MSCP. Upon execution of the Lease (Contract No. 09-70-90-L0704), Freeport donated the land and water rights to the Arizona Game and Fish Commission (AGFC) through a warranty deed. Freeport's interests as lessor of the property were then assigned to AGFC, making AGFC the lessor and Reclamation the Lessee. The Proposed Action is in effect for the life of Lease. Freeport retains ownership of the remaining 4,971 upland acres of Planet Ranch.

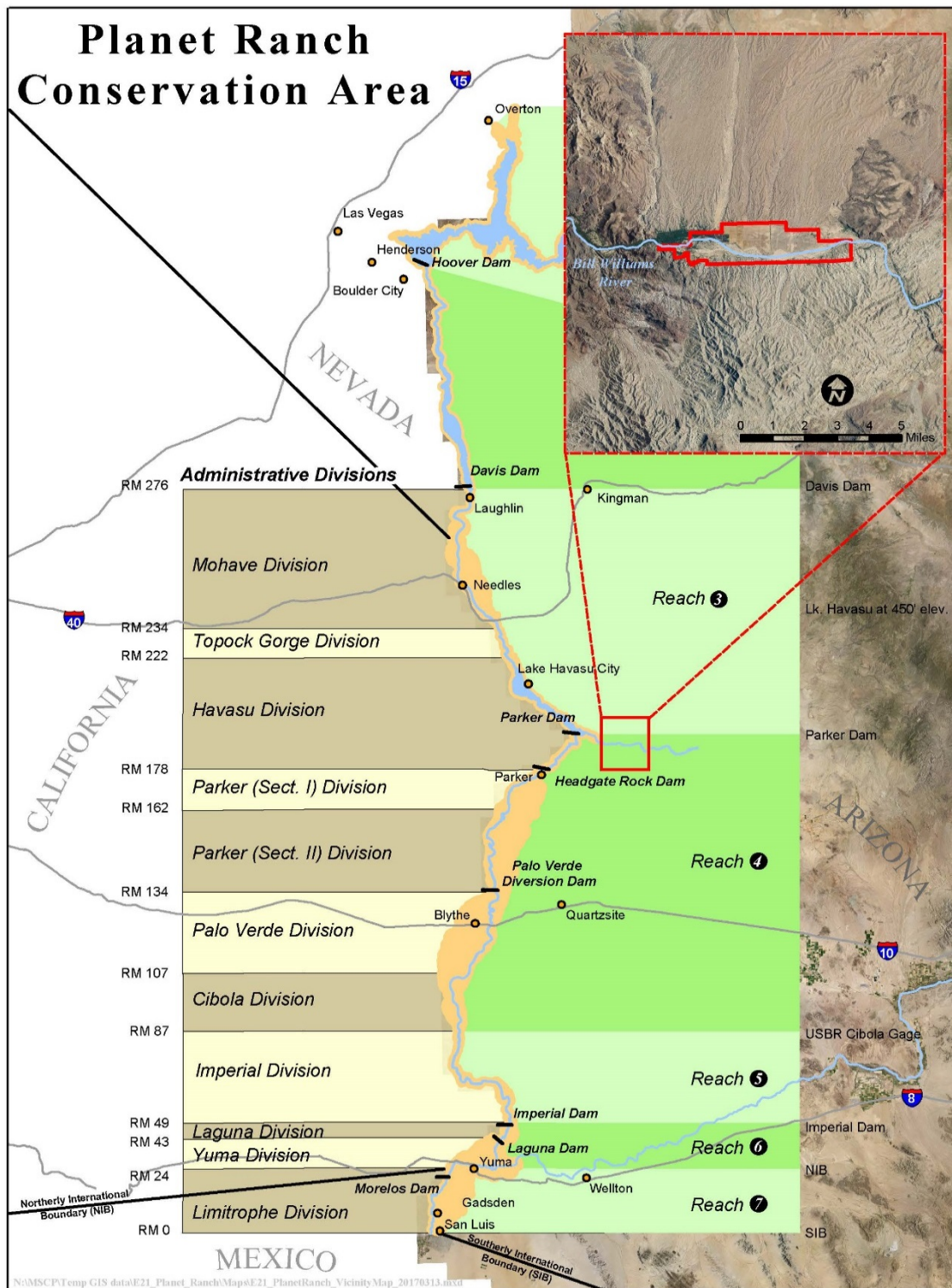


Figure 3. LCR MSCP Planning Area and Vicinity Map for the Planet Ranch and Bill Williams River National Wildlife Refuge.

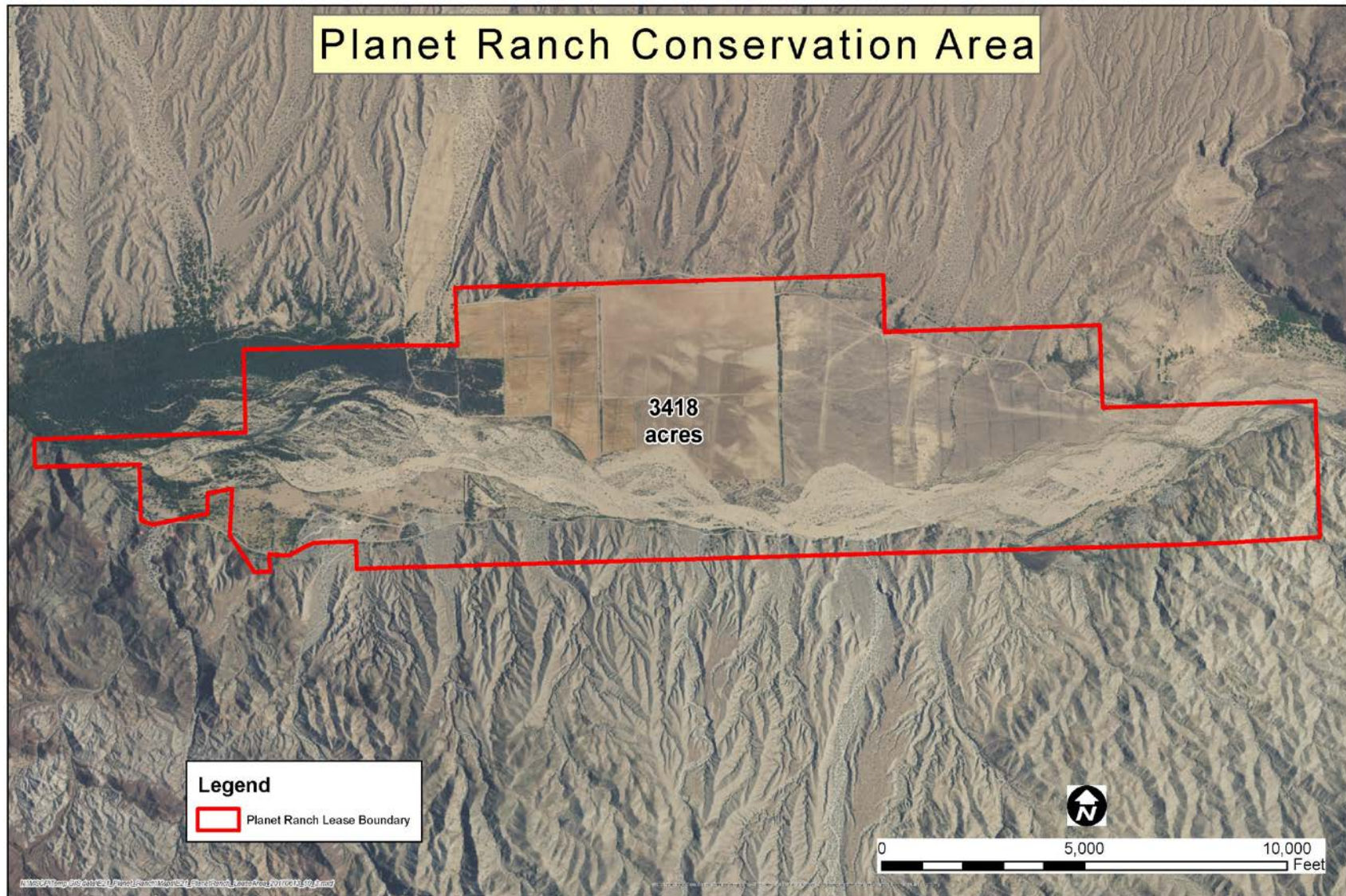


Figure 4. Planet Ranch Conservation Area, Total Overview (Lease Area).

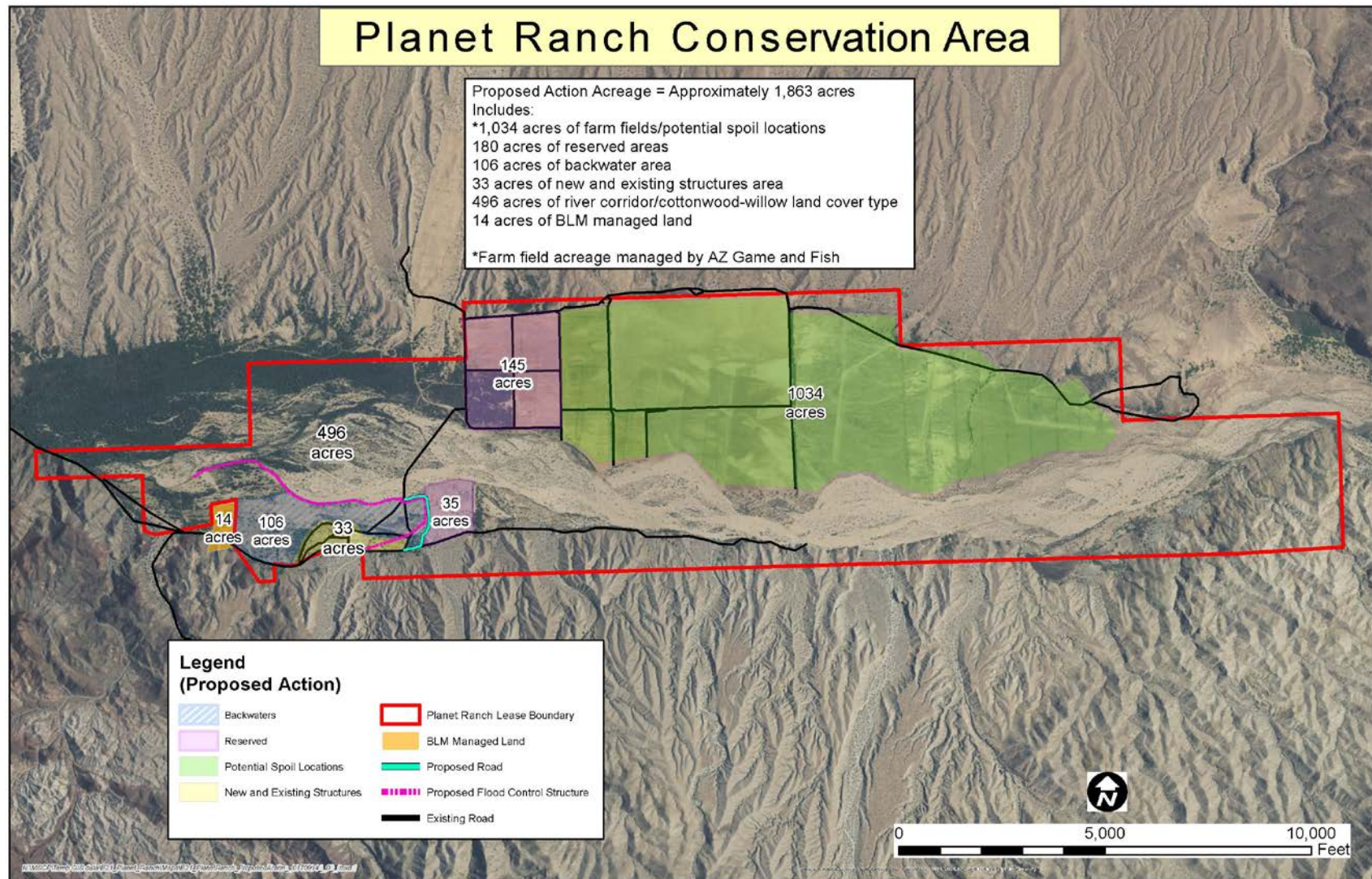


Figure 5. Planet Ranch Conservation Area – Project Area.

Reclamation's acquisition of the Lease was analyzed in the July 10, 2015 *Planet Ranch Lease Final Environmental Assessment (2015 Lease EA) and Finding of No Significant Impact* (Reclamation, 2015). The 2015 Lease EA can be accessed at:
<https://www.usbr.gov/lc/region/g2000/envdocs.html>.

Reclamation and AGFC share management of the 3,418-acre Lease Area. Reclamation is responsible for management of 827 acres in the western third of the Lease Area, while Arizona Game and Fish Department (AGFD) manages the remaining two-thirds of the Lease Area on behalf of the AGFC. The AGFC coordinates with Reclamation to ensure all activities conducted in the area are compatible with the LCR MSCP.

While the 2015 Lease EA analyzed the potential impact of acquiring the Lease on a wide range of resources, including LCR MSCP's receipt of 396 acres of downstream credit of cottonwood-willow land cover type on the Bill Williams River NWR, site specific plans for the Proposed Action were not developed. This EA is being prepared to analyze the potential site-specific impacts of construction, implementation, operation, and maintenance of the Proposed Action on approximately 1,863 acres (Project Area) within the 3,418-acre Lease Area. The 1,863-acre Project Area includes 1,034 acres of land managed by AGFC and 14 acres outside of the Lease Area managed by the Bureau of Land Management (BLM) (Figures 5). The 14 acres of BLM land is located on the Gila & Salt River Meridian, Arizona, T. 11 N., R. 16 W., Section 31, Lot 49.

This EA will serve to aid in BLM's decision-making process for granting a site use permit/Right of Way (ROW) to Reclamation for the 14 acres of BLM managed lands directly adjacent to the lease area for backwaters development.

Planet Ranch is characterized by broad lowland surrounded by rocky low mountains, canyons, and washes. It includes approximately 2,205 acres of divided active and non-active agricultural fields on its northeast border and a mix of Sonoran desert scrub and riparian woodland (USBR, 2005). In addition, existing housing, buildings, utility infrastructure, wells, equipment and storage areas, are located towards the southern border (see Figure 6 – Figure 9). The River through the center of the Lease Area is predominately dry during the year except during releases from Alamo Dam or major rain events and then it flows to the west (Figure 10).

The majority of the Project Area is considered disturbed land (roads, buildings, agriculture fields, etc.). Although native vegetation habitat suitable for covered species exists throughout the river corridor, it has been disturbed as a result of previous activities at Planet Ranch (Figure 11).



Figure 6. Planet Ranch Overview Photo 1.



Figure 7. Planet Ranch Overview Photo 2.

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Figure 8. View towards Bill Williams River National Wildlife Refuge.



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Figure 9. Agriculture Fields (2015).

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Figure 10. Planet Ranch Conservation Area identifying past development and agricultural fields and the flow of the River during releases from Alamo Dam and major rain events.

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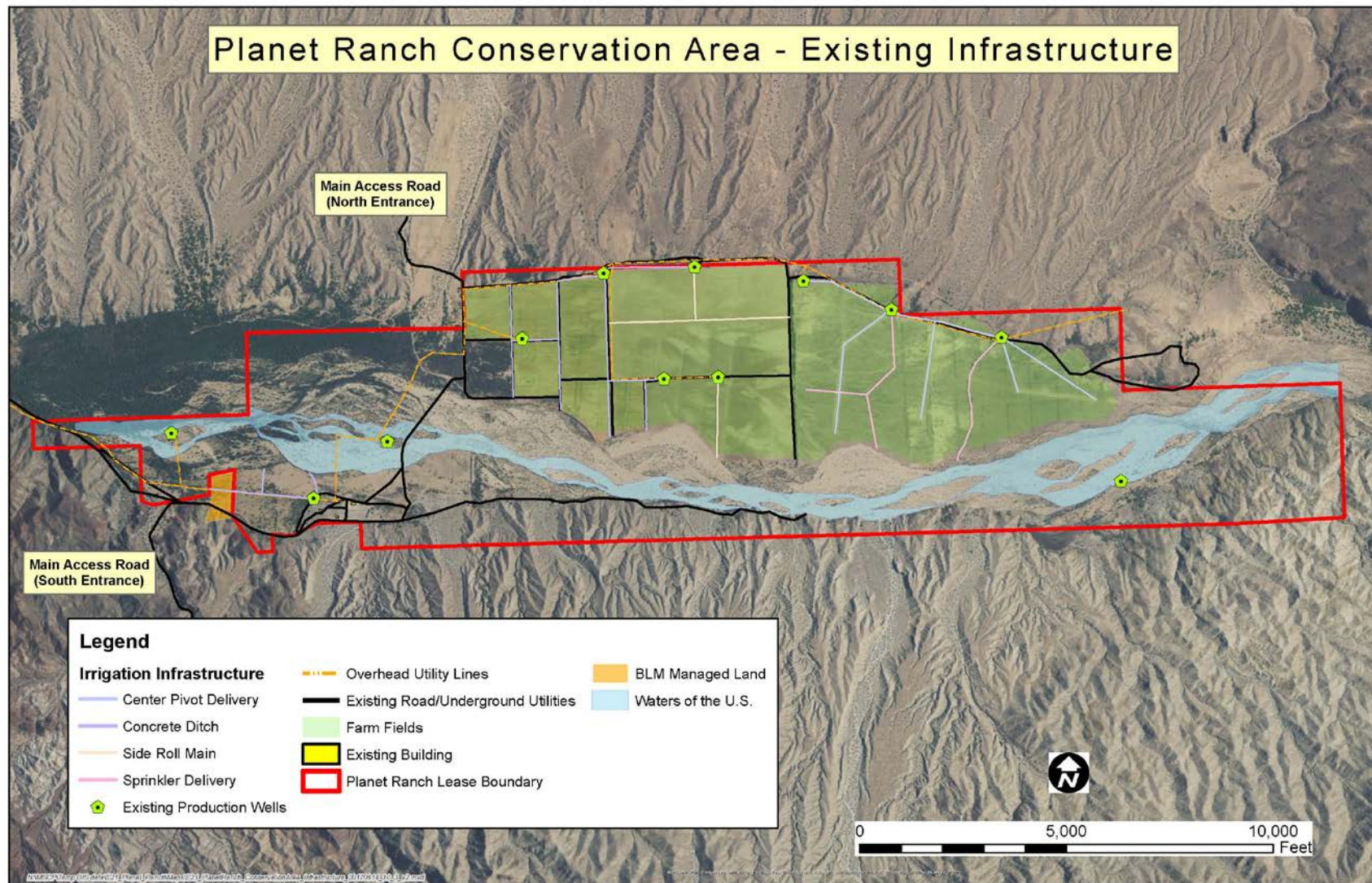


Figure 11. Planet Ranch Conservation Area - Map of Existing Infrastructure.

1.3 Purpose and Need

The purpose of the Proposed Action is to comply with the Act by utilizing the Lease Area and associated water rights to further advance the goals of the LCR MSCP by creating and maintaining land cover types for covered species.

Reclamation

The Proposed Action is needed for a very specific reason: Reclamation acquired the Lease to create, enhance, and restore native habitat on behalf of the LCR MSCP as directed by the Act and provided for in the Big Sandy-Planet Ranch Water Rights Settlement Agreement. Planet Ranch offers one of the few large-scale opportunities for disconnected backwaters and habitat restoration in that portion of the LCR MSCP planning area within Arizona. Acquisition of the Lease allowed 396 acres of cottonwood-willow land cover type on the Bill Williams River NWR to be credited downstream of the Lease Area to the total LCR MSCP goal for habitat creation, and also allowed for the potential for creation of additional cottonwood-willow habitat within the Lease Area through natural regeneration of this species. The Proposed Action would allow the LCR MSCP to achieve additional habitat goals for marsh and backwater habitat. The Proposed Action would provide approximately 71 acres of backwater and up to 514 acres of additional cottonwood-willow habitat within the Planet Ranch Lease Area. Development of the Proposed Action would allow the LCR MSCP to fully realize the potential of the Lease Area to support multiple land cover types and result in substantial progress towards LCR MCSP habitat creation goals.

Bureau of Land Management

The purpose is to allow Reclamation use of 14 acres of BLM-managed lands adjacent to the Planet Ranch Lease Area for construction, operation, and maintenance and reclamation of backwater ponds and associated infrastructure to meet the objectives of the LCR MSCP. The need for the action is established by the BLM's responsibility under Federal Land Policy and Management Act to respond to a request for a site ROW for use of 14 acres of BLM-managed lands adjacent to the Lease.

Agency Decision

BLM's Authorized Officer will determine whether or not to grant a site ROW for the use of 14 acres by Reclamation for backwaters development and if so, what terms and conditions apply to the permit.

1.4 Tiering and Incorporation by Reference

The CEQ regulations encourage both tiering and incorporation by reference. Tiering refers to following up on analysis contained in a broader EIS with an EIS or EA of a narrower scope, incorporating by reference the general discussions and concentrating solely on the issues specific to the narrower scope EIS or EA. An EA tiered to a broad EIS need only analyze the changes to,

or details of, the original proposal not previously analyzed to determine if any of the changes or details result in potentially significant impacts (40 CFR 1502.20).

This EA is tiered to and incorporates by reference the LCR MSCP FEIS/EIR, related documents listed in Section 1.2.1, and the 2015 Lease EA. The analysis in this EA is focused on only those impacts that were not described in the LCR MSCP FEIS/EIR, and the 2015 Lease EA to determine if any of the previously undescribed impacts would be significant. Specifically, this EA analyzes the impacts of the construction, operations, and maintenance of the Proposed Action not described in the previous documents for Planet Ranch.

1.5 Bureau of Land Management Land Use Plan Conformance

The Proposed Action is subject to and has been reviewed for conformance with the following resource management plan (RMP) (43 CFR 1610.5, BLM 1617.3): Lake Havasu Field Office, Record of Decision and Approved Resource Management Plan (RMP), approved May 10, 2007.

Page 9 of the RMP includes an overview and brief discussion of the Lower Colorado River Multiple-Species Conservation Plan.

The proposed action is in conformance with the RMP because it is specifically provided for in the following RMP decision:

- Page 21, Management Decision WF-30 “The BLM will coordinate with appropriate interests, the Multi-Species Conservation Program (MSCP), and jurisdictions to create backwaters along the Colorado River and tributaries to increase native aquatic species habitat availability and diversity.”

Additionally, numerous desired future conditions, land use allocations, management actions and monitoring decisions identified in the RMP provide goals, decisions and objectives for the project area and LCR MSCP. These decisions can be found under the RMP sections for Vegetation and Riparian Management (pages 15-17), Fish and Wildlife Habitat Management (pages 17-21), Special Status Species Management (pages 21-25), Fire Management (pages 30-34), Lands and Realty (page 39, LR-5), Recreation (page 101, RR-57), and Special Designations (page 107, AC-3).

1.6 Compliance with Environmental Statutes

This EA complies with all applicable environmental, natural resource, and cultural resource statutes, regulations, and guidelines. The following statutes and regulations are relevant to the Proposed Action.

- 1 • American Indian Religious Freedom Act of 1978 (P.L. 95-341)
- 2 • National Historic Preservation Act of 1966 (P.L. 89-665), as Amended 1992 (P.L. 102-
- 3 575)
- 4 • Native American Graves Protection and Repatriation Act (P.L. 101-601)
- 5 • Archaeological and Historic Preservation Act (P.L. 93-291)
- 6 • Archeological Resources Protection Act of 1979 (P.L. 96-95)
- 7 • National Environmental Policy Act of 1969 (42 USC 4321)
- 8 • Clean Air Act (33 USC 7401) and Amendments
- 9 • Clean Water Act (33 USC 1251 et seq.), Sections 401, 402, and 404
- 10 • Safe Drinking Water Act (42 USC 300f)
- 11 • Endangered Species Act of 1973 (P.L. 93-205)
- 12 • Farmland Protection Policy Act (P.L. 97-98)
- 13 • Fish and Wildlife Coordination Act of 1958 (PL 85-624)
- 14 • Executive Order (EO) 11988 - Floodplain Management (1977)
- 15 • EO 11990 - Protection of Wetlands (1977)
- 16 • EO 12898 - Environmental Justice (1994)
- 17 • EO 13007 - Indian Sacred Sites (1996)
- 18 • EO 11593 - Protection and Enhancement of the Cultural Environment (1971)
- 19 • EO 13186 - Protection of Migratory Birds (2001)
- 20 • EO 11514 - Protection and Enhancement of Environmental Quality
- 21 • EO 12898 - Federal Actions to Address Environmental Justice in Minority Populations
- 22 and Low-Income Populations
- 23 • Migratory Bird Treaty Act (16 U.S.C. 703-711)
- 24 • National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40 CFR 300)
- 25 • Oil Pollution Act (OPA) (33 USC 2712)
- 26 • Bald and Golden Eagle Protection Acts (16 U.S.C. 668-668d)
- 27 • Secretarial Order 3175: Departmental Responsibilities for Indian Trust Resources
- 28 • Resource Conservation and Recovery Act (RCRA) (42 USC 6901 et seq.)
- 29 • Comprehensive Environmental Response, Compensation, and Liability Act of 1980
- 30 • Toxic Substances Control Act (TSCA) (15 USC 2601–2692)
- 31 • Arizona Native Plant Law (A.R.S. §3-901 et seq)

2.0 Description of Alternatives

2.1 Proposed Action Alternative

2.1.1 Description of the Proposed Action Alternative

Reclamation proposes to design, implement, operate, and maintain the Proposed Action in accordance with LCR MSCP habitat creation goals. The Proposed Action would be comprised of backwater ponds, housing and structures, river corridor, and the areas marked as Reserved for Reclamation future uses shown on Figure 5. As a result of the Proposed Action, it is anticipated LCR MSCP will add 71 acres of disconnected backwater to the total goal for the program, in addition to smaller amounts of cottonwood-willow and mesquite land cover types where possible.

In order to accomplish LCR MSCP habitat creation goals for covered species, construction of new infrastructure and maintenance of existing infrastructure would be implemented within the Project Area. The Project Area includes 1,863 acres and consists of five different managed areas. Within the Lease Area there are 120 acres of backwater area (including 14 acres outside the Lease Area on BLM-managed lands), 33 acres of new and existing structures area, 180 acres of LCR MSCP Reserved Areas, 536 acres of river corridor/cottonwood-willow land cover-type area and 1,034 acres of potential spoils area/agricultural fields (Figure 5).

LCR MSCP management of the Project Area would continue for the life of the Proposed Action. LCR MSCP actions may include wildlife or fisheries monitoring or surveys, scientific studies, or other activities required as part of ESA compliance for the program. Data collected and information resulting from these activities provide guidance for management decisions and a framework for successful future restoration projects.

Backwater Area

The Proposed Action would include 71 acres of backwater ponds on approximately 120 acres designated as the backwater area. Disconnected backwaters would be constructed for the benefit of aquatic species covered under the LCR MSCP. Backwaters would be located west of the existing buildings and south of the active river channel (Figure 5). Constructed backwaters would consist of approximately 71 acres of varying size ponds with depths of approximately 5 to 14 feet. All ponds would be elevated and lined to prevent seepage and interference of pond water with ground water sources, create gravity fed draining systems, and reduce operating costs. The approximate depth to ground water varies between 7.1 and 19.8 feet with an average depth of 13.9 feet.

Ponds would be constructed using land based heavy equipment and fill material would be utilized to armor the pond edges to reach appropriate elevations necessary to avoid ground water interference and to cover the liner materials on the pond bottoms with approximately two feet of material. Excess fill material and spoils would be placed to the north within the potential spoils

1 area/agricultural fields, including the reserve area adjacent to the agricultural fields. The
2 backwaters may include netting or other structures to deter avian and terrestrial predation of fish.
3 Solar panels may be utilized to operate pumps for water quality and quantity management and
4 existing, new and/or temporary infrastructure. Native vegetation may be planted around
5 backwaters to support bank stability and provide thermal refugia.

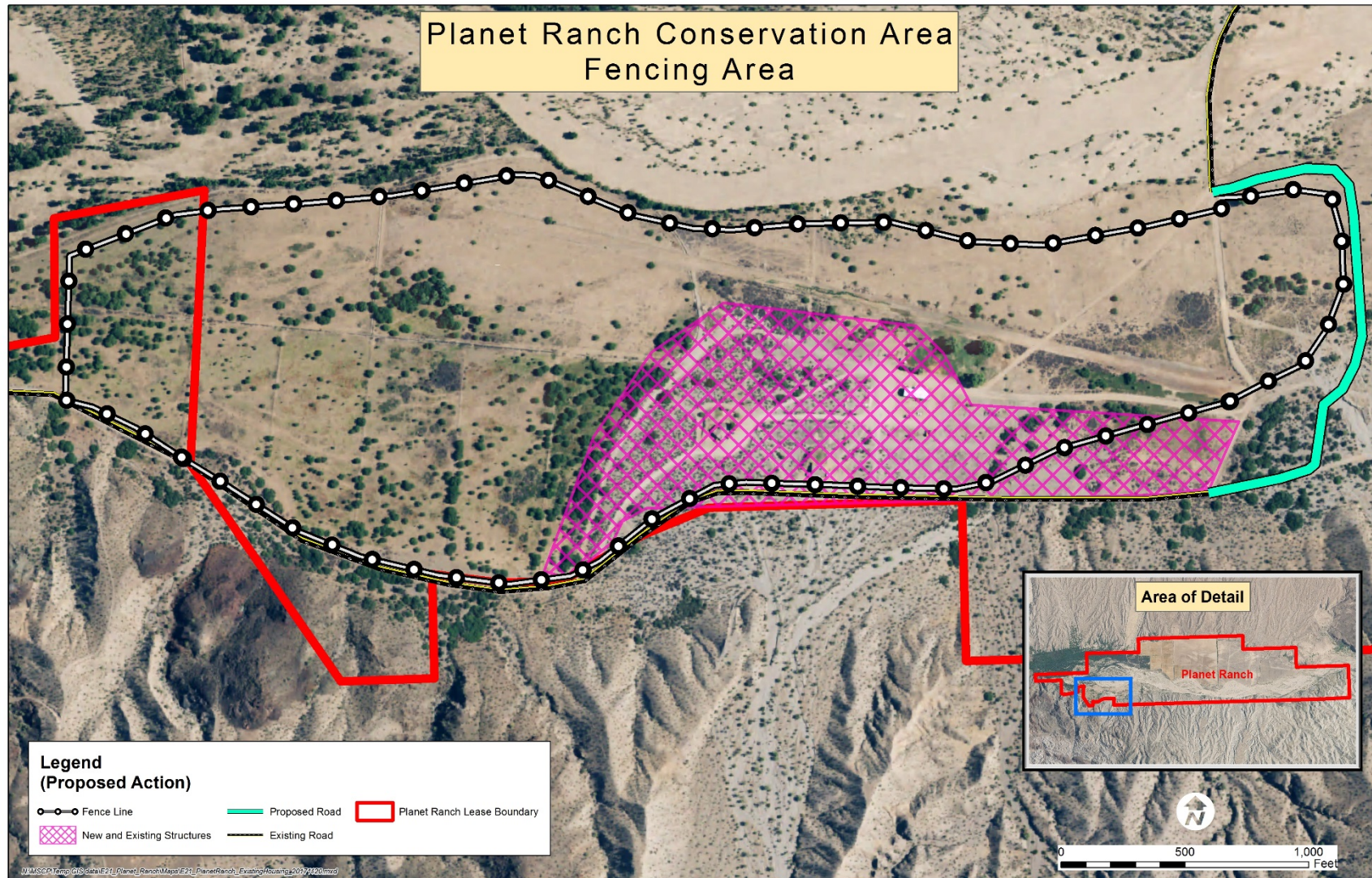
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7 Site access would be managed by focusing travel on access roads surrounding the ponds and
8 throughout the Project Area. The location of the proposed disconnected backwaters would
9 require the relocation of a portion of the main access road. Less than half a mile (0.4 miles) of
10 road would be relocated around the ponds. The road would be rerouted to allow for better
11 project management and public access, and to alleviate any issues that could arise from a road
12 bisecting the area where backwaters are planned. Rerouting the road would allow continued
13 public access to the western portion of the Lease Area managed by AGFD and through traffic on
14 Planet Ranch Road.

15
16 Fencing (chain link or similar), gates, and cattle guards may be installed around the backwaters
17 in the areas where Reclamation operations of the backwater will occur (Figure 12). In addition,
18 strategically placed vegetation around the buildings and backwaters would be used to discourage
19 unauthorized access and prevent introduction of undesired aquatic species into the backwaters.
20 The roads around the perimeter of the backwater area will be open for public access to Planet
21 Ranch.

22
23 A small portion of the conceptual design for the backwater area would occur outside of the Lease
24 Area on land managed by the BLM (Figure 5). As part of the Proposed Action analyzed in this
25 EA, LCR MSCP would coordinate a ROW permit with BLM to access and use 14 acres (Lot 49)
26 in addition to the 106 acres planned for the backwater area, totaling 120 acres of backwater area.
27 Backwater development on the BLM-managed lands would only be implemented after a ROW
28 permit has been finalized between BLM and LCR MSCP. The 14 acres of BLM-managed land
29 would be utilized for backwater ponds and the infrastructure required to develop and to support a
30 backwater pond, which includes pond drainage areas (Figure 12). If the project should terminate
31 and Leased Areas would be surrendered, Reclamation would adhere to all terms and conditions
32 of ROW permit related to reclamation of the lands.

33
34 Water would be supplied to the ponds by new production wells that would include delivery and
35 control structures to allow for individual pond maintenance (i.e. filling, water level control,
36 flushing, draining, etc.). Drainage from the ponds to the drainage area would be done using
37 above-ground pipes. The production wells would be located in areas adjacent to the backwater
38 ponds. Irrigation on other areas previously irrigated by existing irrigation infrastructure would
39 cease beginning December 2017 and watering during the construction and maintenance of the
40 Proposed Action would be conducted for dust control.

41
42 The active river channel is just north of the housing facilities and two drainages terminate near
43 the existing buildings where the backwaters are planned. Increased flows as a result of weather



1
2 **Figure 12. Planet Ranch Conservation Area Fencing Area.**

1 events or releases from the Alamo dam (up to 7,000 cubic feet per second) are anticipated during
2 the life of the Proposed Action. Vegetation barriers, sheet piles, berms, rock riprap, and/or
3 armoring may be utilized to prevent erosion of the southern bank of the Bill Williams River,
4 provide surface flow catchment and direct water away from structures to maintain the integrity of
5 the backwaters, building protection, and safety for staff. For additional protection from
6 increased flows, a flood control structure to protect the backwater ponds from erosion and/or
7 damage would be constructed to include an access road for maintenance from the backwater
8 area, extending into the river corridor/cottonwood willow land cover area. Backwaters, roads,
9 and fences may be elevated for protection from rain/flood events. The structure, as shown in
10 Figure 5, follows the edge of the preliminary Waters of the U.S. jurisdictional boundary as
11 advised by the Army Corps of Engineers report (July 2013).
12

13 The length of flood control structure would be approximately 6,850 ft. Most of this length would
14 be directly adjacent to the south bank of the River and also located to the south of the bank. The
15 height of the structure would be between approximately three to eight feet, depending on its
16 location. The total width of the flood control structure would be approximately 50 ft. A dirt
17 access road would be needed for construction of the erosion control structure, and would be
18 located on the south side of the structure. The width of the road would be approximately 20-25
19 ft.
20

21 Access to the Project Area for construction, operation, and maintenance activities would be from
22 the north or south on Planet Ranch Road. Equipment would be transported to the site via semi-
23 trucks. Equipment staging/storage may occur in previously disturbed areas within the Project
24 Area. Site maintenance would be required for the life of the Proposed Action.
25

26 Construction and maintenance activities may be completed using a variety of resources including
27 mechanical equipment such as scrapers, excavators, backhoes, skid-steer loaders, and/or front
28 end loaders, semi-trucks, water trucks, and other vehicles etc. for clearing, earth work, and
29 maintenance activities. It is estimated that 1 million cubic yards of material may be removed as
30 a result of backwater construction. Excess material would be utilized within the construction
31 area to elevate backwaters, cover the pond bottoms, build fences, roads, etc., and any remaining
32 excess fill would be deposited on the potential spoils area/agriculture fields. Any undesired
33 vegetation cleared during construction or maintenance would be buried on-site or incorporated
34 into flood control structures. Heavy equipment like graders may also be used for any road
35 maintenance or contouring needed especially after high surface flow events. Other less intensive
36 maintenance may be completed using smaller equipment and/or hand tools.
37

38 **New and Existing Structures Area**

39 Existing structures are primarily located on 33 acres of the Project Area. Existing infrastructure
40 on the Project Area includes houses, maintenance shop/warehouse, wells (domestic, monitoring,
41 and production), pumps, irrigation infrastructure, electrical and power supply lines, septic
42 system, etc. All existing structures would require maintenance and upgrades during the life of
43 the Proposed Action. Maintenance and upgrades to existing structures would be conducted in
44 areas that were previously disturbed areas by past activities.
45

Maintenance and upgrade activities would include structural/building maintenance and upgrades, and maintenance/removal of native or non-native species. Native vegetation would be avoided when feasible, and non-native vegetation may be replaced throughout the Project Area. While construction may necessitate some vegetation removal, every effort will be made to avoid removal to facilitate the goal of habitat creation and the benefit of species covered under the LCR MSCP.

Construction and site management would require workers to frequently stay for long periods of time at Planet Ranch because the site is in a remote location without easy access to highways or urban conveniences. The construction of new infrastructure (temporary office/construction trailer or housing) may be necessary within the designated new and existing structures area to accommodate workloads, overnight stays (long-term or short-term), and other activities associated with managing covered species on site (Figure 5). Temporary modular homes or other buildings may be constructed off-site and moved to the Project Area or constructed entirely onsite and located in the general vicinity of the other existing homes and buildings.

All new buildings or trailers would be situated so that electrical, water supply, and septic systems are easily accessed. New domestic wells, septic systems, plumbing or other overhead or underground utility replacements may occur as needed over the life of the program to safely support construction, operation, and maintenance of the conservation area. No new or temporary structures will be located on BLM-managed lands (Figure 12).

LCR MSCP Reserved Areas

The primary area where construction and habitat restoration activities are proposed is located west of the Planet Ranch Road and south of the active river channel (western one-third of the Lease Area); however, approximately 180 acres referred to as the Reserved Area (reserved for LCR MSCP purposes) are within what is considered the area to be managed by AGFD (eastern two-thirds of the Lease Area) (Figure 5). The LCR MSCP identified the Reserved Area as potential locations for future activities that would not be feasible within the western one-third of the Project Area during the life of the Proposed Action. Proposed activities that are analyzed in this EA may include one or a combination, but are not limited to the following activities:

- Additional equipment storage
- Staging areas,
- Excess fill material disposal,
- Parking areas, and/or
- Habitat restoration
 - Active vegetation restoration,
 - Ponds, and/or
 - Infrastructure support

The Reserved Area to the north is bordered by roads on the north and west side and consists of 145 acres of upland that has been converted into agricultural fields, which was most recently used for growing alfalfa. The southern Reserved Area is east of the backwater area and south of

the active river channel. It is located in a wash that flows north from the hills to the south and is comprised of approximately 35 acres of disturbed creosote scrub.

Potential Spoils Area/Agricultural Fields

AGFD-managed lands of approximately 1,034 acres included in the Project Area would be used for excess fill material/spoil not used as part of the construction of the backwaters (Figure 5). The location of excess fill material/spoil deposit field would be situated to avoid washes and may be contoured to replicate the natural topography as much as possible. These areas may be seeded, hand planted, or planted using a mass transplanter with native upland species and irrigated until plants mature and their roots become established to aid in soil stabilization.

River Corridor/Cottonwood-Willow Land Cover Type Area

To the west of the Lease Area, up to 496 acres of cottonwood-willow land cover type habitat credit for species covered under the LCR MSCP within the river corridor would be developed over the life of the Proposed Action through passive restoration.

Passive restoration of habitat would allow cottonwood-willow to grow naturally within the river corridor area by allowing the area to be dependent on yearly moisture in the Bill Williams River and vegetation management when needed as approved by the 2015 Lease EA.

The Proposed Action would utilize a portion of the river corridor/cottonwood-willow land cover type area to construct a flood control structure in order to protect the backwater area from damage resulting from rain/flood events and erosion of the backwater ponds along the southern bank of the River. In addition, the flood control structure would direct water away from backwater pond infrastructures and other structures highlighted in the Proposed Action to maintain the integrity of the backwaters; provide building protection; and provide safety for staff as a result of increased flows from weather events or releases from the Alamo Dam (up to 7,000 cubic feet per second). The structure would be constructed from the eastern side of the backwater area, and extend west into existing river corridor/cottonwood-willow land cover area (Figure 5).

2.1.2 Design Features, Mitigation Measures, Conservation Measures and Best Management Practices Incorporated into the Proposed Action

Design features (DF), mitigation measures (MM), conservation measures (CM), and best management practices (BMP) have been incorporated into the Proposed Action by Reclamation to ensure impacts are avoided or lessened (Table 1 and Appendix A). These measures would be implemented during the construction, implementation, operation, and maintenance of the Proposed Action for the following resources: Air Quality, Biological Resources, Hazardous Materials, and Hydrology and Water Quality.

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1 **Table 1. Incorporated Best Management Practices, Minimization Measures and Conservation Measures.**

Table 1. Incorporated Best Management Practices, Minimization Measures and Conservation Measures.		
Resource Area	Measure Number	Description of Measure
Air Quality		
	Best Management Practices (BMP)	
	BMP-AQ1	To reduce dust emissions: 1. Watering of the site or other soil stabilization method shall be employed on an on-going basis after the initiation of any grading. 2. Portions of the site that are actively being graded shall be watered to ensure that a crust is formed on the ground surface, and shall be watered at the end of each workday. 3. All disturbed areas are treated to prevent erosion. 4. All grading activities are suspended when winds exceed 25 miles per hour.
	BMP-AQ2	To reduce pollutant emissions 1. All equipment used for grading and construction must be tuned and maintained to the manufacturer's specification to maximize efficient burning of vehicle fuel. 2. The operator shall maintain and effectively utilize and schedule on-site equipment and on-site and off-site haul trucks in order to minimize exhaust emissions from truck idling.
Biological Resources		
	Mitigation Measures	
	MM-BIO1	To ensure biological resources awareness of all on-site and other staff: 1. The Project Area biological education program will be provided to staff and contractors by an approved biologist. This education program includes information to aid in species identification, current status, and actions to take to avoid impacts to wildlife.
	MM-BIO2	To reduce spread and/or introduction of noxious and invasive species: 1. Equipment used for this Proposed Action shall be thoroughly cleaned prior to entering the Project Area. The cleaning process will ensure that all dirt and debris that may harbor noxious or invasive weeds seeds are removed and disposed of at an appropriate facility. Reclamation's Inspection and Cleaning Manual for Equipment and Vehicles to Prevent the Spread of Invasive Species: 2012 Edition should be referenced for inspection and cleaning activities. The manual can be found at: http://www.usbr.gov/mussels/prevention/docs/EquipmentInspectionandCleaningManual2012.pdf
	MM-BIO3	If a tortoise enters the Project Area all work will cease and it will be allowed to leave by its own volition. A combination of fencing and cattle/tortoise guards will serve to exclude desert tortoises from entering selected portions of the Project Area.
	MM-BIO4	Pre-activity/construction clearance surveys will be conducted for kit foxes and Sonoran desert tortoises, when appropriate, as determined by the lead MSCP biologist.
	MM-BIO5	Grading/grubbing would occur outside of the migratory bird breeding (February 15 to September 1) season to the maximum extent practicable. If grading/grubbing occurs during the migratory bird breeding season preconstruction clearance surveys will be conducted. No nests, eggs or nestlings will be affected.

2

Conservation Measures		
	CM-BIO5	<p>To ensure compliance to the LCR MSCP HCP:</p> <ol style="list-style-type: none"> All applicable LCR MSCP HCP Conservation Measures will be incorporated into the design, construction, operation, and maintenance of the Proposed Action.
	Design Features	
	DF-BIO6	The design of the backwater ponds would ensure optimal habitat and conditions for the native fish.
	DF-BIO7	Fencing and vegetation barriers would minimize access to the backwater ponds and critical infrastructure and reduce access from the public in the Project Area. This design would minimize the introduction of non-native fish by the public and would reduce predation from riparian and/or wildlife species. The vegetation designs would also consider other LCR MSCP species by developing ideal habitat conditions and preserve existing native plants such as cottonwood-willow and honey mesquites.
	DF-BIO8	The design features of the backwater ponds and the other facilities would allow the onsite staff to drain the backwater ponds for needed maintenance activities and for the removal of non-natives in the event of an introduction.
Cultural Resources		
	Mitigation Measures	
	MM-CR1	An archaeological monitor will periodically inspect the construction site during ground disturbing activities.
	MM-CR2	If any previously unidentified cultural resources (including human remains or cremations) are encountered during any aspect of this project, the crew should immediately stop work at that specific location, take steps to protect the discovery, and immediately call the Arizona Game and Fish Cultural Resource Compliance Manager at 623-236-7620 or 623-285-8821 and Reclamation's Archaeologist at 702-293-8130 in order to determine the appropriate treatment of the discovery.
Hazardous Materials		
	Mitigation Measures	
	MM-HHM1	All solid waste, construction and demolition waste shall be managed by picking up and disposing of all debris materials and trash in appropriate locations off-site (recycling, diversion, landfill, etc.).
	MM-HHM2	To minimize discharge and pollution to the water resources and soils within and adjacent to the Project Area, appropriate permits and plans such as Clean Water Act (CWA) 404 permit, NPDES, SWPPP, and WQMP would be prepared as required for the Proposed Action prior to excavation activities.
	MM-HHM3	<p>Discovered Contaminants Protections. Should contaminants be identified, activity on the site shall cease and a qualified Reclamation Hazardous Materials Specialist for the Project shall be retained to conduct the following:</p> <ol style="list-style-type: none"> Obtain samples of the suspected contaminants Require lab analysis and access findings to identify specific contaminants Ensure appropriate remediation is conducted and completed in accordance to the regulations specific to the contaminants identified.
	MM-HHM4	<p>Toxic Substances Protections. To ensure toxic substances are not released into the aquatic environment, the following measures shall be followed:</p> <ol style="list-style-type: none"> All engine-powered equipment shall be well-maintained and free of leaks of fuel, oil, hydraulic fluid or any other potential contaminant to include the following: <ol style="list-style-type: none"> Prior to start of work, a daily inspection checklist must be completed

		<ul style="list-style-type: none"> b. All equipment should be checked for leaks during operation c. If equipment show evidence of leaks, a drip pan will be placed under the leaking equipment. <ul style="list-style-type: none"> 2. Staging areas for refueling of equipment shall be located away from the backwater and away from the River to prevent any accidental fuel leakage from contaminating surface water; 3. A spill prevention and response plan shall be prepared in advance of the commencement of work; a spill kit with appropriate clean-up supplies shall be kept on hand during operations. <ul style="list-style-type: none"> a. The kit shall include a floating oil-absorbent sock that could be immediately deployed and maintained around the Project area in the event of a spill or any accidental leakage of fuel or hydraulic fluids; b. Refueling and maintenance of mobile equipment shall not be performed directly over the waters of the River. Only approved and certified fuel cans with "no-spill" spring-loaded nozzles shall be used; c. All spill cleanup materials or other liquid or solid wastes shall be securely containerized and labeled in the field; and d. Equipment will not be stored within the boundaries of the waters of the US. Equipment will be relocated to the staging areas at the end of each day to minimize risk of spills. 4. The application and control of herbicides and pesticides shall be in accordance with the Toxic Substances Control Act (TSCA) and Environmental Protection Agency Labeling requirements including but not limited to: <ul style="list-style-type: none"> a. Requiring a certified and trained applicator b. Application of the material in accordance with its label
	MM-HHM5	Prior to any chemicals being stored on in the Lease Area, a Hazardous Materials Authorization form will be filled out and submitted to the Regional Hazmat Coordinator or Back-up Hazmat Coordinator. Only approved materials may be stored in the Lease Area.
Hydrology and Water Quality		
	Mitigation Measures	
	MM-HWQ1	If ground disturbance occurs within the Waters of the US as described in the Preliminary Jurisdiction Delineation report, the Army Corps of Engineers will be consulted for 404 or other appropriate permitting requirements.
	Design Features	
	DF-HWQ2	The design would utilize as much of the existing water related infrastructure as possible to minimize construction of new structures.
	DF-HWQ3	Flood protection barriers would be constructed to prevent flood damage to the Project Area and its facilities.
	DF-HWQ4	The conservation ponds would be elevated to avoid additional impacts and provide flood protection.
	DF-HWQ5	The combination of soft and hard flood and erosion control engineering would be used to stabilize the southern bank of the river channel and protect the Project elements from erosion during large flow events in the River.
	DF-HWQ6	The design would withstand floods of 7,000 cfs, which is the highest controlled release rate from Alamo Dam.

2.1.3 Timing Considerations and Estimated Schedule

Construction of the Proposed Action is anticipated in late fall. The proposed schedule is identified in Table 2.

Table 2. Proposed Action Schedule.

Activity	Proposed Time Periods
<i>Construction of Proposed Action Elements</i>	1 – 2 Months After Final Proposed Action Decision is Issued.
<i>Construction Complete</i>	4 Years After Final Proposed Action Decision is Issued.
<i>Operations and Maintenance</i>	Life of the Lease

2.2 No Action Alternative

Under this alternative, the Proposed Action would not be implemented. The LCR MSCP would continue operations, maintenance, and other management activities including irrigation of agriculture fields to maintain water entitlements consistent with Arizona water rights statutes [MHA1] at the Lease Area for the term of the Lease.

The LCR MSCP would retain the credit for 396 acres of cottonwood-willow habitat on the Bill Williams NWR. They would also obtain program credit for up to 496 acres of cottonwood-willow that may regenerate naturally within the Lease Area. The amount of cottonwood-willow that may regenerate may be substantially less than 496 acres as it would be dependent on yearly moisture in the Bill Williams River. Other land cover types would not be developed. The purpose of the Lease: to create, enhance, and restore native habitat at the Lease area, would not be met. Because Reclamation would not create, enhance, and restore native habitats, the purposes of the LCR MSCP would not be advanced, which conflicts with the intent of the Act.

3.0 Affected Environment and Environmental Consequences

The following section presents a list of aspects of the human and natural environment that may or may not be affected by the No Action Alternative and the Proposed Action Alternative. This section provides a description of the existing condition being reviewed and analyzed in Section 3.4 below.

3.1 Proposed Action Analysis Method

This section includes information for each resource potentially affected by the Proposed Action and a discussion of environmental consequences of the Proposed Action and No Action alternative. The area of analysis for the impacts of the Proposed Action is the Project Area unless otherwise indicated. Although the Project Area and overall design have been determined, specifications and design details to include but not limited to dimensions of the backwater ponds, engineering of storm water and erosion control structures, and placement of specific infrastructure will be developed after the preparation of this EA. Because some of the specifications and design details have not yet been developed, a conceptual design of the Proposed Action will be used to examine and analyze the maximum potential impacts to resources.

The analysis of the Proposed Action will include both direct and indirect effects. The CEQ Regulations define direct effects as those which are caused by the action and occur at the same time and place. The CEQ Regulations define indirect effects as those which are caused by the action and occur later in time or farther removed in distance. The analysis of the Proposed Action will also include cumulative impacts, which are discussed in Section 3.3.

The environmental consequences described in Section 3.4 focus on impacts specific to the Proposed Action that were not described in the LCR MSCP FEIS/EIR or the Lease EA.

3.2 Resource Areas

The resource areas that could be impacted by the Proposed Action Alternative and No Action Alternative are identified in Table 3 and discussed further in Section 3.4.

The resource areas that were determined not to be potentially affected by the Proposed Action or adequately addressed in the LCR MSCP FEIS/EIR or Lease EA are not discussed in further detail. A brief summary of these resource areas are provided in Section 3.2.1.

Table 3. Summary of Resource Area Analysis.

Resource Area	Discussed	Not Discussed Further
Air Quality	X	
Agricultural Resources		X
Biological Resources	X	
Cultural Resources/Traditional Cultural Properties/Sacred Sites and Paleontological Resources	X	
Environmental Justice		X
Geology and Soils	X	
Hazardous Materials, Solid Waste, and Health and Human Safety	X	
Floodplains / Wetlands		X
Hydrology		X
Indian Trust Assets		X
Land Use / Recreation	X	
Noise	X	
Public Services / Utilities and Service Systems	X	
Socioeconomics		X
Transboundary Impacts		X
Transportation and Traffic	X	
Visual Resources/Aesthetics	X	
Water Quality	X	
Wild and Scenic Rivers		X
Wilderness		X

3.2.1 Resource Areas Not Discussed Further

The following topics are not further addressed in this document. These resources were not analyzed because the Proposed Action would not impact or raise concerns about these elements during the construction, operation, and maintenance of the Proposed Action.

➤ **Agricultural Resources** – Impacts to agricultural resources in the LCR MSCP FEIS/EIR were evaluated with respect to the Farmland Protection Policy Act (7 U.S.C. 4201) (Act). The analysis included a “worst case scenario” evaluation that assumed all farmland was important farmland, as defined by the Farmland Protection Policy Act, because important farmland has not been mapped to date on the Bill Williams River. This analysis concluded that the impact of the Off-Site Conservation Area Alternative (which includes the Bill Williams River) on Agricultural Resources was not found to be significant because the potential development of 7,772 acres of agricultural land in the three Off-Site Conservation Areas represented only 2.8 percent of the total 269,000 acres of agricultural land in the LCR MSCP planning area. There would be no impacts to important farmland from the Proposed Action as it has not been identified on the Bill Williams River.

➤ **Environmental Justice** - The Lease EA included an evaluation of Environmental Justice for the Project Area in the Environmental Justice section. The analysis area for Environmental Justice included Census Tracts located in the vicinity of Planet Ranch in Mohave and La Paz counties as well as the unincorporated community of Wikieup, Arizona, located in Mohave County. It was concluded that acquisition of the Lease would not result in disproportionately high and adverse human health or environmental effects on minority and low-income populations. A minority population was not identified for the analysis area. The percent of individuals below poverty levels in the Census Tracts were compared to those for Arizona and Mohave and La Paz Counties. The poverty levels for the Census Tracts in Mohave County were either below or only slightly higher than those for Mohave County or Arizona. Census Tract 201 in La Paz County has a poverty rate that is 8 percent higher than the rate for La Paz County. Although Census Tract 201 has a higher poverty rate than LaPaz County as a whole, no high and adverse human health or environmental effects have been identified that may impact this Census Tract. No cumulative impacts were identified because no direct or indirect environmental justice impacts were identified. The Proposed Action would not result in any change to these impacts, therefore no further Environmental Justice analysis is needed.

➤ **Floodplains and Wetlands** - Federal activities in floodplains and wetlands are guided in part by two Executive Orders (EO): EO 11988 “Floodplain Management” and EO 11990 “Protection of Wetlands”. These EOs direct Federal agencies to minimize impacts to these resources and restore and preserve the natural and beneficial values served by floodplains and wetlands when acquiring, managing, and disposing of Federal land and facilities, conducting or funding construction, or conducting programs affecting land use.

Portions of the Lease Area are located within the floodplain of the Bill Williams River (FEMA, 2014) and have soil moisture and depth to groundwater that would support the establishment of wetland vegetation (USBR, 2005). The Bill Williams River NWR is also located partially in the 100- year floodplain of the River. The Bill Williams River NWR supports diverse riparian vegetation as a result of subsurface and surface water. There would be no impact to floodplains or wetlands from construction activities as no

1 construction would take place in these areas. The Floodplains and Wetlands section of
2 the Lease EA concluded that acquisition of the Lease would have a beneficial impact to
3 floodplains and wetlands within the Lease Area and on the Bill Williams NWR. There
4 would be no change to these impacts. All actions within the Lease area would comply
5 with EOs 11988 and 11990.

6
7 ➤ **Hydrology** - The Hydrology Section of the Lease EA describes the sources of
8 streamflow to the River and hydrologic characteristics of the Planet Valley in which the
9 Lease Area is located. This information is incorporated here by reference. In summary,
10 flows in the River below Alamo Lake are regulated by Alamo Dam. Prior to construction
11 of Alamo Dam in 1968, flows in the River were intermittent and widely varying. The
12 hydrology of the River below Alamo Dam is characterized by intervening reaches of
13 perennial flow, intermittent flow and reaches that are ephemeral in nature (with surface
14 flows only appearing during large rain events). Continuous surface flow along this reach
15 of the River typically will only occur from runoff during large rain events or when
16 releases from Alamo Dam exceed approximately 500 cubic-feet per second (cfs) for at
17 least a 24-hour period. This is due to the floodplain's deep alluvium (unconsolidated
18 rock and silt) and significant storage capacity within the largely coarse grained sediments
19 (USGS, 2002). The Lease EA describes how water is added to the aquifer, or
20 underground layer of water, in Planet Valley during periods of high flow. The structure
21 of the valley is such that the water surfaces near the west end of the Planet Valley,
22 providing for surface water flows in the lower River, including the Bill Williams River
23 National Wildlife Refuge.

24
25 A maximum of 5,549 AFY of water is currently being used at Planet Ranch for
26 agricultural purposes. These water rights would continue to be used in the future to
27 benefit the LCR MSCP as directed by the Act. The Lease EA documented that use of the
28 5,549 AFY for agricultural or LCR MSCP restoration purposes would not have a
29 measurable impact on flows in the lower River, but a measurable impact could potentially
30 be seen if surface flows are reduced during periods of drought. It was concluded that use
31 of the 5,549 AFY for restoration purposes would have an overall beneficial impact to
32 Hydrology, as these water rights are considerably fewer than were available for use at
33 Planet Ranch prior to the Big Sandy River-Planet Ranch Agreement; potentially resulting
34 in more water remaining within the Planet Valley aquifer and contributing to base flows
35 on the River.

36
37 The flow rates under existing conditions were modeled and it was determined that
38 maximum flows of 7,000 cfs resulting from Alamo Dam discharge events would inundate
39 the northern footprint of the backwater area with less than 15 cm (3.9 in) of flow depths
40 (Reclamation, 2017). Modeling is being conducted to determine whether there would be
41 any impacts on flow rates from the proposed flood control structure to prevent erosion of
42 the banks of the fishponds. The model information would be used to design a flood
43 control structure that would minimize adverse impacts at Planet Ranch or downstream
44 areas.
45

The Proposed Action would not result in any change to these impacts, therefore no further hydrology analysis is needed.

➤ **Indian Trust Assets (ITA)** - The Lease EA evaluated ITAs in relation to the execution of the Lease Agreement and determined ITAs would not be impacted as none are located in the Project Area.

➤ **Socioeconomics** – The Lease EA evaluated socioeconomics in detail in relation to the execution of the Lease Agreement and determined socioeconomics would not be impacted.

➤ **Transboundary Impacts** - The LCR MSCP FEIS/EIR evaluated transboundary impacts for the LCR MSCP, and determined there would be no transboundary impacts from conservation areas such as Planet Ranch that are located off the main-stem of the Colorado River. No further analysis is needed.

➤ **Wild and Scenic River** - Upstream from Planet Ranch, 20.5 miles of the Bill Williams River are suitable for inclusion into the National Wild and Scenic Rivers System. Congress has not acted on these determinations. Pending congressional action, these segments would be managed to protect their “outstandingly remarkable values” identified by the interdisciplinary team that make the segments eligible for inclusion in the National System and protected under the Wild and Scenic Rivers Act.

This segment of the Bill Williams River is outside the boundaries of the Lease Area and Project Area and the Proposed Action would not impact the designated National Wild and Scenic River Systems. No further analysis is needed.

➤ **Wilderness** – The 1989 Bill Williams Riparian Management Area Plan, the 2007 Lake Havasu Field Office ROD and Approved Resource Management Plan, and the 1995 Kingman Resource Area Resource Management Plan provide management direction for BLM land including the Wilderness areas.

The Lease EA evaluated wilderness areas within the proximity of Planet Ranch and determined that the 16,400 acres of Swansea Wilderness adjoins the eastern boundary of Planet Ranch and includes the eastern end of the Buckskin Mountains, the Black Mesa extension to the north, and six miles of the Bill Williams River. The Buckskin Mountain portion includes a complex drainage system leading to the river (BLM, 2012). The Rawhide Mountains and Swansea Wilderness areas are managed by the BLM’s Lake Havasu Field Office.

Currently the land use within the Lease Area is consistent with the “Rural” designation assigned by Mohave and La Paz Counties and is outside the designated Swansea Wilderness areas. Thus, BLM designated Wilderness areas would not be impacted and no further analysis is needed.

3.3 Cumulative Impact Analysis Methods and Identified Cumulative Actions

Cumulative impacts are defined as impacts to the environment that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes the action. Cumulative impacts can result from individually minor, but collectively significant, actions taking place over a period of time (40 CFR 1508.7).

This analysis will address the cumulative impacts of the Proposed Action in combination with other projects or management activities within the Project Area and remaining Lease Area (Figure 5). Table 4 identifies activities (past, present, and reasonably foreseeable) that are located in the vicinity of the Project Area or Lease Area and have been identified as having the potential for cumulative impacts when considered in addition to the impacts of the Proposed Action. The timeframe for analysis considered in this section would be the life of the lease.

These actions will be addressed as appropriate in Section 3.4.

Table 4. Actions Considered for Cumulative Impacts Analysis.

Type of Activity/Project Name	Description	Location
Mohave and La Paz Land Use Plans	These land use plans are discussed in Section 3.4.6	Mohave and La Paz
Recreation Opportunities	Recreation opportunities are summarized in Section 3.4.6.	Mohave and La Paz County
Proposed Yellow-billed Cuckoo critical habitat designation	Rule proposed on August 15, 2014.	Arizona, California, Colorado, Idaho, Nevada, New Mexico, Texas, Utah, and Wyoming
Designated critical habitat southwestern willow flycatcher	This Final Rule was published in the Federal Register on January 3, 2013.	Arizona, California, Nevada, New Mexico, and Utah.

3.4 Affected Environment and Environmental Consequences

3.4.1 Air Quality

3.4.1.1 Affected Environment

The Project Area straddles the low desert portions of Mohave County and La Paz County, Arizona. The climate in and around Project Area is primarily hot and dry. Moisture comes from intense thunderstorms during the monsoon season, July through September, and from more gentle winter rains that typically occur December through March. The Project Area receives an average of 5.04” per year, similar levels of precipitation to Parker, Arizona. The weather hazards experienced in the area are strong wind events that can potentially generate blowing dust and sand.

The Federal Clean Air Act of 1970, 42 USC 7401 et seq. as amended in 1977 and 1990 (CAA), establishes National Ambient Air Quality Standards (NAAQS). The Environmental Protection Agency (EPA) has developed primary and secondary NAAQS for six criteria air pollutants, including: ozone (O₃), oxides of nitrogen (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂), particulate matter (PM)-10, and PM-2.5. Areas of the country that are currently in violation of NAAQS are classified as non-attainment areas, and new sources to be located in or near these areas are typically subject to more stringent air permitting requirements than similar sources in attainment areas. The State of Arizona, through the Arizona Department of Environmental Quality (ADEQ), determines planning and zoning management for environmental quality based on the jurisdiction of the local municipality where the property is located (ADEQ 2010).

The ADEQ is responsible for the management and updating of the State Implementation Plan (SIP) for air quality, implemented under Title I of the CAA and other rules and regulations relating to air quality. The SIP was developed for the primary purpose of controlling emissions to maintain all federal and state ambient air standards for Arizona.

The State of Arizona’s air pollution statutes (Title 18, Chapter 2 of the Arizona Administrative Code) seek to protect and enhance public health and the environment by controlling present and future sources of air pollution. These statutes require the use of reasonably available methods to prevent, reduce, or control air pollution throughout the State of Arizona.

The ADEQ operates and maintains an ambient air monitoring network throughout Mohave and La Paz County that measure the ambient concentrations of EPA criteria pollutants including NO₂, oxides of sulfur (SO_x), volatile organic compounds (VOCs) that are precursors to O₃, CO, lead (Pb), total PM, and particulate matter 10 microns or less in diameter (PM-10) (ADEQ, 2010). According to the ADEQ, the Project Area within Mohave and La Paz County is not within a nonattainment or maintenance area (ADEQ, 2017).

The Proposed Action would be located within a designated Off-Highway Vehicle (OHV) recreational area managed by the AGFD. The OHV recreational area includes limited speed

OHV access trails established adjacent to existing roadways and within the dry river channel. Criteria air pollutant emissions within the proposed Project Area are generated from the use of OHVs and other motor vehicles. In addition, criteria pollutants are generated from the current operations and maintenance at the Project Area.

Sensitive receptors within and in the vicinity of the Project Area include the OHV users, other recreationalists, and onsite staff operating and maintaining the Proposed Action.

3.4.1.2 Environmental Consequences

No Action

The No Action Alternative would have no effect on air quality because no criteria pollutants would be generated by the Proposed Action. Air quality would remain the same as it currently is in the vicinity of the Project Area. The current use as a designated OHV recreational area, and operations and maintenance within the Lease Area would continue. As a result, the level of criteria air pollutants would remain.

Proposed Action

Short-term impacts are anticipated to air quality as a result of the implementation of the Proposed Action. Criteria air pollutant emissions from the use of vehicles for travel and heavy fuel based equipment for transport, clearing, and construction would be generated during construction of the Proposed Action (Table 5). The generation of criteria air pollutant emissions from temporary and short-term burning of gasoline and diesel fuel during the construction of the Proposed Action would not violate air quality standards or negatively contribute to existing or projected air quality conditions as defined by the EPA and ADEQ stated in Section 3.4.1.1.

Table 5. List of Equipment Type and Diesel Fuel Estimates.

Quantity	Equipment Type	Hours in Operation	Gallons per Hour	Estimated Fuel Use (Gallons)
2	D6R Dozer	2,000	6	12,000
4	John Deere Tractor Scraper	2,000	7	14,000
2	345 Excavator	2,000	8	16,000
2	4000 Gallon Water truck	2,000	6	12,000
1	140M Motor Grader	1,500	6	9,000
Total Estimates:		9,500	33	63,000

After construction, onsite operations activities such as habitat operations, facility management and maintenance, and travel between facilities and other structures are anticipated to generate criteria air pollutant emissions (Table 6). Once the Proposed Action is constructed and operations begin, current farming operations would cease. The use and operation of vehicles would be re-directed to operations and activities for the Proposed Action. No net gain in generation of criteria air pollutants is expected. Thus, additional generation of criteria air pollutant emissions during annual operations and maintenance would not violate air quality

standards or negatively contribute to existing or projected air quality conditions as defined by the EPA and ADEQ stated in Section 3.4.1.1.

Table 6. Annual Gasoline Fuel Estimates for New Onsite Operations.

Quantity	Equipment Type	Hours in Operation ¹	Gallons per Hour	Estimated Fuel Use (Gallons)
2	Vehicles	2,920	15	43,800
Total Estimates:				43,800

¹ Note: This is an annual gasoline (gallons) estimate for the use of 2 vehicles for 4 hours daily for one year (365 day). Daily estimates are used since onsite staff is expected to be onsite all year and not a typical 5 day work week.

Additionally, although criteria pollutants would be generated, BMP-AQ1 and BMP-AQ2 would be implemented to further control and reduce the production of fugitive dust. (See Table 1 and Appendix A: Best Management Practices, Minimization Measure, Conservation Measure and Mitigation Measure Register).

It is also anticipated additional construction and activities conducted within the reserved areas during the life of the Lease would have short-term impacts to air quality. Table 7 describes the environmental consequences to the potential activities proposed for the reserved areas.

Table 7. Air Quality Reserved Area Analysis.

Proposed Activity ¹	Environmental Consequence
Additional equipment storage	Criteria air pollutant emissions from the use of vehicles for travel and heavy fuel based equipment for transport, clearing, and construction would be generated during construction of additional equipment storage areas. The generation of criteria air pollutant emissions from temporary and short-term burning of gasoline and diesel fuel during the construction of the storage would not violate air quality standards or negatively contribute to existing or projected air quality conditions
Staging areas	Criteria air pollutant emissions from the transport of vehicles and other equipment to and from the staging areas would be generated. The generation of criteria air pollutant emissions from temporary and short-term burning of gasoline and diesel fuel during the use of the staging areas would not violate air quality standards or negatively contribute to existing or projected air quality conditions
Excess fill material disposal	Criteria air pollutant emissions from the transport of excess fill materials to the disposal areas would be generated. The generation of criteria air pollutant emissions from temporary and short-term burning of gasoline and diesel fuel during the use of the staging areas would not violate air quality standards or negatively contribute to existing or projected air quality conditions
Parking areas	Criteria air pollutant emissions from the use of vehicles for travel and heavy fuel based equipment for transport, clearing, and construction would be generated during construction. The generation of criteria air pollutant emissions from temporary and short-term burning of gasoline and diesel fuel during the construction of the Proposed Action would not violate air quality standards or negatively contribute to existing or projected air quality conditions
Habitat restoration	Criteria air pollutant emissions from the use of vehicles for travel and heavy fuel based equipment for transport, clearing, and construction would be generated during construction. The generation of criteria air pollutant emissions from temporary and short-term burning of gasoline and diesel fuel during the construction of the Proposed

Proposed Activity ¹	Environmental Consequence
	Action would not violate air quality standards or negatively contribute to existing or projected air quality conditions

¹ The identified proposed activities have been included in the analysis for potential implementation as a part of the Proposed Action. Additional actions proposed within the reserved areas not listed in this table would require additional analysis.

Overall, once the Proposed Action is constructed and implemented, air quality is expected to return to levels currently observed at the Project Area and potentially improve throughout implementation of the Project thereafter. There would be no measurable long-term impacts to air quality as a result of this Proposed Action. Long-term improvements to air quality and the emissions of GHGs would potentially occur from the re-vegetation of the Project Area.

Cumulative Impacts

Although implementation of the Proposed Action would generate criteria air pollutant emissions, air quality is expected to return to levels currently observed at the Project Area and potentially improve throughout implementation of the Proposed Action. Thus, cumulative impacts to air quality are not anticipated when considered with other projects in the past, present, and foreseeable future.

3.4.2 Biological Resources

3.4.2.1 Affected Environment

Habitat Overview

There are approximately 1,142 acres of farm fields in the Project Area; this includes the 1034 acres of farm fields labeled on Figure 5, and 108 acres in the northern reserved area. The northern reserved area also contains 37 acres of dead and dying tamarisk. Vegetation in the farm fields consists of alfalfa. The farm fields are currently being irrigated, but will be fallowed beginning December 2017.

There are 153 acres of mesquite habitat. This includes the Backwater area (106 acres), 14 acres of the BLM parcel and the new and existing structures area (33 acres) (Figure 5). Within the planned footprint of construction, stands of honey mesquite and scattered saltcedar and other shrubs are suitable habitat for many migratory birds. Migratory birds are protected by the Migratory Bird Treaty Act.

The 35-acre southern reserved area (Figure 5) is disturbed creosote scrub habitat.

There are 496 acres of river corridor/cottonwood-willow habitat (Figure 13). There is no suitable habitat for the SWFL and YBCU within the footprint of construction at Planet Ranch, but there may be suitable habitat within the larger Lease Area, both downstream and upstream of the planned construction.

Species Information

A description of common wildlife that have the potential, within the life of the project, to occur in the Project Area can be found in the 2015 Lease EA and is incorporated here by reference.

During the avian breeding season of 2017, Reclamation's contractor conducted breeding bird area searches at Planet Ranch (Figures 14 – 16). Plots were chosen randomly, with some falling within the footprint of construction. Habitat found inside these plots and the birds breeding there are also found throughout the Project Area. Breeding vermilion flycatcher, Arizona Bell's vireo, Gila woodpecker and Sonoran yellow warbler, all LCR MSCP covered species, were confirmed breeding. A pair of least bittern, another covered LCR MSCP species, was found in cottonwood-willow habitat (likely where standing water occurs at the west end of the ranch adjacent to the Refuge). In 2016, Reclamation staff detected a California black rail (LCR MSCP covered species) in this habitat as well. Great-horned owls are also breeding in the Project Area. Other migratory species found breeding in one or more of these plots include Ash-throated flycatcher, Bewick's wren, blue grosbeak, brown-crested flycatcher, common yellow-throat, crissal thrasher, Lucy's warbler, song sparrow, and yellow-breasted chat.

There is upland habitat on the northern and southern borders of the Lease Area that could be suitable habitat for Sonoran desert tortoise (*Gopherus morafkai*). Sonoran desert tortoise habitat does not occur in the Project Area.

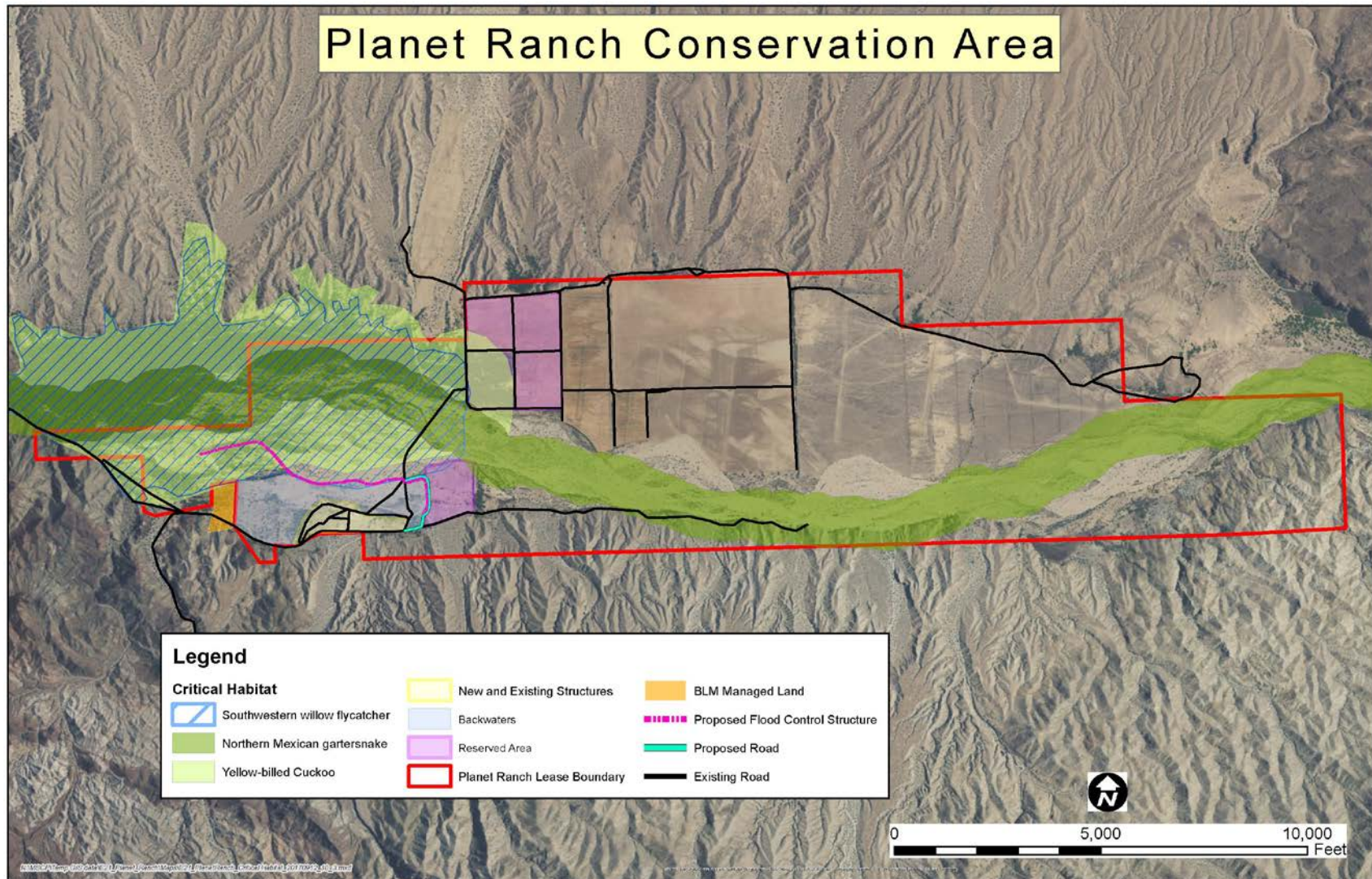


Figure 13. Planet Ranch Conservation Area Critical Habitat.

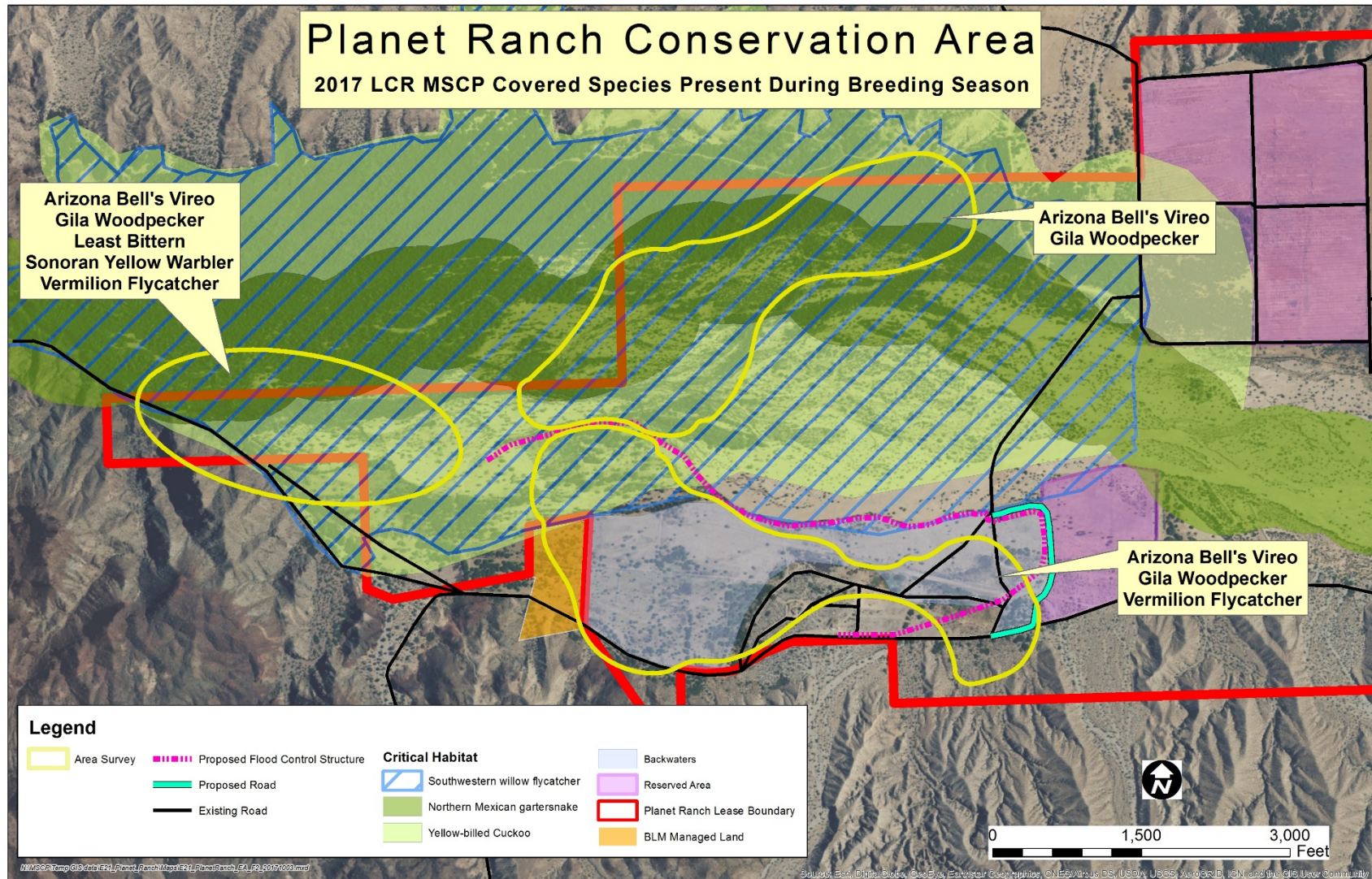


Figure 14. LCR MSCP Covered Species Present During Breeding Season at Planet Ranch Conservation Area.

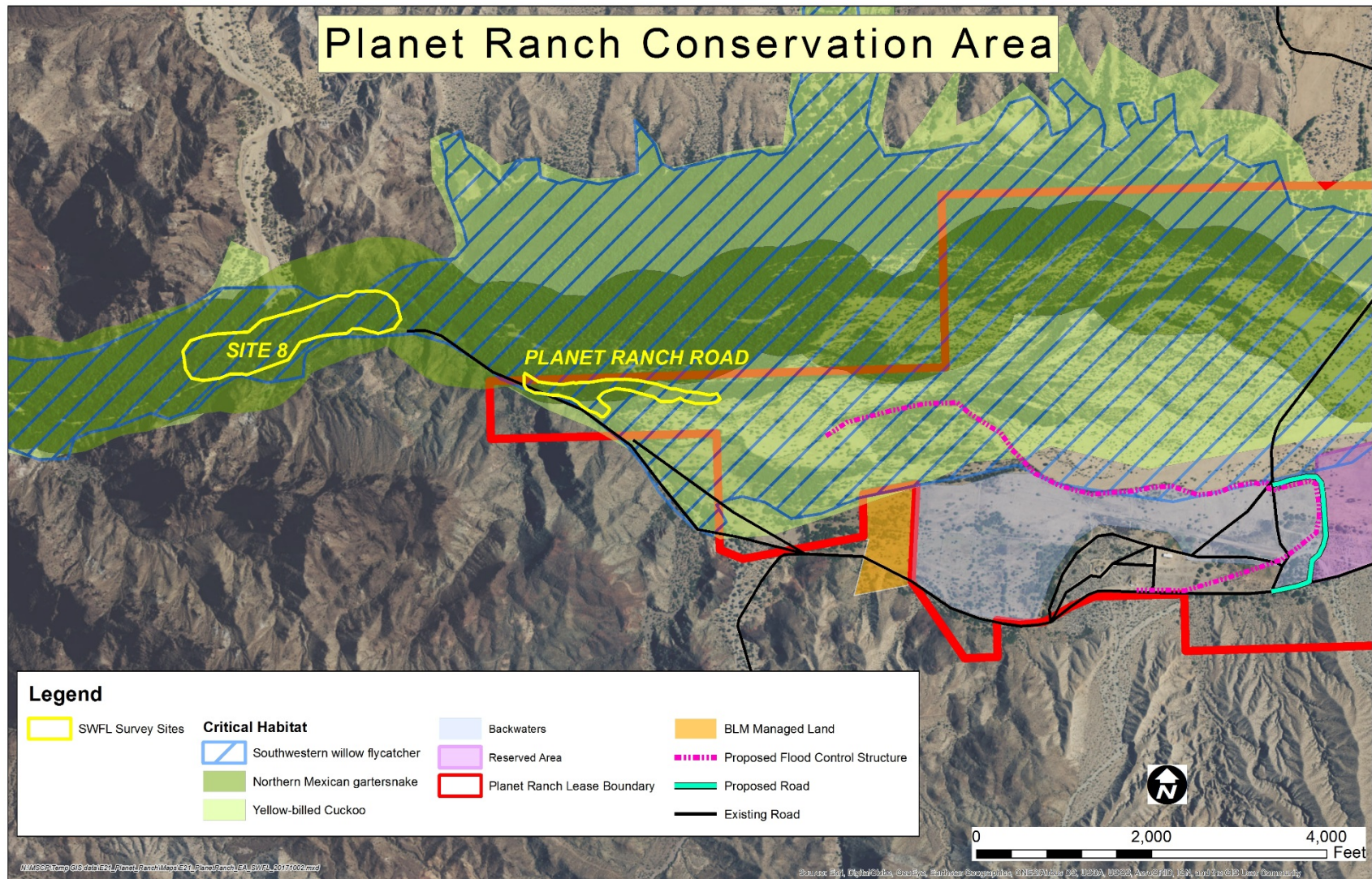


Figure 15. Southwestern Willow Flycatcher (SWFL) at Planet Ranch Conservation Area.

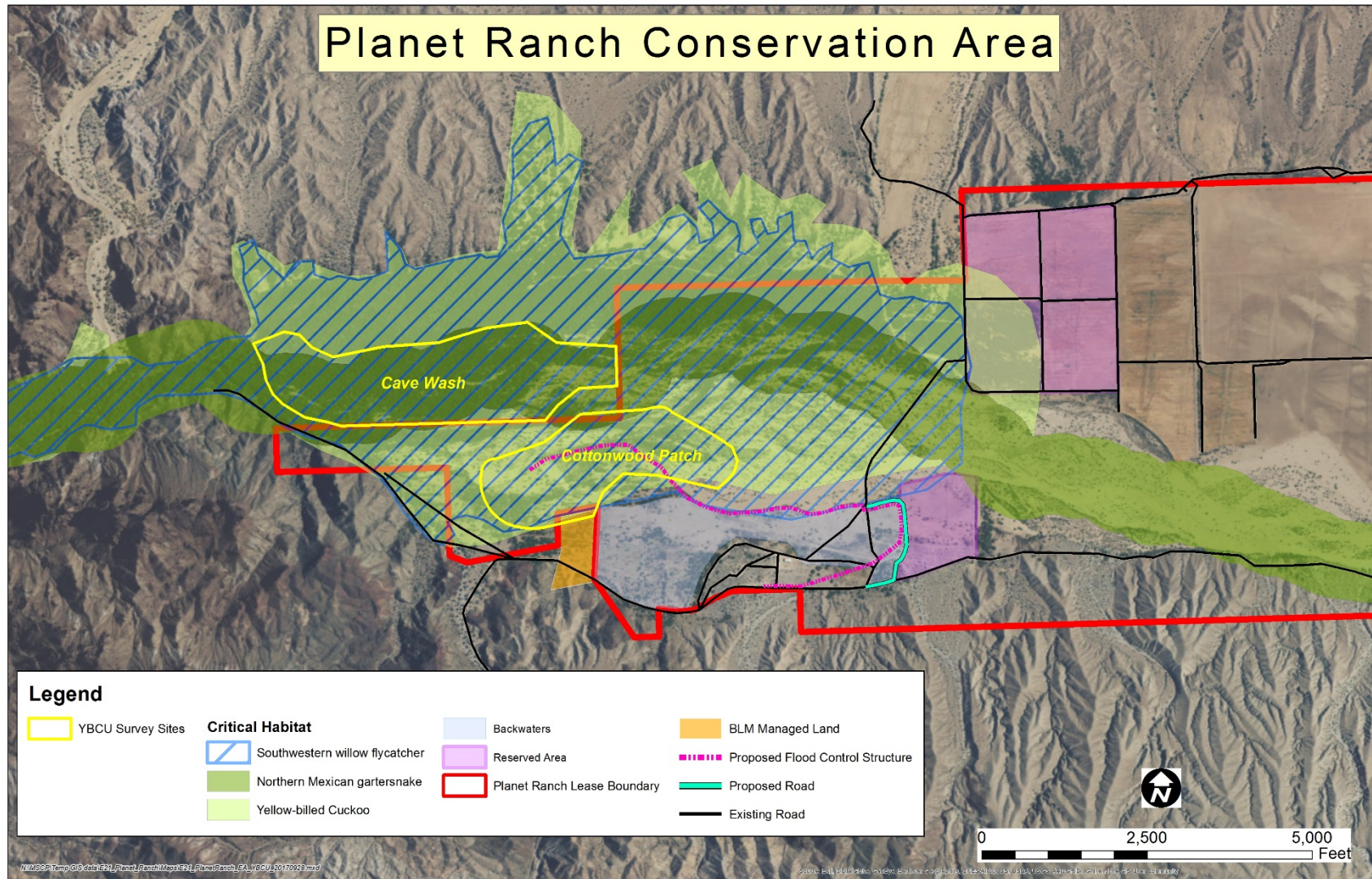


Figure 16. Yellow-Billed Cuckoo (YBCU) at Planet Ranch Conservation Area.

Two LCR MSCP evaluation species: the Colorado River toad (*Bufo alvarius*) and lowland leopard frog (*Lithobates yavapaiensis*) are known to occur along the BWR. There is no existing habitat for these species in the footprint of the construction site, but some potential habitat is present on the western end of the Project Area where standing water occurs.

Listed Species and Critical Habitat

Four Federally listed species have the potential to occur in the Project Area: southwestern willow flycatcher (*Empidonax traillii extimus*), yellow-billed cuckoo (*Coccyzus americanus*), California least tern (*Sterna antillarum browni*) and northern Mexican gartersnake (*Thamnophis eques megalops*). Southwestern willow flycatcher and California least tern are listed as endangered. Yellow-billed cuckoo and northern Mexican gartersnake are listed as threatened.

Access for Reclamation's contractor, SWCA, Inc. to Planet Ranch from 2012 on was restricted to surveying from the property boundary, approximately 80 meters away from the previously occupied southwestern willow flycatcher breeding area. In 2011, Reclamation's contractor, SWCA, Inc. surveyed three sites adjacent to and within the Project Area for SWFL. Five surveys were conducted at each site. Three breeding southwestern willow flycatchers and two individuals for which residency could not be determined were detected at the Planet Ranch Road site. No southwestern willow flycatchers were detected during four surveys in 2012. In 2013, three surveys were conducted at the Planet Ranch Road site. One resident southwestern willow flycatcher and four additional willow flycatchers were detected for which residency could not be determined. Also in 2013, a contractor hired by the landowners reported to the U.S. Fish and Wildlife Service eight southwestern willow flycatcher territories between June 25 and July 10. Their surveys were conducted within the habitat near the Planet Ranch Road site. No southwestern willow flycatchers were detected in 2014, 2015, 2016, or 2017. Presently, "Site 08", located just outside the western boundary of Planet Ranch is the closest site occupied by southwestern willow flycatchers. One resident, unpaired male was detected in 2016. No southwestern willow flycatchers have been detected nesting in the portion of the Project Area where construction is proposed.

In 2011, protocol level surveys for yellow-billed cuckoo were conducted at Cave Wash, on the BWRNWR and at Cottonwood Patch, within the Project Area. One confirmed breeding pair of yellow-billed cuckoos was detected at Cave Wash. At Cottonwood Patch, one yellow-billed cuckoo was detected during the first survey period only. At Cave Wash, the closest site to the Project Area, there were seven detections in 2012, one possible breeding pair and one probable breeding pair; in 2013, there were eight detections, two possible breeding pairs; in 2014, there was one detection, but no possible, probable or confirmed breeding pairs. There were no detections in 2015 and the BWR was not surveyed by Reclamation's contractors in 2016. In 2017, surveys at BWRNWR were resumed, but only in locations where Reclamation will receive credit for habitat protections due to the lease/purchase of Planet Ranch. The most eastern site surveyed in 2017 was Mineral Wash. There were no yellow-billed cuckoos detected at any sites on the BWRNWR in 2017; habitat is in poor condition and yellow-billed cuckoo detections have declined steadily since 2011. No yellow-billed cuckoos have been detected nesting in the portion of the Project Area where construction is proposed.

The northern Mexican gartersnake occurs upstream of the Project Area. Habitat requirements for

the snake include wetlands and surface water which do not currently exist in the portion of the Project Area where construction is proposed. Some potential habitat is present on the western end of the Project Area where standing water occurs, but no northern Mexican gartersnakes have been observed in that area during surveys for lowland leopard frogs or Colorado River toads (AGFD personal communication, 2017).

California least tern has not been detected in the Project Area. Transient birds have been reported in Mohave County; thus, there is potential for the tern to occur in the irrigated farm fields.

Designated critical habitat for southwestern willow flycatcher and proposed critical habitat for yellow-billed cuckoo and northern Mexican gartersnake occur in the Project Area (Figure 13).

None of the designated or proposed critical habitat that may be affected by the proposed action have the physical and biological features essential to the conservation of the species.

The northern reserved area (Figure 13) has 37 acres of proposed critical habitat for yellow-billed cuckoo that is composed of dead and dying tamarisk and therefore lacks physical and biological features needed to support the species.

The proposed flood control structure and the drainage system for the backwater area are both proposed to be located in previously farmed areas that are designated and proposed critical habitat for southwestern willow flycatcher and yellow-billed cuckoo, respectively. The habitat consists of an open park like cottonwood-willow habitat and lacks the dense riparian vegetation necessary to support the Southwestern willow flycatcher and yellow-billed cuckoo.

AGFD Species of Greatest Concern and Special Status Species were also reviewed within a five-mile radius of the Project Area. Recommendations on how to best manage and avoid potential impacts to these species has been provided by AGFD staff.

3.4.2.2 Environmental Consequences

No Action

If the Proposed Action is not approved current management of the Lease Area would continue as described in the proposed action in the 2015 Lease EA. The environmental consequences of this no action alternative were evaluated for the 2015 Lease EA proposed action and can be found in the 2015 Lease EA and are incorporated here by reference. The creation of approximately 71 acres of aquatic habitat for benefit of aquatic species covered under the LCR MSCP would not occur and another location would need to be developed, thereby delaying progress towards LCR MSCP program goals.

Proposed Action

Restoration of the farm fields to upland shrub communities would have a long term beneficial effect to common wildlife by providing forging, nesting, and cover habitat.

There will be up to 153 acres of impacts to mesquite habitat that grew in after the agriculture

1 ceased in the fields (about 10 years old) and 35 acres of disturbed creosote scrub. Up to 188
2 acres of habitat will be lost and not available to wildlife.

3
4 Direct impacts to the mesquite and creosote scrub habitat would include grading/grubbing
5 (ground clearing/vegetation removal) of the construction footprint and excavation of the
6 backwaters. Grading/grubbing would occur outside of the migratory bird breeding (February 15
7 to September 1) season to the maximum extent practicable (MM-BIO5). If grading/grubbing
8 occurs during the migratory bird breeding season preconstruction clearance surveys will be
9 conducted. No nests, eggs or nestlings will be affected. Direct impacts to wildlife are
10 anticipated to be minimal from the grading/grubbing activities. Small slow moving wildlife may
11 be crushed and killed by heavy equipment if not seen during construction. Noise and vibrations
12 from the vehicles and heavy equipment may displace wildlife in the adjacent habitat during
13 construction.

14
15 Sonoran desert tortoises may wander into the Project Area from upland habitat. This species will
16 be included in the education program and any impacts will be minimized. No direct mortality is
17 anticipated (MM-BIO1). If a tortoise enters the Project Area all work will cease and it will be
18 allowed to leave by its own volition. A combination of fencing and cattle/tortoise guards will
19 serve to exclude desert tortoises from entering selected portions of the Project Area (MM-BIO3,
20 MM-BIO4).

21
22 Disconnected backwaters would be constructed for the benefit of aquatic species covered under
23 the LCR MSCP including bonytail (*Gila elegans*) and razorback sucker (*Xyrauchen texanus*).
24 The backwaters and other areas where water may accumulate have the potential to attract
25 wildlife. Wildlife may become trapped/injured in exclusion netting or fencing. Wildlife may
26 drown if they enter the backwaters or detention basins. Fencing around the backwaters and other
27 areas will be installed as necessary. All fencing and netting will be designed to reduce potential
28 entrapment of wildlife (DF-BIO7).

29
30 It is possible that within the life of the Proposed Action that the Colorado River toad and lowland
31 leopard frog will enter the Project Area. These species are attracted to aquatic habitats and are
32 also known to use manmade structures such as stock tanks, ponds and areas where surface water
33 accumulates.

34
35 Impacts to Colorado River toad and lowland leopard frog could occur in the form of both
36 harassment (relocation) and mortality. There is no estimate as to the number of individuals that
37 would be impacted. There may be beneficial effects to these species with the creation of aquatic
38 habitat in the Project Area in the form of breeding and foraging habitat. Best management
39 practices will be used to minimize impacts to these species if encountered during operations and
40 maintenance of the facilities.

Listed Species and Critical Habitat

The only potential breeding habitat in the Project Area for California least tern is the irrigated farm fields. At the time of project implementation the fields will be fallowed and no longer provide suitable habitat. Reclamation has determined there will be no effect to California least tern.

Potential impacts to the northern Mexican gartersnake would be the same as those described for the Colorado River toad and lowland leopard frog. Best management practices will be used to minimize impacts to this species if encountered during operations and maintenance of the facilities. The northern Mexican gartersnake will be added to the LCR MSCP as a covered species prior to implementation of the Proposed Action or a formal ESA Section 7 consultation will be conducted.

The backwaters drainage system will drain into approximately 35 acres of previously disturbed cottonwood willow habitat that is designated critical habitat for southwestern willow flycatcher and proposed critical habitat for yellow-billed cuckoo.

Development of the backwaters drainage would not require vegetation clearing or ground disturbance. Piping would be laid above ground and will be designed to be moved as needed. Water from the periodic draining and flushing of the backwaters for maintenance and temperature regulation would result in water being discharged into the river cottonwood- willow habitat. Water from the backwater pond drainage should have a beneficial effect on the cottonwood-willow habitat. It is anticipated that the habitat will transition from a parklike setting to a dense multi storied cottonwood-willow habitat that could possibly support southwestern willow flycatcher and provide foraging habitat for yellow-billed cuckoo.

The flood control structure and associated access road will impact approximately 6 acres of cottonwood- willow habitat, 3.5 acres of which is designated critical habitat for southwestern willow flycatcher and proposed critical habitat for yellow-billed cuckoo. The approximately 1.5-acre access road will be temporary and will not require grading or improvements. The construction of the flood control structure and associated road would have a short term negative effects on the cottonwood-willow habitat and wildlife due to initial clearing activities, construction and periodic maintenance. The short term impacts to wildlife would be similar to those described for the mesquite and creosote scrub habitats. It is anticipated the access road in critical habitat will not only recover from construction impacts but will exceed pre construction habitat conditions due to increase water availability from the backwaters drainage system. The approximately 2 acres of permanent impacts related to the flood control structure in designated critical and proposed habitat are not anticipated to change the habitat from the existing park like habitat setting localized around the structure.

The 37 acres of proposed critical habitat for yellow-billed cuckoo in the northern reserved area will be restored, or some other purpose for the area that would allow the habitat to improve over time from the current condition of dead and dying tamarisk will be determined.

No adverse effect to designated critical habitat for southwestern willow flycatcher and proposed

critical habitat for yellow-billed cuckoo is anticipated. The habitat currently lacks the physical and biological features essential to the conservation of both species. It is anticipated that the Proposed Action will have beneficial effects to the habitat over the life of the Lease by passive restoration of up to 496 acres of habitat that may develop the physical and biological features essential to the conservation of both species.

Impacts and effects of implementation of the LCR MSCP to bonytail, razorback sucker, southwestern willow flycatcher, and yellow-billed cuckoo were considered and disclosed in the Biological and Conference Opinion on the LCR MSCP (2005 Biological Opinion) and LCR MSCP FEIS/EIR. Yellow-billed cuckoo coverage became effective on November 3, 2014 when it was listed as threatened.

Cumulative Impacts

Negative impacts to common wildlife from ongoing maintenance activities were described in the Planet Ranch Lease EA. Negative impacts included: Wildlife temporarily being displaced, injured, or killed if not avoided, as a result of maintenance activities and vehicle traffic.

Construction, operation, and maintenance of the Proposed Action would have similar impacts as the existing impacts resulting from the operation and maintenance of the Lease Area and therefore will not result in a measurable cumulative impact to common wildlife or Sonoran desert tortoise.

Cumulative impacts to bonytail chub, razorback sucker, southwestern willow flycatcher, and yellow-billed cuckoo were considered and disclosed in the 2005 Biological Opinion and LCR MSCP FEIS/EIR. Cumulative impacts to northern Mexican gartersnake and proposed critical habitat will be considered in the LCR MSCP permit and LCR MSCP BO amendments.

Cumulative effects to designated critical habitat for southwestern willow flycatcher and proposed critical habitat for yellow-billed cuckoo are anticipated to be beneficial by enhancement of up to 496 acres of cottonwood willow habitat in the river corridor and 37 acres of habitat in the northern reserved area for yellow-billed cuckoo.

3.4.3 Cultural Resources/Traditional Cultural Properties/Sacred Sites and Paleontological Resources

3.4.3.1 Affected Environment

Cultural Resources

The National Historic Preservation Act (NHPA) requires Federal agencies to consider and evaluate the effect that Federal projects may have on historic properties under their jurisdiction. A Traditional Cultural Property (TCP) is potentially eligible for the National Register of Historic Places (NRHP) because of its association with the cultural practices or beliefs of a living community that are rooted in that community's history, and important in maintaining the continuing cultural identity of the community. EO 13007 "Indian Sacred Sites" requires that Federal agencies with legal or administrative responsibility for management of Federal lands, "to the extent practicable permitted by law, and not clearly inconsistent with essential agency functions, to: (1) accommodate access to, and ceremonial use of, Indian sacred sites by Indian religious practitioners; and (2) avoid adversely affecting the physical integrity of such sacred sites".

A Class I literature and records review for the LCR MSCP planning area was conducted in 2001 for the LCR MSCP FEIS/EIR. At that time, Reclamation also initiated government-to-government consultations with tribes to identify traditionally important properties (e.g., TCP, sacred site) in the conservation areas. At that time, all of the tribal representatives declined to provide information. Mitigation measures were developed and documented in the LCR MSCP FEIS/EIR to ensure compliance with NHPA Section 106, EO 13007, and other laws related to cultural resources when implementing the LCR MSCP.

Class I Cultural Resources Cultural Resource Records Review and Class III Archaeological Survey

In 2011 Reclamation conducted a "Class I Cultural Resources Records Review for the 3,418-acre Planet Ranch Property for the U.S. Bureau of Reclamation-Lower Colorado Regional Office, La Paz and Mohave Counties, Arizona" (Stokes et al. 2011). In 2016 Reclamation refined the Project Area and conducted "A Class III Cultural Resources Survey of 795 Acres at Planet Ranch near Parker, La Paz and Mohave Counties, Arizona" (Lewandowski 2016).

Native Americans

Prehistoric cultural remains found in the area surrounding the Proposed Action are remnants of the archaeological culture traditionally referred to Patayan and its Archaic antecedents. Evidence of their occupation and land use are various rock features and artifacts such as flaked stone and ceramics. At the time of contact with Europeans the Native American group most often identified with this area are the Yavapai.

The Historic Period at Planet Ranch and Vicinity

The Planet Mine was located outside of but near the Project Area. Copper mining at the Planet Mine began production in 1863 and peaked in 1867. There were several sporadic, small mining operations the occurred at various times until the 1960s. There are no features related to mining within the Project Area; all of the mine features are on the adjacent BLM lands.

Land records indicate that Planet Ranch area was homesteaded in the late 1910s, with two homesteads established in the vicinity but their exact location is unknown. Little is known of the development of Planet Ranch in the decades between 1924 and 1960. By 1962, Planet Ranch was under the ownership of a cattle company known as Arizona Ranch and Metals Company (ARMCO) that was based in Salt Lake City. By purchasing the railroad grant lands and leasing public lands in the vicinity of Planet Ranch, ARMCO expanded the ranch over the next decade to an estimated 10,000 acres for its livestock. Agricultural fields, laterals, and wells on the ranch were constructed, improved, and maintained.

In 1978, the Defense Nuclear Agency conducted two detonation tests on Planet Ranch as part of a simulation operation known as Miser's Bluff. Two nuclear blasts were simulated by detonating seven ammonium nitrate charges on Planet Ranch. Evidence of these tests have yet to be found within the lease area or surrounding property.

In 1984, ARMCO sold the private holdings of the cattle ranch to the City of Scottsdale. The City of Scottsdale purchased Planet Ranch in order to acquire its water rights to ensure a reliable water supply for Scottsdale. A proposal to construct a pipeline from Planet Ranch to the nearby Central Arizona Project (CAP) canal was never executed. In order to retain the water rights, the City of Scottsdale expanded the irrigation capabilities of Planet Ranch and leased the lands to local farmers for cultivation of alfalfa. Planet Ranch was purchased by the Freeport-McMoRan Inc. from the City of Scottsdale in 2011. In 2015, as a result of the Big Sandy River-Planet Ranch-Agreement, the Planet Ranch property was acquired by the AGFC.

Results of Class I literature and records review

The 2011 Class I included both the lease area and a one-mile review buffer around the lease area (Figure 17). The 2011 Class I reported six cultural resource investigations and 14 cultural resource sites. Of the 14 recorded cultural resource sites in the Lease Area, only three of them occur within the Project Area. Two of these are small prehistoric sleeping circle, rock alignment, and artifact scatter sites; and the other is the adjacent historic Planet Mine, located outside of the Lease area. The remaining 11 sites include similar small prehistoric sites, most with rock features and artifact scatters. Of the 14 sites, only one prehistoric site, AZ M:13:5 (ASM), is recommended as eligible for the NRHP. The historic Planet Mine is listed on the Arizona State Register and is being considered as eligible for the NRHP. No TCPs or sacred sites have been identified in the Project Area.

Results of Class III Pedestrian Survey

The 795-acre Class III cultural resources survey (Figure 14) resulted in the identification of two previously recorded sites, AZ M:9:2 (ASM) and AZ M:13:13 (ASM), and one newly recorded site, AZ M:9:26 (ASM). AZ M:9:2 (ASM) is a prehistoric flaked-stone scatter was recommended eligible for inclusion in the NRHP. AZ M:9:26 (ASM), a small flaked stone site, was recommended as ineligible for the NRHP. AZ M:13:13 (ASM) is the Planet Mine and ranch, and recommended eligible for inclusion in the NRHP.

AZ M:13:13 (ASM) encompasses a large area with gaps and open spaces between features and artifact clusters. Features associated with the historic Planet Mine are outside the Project Area.

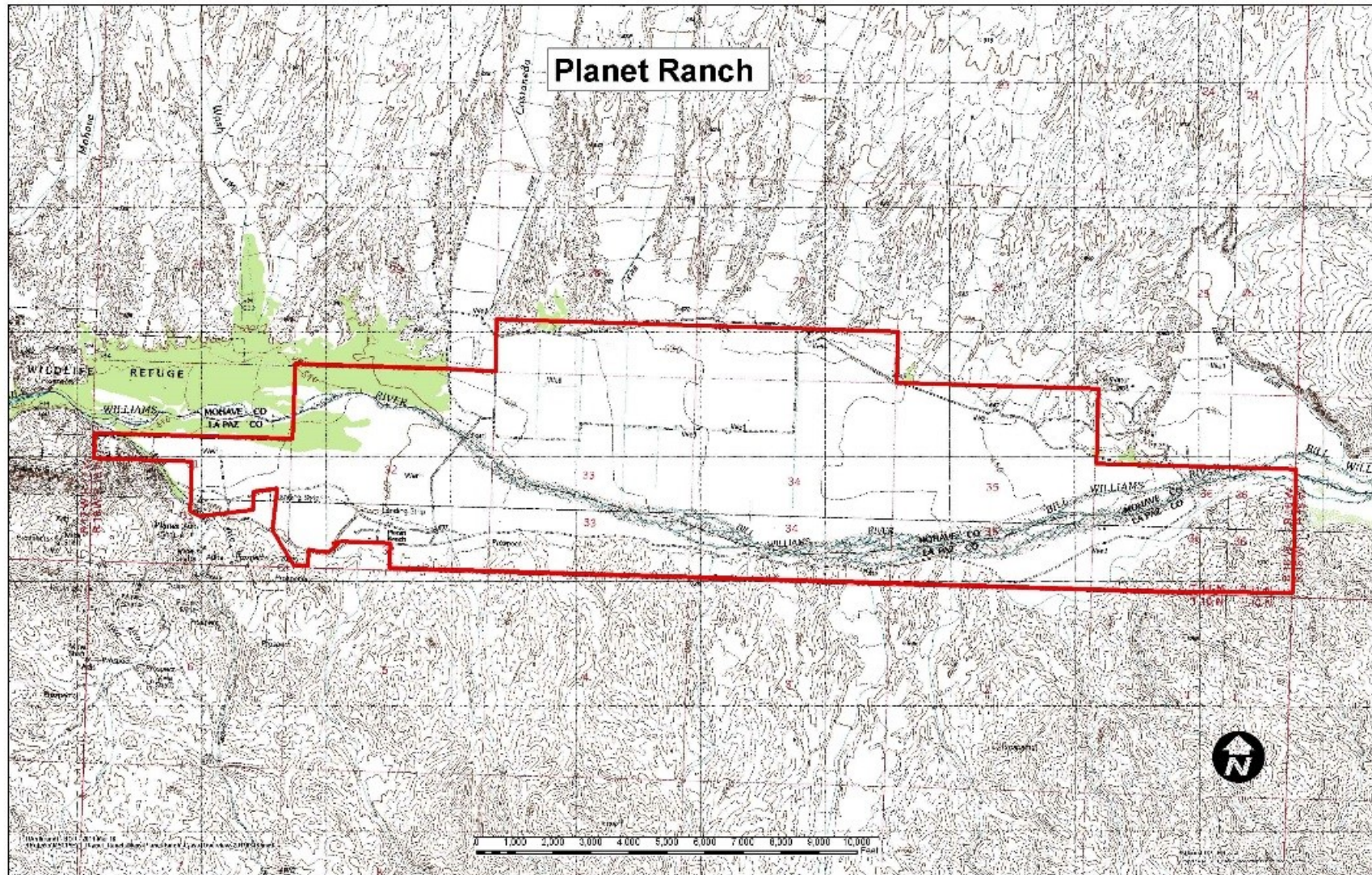


Figure 17. Class I Study Area (Lease Area).

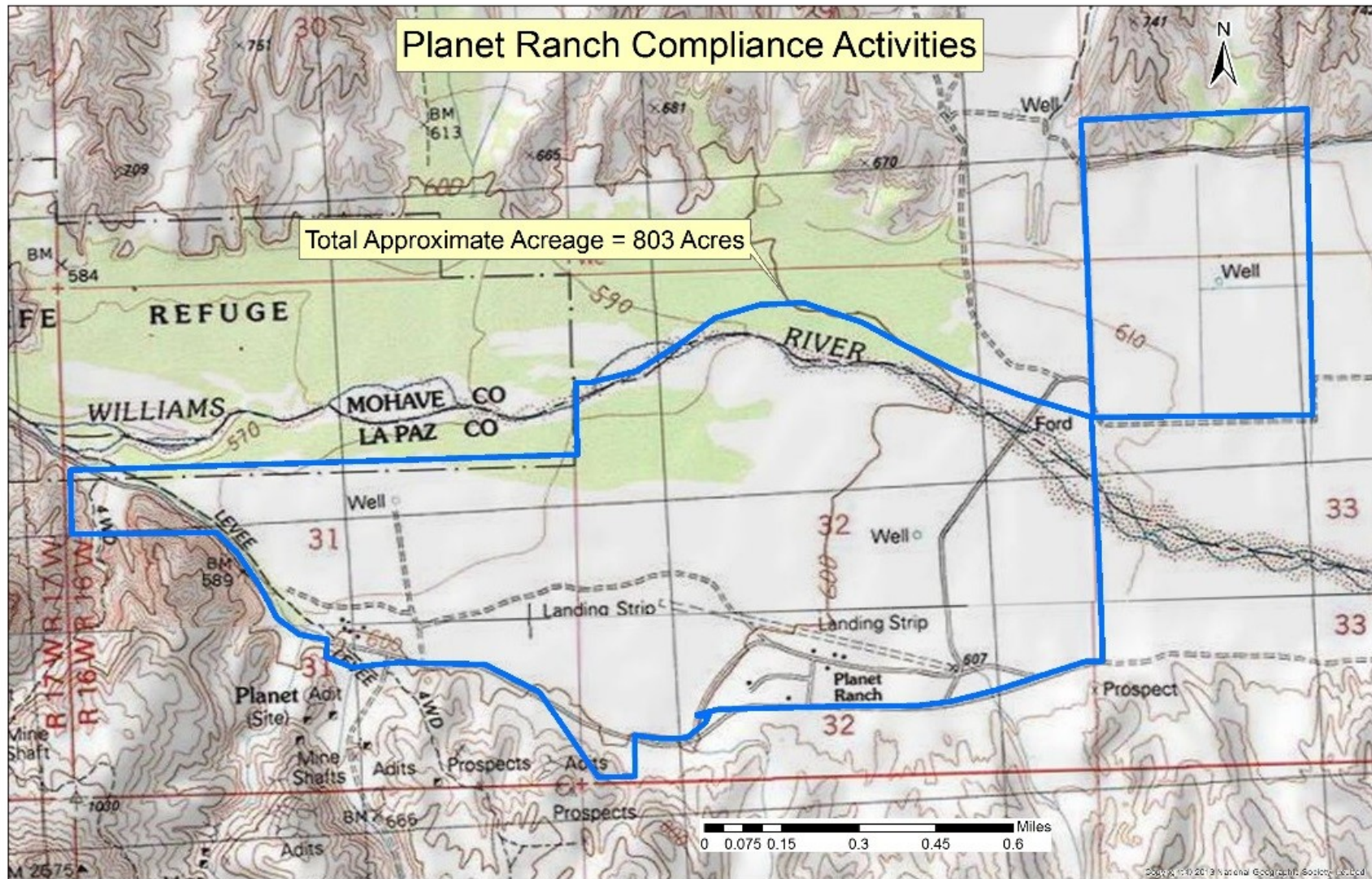


Figure 18. Class III Study Area.

1 There are three loci (e.g., areas with concentration of artifacts) that are adjacent to the Project
2 Area. Locus 1 includes a structure and artifact cluster, Locus 2 includes a variety of historic
3 debris dating back to the early 1900s, and Locus 3 was newly identified and includes a dirt
4 landing strip, three mid-1960s structures, and a late 1960s road. Components within Locus 3, the
5 only area of the site that will be impacted by the Proposed Action, are a non-contributing
6 element to the site's eligibility as they no longer convey their significance and lack integrity for
7 listing on the NRHP.

9 **3.4.3.2 Environmental Consequences**

11 **No Action**

12 Under the No Action alternative, there will be no effect to cultural resources.

14 **Proposed Action**

15 Proposed Action design has minimized impacts to cultural resources. A portion of site AZ
16 M:13:13 (ASM) will be impacted by construction; this area includes structures/buildings and dirt
17 landing strip, all built in the mid-to-late 1960s that no longer convey significance and lack
18 integrity because they have been altered since they were built. In on-going consultation with the
19 Arizona SHPO, Reclamation found that this area is a non-contributing element of the Planet
20 Mine/Ranch site and Reclamation recommended a determination of no adverse effect (Appendix
21 B).

23 There will be a change in the view shed. The now barren area where structures and farming
24 equipment were stored will be changed to include ponds and native plants. The installation of
25 these will not have direct or indirect impacts to cultural resources; the addition of the ponds and
26 native plants will create a more natural view than the machine leveled land and isolated
27 structures that exist today.

29 An archaeological monitor will be present to inspect the construction site during ground
30 disturbing activities [SFL1] [OD2] (MM-CR1).

32 **Cumulative Impacts**

33 The analysis area for potential cumulative impacts to cultural resources/TCPs/sacred sites was
34 defined as the lease area because no potential impacts are anticipated outside of the Project Area.
35 There are no cumulative impacts.

3.4.4 Geology and Soils

3.4.4.1 *Affected Environment*

The River channel is characterized by a series of relatively narrow gorges that are separated by distinctly wider, alluvial reaches. The riverbed is filled with alluvium throughout the length of the river. At low flows, the river follows a braided pattern characterized by relatively low sinuosity channels separated by medial bars composed of sands and gravel. During high flows (prior to construction of Alamo Dam) the channel often occupied most of the wide alluvial valley (AZ 1999).

The east-west-trending Planet Valley is the longest and widest alluvial valley occupied by the River. It is bounded on its north and south sides by high-standing dissected surfaces of relict Pleistocene and late Tertiary alluvial fan surfaces and intervening late Holocene alluvial fans emanating from the Buckskin Mountains on the south and from diverse, distant mountain source areas to the north (AZ 1999).

Planet Valley was subjected to protracted, high post-dam stream flow events in 1993 and 1995. Considerable lateral erosion resulted, but minimal to no vertical incision of the channel is apparent (AZ 1999).

3.4.4.2 *Environmental Consequences*

No Action

Under the No Action alternative, no soil excavation, or flood control structures construction would occur as a result of the Proposed Action. Therefore, the natural processes of erosion and deposition of sediment would be allowed to occur in the Project Area with no additional effect, and no soil would be relocated due to any construction practices.

Proposed Action

Under the Proposed Action, LCR MSCP would construct a flood control structure by adding materials such as, but not limited to, sheet-pile or rip-rap along the northern edge of the Project Area. Although the Project Area is outside of the identified waters of the US (USACE 2013), and the 100-year floodplain, flood control structures would be installed to protect against larger flood events. These flood control structures would prevent potential floodwaters from entering the facilities and causing erosion as well as reduce soil erosion along the northern edge of the Project Area (Figure 6). Mitigation measures MM-HWQ1 will be followed to ensure compliance with the Clean Water Act.

In addition, LCR MSCP would plant native cottonwood and willow trees to enhance the habitat within the Project Area, wherever possible, which would also increase soil stabilization. Any soil work would be localized to the Project Area and is not expected to affect the overall geology or soils within the Lease property.

The Proposed Action would be designed to utilize as much of the onsite characteristics as possible as to minimize impacts. This includes utilizing existing water related infrastructure and detention basins (DF-HWQ-2, DF-HWQ-3). Additional design features include elevation of the ponds to minimize risk of damage due to flooding; soft and hard erosion control engineering; and the Proposed Action would be designed to withstand floods of 7,000 cfs (DF-HWQ-4, DF-HWQ-5, DF-HWQ-6). A complete list of design features and minimization measures incorporated into the Proposed Action are listed in Table 1.

During construction, the backwater ponds would be excavated and the spoil material will be moved to the upland farmed areas and contoured to mitigate erosion caused by stormwater flow from the washes, and will be seeded with and stabilized by native plants and restore the shrub communities. Additional soil disturbance during construction from grading, use of vehicles and/or other equipment, would be temporary. Completion of the Proposed Action would result in improved management of erosion, run-off and drainage in the north areas in the upland farming lands where spoils would be placed, and flood control structures on the northern edge of the Project Area. Although soil materials would be excavated, it would be moved within the Project Area and infrastructure such as flood control structures would be constructed to protect the backwater from rain/flood events and control soil erosion.

It is also anticipated additional construction and activities conducted within the reserved areas during the life of the Lease would have short-term impacts to geology and soils. Table 8 describes the environmental consequences as a result of the potential activities proposed for the reserved areas.

Table 8. Geology and Soil Reserved Area Analysis

Proposed Activity ¹	Environmental Consequence
Additional equipment storage	Additional equipment for the maintenance and operation of the site would generate potential dust and soil erosion. Storage of equipment is expected to be in areas previously disturbed and/or in a maintenance shed.
Staging areas	A staging area for construction and/or maintenance operations will generate a short term disturbance greater than the baseline disturbance. The staging area is expected to be in an area previously disturbed so as to minimize impacts to geology and soils.
Excess fill material disposal	During operations and maintenance activities, occasional excess fill material may accumulate and be stored in reserved areas for future maintenance activities. The fill material will be in previously disturbed areas and is not expected to contribute to long term impacts to geology or soils.
Parking areas	Parking areas would generate potential dust and soil erosion. Parking areas are expected to occur on previously disturbed areas to reduce impacts to geology and soils.
Habitat restoration	Habitat restoration provides soil and bank stabilization in the event of flood events. Habitat restoration would provide beneficial impacts over time.

¹ The identified proposed activities have been included in the analysis for potential implementation as a part of the Proposed Action. Additional actions proposed within the reserved areas not listed in this table would require additional analysis.

Cumulative Impacts

Although the Proposed Action would move soils during excavation of the backwater ponds and construction, measures would be implemented to minimize impacts (Table 1) and prevent

1 erosion during high flow events during operation of the Proposed Action. It is anticipated that
2 implementation of the Proposed Action would have no direct or indirect negative impacts and
3 would have a beneficial impact to upland farming areas. A positive cumulative impact from
4 improvement of drainage in upland areas where spoils are placed is anticipated.
5
6

3.4.5 Hazardous Materials, Solid Waste and Health and Human Safety

3.4.5.1 *Affected Environment*

Phase I and II Environmental Site Assessments¹ were conducted at Planet Ranch when Freeport purchased the property from the City of Scottsdale (City) between 2006 and 2010, at which time, all remediation actions and the removal of all hazardous materials were taken by the City. Since the initial Phase I, II, and III were conducted and all appropriate actions were taken at that time, a Phase I Assessment was completed in 2015, prior to the Final Lease Agreement between the current landowner (AGFC) and Reclamation. No additional remediation actions were required.

3.4.5.2 *Environmental Consequences*

No Action

Under the No Action Alternative there would be no impacts related to hazards and hazardous materials/human health and safety. The Project Area would remain in its current condition where the potential for spills and leaks of fuel from the use of OHV would remain the same. There are no known hazardous materials or contaminants in the Project Area.

Proposed Action

The Proposed Action would use fuel based heavy construction equipment during removal/clearing, construction, maintenance, and operational activities. Other fuel-based vehicles and equipment such as staff fleet, maintenance, and machinery equipment would be operated from the start of the Proposed Action activities. Use of fuel-based equipment and vehicles may lead to the potential for fuel spills and leaks of oil.

During construction and maintenance activities, solid waste may be generated. Generated solid waste would be recycled, diverted, and/or disposed of in appropriate processing facilities (MM-HHM1). All solid waste material recycled or diverted would not contain hazardous materials. Solid waste that does not meet the criteria of recycled or diverted material would be disposed of in a state certified landfill.

The use of pesticides to control the re-growth of invasive plants would be used, as needed, during all phases of the Proposed Action, as invasive plants such as salt cedar are known to persist in the area. In addition, pesticides, used to control the population of fish species, may be required in the backwater ponds as fish management practices during maintenance and operations activities. The use of chemical control of these nuisance and invasive species may result in accidental spills, leaks, and overspray of chemicals. Pesticides used for the control of

¹ A Phase I Environmental Site Assessment (Assessment) is a report that documents evaluation of a parcel of real estate for environmental contamination. A Phase II Assessment is a more detailed report prepared if contamination is identified. A Phase III Assessment is the actual cleanup of the contamination. The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 requires that an Assessment be completed one year prior to the date of acquisition of a property.

invasive plant re-growth and fish population control would be used as needed and would be applied in accordance with the manufacturer's label.

To further reduce the risk to the health and safety of the public resulting from potential spills, leaks and/or releases, compliance with all of the requirements of the CWA to include conditions and measures MM-HHM2 and MM-HWQ1 will be followed. Although it is not anticipated that the Proposed Action would not be constructed within the waters of the U.S. as defined in the CWA, the river channel is directly adjacent to the Project Area. Minimization measures MM-HHM4 and monitoring from the implementation of the NPDES, SWPPP, and the WQMP would ensure the reduction of risks to human health and safety by minimizing risk of discharge and pollution to the Project Area, backwater ponds, and the river channel (Appendix A).

Although no known hazardous material or contaminants are present and no potential impacts are anticipated from the use of fuel-based equipment and vehicles for integrated pest management, MM-HHM2, MM-HHM3, MM-HHM4, and MM-HHM5 would be implemented during construction, operation and maintenance activities. The application of pesticides will be applied in accordance with manufacturer label instructions.

It is also anticipated that additional construction and activities conducted within the reserved areas during the life of the Lease would have short-term impacts to hazardous materials and health and human safety. Table 9 describes the environmental consequences as a result of the potential activities proposed for the reserved areas. Although the risk of potential spills, the measures described above would prevent direct or indirect impacts.

Table 9. Hazardous Materials and Health and Human Safety Reserved Area Analysis.

Proposed Activity ¹	Environmental Consequence
Additional equipment storage	Additional equipment increases the risk for chemical or oil spills to occur.
Staging areas	Staging areas will temporarily increase the risk for chemical or oil spills to occur.
Excess fill material disposal	All fill material is expected to be used for contouring of the northern edge of the Project Area. Any excess fill material will be disposed of in an appropriate landfill. No risks to health and safety are expected to occur as a result of fill material.
Parking areas	Parking areas increase the risk chemical or oil spills to occur. Any soils that become stained with oils will be disposed of through a license contractor.
Habitat restoration	Habitat restoration is expected to reduce the risk of erosion and run off into the River.

¹ The identified proposed activities have been included in the analysis for potential implementation as a part of the Proposed Action. Additional actions proposed within the reserved areas not listed in this table would require additional analysis.

Cumulative Impacts

Although implementation of the Proposed Action may have the potential for spills, leaks and/or releases of hazardous or toxic chemicals or materials, measures would be implemented to minimize impacts. It anticipated that implementation of the Proposed Action would have no direct or indirect impacts. Therefore, no cumulative impacts are anticipated.

3.4.6 Land Use / Recreation

3.4.6.1 Affected Environment

Land Use and Agricultural Resources

Reclamation has management responsibility for within the Project Area in accordance with the terms of the Lease. Currently, AGFD manages the areas where existing farmlands in the north east part of the Lease Area excluding the Reserved Areas and land east of the main north-south access road that cross the property. AGFD currently allows OHV and other recreational activities within these managed areas. Reclamation operates and maintains the Reserved Areas and the land west of the main north-south access road. In addition, Reclamation would utilize its 5,549 AFY of associated water rights outlined in the Lease. The Proposed Action is within the Mohave and La Paz County land use planning areas where land use is designated each County's respective plans. Lands to the north of the active river channel is within the Mohave County planning area and lands to the southwest corner of the Lease Area, directly south of the active river channel, are within the La Paz County planning area.

The Land Use section of the Lease EA documented a review of these land use plans with respect to the Lease Area, and concluded that the acquisition of the Lease would be consistent with the Mohave and La Paz County land use plans, this information is incorporated here by reference. In summary, the Lease EA identified the portion of Mohave County in which Planet Ranch is located, is within the planning area known as "Rural Development Area (RDA)". There are no land uses planned for the portion of the RDA in which Planet Ranch is located. The La Paz County Plan designates Planet Ranch as "Rural Residential". This designation allows for low density single family homes on 2.5-acre to 40-acre parcels.

Recreation

Early in 2017, AGFD opened up the Lease Area east of the Project Area for recreation activities. The area is primarily used for wildlife viewing, hunting and OHV use. No fires or wood gathering are authorized. Signs have been posted alerting the public of the restrictions to prevent unauthorized use and trespassing on the Project Area. AGFD is in the process of developing and finalizing a land use plan for the AGFD-managed area.

The lands managed by Reclamation within the Project Area, west of the main access road, including the Reserved Areas, would be opened for limited recreational activities including birdwatching, hiking, and other types of foot traffic (Figure 5). No camping, fires, wood gathering, hunting or OHV use will be authorized in the Project Areas.

All vehicular traffic including OHV is permitted on designated roads that border the project area and those that are currently proposed to be designated as the Arizona Peace Trail.

3.4.6.2 Environmental Consequences

No Action

Under the No Action Alternative, the Lease Area would continue to be managed for habitat restoration and comparable activities by Reclamation and AGFD in accordance with the terms of the Lease. Lands would be managed in accordance with existing plans and Federal, State, and County requirements.

Proposed Action

The Land Use section of the Lease EA documented that plans for habitat restoration and other LCR MSCP compatible activities, operations and maintenance of the Lease Area may be developed by Reclamation and AGFC. Under the Proposed Action, as a result of this restoration planning, Reclamation would cease operating and maintaining farmlands in the northeast section of the Lease Area and approximately 120 acres would be developed as disconnected backwaters to restore razorback suckers and bonytail chub in the southwest portion of the Lease Area. Areas within the 1,034 acres of farmlands and potential spoils location to the northeast would be restored to upland areas. These activities are consistent with the goal of restoring habitat and implementing LCR MSCP compatible activities, operations, and maintenance within the Lease Area.

The Lease Area would continue to be managed by Reclamation and AGFD in accordance with the terms of the Lease. Land use would be consistent with the RDA designations assigned by Mohave and La Paz Counties as well as goals identified for preserving and enhancing wetlands, wildlife, and other natural resources, therefore, lands within the Project Area would be managed in accordance with existing plans and Federal, State, and County requirements.

It is also anticipated that additional construction and activities conducted within the Reserved Areas during the life of the Lease would have short-term impacts to land use and recreation. Table 10 describes the environmental consequences as a result of the potential activities proposed for the reserved areas.

Table 10. Land Use and Recreation Reserved Area Analysis.

Proposed Activity ¹	Environmental Consequence
Additional equipment storage	The Reserved Areas include lands that have been previously disturbed. No effects to Land Use/Recreation are expected. There will be no change to "Rural" designations or other land uses as a result of storing additional equipment that are not already identified in the above section.
Staging areas	No effects to Land Use/Recreation are expected. There will be no change to "Rural" designations or other land uses as a result of staging areas that are not already identified in the above section.
Excess fill material disposal	No effects to Land Use/Recreation are expected. There will be no change to "Rural" designations or other land uses as a result of storing excess fill material that are not already identified in the above section.
Parking areas	No effects to Land Use/Recreation are expected. There will be no change to "Rural" designations or other land uses as a result of creating parking areas that are not already identified in the above section.

1

Habitat restoration	No effects to Land Use/Recreation are expected. There will be no change to "Rural" designations or other land uses as a result of habitat restoration that are not already identified in the above section.
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¹ The identified proposed activities have been included in the analysis for potential implementation as a part of the Proposed Action. Additional actions proposed within the reserved areas not listed in this table would require additional analysis.

6

Cumulative Impacts

7

The current land jurisdiction has resulted in a watershed that is primarily rural. The Proposed Action is not expected to have a cumulative impact on the rural nature of the watershed because the Project Area would be used for habitat restoration and other compatible activities, all of which would be consistent with the current rural setting at Planet Ranch.

8

9

3.4.7 Noise

3.4.7.1 Affected Environment

The existing noise levels within or near the Project Area are associated with the current Reclamation operations and management of farmlands, OHV operations, and other related recreational activities within and directly adjacent to the Project Area. The nearest sensitive receptor (e.g., residential uses, schools, hospitals, nursing homes, religious institutions, libraries, and similar uses) to noise would be the onsite staff operating and maintaining farmlands for Reclamation. Other sensitive receptors would be located in Parker Arizona, ten miles from the Project Area.

The surrounding areas around the Project Area are generally exposed to low levels of ambient noise with occasional increases in noise levels from the operation of farming equipment and vehicles, and normal traffic and operations from OHV use and other recreational activities.

The Noise Control Act (42 USC 4910) established noise emission criteria, as well as noise testing methods (40 CFR Chapter 1, Subpart Q). These criteria generally apply to interstate rail carriers and to some types of construction and transportation equipment. The EPA published a guideline (USEPA 1974) containing recommendations for acceptable noise level limits affecting residential land use of 55 A-weighted decibels (dBA) L_{dn} for outdoors and 45 dBA L_{dn} for indoors.

3.4.7.2 Environmental Consequences

No Action

The No Action Alternative would have no impacts related to noise. The Proposed Action would not be implemented and no noise would be generated from heavy fuel based construction equipment used for the Proposed Action. The Project Area would continue to be managed by Reclamation and AGFD and current noise levels from recreational activities would continue.

Proposed Action

Although vegetation removal and construction would require the use of heavy fuel-based equipment that would temporarily raise ambient noise levels when in use, the use of construction equipment would be temporary. Construction is proposed to take place for maintenance, repair, or clearing activities during business hours between 7:00 a.m. and 7:00 p.m. Impacts from noise resulting from the Proposed Action would be short-term. Noise conditions after construction would go back to the current conditions.

It is also anticipated that additional construction and activities conducted within the Reserved Areas during the life of the Lease would have short-term impacts to Noise. Table 11 describes the environmental consequences as a result of the potential activities proposed for the Reserved Areas.

In addition, no additional sensitive receptors, facilities, and other noise generating structures would be constructed.

Table 11. Noise Reserved Area Analysis.

Proposed Activity ¹	Environmental Consequence
Additional equipment storage	Activities related to the construction of additional equipment storage would take place during business hours between 7:00 a.m. and 7:00 p.m. Impacts of noise resulting from the construction of additional equipment storage would be short-term. Noise conditions after construction would go back to the current conditions.
Staging areas	Impacts of noise resulting from the activities related to the use of staging areas would be short-term during the use of vehicles and heavy equipment. Noise conditions after the use of the staging areas use would go back to the current conditions.
Excess fill material disposal	Activities related to the disposal excess fill material to the reserved area would be short-term during the use of vehicles and heavy equipment. Noise conditions after the use of the excess fill material disposal would go back to the current conditions.
Parking areas	Activities related to the construction of parking areas would take place during business hours between 7:00 a.m. and 7:00 p.m. Impacts of noise resulting from the construction of parking area would be short-term. Noise conditions after construction would go back to the current conditions.
Habitat restoration	Activities related to habitat restoration would take place during business hours between 7:00 a.m. and 7:00 p.m. Impacts of noise resulting from habitat restoration would be short-term. Noise conditions after construction and implementation of habitat restoration would go back to the current conditions.

¹ The identified proposed activities have been included in the analysis for potential implementation as a part of the Proposed Action. Additional actions proposed within the reserved areas not listed in this table would require additional analysis.

Cumulative Impacts

The analysis area for potential cumulative impacts related to noise was defined as the Project Area because no potential impacts are anticipated outside of the Project Area. No cumulative impacts are anticipated because the Proposed Action design would not include additional sensitive receptors, and other noise generating structures that would cumulatively impact noise levels in the Project Area.

3.4.8 Public Services / Utilities and Service Systems

3.4.8.1 Affected Environment

The Project Area is remote and located within a secluded area within Planet Ranch. The Project Area contains two four-bedroom houses and a maintenance shop located on the south side of the Project Area within the New and Existing Structures Area (Figure 5). These structures would continue to be utilized to accommodate onsite staff for the operation and maintenance of backwater ponds within the Backwater Area by Reclamation staff or contractors. Existing infrastructure includes roads, water lines, wells and associated pumps, and septic systems (Figures 19-25). The wells, pumps, and structures are currently connected to electrical utilities. Electricity is serviced by Arizona Public Services in La Paz County and Unisource in Mohave County.

Public services such as law enforcement and fire services within the Lease Area are provided by the BLM through an agreement with Reclamation. This agreement includes occasional patrols by the BLM and response to MSCP emergencies within the Lease Area including fire. AGFD also patrols the property.

Water for current Reclamation's operations and management of farmlands is supplied by the 5,549 AFY of water rights granted by the Lease described in Section 1.2.3.

3.4.8.2 Environmental Consequences

No Action

The No Action Alternative would have no impacts related to public services/utilities and services. The Proposed Action would not be implemented and the LCR MSCP would continue to manage, operate, and maintain the Lease Area as authorized by the Lease. It would not be anticipated that additional public services, utilities, or system services would be needed.

Proposed Action

The Project Area is currently managed and operated by Reclamation and AGFD. The Proposed Action would not require new public services such as fire and law enforcement since an existing agreement is in place for these services with the BLM. Although operation and maintenance staff would be present at the site on a regular basis, access to the Project Area would be limited to operation and maintenance activities of the Proposed Action. No public access is anticipated within the Project Area with the exception of the use of the existing main north-south access roads to access lands managed by AGFD, birdwatching, and hiking.

The Proposed Action would not induce population growth. There are no plans to construct facilities that would encourage increased recreation within the Project Area. Thus, no additional public services would be required as a result of the Proposed Action.



Figure 19. Planet Ranch Housing 1 (2017).



Figure 20. Planet Ranch Housing 2 (2017).



Figure 21. Planet Ranch Housing 3 (2017).



Figure 22. Planet Ranch Housing 4 (2017).

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3
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Figure 23. Planet Ranch Buildings (2017).



5
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Figure 24. Planet Ranch Electrical Infrastructure (2017).

1



2
3 **Figure 25. Well and Equipment (2015).**

4
5 The Proposed Action would utilize existing infrastructure such as roads, water lines, wells, and
6 septic systems and electrical utilities to operate the existing and proposed new facilities. New
7 utilities connections may be required resulting from the development of the Project Area through
8 the life of the Lease. The Proposed Action would integrate the following:

- 9
- 10 • **Roads** – Existing roads would be utilized to operate the Proposed Action. A proposed
11 road would be incorporated to the east of the staging area and be designed to help with
12 storm water and erosion control.
 - 13
 - 14 • **Water** - Reclamation would use its 5,549 AFY of water rights to accommodate Proposed
15 Action operations, maintenance, and onsite-staff by upgrading, connecting into and
16 maintaining the existing wells and water lines.
 - 17
 - 18 • **Electricity** - Reclamation would utilize site infrastructure close to existing electricity
19 utilities for access. Solar panels may be incorporated into the design to power critical
20 infrastructures such as pumps and lighting to minimize use on the existing electrical
21 utility lines. New structures associated with the Proposed Action would increase use of
22 electricity that may require upgrades to existing infrastructure.
 - 23
 - 24 • **Septic** – The Proposed Action design would utilize existing septic systems where
25 possible for new facilities such as modular homes and other facilities. New septic

systems may need to be installed, and existing septic systems may need to be replaced to support future operations of the Conservation Area activities.

Although the Proposed Action would utilize existing public services / utilities and systems services, there would be no impact to public services and utilities and services. If the need for additional septic systems or utility upgrades or maintenance of existing utility and public services are required, mitigation measure MM-HHM1 would be implemented

It is also anticipated that additional construction and activities conducted within the Reserved Areas during the life of the Lease would have short-term impacts to Public Services/Utilities and Service Systems. Table 12 describes the environmental consequences as a result of the potential activities proposed for the reserved areas.

Table 12. Public Services/Utilities and Service Systems Reserved Area Analysis.

Proposed Activity ¹	Environmental Consequence
Additional equipment storage	The construction of additional equipment storage may require lighting that would utilize electrical utilities for power. Existing utilities would be used to operate the proposed structure. No additional public services/utilities and service systems would be needed as a result of the construction of additional equipment storage.
Staging areas	Staging areas would not require utilities, thus no additional public services/utilities and service systems would be needed as a result of the construction of additional equipment storage.
Excess fill material disposal	Disposal areas for excess fill materials would not require utilities, thus no additional public services/utilities and service systems would be needed as a result of the construction of additional equipment storage.
Parking areas	The construction of parking areas may require lighting that would utilize electrical utilities for power. Existing utilities would be used to light areas for parking. No additional public services/utilities and service systems would be needed as a result of the construction of additional equipment storage.
Habitat restoration	Habitat restoration may require utilities such as roads, water lines, wells, and electrical utilities to operate the proposed new facilities associated with habitat restoration. New and existing utilities would be used to operate the proposed infrastructure. No additional public services/utilities and service systems would be needed as a result of the construction of additional equipment storage.

¹ The identified proposed activities have been included in the analysis for potential implementation as a part of the Proposed Action. Additional actions proposed within the reserved areas not listed in this table would require additional analysis.

Cumulative Impacts

No potential impacts are anticipated within the Project Area of analysis and no cumulative impacts are anticipated because the Proposed Action design would utilize existing services and infrastructure to accommodate additional housing, facilities, and other structures. In addition, the Proposed Action is not anticipated to induce population growth which would require additional public services.

3.4.9 Transportation and Traffic

3.4.9.1 Affected Environment

1 The Proposed Action is within an area that is currently categorized as a RDA. Recently, the
2 northeast portion of the Lease Area managed by AGFD has been opened up for public use.
3 Public use includes, but is not limited to birding/wildlife viewing, foot traffic such as hiking, and
4 OHV use. A land use plan has not been established by AGFD for managed lands for recreation
5 at this time.

6
7 The Lease Area is currently accessed from the main access road with two entrances to the
8 property. One entrance is from the south and the other is from the north end. The main road and
9 all of the other existing access roads through the farm fields are unimproved and made of
10 compacted dirt. Landowners outside the Lease Area, Reclamation staff, AGFD staff, and
11 recreationalists are the primary users of main access road. Recreational vehicles, OHVs, and
12 government vehicles are the most common types of vehicles using the access roads in the Lease
13 Area.

14 15 **3.4.9.2 Environmental Consequences**

16 17 **No Action**

18 The No Action Alternative will have no effect on existing transportation and traffic.
19

20 **Proposed Action**

21 The Proposed Action is anticipated to have short term effects to traffic in and around the town of
22 Parker, AZ. Shea Road in Parker AZ that leads to the Project Area is likely to experience more
23 activity due to the delivery of materials and equipment into and out of the Project Area during
24 construction. Construction and staff vehicles would be traveling on Planet Ranch Road that is
25 located with the Project Area and travel speeds are anticipated to be slow (25mph or less) to
26 ensure BMPs and mitigation measures for other resource areas are being implemented. Roads
27 used during construction would be temporarily closed to limit access for public safety. This
28 effect is expected to be temporary and intermittent.

29
30 In addition, the Proposed Action would include a new unimproved road alignment to the east of
31 the proposed backwater ponds. The new alignment is necessary because the eastern-most area of
32 the proposed Conservation Area ponds is sited where a portion of the existing main access road
33 is located and would need to be relocated. This new alignment would also direct traffic away
34 from the ponds to reduce interference with the operation and maintenance of the Conservation
35 Area ponds. The total length of this new road alignment is approximately 0.4 miles long (Figure
36 5 and Figure 12).

37
38 Increased use of the access roads resulting from recreation and OHV use permitted in specific
39 areas within the Lease Area by the AGFD is anticipated. The new alignment would provide
40 alternative and continued access to these areas, preventing disruption to the operations and
41 maintenance of the Proposed Action.

42
43 Once construction of the Proposed Action is completed, operations and maintenance traffic
44 generated by onsite staff is anticipated to increase slightly due to additional onsite staff. The

proposed new road alignment would allow traffic from recreation to continue through the AGFD lands, which would reduce access and traffic impacts to the Project Area.

It is also anticipated that additional construction and activities conducted within the Reserved Areas during the life of the Lease would have short-term impacts to transportation and traffic. Table 13 describes the environmental consequences as a result of the potential activities proposed for the reserved areas.

Table 13. Transportation and Traffic Reserved Area Analysis.

Proposed Activity ¹	Environmental Consequence
Additional equipment storage	Using the reserved areas to store additional equipment will have minimal impacts to traffic. Equipment store on reserved areas instead of maintenance sheds creates greater areas of travel between the Project Area and the equipment. Equipment stored in reserved areas potentially will increase traffic on roads when being moved between site locations.
Staging areas	Using the reserved areas for staging area will potentially increase traffic in the area periodically through the movement of equipment and materials from location to location within the project area.
Excess fill material disposal	Using the reserved areas for excess fill material disposal will potentially increase traffic in the area periodically through the movement of equipment and materials from location to location within the project area. Short term impacts only.
Parking areas	Parking areas will increase transportation and traffic impacts due to the nature of parking areas. These areas will be used for vehicles by people coming and going from the Project Area. The increase is expected to be minimal.
Habitat restoration	Habitat restoration activities on reserved areas is expected to have short term impacts to traffic and transportation during construction. Habitat restoration in reserved areas is expected to decrease traffic and transportation in these areas.

¹ The identified proposed activities have been included in the analysis for potential implementation as a part of the Proposed Action. Additional actions proposed within the reserved areas not listed in this table would require additional analysis.

Cumulative Impacts

The Proposed Action is anticipated to have minimal direct and indirect impacts to traffic within the Lease Area as the impacts are anticipated to be temporary. Thus, no cumulative impacts are anticipated.

3.4.10 Visual Resources / Aesthetics

3.4.10.1 Affected Environment

The Project Area is located directly adjacent to the Bill Williams River, a tributary to the Colorado River in western Arizona, approximately 20 miles east of Parker, Arizona. The Project Area is already disturbed, consisting of existing infrastructure from previous private ownership and land use. Existing infrastructure includes housing facilities and work facilities. In addition, the Project Area is known for extensive native riparian habitat and is characterized by broad lowland surrounded by rocky low mountains, canyons, and washes. Lands are a mix of Sonoran desert scrub, riparian woodland/scrub, and fallowed agricultural fields. Existing facilities and remnants of housing structures built by previous landowners and taken down over time are also present (Figure 26-28).



Figure 26. Low Desert Riparian and Woodlands/Scrubs.



Figure 27. Fallowed Agricultural Lands.



Figure 28. Existing Facilities and Structures.

Currently, the Lease Area is being used for OHV and other recreational activities, as well as Reclamation's operations and management of farmlands to the northeast. The Project Area is within the remote areas adjacent to the Bill Williams River NWR, thus cannot be seen from major freeways or areas of interest.

3.4.10.2 Environmental Consequences

No Action

The No Action Alternative would have no effect to visual resources/aesthetics. The visual resources/aesthetics would not be altered from the Proposed Action and the viewshed would remain in its current condition, dominated by low desert vegetation and farmlands. The existing infrastructure would remain in its current condition. Changes in the viewshed of the Project Area may change in the future as a result of future LCR MSCP conservation activities.

Proposed Action

Short-term impacts would result from the implementation of vegetation removal and construction of the Proposed Action. These activities would temporarily lessen the visual quality of the area on because of the use of land based mechanical and hydraulic equipment and the movement of materials.

However, re-vegetation would occur near the excavated backwater ponds. The new open backwater ponds would be designed to blend into the existing natural landscape. The re-vegetation and creation of habitat would restore the Project Area to a natural appearance that would enhance the visual aesthetics, as well as add value to the area and the viewshed.

Construction of flood control structures and other bank stabilization structures to prevent erosion of the southern bank of the River would also be designed and constructed to blend into the natural landscape of the Project Area. The flood control structures would be used to protect the backwater ponds during increased flows from weather or Alamo Dam flood releases. This structure would be constructed using natural materials from the Project Area where possible and would be designed to blend in with the natural surroundings.

Existing facilities are a part of the current conditions within the Project Area. Although the Proposed Action incorporates the addition of new facilities, modular housing or trailers and other critical infrastructure, it would be designed to blend into the existing viewshed.

It is also anticipated that additional construction and activities conducted within the Reserved Areas during the life of the Lease would have short-term impacts to Visual Resources/Aesthetics. Table 14 describes the environmental consequences as a result of the potential activities proposed for the reserved areas.

Table 14. Visual Resources/Aesthetics Reserved Area Analysis.

Proposed Activity¹	Environmental Consequence
Additional equipment storage	The construction of additional equipment storage would be located with the existing and other proposed new structures and would be designed to blend into the existing viewshed.

Proposed Activity ¹	Environmental Consequence
Staging areas	The use of additional staging areas would be located with the existing areas where current operations exist and would blend in with the existing viewshed.
Excess fill material disposal	The use of additional disposal areas for excess fill materials would be placed in areas where the materials can be contoured to blend in with the existing viewshed.
Parking areas	The construction of parking areas would be located existing areas where current operations exist. Although lighting may be needed, parking areas would be designed to blend in with the existing viewshed.
Habitat restoration	Short-term impacts would be anticipated from the implementation of additional vegetation removal and construction of habitat areas within the identified reserved areas activities. Construction activities would temporarily lessen the visual quality of the area on because of the use of equipment and the movement of materials. However, the habitat restoration area(s) would be designed to blend into the existing natural landscape. The re-vegetation and creation of habitat would further restore the Project Area to a natural appearance that would additionally enhance the visual aesthetics, as well as add value to the area and the viewshed.

¹ The identified proposed activities have been included in the analysis for potential implementation as a part of the Proposed Action. Additional actions proposed within the reserved areas not listed in this table would require additional analysis.

Cumulative Impacts

The Proposed Action would not result in the obstruction or degradation of any scenic viewshed, as the removal/clearing, construction, and establishment activities are anticipated to cause only temporary changes in the visual character of the Project Area. No cumulative impacts are anticipated because the design of the Proposed Action would blend in with the natural landscape.

3.4.11 Water Quality

3.4.11.1 Affected Environment

The Proposed Action would be located in the widest alluvial valley of the River, called Planet Valley. There is an aquifer along the River in Planet Valley that is hydraulically connected to the surface flow in the channel throughout a large section of the river. This aquifer is contained by sandstone and alluvial (unconsolidated rock and silt) material beneath the floodplain of the river and provides a substantial volume of subsurface storage below the floodplain surface (USGS, 2002). Water is added to storage within the aquifer during periods of high flow in the river; during periods of low flow, out flow from this aquifer maintains base flows in downstream sections of the river where nearly impermeable consolidated rock is located near the surface. The portion of the aquifer in Planet Valley (including the upstream end of the Bill Williams River NWR), provides the largest volume of subsurface storage in the lower River reach and buffers against changes in base flow in the Bill Williams River NWR (USGS 2002).

At Planet Valley, the aquifer is about 6 miles wide and as much as 400 feet deep. Groundwater monitoring wells installed in July 2016 indicate that the groundwater depths vary from approximately 7.1 to 19.8 feet below ground surface with an average of approximately 13.9 feet. Aquifer mapping has illustrated that while the channel of the river through Planet Valley may be dry, water infiltrates into the uppermost layer of the aquifer at the head of Planet Valley and is probably concentrated along the center and southwestern part of the valley, as indicated by high specific capacities of wells in those areas. The quality of surface flow in the River as it enters the Bill Williams River NWR is substantially influenced by movement of water back and forth between the river channel and the aquifer and by the quality of water lost to evaporation, transportation, and agricultural usage between the Bill Williams River NWR and Alamo Dam (USGS 2002).

Planet Valley is part of the Basin and Range formation of Arizona. Arizona is an arid and semi-arid climate, recharging groundwater, on average, between 2% and 3% of the average annual rainfall (Uhlman, 2005). Due to the nature of the geology of alluvial basins, water infiltrates rapidly. Clay minerals, iron hydroxide and humic matter as well as microorganisms located in the subsurface have high decontamination capacities (Klaus-Dieter and Yan 2008). Natural purification effects within filter layers and in the subsurface are caused mainly by filtration, sedimentation, precipitation, oxidation-reduction, sorption-desorption, ion-exchange and biodegradation. Dissolved compounds, among them also contaminants, can be adsorbed especially by clay materials, iron-hydroxides, amorphous silicic acid, and organic substances.

At the confluence of the River into Lake Havasu, below the Bill Williams River NWR (where the river and the lake meet), the specific conductivity averaged 899 $\mu\text{S}/\text{cm}$ between 1982 and 2013 (Reclamation data). This is typical of the water of the Colorado River.

3.4.11.2 Environmental Consequences

No Action

Under the No Action alternative, there would be no changes to groundwater quality.

Proposed Action

Under the Proposed Action, the backwater ponds would be designed to constantly flow through at various discharge rates directly onto the alluvial deposits upland of the river channel. During an emergency or unplanned maintenance such as repairs to the pond liners and other parts of the structure, draining may be necessary. The Proposed Action design would include tertiary treatment measures to provide a method of percolation through planted vegetation and through the alluvial deposits. This treatment would provide a natural filter for any organic and/or inorganic compounds that may enter the aquifer adding additional water quality treatment.

The water is not expected to flow directly into the river channel and will be designed to avoid being a point source. Measures to minimize impacts to water quality include MM-BIO6, MM-HHM1, MM-HHM3 (see Table 1 and Appendix A). Through the natural process outlined above and the measures incorporated into the Proposed Action, no impacts are anticipated to water quality.

It is also anticipated additional construction and activities conducted within the reserved areas during the life of the Lease would have short-term impacts to water quality. Table 15 describes the environmental consequences as a result of the potential activities proposed for the reserved areas.

Table 15. Water Quality Reserved Area Analysis.

Proposed Activity ¹	Environmental Consequence
Additional equipment storage	Additional equipment for the maintenance and operation of the site would generate potential increase in spills. The reserved areas are previously disturbed but storage of equipment is not expected to have significant impacts. Table 1 outlines requirements for stained soils and spills.
Staging areas	A staging area for construction and/or maintenance operations will generate a short term disturbance greater than the baseline disturbance. The staging area is expected to be in an area previously disturbed so as to minimize impacts to water quality. Table 1 outlines requirements for stained soils and spills.
Excess fill material disposal	During operations and maintenance activities, occasional excess fill material may accumulate and be stored in reserved areas for future maintenance activities. The fill material will be in previously disturbed areas and is not expected to impact to water quality.
Parking areas	Parking areas would generate potential erosion and run-off into waters of the US. Parking areas are expected to occur on previously disturbed areas. Parking areas increase the risk for spills to occur, increasing the risk for water quality issues. Table 1 outlines requirements for stained soils and spills.
Habitat restoration	Habitat restoration provides soil and bank stabilization in the event of flood events. Habitat restoration would provide beneficial impacts over time.

¹ The identified proposed activities have been included in the analysis for potential implementation as a part of the Proposed Action. Additional actions proposed within the reserved areas not listed in this table would require additional analysis.

Cumulative Impacts

1 Although no impacts are anticipated to water quality as a result of draining of the backwater
2 ponds during maintenance, design features and minimization measures would be incorporated.
3 The flood control structure may penetrate as deep as 15 feet, which is within the aquifer water
4 table. The flood control structure will be constructed with non-hazardous materials; therefore,
5 no harmful impacts to water quality are anticipated as a result of the implantation of the
6 Proposed Action.
7

4.0 List of Preparers

4.1 Bureau of Reclamation

Dana Owen
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Bureau of Reclamation, Lower Colorado Regional Office

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4.2 Bureau of Land Management

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- 2 Realty Specialist
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- 5 Shari Ketcham
- 6 Wildlife Biologist
- 7 Bureau of Land Management, Lake Havasu Field Office
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- 9 Caroline Kilbane
- 10 Outdoor Recreation Planner
- 11 Bureau of Land Management, Lake Havasu Field Office
- 12
- 13 Jessica Han
- 14 Archaeologist
- 15 Bureau of Land Management, Yuma Field Office

5.0 Consultation and Coordination

5.1 Persons/Agencies Consulted

5.1.1 Federal

The following Federal Agencies are being contacted and/or consulted with on the Proposed Action:

- US Fish and Wildlife Service

5.1.2 State

The following State entities are being contacted and/or consulted with on the Proposed Action

- Arizona Game and Fish Commission
- Arizona Game and Fish Department
- Arizona State Historic Preservation Office

5.1.3 Tribes

The following Tribes are being consulted with on the Proposed Action:

- Chemehuevi Indian Reservation, Havasu Lake, CA
- Mojave, Colorado River Indian Reservation, Parker, AZ
- Fort Mojave Indian Reservation, Mohave Valley, AZ
- Yavapai-Prescott Indian Tribe Reservation, Prescott, AZ
- Yavapai-Apache, Camp Verde Indian Reservation, Camp Verde, AZ
- Fort McDowell Indian Reservation, Fountain Hills, AZ
- Hualapai Reservation, Peach Springs, AZ
- Havasupai Reservation, Supai, AZ
- Hopi Indian Reservation, Kykotsmovi, AZ
- Navajo Indian Reservation, Window Rock, AZ
- Quechan, Fort Yuma Indian Reservation, Yuma, AZ

5.2 Scoping / Public Involvement

Preparation and outreach for the notification of the availability of the Draft EA for a 30-day public review and comment period will include:

- 1 • The preparation of a news release by Reclamation advertising the purpose, location, date,
2 time, and reference resources.
- 3 • Preparation of an information postcard for the Proposed Action distributed to interested
4 parties.
- 5 • A joint open house will be conducted LCR MSCP and AGFD to discuss the plans for the
6 Planet Ranch area. Reclamation will also be available to address questions related to
7 NEPA and the draft EA for the Proposed Action.

8

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Appendices

Appendix A

Best Management Practices, Minimization Measure, Conservation Measure, and Mitigation Measure Register

Measure Table

Resource Area	Measure Number	Description of Measure
Air Quality	Best Management Practices (BMP)	
	BMP-AQ1	<ul style="list-style-type: none"> To reduce dust emissions: <ol style="list-style-type: none"> 1. Watering of the site or other soil stabilization method shall be employed on an on-going basis after the initiation of any grading. 2. Portions of the site that are actively being graded shall be watered to ensure that a crust is formed on the ground surface, and shall be watered at the end of each workday. 3. All disturbed areas are treated to prevent erosion. 4. All grading activities are suspended when winds exceed 25 miles per hour.
	BMP-AQ2	<ul style="list-style-type: none"> To reduce pollutant emissions <ol style="list-style-type: none"> 1. All equipment used for grading and construction must be tuned and maintained to the manufacturer's specification to maximize efficient burning of vehicle fuel. 2. The operator shall maintain and effectively utilize and schedule on-site equipment and on-site and off-site haul trucks in order to minimize exhaust emissions from truck idling.
Biological Resources		
	Mitigation Measures	
	MM-BIO1	To ensure biological resources awareness of all on-site and other staff: <ol style="list-style-type: none"> 1. The Project Area biological education program will be provided to staff and contractors by an approved biologist. This education program includes information to aid in species identification, current status, and actions to take to avoid impacts to wildlife.
	MM-BIO2	To reduce spread and/or introduction of noxious and invasive species: <ol style="list-style-type: none"> 1. Equipment used for this Proposed Action shall be thoroughly cleaned prior to entering the Project Area. The cleaning process will ensure that all dirt and debris that may harbor noxious or invasive weeds seeds are removed and disposed of at an appropriate facility. Reclamation's Inspection and Cleaning Manual for Equipment and Vehicles to Prevent the Spread of Invasive Species: 2012 Edition should be referenced for inspection and cleaning activities. The manual can be found at: http://www.usbr.gov/mussels/prevention/docs/EquipmentInspectionandCleaningManual2012.pdf
	MM-BIO3	If a tortoise enters the Project Area all work will cease and it will be allowed to leave by its own volition. A combination of fencing and cattle/tortoise guards will serve to exclude desert tortoises from entering selected portions of the Project Area.

Resource Area	Measure Number	Description of Measure
	MM-BIO4	Pre activity/construction clearance surveys will be conducted for kit foxes and Sonoran desert tortoises, when appropriate, as determined by the lead MSCP biologist.
	MM-BIO5	Grading/grubbing would occur outside of the migratory bird breeding (February 15 to September 1) season to the maximum extent practicable. If grading/grubbing occurs during the migratory bird breeding season preconstruction clearance surveys will be conducted. No nests, eggs or nestlings will be affected.
	Conservation Measures	
	CM-BIO5	To ensure compliance to the LCR MSCP HCP: 1. All applicable LCR MSCP HCP Conservation Measures will be incorporated into the design, construction, operation, and maintenance of the Proposed Action.
	Design Features	
	DF-BIO6	The design of the backwater ponds would ensure optimal habitat and conditions for the native fish.
	DF-BIO7	Fencing and vegetation barriers would minimize access to the backwater ponds and critical infrastructure and reduce access from the public in the Project Area. This design would minimize the introduction of non-native fish by the public and would reduce predation from riparian and/or wildlife species. The vegetation designs would also consider other LCR MSCP species by developing ideal habitat conditions and preserve existing native plants such as cottonwood-willow and honey mesquites.
	DF-BIO8	The design features of the backwater ponds and the other facilities would allow the onsite staff to drain the backwater ponds for needed maintenance activities and for the removal of non-natives in the event of an introduction.
Cultural Resources		
	Mitigation Measures	
	MM-CR1	An archaeological monitor will periodically inspect the construction site during ground disturbing activities.
	MM-CR2	If any previously unidentified cultural resources (including human remains or cremations) are encountered during any aspect of this project, the crew should immediately stop work at that specific location, take steps to protect the discovery, and immediately call the Arizona Game and Fish Cultural Resource Compliance Manager at 623-236-7620 or 623-285-8821 and Reclamation's Archaeologist at 702-293-8130 in order to determine the appropriate treatment of the discovery.
Hazardous Materials		

Measure Table

Resource Area	Measure Number	Description of Measure
	MM-HHM1	All solid waste, construction and demolition waste shall be managed by picking up and disposing of all debris materials and trash in appropriate locations off-site (recycling, diversion, landfill, etc.).
	MM-HHM2	To minimize discharge and pollution to the water resources and soils within and adjacent to the Project Area, appropriate permits and plans such as Clean Water Act (CWA) 404 permit, NPDES, SWPPP, and WQMP would be prepared as required for the Proposed Action prior to excavation activities.
	MM-HHM3	<p>Discovered Contaminants Protections. Should contaminants be identified, activity on the site shall cease and a qualified Reclamation Hazardous Materials Specialist for the Project shall be retained to conduct the following:</p> <ol style="list-style-type: none"> 1. Obtain samples of the suspected contaminants 2. Require lab analysis and access findings to identify specific contaminants 3. Ensure appropriate remediation is conducted and completed in accordance to the regulations specific to the contaminants identified. <p>Toxic Substances Protections. To ensure toxic substances are not released into the aquatic environment, the following measures shall be followed:</p> <ol style="list-style-type: none"> 1. All engine-powered equipment shall be well-maintained and free of leaks of fuel, oil, hydraulic fluid or any other potential contaminant to include the following: <ol style="list-style-type: none"> a. Prior to start of work, a daily inspection checklist must be completed b. All equipment should be checked for leaks during operation c. If equipment show evidence of leaks, a drip pan will be placed under the leaking equipment. 2. Staging areas for refueling of equipment shall be located away from the backwater and away from the River to prevent any accidental fuel leakage from contaminating surface water; 3. A spill prevention and response plan shall be prepared in advance of the commencement of work; a spill kit with appropriate clean-up supplies shall be kept on hand during operations. <ol style="list-style-type: none"> a. The kit shall include a floating oil-absorbent sock that could be immediately deployed and maintained around the Project area in the event of a spill or any accidental leakage of fuel or hydraulic fluids; b. Refueling and maintenance of mobile equipment shall not be performed directly over the waters of the River. Only approved and certified fuel cans with “no-spill” spring-loaded nozzles shall be used; c. All spill cleanup materials or other liquid or solid wastes shall be securely containerized and labeled in the field; and
	MM-HHM4	

Measure Table

Resource Area	Measure Number	Description of Measure
		<div><div>d. Equipment will not be stored within the boundaries of the waters of the US. Equipment will be relocated to the staging areas at the end of each day to minimize risk of spills.</div><div>4. The application and control of herbicides and pesticides shall be in accordance with the Toxic Substances Control Act (TSCA) and Environmental Protection Agency Labeling requirements including but not limited to:<div><div>a. Requiring a certified and trained applicator</div><div>b. Application of the material in accordance with its label</div></div></div></div>
	MM-HHM5	Prior to any chemicals being stored on in the Lease Area, a Hazardous Materials Authorization form will be filled out and submitted to the Regional Hazmat Coordinator or Back-up Hazmat Coordinator. Only approved materials may be stored in the Lease Area.
Hydrology and Water Quality		
	Mitigation Measures	
	MM-HWQ1	If ground disturbance occurs within the Waters of the US as described in the Preliminary Jurisdiction Delineation report, the Army Corps of Engineers will be consulted for 404 or other appropriate permitting requirements.
	Design Features	
	DF-HWQ2	The design would utilize as much of the existing water related infrastructure as possible to minimize construction of new structures.
	DF-HWQ3	Flood protection barriers would be constructed to prevent flood damage to the Project Area and its facilities.
	DF-HWQ4	The conservation ponds would be elevated to avoid additional impacts and provide flood protection.
	DF-HWQ5	The combination of soft and hard flood and erosion control engineering would be used to stabilize the southern bank of the river channel and protect the Project elements from erosion during large flow events in the River.
	DF-HWQ6	The design would withstand floods of 7,000 cfs, which is the highest controlled release rate from Alamo Dam.

Appendix B

**National Historic Preservation Act State Historic Preservation Office Concurrence
for Planet Ranch Conservation Area, July 25, 2017**



SHPO - 2017 - 0973 (138096)
ARIZONA STATE HISTORIC PRESERVATION OFFICE

DOE NAE

United States Department of the Interior

BUREAU OF RECLAMATION
Lower Colorado Regional Office
P.O. Box 61470
Boulder City, NV 89006-1470



IN REPLY REFER TO:

LC-8414
ENV-3.00

JUL 19 2017

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Ms. Kathryn Leonard
State Historic Preservation Officer
Arizona State Parks
1300 West Washington
Phoenix, AZ 85007

Subject: Planet Ranch Conservation Area Ponds: Section 106 of the National Historic Preservation Act Consultation (AZ 16-09 P)

Dear Ms. Leonard:

The Bureau of Reclamation is proposing to develop a conservation area along the Bill Williams River at Planet Ranch. The project will include backwater ponds that will be dedicated to conserving native fish (i.e., razorback sucker, *Xyrauchen texanus*; and, bonytail chub, *Gila elegans*). These species are covered under the Lower Colorado River Multi-Species Conservation Program (LCR MSCP); the LCR MSCP is a 50-year (2005 to 2055) multi-stakeholder Federal and non-Federal partnership created to balance the use of Lower Colorado River water resources with the conservation of native species and their habitats in compliance with the Endangered Species Act. The program is cooperatively funded by the Federal government and the states of Arizona, California, and Nevada including permittees within these states. Reclamation acquired a lease to Planet Ranch lands from the Arizona Game and Fish Department. Reclamation is the lead agency for compliance with Title 54 USC 306108, commonly referred to as the National Historic Preservation Act as implemented through the Code of Federal Regulations Part 800 (36 CFR 800), for the undertaking.

Location and Description of the Undertaking

Planet Ranch, Arizona is adjacent to the Bill Williams River, a tributary to the Colorado River in west-central Arizona. It is approximately 20 miles east of Parker, Arizona, in Mojave and La Paz Counties. Planet Ranch is upstream of and shares a boundary with the Bill Williams River National Wildlife Refuge (Figure 1). The project is within portions of Sections 31 and 32, T11N, R16W, Gila and Salt River Baseline and Meridian (G&SRB&M) (USGS 7.5' Castaneda Hills SW, Ariz., 1990 and Planet, Ariz., 1990).

The project area was owned by Freeport Minerals Corporation. On November 25, 2015, the Secretary of the Interior entered into the "Big Sandy River-Planet Ranch Water Rights Settlement Agreement" as authorized and directed by the "Bill Williams River Water Rights Settlement Act of 2014". An aspect of the agreement was Reclamation's lease for 3,418 acres of land and 5,549 acre-feet per year of associated water rights within Planet Ranch to maintain habitat and implement restoration projects. Upon execution of the lease, Freeport Minerals Corporation donated the land and water rights to the Arizona Game and Fish Commission through a warranty deed.

The proposed project includes approximately 204 acres of ponds, facilities, and other features, and approximately 147 acres where the sediments excavated for pond creation will be deposited. Within the approximately 204 acres construction will include about 71 acres of disconnected backwater ponds, a fencing/vegetation barrier around the ponds, a detention basin for flood control, and a rock/soil barrier at the Bill Williams River to prevent erosion (see Figure 2 and 3). Native plants, such as honey-mesquite, cottonwood, and willow, will be established around the ponds to provide natural screening and control river bank erosion.

Materials excavated during construction will be on 147 acres of farm fields at Planet Ranch (see Figure 2). Excavated materials will be moved by trucks, on existing roads, and placed on former farm land. The mechanically excavated dirt will be shaped and contoured to match/blend with the native landform, and it will then be seeded with native upland shrub plants.

Existing roads will be used during construction and maintenance of the property. All of these roads were established during farming activities. A short road segment will be constructed near the ponds (see Figures 2 and 3).

Area of Potential Effect (APE)

The APE is the 204 acres where the ponds and other facilities/features will be established and the 147 acres where excavated sediments will be deposited.

Identification of Cultural Resources and Evaluation of Historical Significance in the APE

In 2011 Reclamation contracted with Archaeological Consulting Services for a Class I overview of 3,418 acres for Planet Ranch (Enclosure 1). The Class I work identified fourteen cultural resource sites within the 3,418 acres. This information was used for planning purposes if a lease was obtained by Reclamation.

In 2016 a Class III pedestrian survey was undertaken by Logan Simpson Design, Inc. for 795 acres (Enclosure 2). Three sites were identified in their survey. AZ M:9:2 (ASM) is a prehistoric flaked-stone scatter with features, and Reclamation recommends it eligible for inclusion in the National Register of Historic Places (NRHP) under Criterion D (information potential). AZ M:9:26 (ASM) is a small prehistoric flaked-stone scatter with features. Reclamation recommends it not eligible for inclusion in the NRHP; the information potential of the site has been exhausted by field recordation. AZ M:13:13 (ASM) is the historic Planet Mine and farm/ranch, and it has been previously recommended as eligible for inclusion in the NRHP under Criterion D (information potential).

Only site AZ M:13:13 (ASM) is within the current project area (see Figure 4 and Table 1), the other sites are outside of the project boundaries (see Figure 3).

Context of AZ M:13:13 (ASM)

Planet Mine

Established in 1863 the Planet Mine, adjacent to the project area, was one of the first successful copper mines in Arizona. In 1867 the mining area had 500 miners and in 1902 the town of Planet established a post office. Fluctuations in the value of copper resulted in rapid population fluctuations and near abandonment of the mine. A short-lived revitalization of the area occurred in 1883 when a smelter was built in the area, but the mines still failed. In 1909, the New Planet Copper Mining Company was incorporated; over the next decade, the company patented 39 claims. The deposits were not mined by the New Planet Mine Company; instead the company leased claims to various companies, such as the General Development Company in 1909 and 1910, the Northwest Leasing and Development Company from 1915 to 1917, and Albert B. Jones in 1915. From 1917 to 1961 there was little activity at Planet Mine. In 1961

the Golden Gate Mining Company leased the property for the mining of iron ore (to be shipped to Japan). By 1969 the mine was inactive and these lands were purchased by Arizona Ranch & Metals Co. who owned the adjacent Planet Ranch (the current project area).

Planet Ranch

In the late 1910s two homesteads were established in the vicinity of the current project. A larger body of lands, that incorporate the current Planet Ranch property, were acquired by the Santa Fe Pacific Railroad in 1924 as railroad land grants. The 1919 cadastral plat shows the home of "A.G. Jones" in the southeast corner of Section 31. Albert Jones leased the mine property for several months in 1915.

Little is known of Planet Ranch in the decades between 1924 and 1960. By 1962, Planet Ranch was under the ownership of a cattle company known as Arizona Ranch and Metals Co. (ARMCO). ARMCO expanded the ranch over the next decade to an estimated 10,000 acres for its livestock. Agricultural fields, laterals, and wells on the ranch were established, improved, and maintained. The 1966 topographic map shows a landing strip and agricultural fields established north of Bill Williams River.

In the early 1970s, the company tried to establish the new town of Planet on the ranch property where 12,000 acres were to be used for 7,000 residential units. As part of this proposed action, archaeologists from Prescott College conducted a reconnaissance survey of 5,500 acres of Bureau of Land Management land within the proposed town boundary; they identified six prehistoric sites. The town was never established due to environmental concerns and water availability.

In 1978, the Defense Nuclear Agency conducted a number of detonation tests near Planet Ranch as part of a simulation operation known as Miser's Bluff (an operation to measure ground motion caused by nuclear blasts on MX missile sites in the western United States). Seven 120-ton ammonium nitrate charges, simulating nuclear blasts, took place as part of Miser's Bluff in 1978.

In 1984, ARMCO sold the private holdings of the ranch to the City of Scottsdale. The city assumed full control of the 8,400+ acre ranch in order to acquire its water rights (~14,000 acre feet of water rights). The City of Scottsdale expanded the irrigation capabilities of Planet Ranch and leased the lands to local farmers for cultivation of alfalfa. In the 1990s the City of Scottsdale sold the ranch to the mining company of Freeport-McMoRan, Inc. In 2016 the property was sold to the Arizona Game and Fish Commission and Reclamation acquired a lease.

Effects Determination

Direct Effect

AZ M:9:2 (ASM) and AZ M:9:26 (ASM) will not be impacted by the proposed project. They are in upland areas, away from any construction, and not within the proposed project area boundary (see Figure 2).

The Class III survey expanded the boundaries of AZ M:13:13 (ASM). Specifically, five features were identified; these included, a late 1960s landing strip, two 1970s structures (houses where the current caretakers live), a work shop built in the 1970s, and a maintained dirt road. All of the structures and road will continue to be used and function as they do now; however, the dirt landing strip will be mostly removed by the project. All of these features are a latter component of Planet Ranch and are associated with farming and other recreation activities (see Figures 4 through 8). They are a non-contributing element to the site's eligibility as they do not convey their significance and lack integrity.

Indirect Effect

There are no indirect effects associated with the proposed construction. The project is removing modern agricultural fields and replacing these with native habitat and ponding areas for raising native species of fish.

Cumulative Effect

There are no cumulative effects. It is possible that the area for placing sediments excavated from pond creation will need to be expanded in order to make it blend with the natural setting. If future undertakings are planned, these will be individually consulted upon.

Finding of Effect

Sites AZ M:9:2 (ASM) and AZ M:9:26 (ASM) will not be impacted by construction; they are outside of the project area. Within the project area there are 1970s vintage structures and features that have been incorporated into the boundaries of site AZ M:13:13 (ASM). These are all non-contributing elements to the site's eligibility and do not convey significance, and they lack integrity. Per 36 CFR 800.5 Reclamation is consulting on our finding of no adverse effect for the undertaking. If you have questions or concerns regarding the undertaking please contact Mr. Mark C. Slaughter, Archaeologist, at 702-293-8143 or mslaughter@usbr.gov.

Sincerely,

Laura Vecerina

ACTING FOR

John Swett
Program Manager
Lower Colorado River
Multi-Species Conservation Program

Enclosures – 2

*Concur;
Listed elements of site AZ M:13:13 (ASM) are
noncontributing. Therefore, subject to
Tribal concerns, I concur that this undertaking
should have No Adverse Effect.*

*James C. Swett 8/3/14
for ASHPO*