RECLAMATION
Managing Water in the West

Draft Environmental Assessment

Casa Blanca-III Lateral and Sub-Lateral Canals

Pima-Maricopa Irrigation Project
Gila River Indian Community
Pinal County, Arizona

U.S. Department of the Interior
Bureau of Reclamation
Phoenix Area Office
Phoenix, Arizona

February 2019

Mission Statements

The Department of the Interior (DOI) conserves and manages the Nation's natural resources and cultural heritage for the benefit and enjoyment of the American people, provides scientific and other information about natural resources and natural hazards to address societal challenges and create opportunities for the American people, and honors the Nation's trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated island communities to help them prosper.

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.

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ACRONYMS AND ABBREVIATIONS

APE	area of potential effects
BIA	U.S. Bureau of Indian Affairs
CAA	Clean Air Act
CAP	Central Arizona Project
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	carbon monoxide
CO_2	carbon dioxide
Community	Gila River Indian Community
Corps	U.S. Army Corps of Engineers
CT	census tract
EA	Environmental Assessment
EO	Executive Order
EPA	U.S. Environmental Protection Agency
FPPA	Farmland Protection Policy Act
GHG	greenhouse gas
I-10	Interstate 10
IPaC	Information for Planning and Consultation
ITA	Indian Trust Assets
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act of 1969
NHPA	National Historic Preservation Act
NO_2	nitrogen dioxide
NRCS	U.S. Natural Resources Conservation Service
NRHP	National Register of Historic Places
O&M	operation and maintenance
PEIS	Programmatic Environmental Impact Statement
PIE	permanent irrigation easement
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
PM_{10}	particulate matter less than 10 but 2.5 or more microns in diameter
P-MIP	Pima-Maricopa Irrigation Project
Reclamation	U.S. Bureau of Reclamation
Reservation	Gila River Indian Reservation
SCIP	San Carlos Irrigation Project
SHPO	State Historic Preservation Office
SO_2	sulfur dioxide
SR	State Route
TCE	temporary construction easement
TCP	Traditional Cultural Property
U.S.	United States
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

1.0 PURPOSE AND NEED

1.1 INTRODUCTION

The Gila River Indian Community (Community) Pima-Maricopa Irrigation Project (P-MIP) is constructing an extensive irrigation system to serve farmland within the Community (Figure 1). The existing Casa Blanca Canal, which is owned by the San Carlos Irrigation Project (SCIP), is one of the major irrigation canals of this system. The proposed project consists of efficiency enhancements to water distribution equipment on approximately 71 miles of lateral and sub-lateral canal offshoots of the main Casa Blanca Canal. The five primary laterals are within Community Districts 3, 5, and 6 and are generally bounded by the Gila River to the north, Olberg Road to the east, Maricopa Road to the west, and the Casa Blanca Canal to the south (Figure 2). The construction of the water delivery enhancements is the subject of this Environmental Assessment (EA).

This EA has been prepared in accordance with the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. § 4321–4347), Council on Environmental Quality (CEQ) regulations (40 Code of Federal Regulations [CFR] 1500–1508), and U.S. Department of the Interior NEPA regulations (43 CFR 46). The U.S. Bureau of Reclamation is the lead federal agency responsible for the preparation of this EA. The Community P-MIP is the action proponent and the U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) is a cooperating agency in the preparation of this document.

1.2 BACKGROUND

The Colorado River Basin Project Act (Public Law 90-537, as amended) was passed on September 30, 1968. The Act authorized the Secretary of the Interior, through Reclamation, to construct the Central Arizona Project (CAP), a water resource development and management project with the primary purpose of furnishing Colorado River water for irrigation and municipal and industrial uses in central and southern Arizona. The Colorado River Basin Project Act authorizes Congress to appropriate Federal funding, which is administered by Reclamation, to help build and rehabilitate a portion of the facilities needed to implement the P-MIP.

By the 1990s, the Community determined that the maximum benefit of its CAP water entitlement could be obtained by integrating CAP water resources into a common-use irrigation system. When fully constructed, this common-use irrigation delivery system, known as P-MIP, would be capable of conveying irrigation water from all available sources to all lands identified for agricultural development in the Community Master Plan Report for Land and Water Use (Franzoy Corey Engineering, Inc. 1985). On May 15, 2006, the U.S. Secretary of the Interior entered into an amended water service contract with the Community for the annual delivery of 311,800 acre-feet of CAP water.

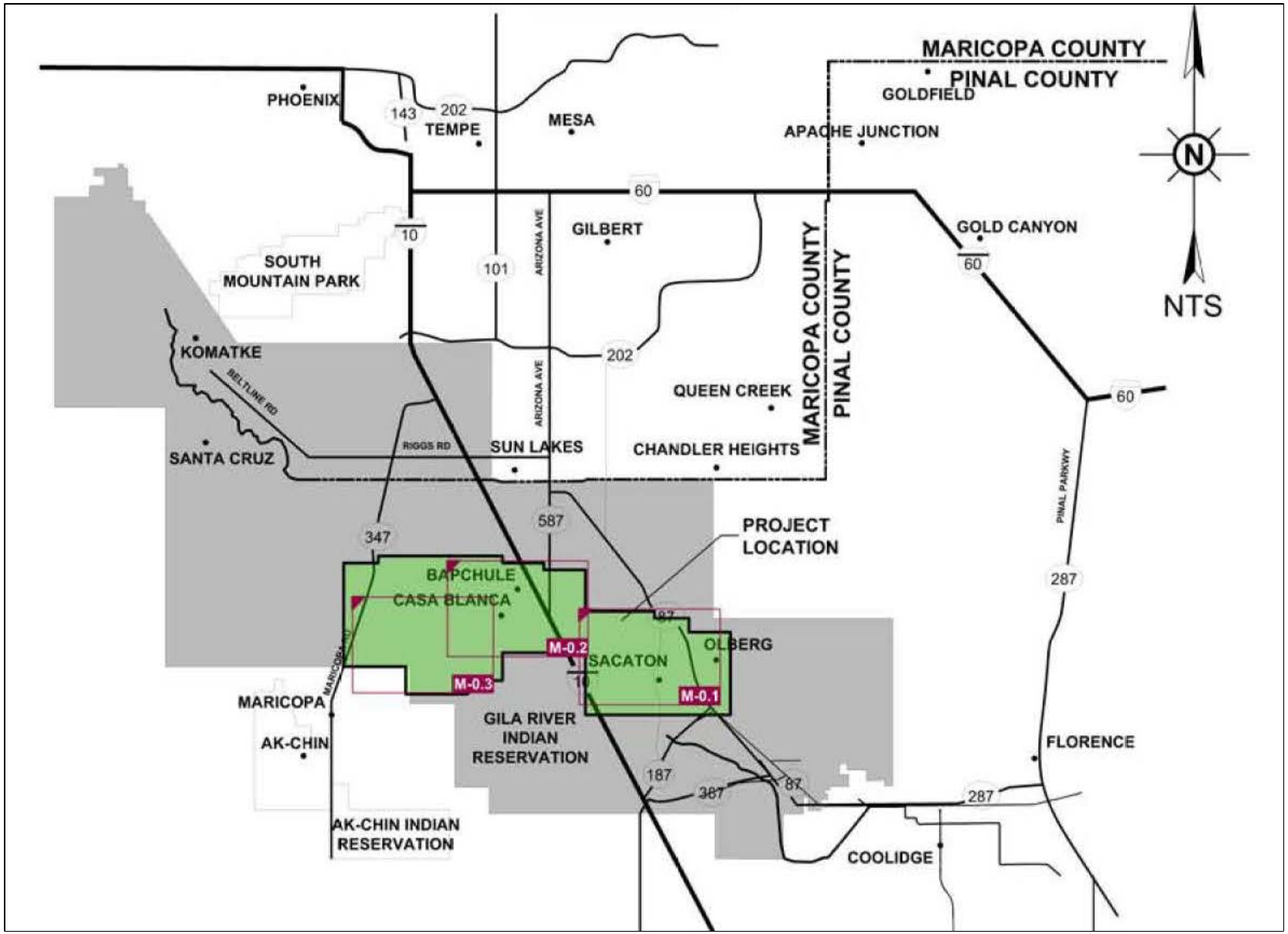


Figure 1. Project vicinity

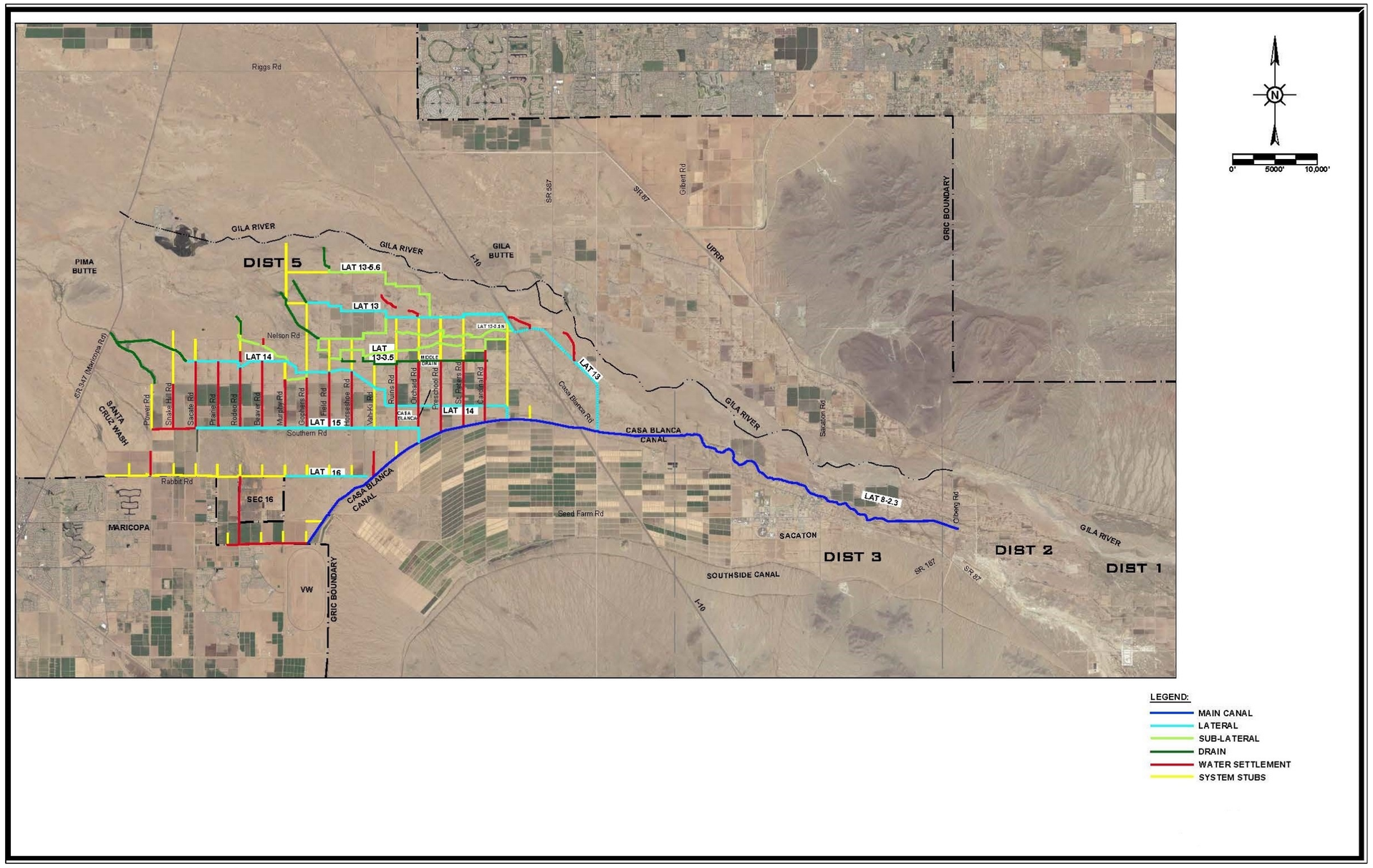


Figure 2. Casa Blanca Canal and laterals

1.3 PURPOSE AND NEED FOR ACTION

The purpose of the proposed project is to provide a reliable water supply to agricultural lands in the Casa Blanca Canal service area through the P-MIP system. The proposed project is needed to increase water transport efficiency and reduce water losses during travel within the canals. In addition, the assessment and modernization of system components would reduce the scope and frequency of required maintenance. The proposed updates are needed to provide flexibility in the service, repair, and operations of the canals and laterals, resulting in reduced overhead, maintenance, and resources necessary to conduct repairs to the irrigation system in the future.

To address this purpose, the proposed project would consist of installing 2.5 inches of concrete lining to all laterals; constructing a new segment of Lateral 14 to straighten its current inefficient alignment; inspecting and repairing or replacing existing irrigation canal measurement and control components (e.g., check structures, control gates), as necessary; and maintaining all canal access roads and road crossings within the existing permanent irrigation easement (PIE).

1.4 PROJECT LOCATION

The proposed project is within the south-central portion of the Community and is generally from east of Sacaton to west of Casa Blanca in Pinal County, Arizona. The area is bounded by the Gila River to the north, Olberg Road to the east, Maricopa Road to the west, and the Casa Blanca Canal to the south (see Figure 2).

1.5 PUBLIC INVOLVEMENT

Agency and public scoping for the project began when Reclamation sent scoping letters to interested agencies and tribal governments to solicit input on issues of concern. The scoping period was defined as March 19, 2018, to April 30, 2018. No public scoping meetings were held for this project. The public, agencies, and tribal governments are being given an opportunity to review and comment on this Draft EA. Public involvement and agency consultation and coordination are further discussed in Section 5.0 of this Draft EA.

1.6 DECISIONS TO BE MADE

The responsible officials for this Draft EA are the Area Manager of Reclamation's Phoenix Area Office and the State Conservationist of the NRCS. These officials are responsible for determining whether or not the action(s) proposed in this EA constitute a significant impact to the human environment and would require further analysis in an Environmental Impact Statement. If the Proposed Action is implemented, the Community P-MIP would undertake rehabilitation of the Casa Blanca Canal laterals with funds provided by Reclamation and potentially the NRCS.

1.7 PRIOR COMPLIANCE WITH NEPA

This EA tiers from the Programmatic Environmental Impact Statement (PEIS) for P-MIP completed in 1997. The PEIS addressed Community plans to construct and operate a common-use irrigation system and place up to 146,330 acres of land into agricultural production and allowed for a programmatic-level evaluation of the environmental impacts of the P-MIP at full implementation. Because adequate details had not yet been determined when the PEIS was prepared, the PEIS included commitments to prepare subsequent NEPA documentation for project components, including those associated with Casa Blanca Canal laterals rehabilitation. Additional background regarding the P-MIP is available in the Final Programmatic Environmental Impact Statement (FPEIS) for the Pima-Maricopa Irrigation Project (Reclamation 1997), the Final EA for the Blackwater Area Project (Reclamation 2003) and the Final EA for the 4-Mile Post Lift Station and Pipeline Improvements Project (Reclamation 2017).

2.0 DESCRIPTION OF ALTERNATIVES

This chapter describes the alternatives considered for the project - the no action alternative, the Proposed Action, and other alternatives considered but eliminated.

2.1 NO ACTION

Section 102(2)(E) of NEPA requires that "no action" be considered as an alternative in an environmental review whenever there are unresolved conflicts about the Proposed Action with respect to alternative uses of available resources. A description of "no action" is also customarily used to provide the baseline for comparison of environmental effects of the action alternatives against conditions that are representative of the status quo.

For the purpose of this analysis, the no action alternative assumes that the existing Casa Blanca lateral system would not be constructed or otherwise modernized. Farmers would continue to use water from the Casa Blanca Canal through approximately 56.83 miles of existing concrete-lined or earthen laterals and pipelines, and wells. The available water supply would continue to limit the area being cultivated, at approximately 7,024 aces. No additional lands would be brought into production and the current service area would not increase.

2.2 PROPOSED ACTION

The Proposed Action involves modernizing the existing Casa Blanca Canal lateral system. Five primary laterals branch from the Casa Blanca Canal: Lateral 13, Lateral 14, Lateral 15, Lateral 16, and Lateral 8-2.3, with each having a series of sub-laterals (see Figure 2).

The project would include the following general actions:

- Installing 3 inches of concrete lining to all laterals and sub-laterals (Figure 3)
- Removing debris and flushing all pipes
- Realigning approximately 2,320 feet of Lateral 14 (Figure 4)
- Repairing or replacing measurement and control components (e.g., turnouts, check structures, control gates, etc.) on the laterals (Figure 5)
- Conducting maintenance activities on the lateral's access roads and road crossings within the existing PIE (Figures 6–8)

All laterals and sub-laterals would remain in their existing channels and within their existing PIE, except for approximately 2,320 feet of Lateral 14, which would be realigned to straighten its current inefficient alignment. Build-out of the Proposed Action would modernize approximately 73 miles of laterals and sub-laterals and irrigate approximately 14,785 acres of existing agricultural lands. This acreage, along with an additional 4,955 acres fed directly from the Casa Blanca Canal, would maximize agricultural production in this service area by allowing for use of a combined 19,740 acres of existing agricultural lands (Figure 9).

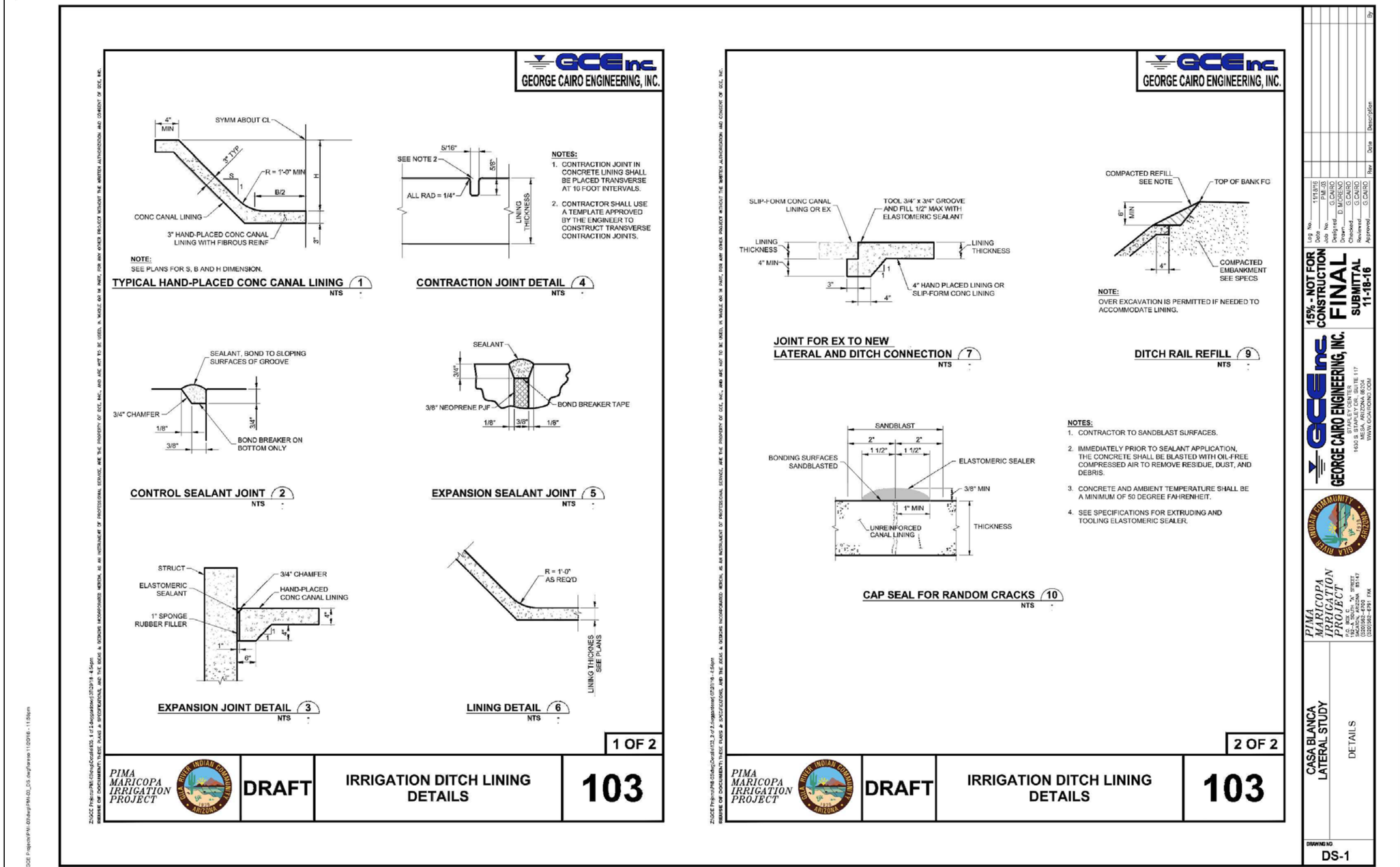


Figure 3. Typical canal lining

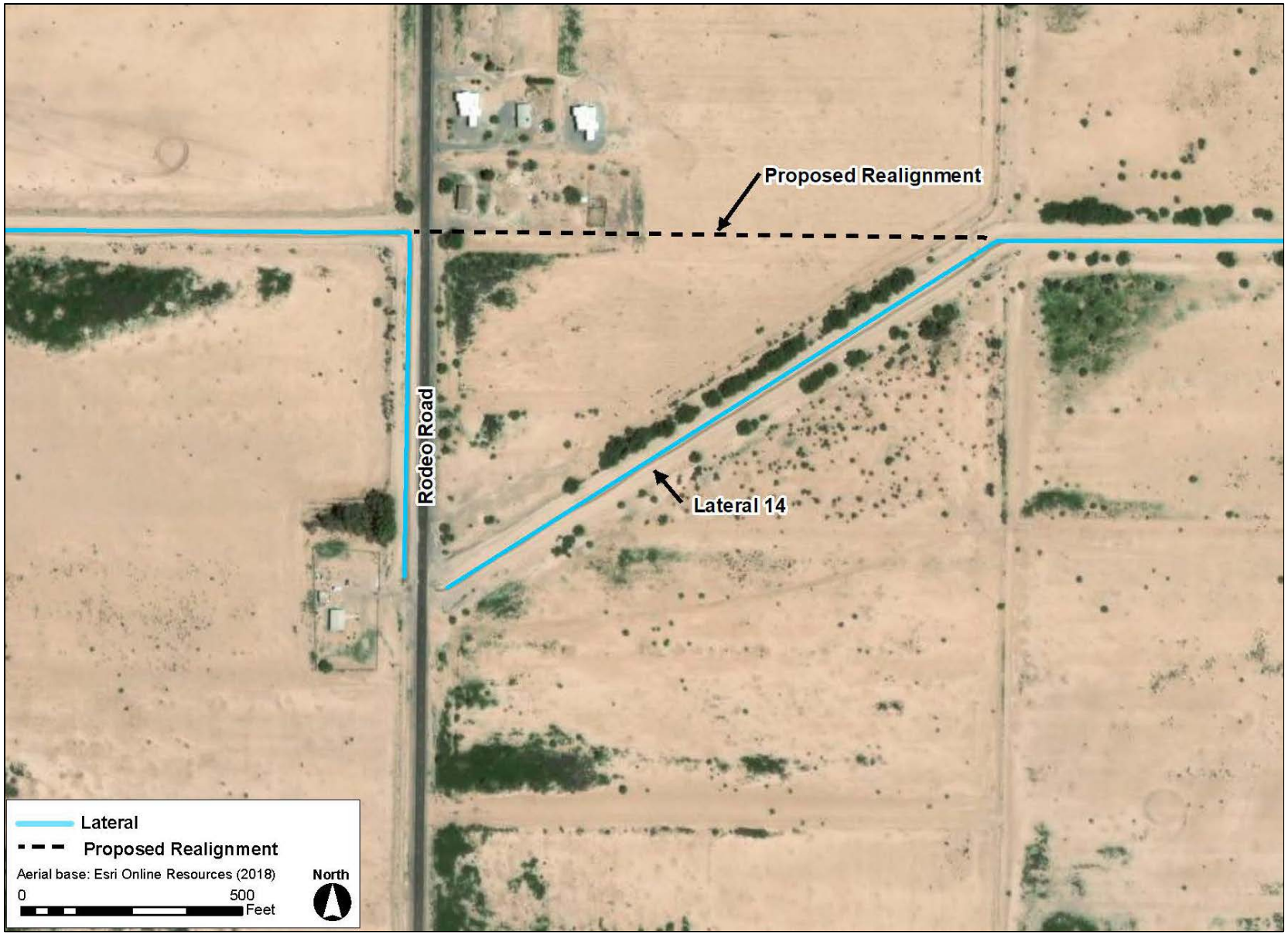
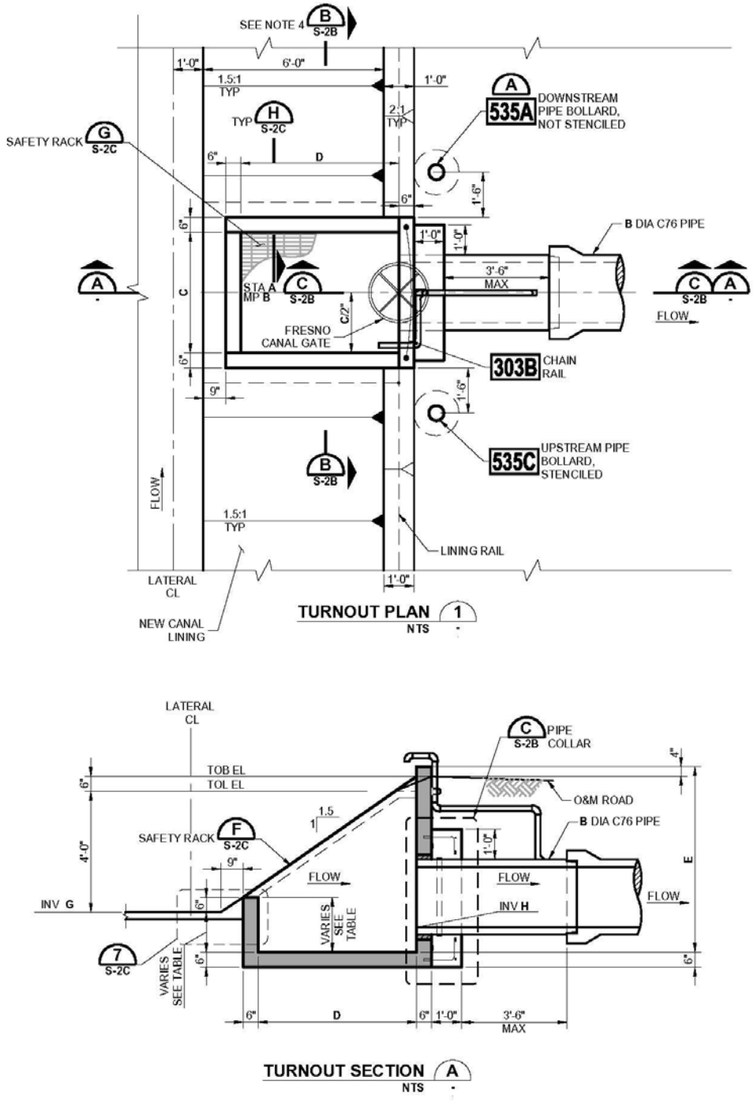


Figure 4. Proposed realignment of Lateral 14



TURNOUT PLAN 1
NTS

TURNOUT SECTION A
NTS

FOR REFERENCE ONLY

SEE S-2D THROUGH S-2E FOR TURNOUT TABLES

NOTES:

1. ALL SHADED CONCRETE SECTION CUTS ARE PRE-CAST CONCRETE STRUCTURES. SEE GENERAL STRUCTURAL NOTES.
2. GATE SLOPE PAVING AND LINING ARE NOT SHOWN FOR CLARITY.
3. ALL PRE-CAST STRUCTURES SHALL BE DESIGNED BY PRE-CAST MANUFACTURER. CONTRACTOR SHALL SUBMIT STRUCTURAL SHOP DRAWINGS AND CALCULATIONS PRIOR TO CONSTRUCTION.
4. ALL PRE-CAST STRUCTURE JOINTS BETWEEN MODULAR UNITS SHALL BE BONDED WITH SIKADUR LO-MOD GEL OR APPROVED EQUAL. SEAL EXPOSED JOINTS BETWEEN MODULAR PRE-CAST UNITS WITH ELASTOMERIC SEALANT OR APPROVED EQUAL.
5. ALL PRE-CAST STRUCTURE INTERIOR DIMENSIONS SHALL NOT BE CHANGED FROM DIMENSIONS SHOWN UNLESS APPROVED BY ENGINEER PRIOR TO FABRICATION OF STRUCTURES.
6. ALL PRE-CAST STRUCTURE WALL AND SLAB THICKNESS ARE ASSUMED BASED ON COORDINATION WITH JENSEN PRECAST. WALL AND SLAB THICKNESS MAY CHANGE AFTER REVIEW AND APPROVED BY ENGINEER PRIOR TO FABRICATION TO DETERMINE IMPACTS OF WALL AND SLAB DIMENSION MODIFICATIONS TO STRUCTURE LAYOUTS.

* GATES AND TRASH RACKS NOT REQUIRED PIPE TO BE PLUGGED AT BOTH ENDS, SEE SP SHEET.

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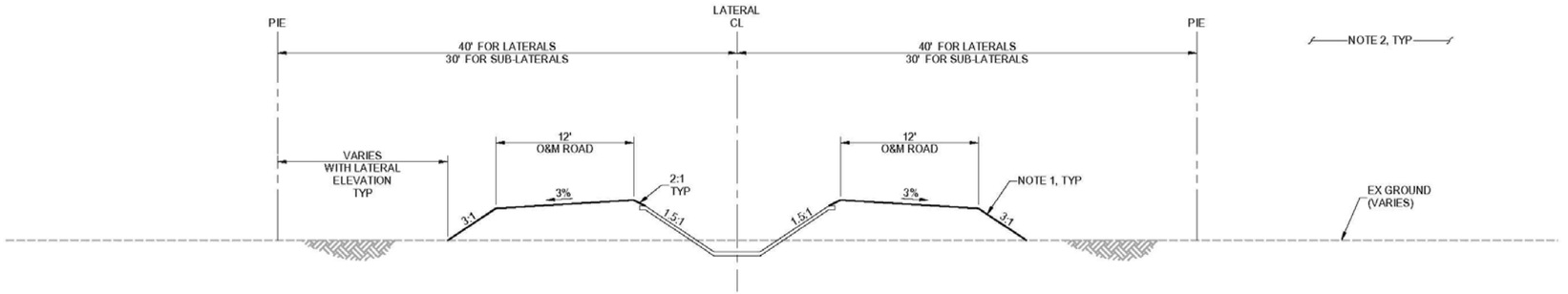
CASA BLANCA LATERAL STUDY
PRE-CAST LATERAL TURNOUT STRUCTURE PLAN, SECTION, AND TABLE

DRAWING NO. S-2A

Figure 5. Typical turnout



TYPICAL SECTION LATERAL (A)
HORIZ:1"=10'
VERT:1"=5'

NOTES:

1. TYPICAL SECTIONS IS SCHEMATIC ONLY. FINAL DESIGNER WILL NEED TO ASSESS ACTUAL CONDITIONS AT GIVEN LOCATIONS AND INCLUDE DESIGN ADJUSTMENTS AS REQUIRED. ADJUSTMENT MAY INCLUDE, BUT NOT BE LIMITED TO, SLOPE STEEPENING OVER LIMITED DISTANCES OR OTHER MEANS. REFER TO PIE DISCUSSION IN THE REPORT.
2. TEMPORARY CONSTRUCTION EASEMENT IS NOT AVAILABLE DUE TO BUDGETARY RESTRICTION.

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Date 7/14/16
Job No. G.CAIRO
Designed D.MORENO
Drawn G.CAIRO
Checked G.CAIRO
Reviewed G.CAIRO
Approved G.CAIRO

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CASA BLANCA LATERAL STUDY

TYPICAL SECTION LATERAL

DRAWING NO.
C-1A

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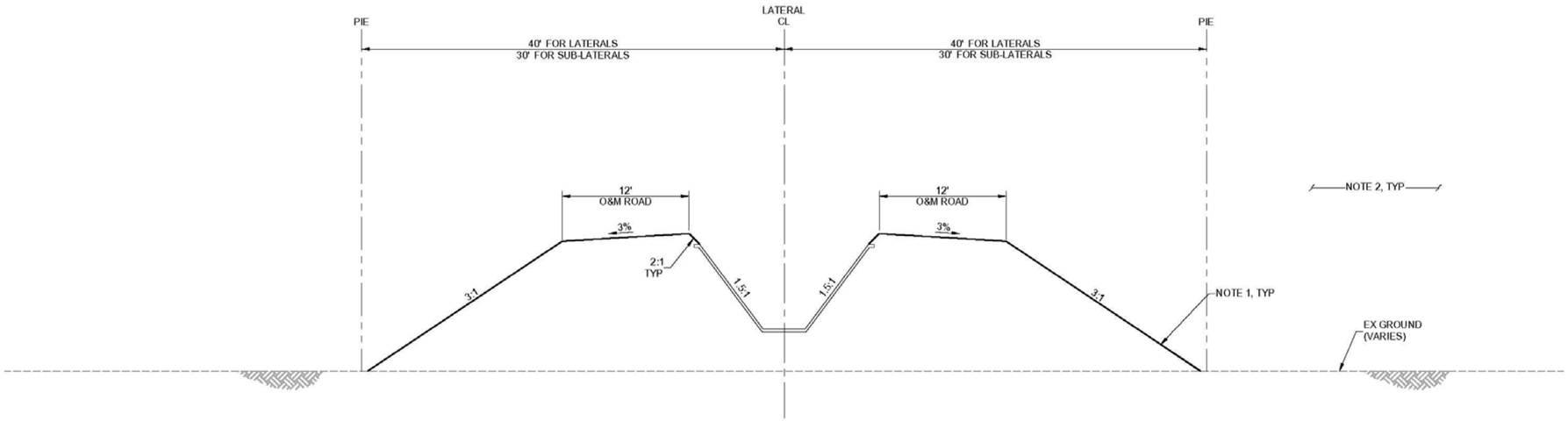
Figure 6. Typical lateral cross section



TYPICAL SECTION ELEVATED LATERAL (A)
HORIZ:1"=10'
VERT:1"=5'

NOTES:

1. TYPICAL SECTIONS IS SCHEMATIC ONLY. FINAL DESIGNER WILL NEED TO ASSESS ACTUAL CONDITIONS AT GIVEN LOCATIONS AND INCLUDE DESIGN ADJUSTMENTS AS REQUIRED. ADJUSTMENT MAY INCLUDE, BUT NOT BE LIMITED TO, SLOPE STEEPENING OVER LIMITED DISTANCES OR OTHER MEANS. REFER TO PIE DISCUSSION IN THE REPORT.
2. TEMPORARY CONSTRUCTION EASEMENT IS NOT AVAILABLE DUE TO BUDGETARY RESTRICTION.

CASA BLANCA LATERALS STUDY
SECTION E.9.
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Figure 7. Typical elevated lateral cross section

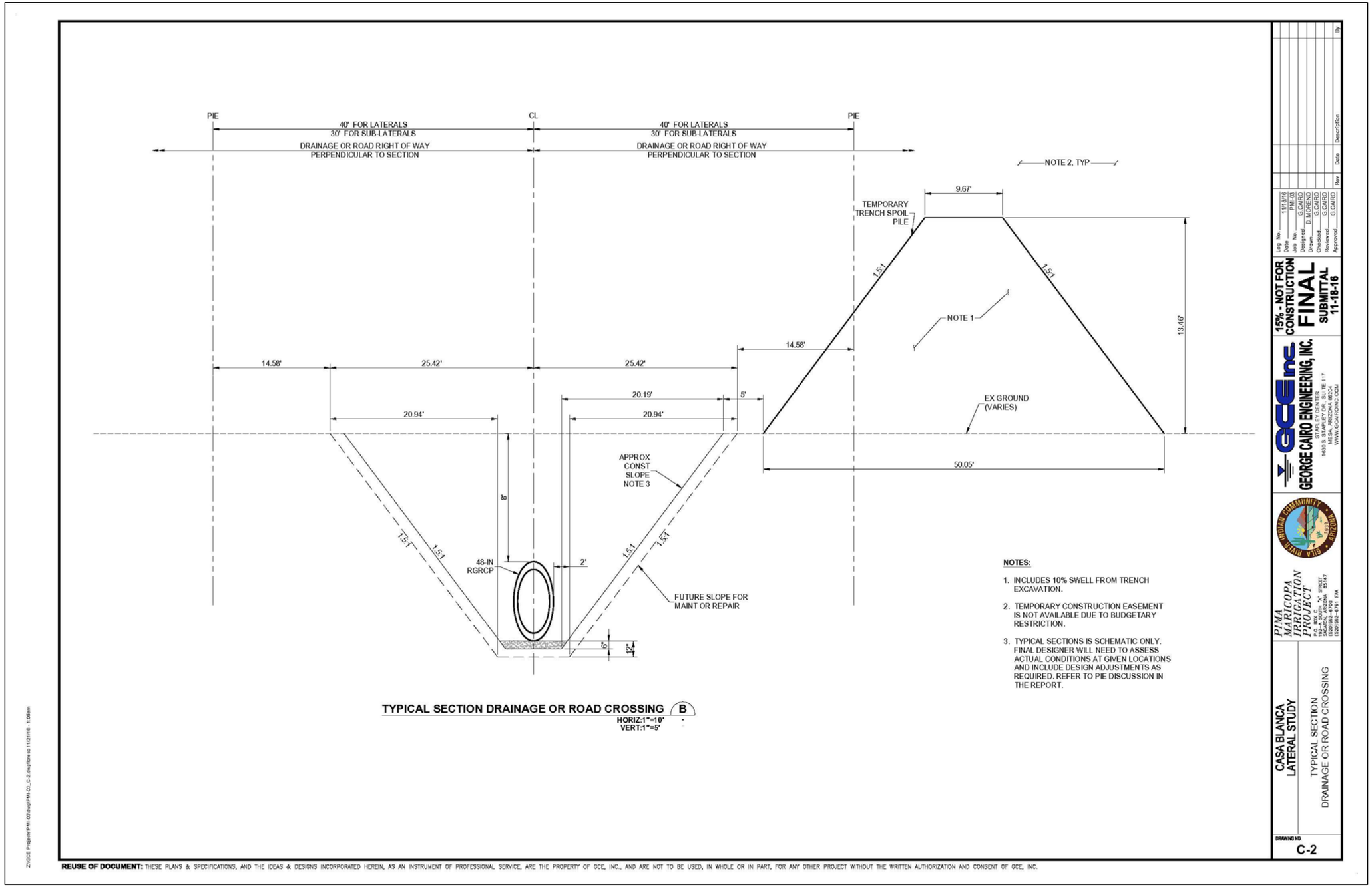

Figure 8. Typical drainage or road crossing

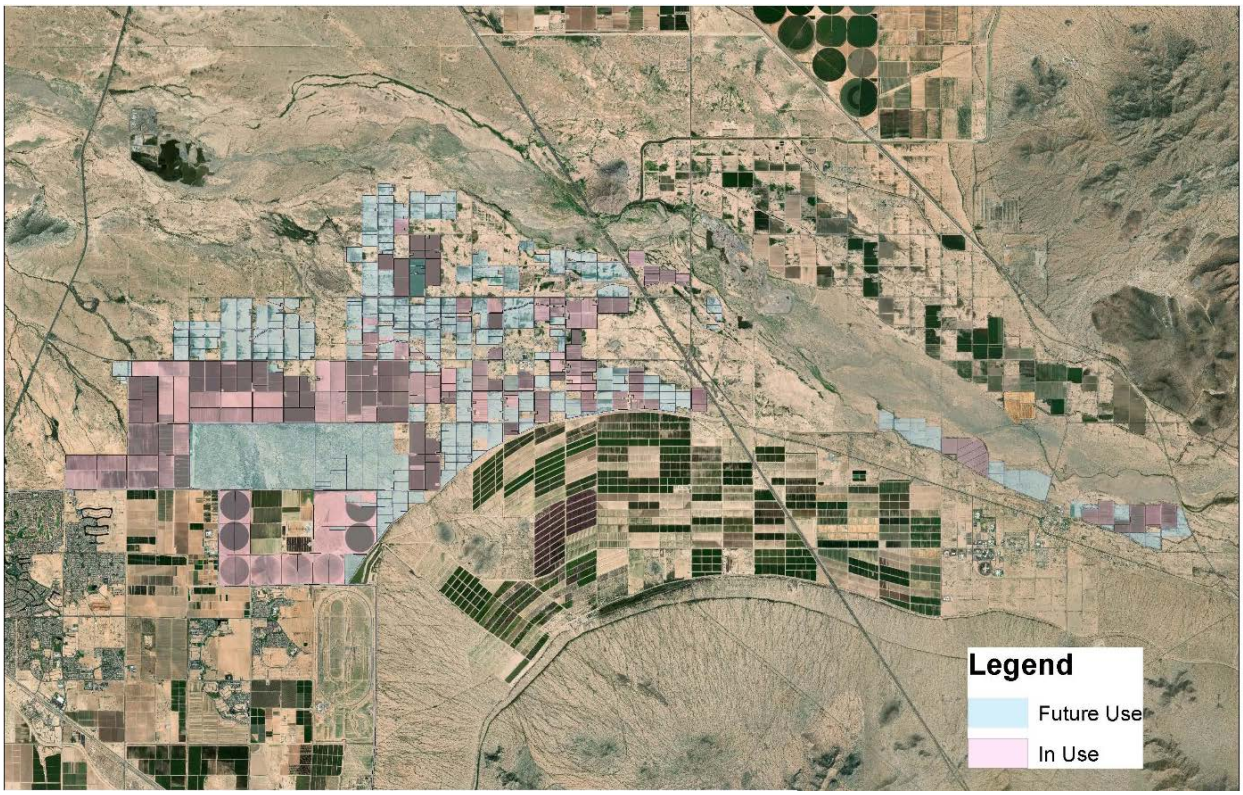

Figure 9. Existing agricultural fields currently in use and proposed to be used with updated irrigation capacity.

Lateral 13 and its associated sub-laterals currently irrigate 937 acres north of the Casa Blanca Canal on both sides of Interstate 10 (I-10), with the bulk of the lands west of I-10. This system includes 19.52 miles of concrete-lined or earthen canals, 2.43 miles of drains, 20 active turnouts, and 78 inactive or abandoned turnouts. Ten roads cross Lateral 13 and its associated sub-laterals: State Route (SR) 587, I-10, St. Peters Road, Preschool Road, Orchard Road, Ruins Road, Vah Ki Road, Horseshoe Road, Nelson Road, and Field Road (see Figure 2).

Lateral 14 and its associated sub-laterals currently irrigate 798 acres north of the Casa Blanca Canal and west of Snake Hill Road. This system includes 18.01 miles of concrete-lined or earthen canals, 1.59 miles of drains, 20 active turnouts, and 32 inactive or abandoned turnouts. Fourteen roads cross Lateral 14 and associated sub-laterals: Cardinal Road, St. Peters Road, Preschool Road, Orchard Road, Ruins Road, Vah Ki Road, Horseshoe Road, Field Road, Gophers Road, Murphy Road, Beaver Road, Rodeo Road, Prairie Road, and Sacate Road (see Figure 2).

Lateral 15 and its associated sub-laterals currently irrigate 2,473 acres between the Casa Blanca Canal and Southern Road. This system includes 11.80 miles of concrete-lined or earthen canals, 1.06 miles of drains, 14 active turnouts, and 3 inactive or abandoned turnouts. Seven roads cross Lateral 15 and associated sub-laterals: Southern Road, Ruins Road, Vah Ki Road, Horseshoe Road, Murphy Road, Sacate Road, and Power Road (see Figure 2).

Lateral 16 currently irrigates 1,130 acres west of the general intersection of Vah Ki Road and Rabbit Road. There are no existing sub-laterals off the 5.0-mile earthen lateral. The lateral has three active turnouts and three inactive or abandoned turnouts. Four roads cross Lateral 16: Murphy Road, Rodeo Road, Prairie Road, and Power Road (see Figure 2).

Lateral 8-2.3 irrigates 210 acres west of SR 587 and north of the Casa Blanca Canal. Lateral 8-2.3 is a 1.97-mile earthen lateral with no existing sub-laterals. Three roads cross Lateral 8-2.3: SR 587, a public gravel road, and a private farm road (see Figure 2).

The proposed action for each lateral and its associated sub-laterals are summarized in Table 1. A quarter-mile segment of Lateral 14 east of Rodeo Road would be realigned to straighten the lateral.

Table 1. Proposed activities for laterals and sub-laterals

	Lateral No. (includes associated sub-laterals)				
Proposed Activity	**Lateral 13**	**Lateral 14**	**Lateral 15**	**Lateral 16**	**Lateral 8-2.3**
Removing and replacing the existing road crossings, including pipes, headwalls, and safety racks	X	X	X	X	X

Table 1. Proposed activities for laterals and sub-laterals

Proposed Activity	Lateral No. (includes associated sub-laterals)				
	Lateral 13	**Lateral 14**	**Lateral 15**	**Lateral 16**	**Lateral 8-2.3**
Removing and replacing all existing gates for turnouts and check structures	X	X	X	X	X
Removing and replacing turnouts that encroach on road PIE	X	X	X	X	X
Raising the vertical profile of operation and maintenance (O&M) roads in place to meet required earthen freeboard	X	X	X	X	
Shaping O&M roads to design grades	X	X	X	X	X
Rehabilitating the existing concrete lining in place	X	X	X	X	
Installing walkways with handrails at check structures	X	X	X	X	X
Installing safety ladders and safety cables	X	X	X	X	X
Installing riprap at lateral outlets	X	X	X	X	
Conducting well site improvements	X	X	X		X
Installing drainage aprons			X	X	
Filling abandoned ditch segments as necessary				X	
Removing all existing check structures					X
Lining existing earthen lateral with concrete					X
Irrigation capability under full build-out (acres)	4,748	3,399	2,288	3,261	486

2.2.1 Project Construction

Construction would require equipment storage, material stockpiling, and the setup of trailers for contractor offices. These areas would be located within the lateral PIE and determined by the contractor during construction. Construction vehicles and equipment would access the site using

existing roads. It is anticipated that construction would begin in fall 2019 and continue for five or more years.

2.3 ALTERNATIVES CONSIDERED BUT ELIMINATED

2.3.1 Open Canal Delivery System Alternative

Consideration was given to realigning a segment of Lateral 8-2.3. This realignment would meet the purpose and need for the project. However, this realignment was eliminated from further consideration because a significant amount of new PIE and a large amount of regrading and sloping of the adjacent farm fields would have been required, which would result in impacts to cultural resources.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 INTRODUCTION

This chapter describes the affected environmental or existing conditions by resource topic. Section 3.2 addresses the resources topics dismissed from detailed analysis. Sections 3.3 to 3.10 address the resource topics evaluated in detail in this EA.

The "study area" consists of the lateral alignments and service areas. The term "project footprint" is used to indicate all land that would be directly affected by construction and operation of the proposed project. The project footprint consists of a 60 to 80-foot-wide PIE (see Figures 6 and 7).

3.2 RESOURCE TOPICS DISMISSED FROM DETAILED ANALYSIS

A number of the resource topics typically addressed in a NEPA document are not present or have no potential to be impacted by the Proposed Action. The following resource topics are not analyzed in detail in this EA.

- *Visual Resources.* The overall appearance of the study area, including scenic vistas from public vantage points, will not change with the implementation of the Proposed Action; therefore, visual resources have been eliminated from detailed analysis in this EA.
- *Socioeconomic Conditions.* The study area is primarily undeveloped or has been developed for agricultural purposes and is sparsely populated. This project has minimal potential to impact socioeconomic conditions; therefore, this resource has been eliminated from detailed analysis in this EA.
- *Floodplain and Flooding.* Implementation of the Proposed Action is not expected to alter the current or future floodplain or contribute to downstream flooding. Floodplain and flooding have been eliminated from detailed analysis in this EA.
- *Noise.* The study area is primarily undeveloped and is sparsely populated. Minimal or no impacts are anticipated because construction noise would be similar to existing traffic and farming equipment, and would be temporary. Therefore, this resource has been eliminated from detailed analysis in this EA.
- *Hazardous Materials.* Construction activities associated with the Proposed Action would not affect any known hazardous materials sites, and hazardous waste generation is not anticipated; therefore, the topic of hazardous materials has been eliminated from detailed analysis in this EA.

3.3 LAND OWNERSHIP, JURISDICTION, AND LAND USE

3.3.1 Affected Environment

Land Ownership and Jurisdiction

The proposed study area is in the western portion of the Community in Pinal County and is generally bounded by the Gila River to the north, SR 347 to the west, and the Casa Blanca Canal to the south. On the east, I-10 forms the boundary for all but a portion of Lateral 13 and Lateral 8-2.3, which is east of I-10 near Olberg Road.

In total, the Gila River Indian Reservation (Reservation) encompasses 372,929 acres, of which 275,537 acres are tribal lands and 97,392 acres are privately owned by Community members as allotments. Approximately 5,000 individual allotments are on the Reservation. The allotment system was established by the General Allotment Act of 1887, as amended. When executed between 1916 and 1921, the General Allotment Act allotted each tribal member 20 acres of land divided into two noncontiguous 10-acre parcels. Today, due to inheritance, individual allotments are owned by one to hundreds of people. Land not allotted to individuals remains tribal, owned collectively by the Community. Some lands in the study area are owned by the Community as tribal lands; others are owned by private Community members as allotments.

The Proposed Action may require the acquisition of limited amounts of PIE for the realignment of Lateral 14 and temporary construction easements (TCEs). One common characteristic of allotted and tribal lands is the trust responsibility of the federal government administered by the U.S. Bureau of Indian Affairs (BIA). All contracts, deeds, or use of these trust resources must follow federal law, regulation, and policy found in the BIA Manual (1984) and other federal regulations that require consent of landowners involved and, where appropriate, the consent and/or concurrence of the tribal government and approval by the BIA.

The acquisition of tribal lands and allotted lands would use the same procedure. The tribal council would be consulted for consent or rejection for tribal trust lands. Individual landowners would provide consent or withhold consent for all allotted lands. Upon receipt of consent, the BIA would issue the grant of easement after compensation is deposited with the Community and the Finance Department issues a letter of receipt of compensation to the BIA. Compensation for allotted land is paid directly to the BIA for distribution to landowners.

Land Use

The general character of the study area is rural. Though surrounding lands include large areas of native, undeveloped desert, agriculture is a predominant land use in the study area. Land devoted to agriculture varies from active cultivation to fallow fields.

The Farmland Protection Policy Act (FPPA) (PL 97-98; 7 U.S.C. § 658) governs the definition and identification of farmlands. The FPPA requires that federal agencies identify proposed actions that would affect any land classified as farmland before federal approval of any activity that would convert farmland into other land uses.

Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, and other agricultural crops. Unique farmland is land other than prime farmland that is used for the production of specific high-value food and fiber crops. The majority of the soils within the project footprint are classified by NRCS as farmland of unique importance. In addition, one soil, the Mohall sandy loam, is considered prime farmland if irrigated (NRCS 2018).

The project footprint encompasses concrete canals, earthen canals, irrigation pipelines, and irrigation infrastructure, including ground water wells, headworks, and other structures associated with agricultural activities. Scattered residences and structures associated with agricultural lands are present throughout the study area. Several arterial and rural roads cross the study area.

No national parks, recreation areas, or designated wilderness areas; wildlife refuges; wild and scenic rivers; or other special status lands or waters are in the study area or vicinity.

3.3.2 Environmental Consequences

No Action

Under the no action alternative, there would be no impact to ownership, jurisdiction, or land use because no project would be constructed or implemented. It is assumed that there would be no change in existing patterns of land ownership or land use.

Proposed Action

Construction of the Proposed Action would require the acquisition of a limited amount of new PIE and potentially some TCEs. The PIE requirements for implementation of the Proposed Action include the acquisition of 2.04 acres for new PIE to realign Lateral 14 (see Figure 4).

Any use of TCEs would be determined by the contractor prior to construction. TCEs for the proposed project have been included in this EA for analysis and would be within the PIEs for the proposed action.

Land to be acquired as PIE and converted to project use under the Proposed Action would not fall under the purview of the FPPA, which was developed to mitigate actions that would convert farmland to nonagricultural uses.

The Proposed Action would not result in residential or commercial displacements because no residences or commercial facilities are within the project footprint.

The potential increase in truck traffic during construction would contribute to ongoing farm and other local traffic; however, the construction traffic would be minor and temporary.

Cumulative Impacts

The conversion of farmland from fallow to active cultivation, combined with past, present, and reasonably foreseeable farmland conversions, would have a minor cumulative impact to land use. The majority of cumulative impacts in the area have resulted from residential and urban development in the region. Implementation of the Proposed Action would support existing agricultural activities and increase the acreage of existing farmland that would be cultivated, similar to other past, present, and future irrigation projects. Impacts of agricultural activities were evaluated in the P-MIP FPEIS (Reclamation 1997).

3.4 ENVIRONMENTAL JUSTICE

3.4.1 Affected Environment

Title VI of the Civil Rights Act of 1964 (PL 88-352) and related statutes ensure that individuals are not excluded from participation in, denied the benefit of, or subjected to discrimination under any program or activity receiving federal financial assistance on the basis of race, color, national origin, age, sex, and disability. Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which was signed by President Clinton on February 11, 1994, directs that federal programs, policies, and activities do not have disproportionately high and adverse human health and environmental effects on minority (e.g., Native American Tribes) and low-income populations.

The majority of the study area consists of agricultural and undeveloped land, with sparsely scattered single-family dwellings. The entirety of the study area is on land under the jurisdiction of the Community. Data from the 2016 U.S. Census (U.S. Census Bureau 2012–2016) were used for this analysis. The study area falls within two census tracts (CTs): CT 9412 and CT 9413. Data on minorities and low-income families (below the 2016 poverty level of $24,300 for a family of four) were obtained. Census data from the CTs were compared with those of Pinal County and the State of Arizona as a whole. Following environmental justice guidance (CEQ 1997), minority populations should be identified where either (1) the majority population exceeds 50 percent or (2) the minority population percentage in the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis. For this analysis, the appropriate units of geographic analysis were Pinal County and the State of Arizona.

As shown in Table 2, minority populations, consisting predominately of Native Americans, represented a majority of the population (93.9 percent of CT 9412 and 90.8 percent of CT 9413) and were meaningfully higher than the comparison populations in Pinal County (20.0 percent) and the State of Arizona (22.2 percent).

Table 2. Race in Arizona, Pinal County, and affected census tracts

Census Category	Arizona	Pinal County	CT 9412	CT 9413
Total estimated population for which race was determined	6,728,577	397,604	6,521	2,305
One race, white	5,235,158	317,989	399	211
Percent white	77.8	80.0	6.1	9.2
American Indian and Alaskan Native	296,732	20,889	5,645	1,974
Percent American Indian and Alaskan Native	4.4	5.3	86.6	85.6
Total minorities	1,493,419	79,615	6,122	2,094
Percent minorities	22.2	20.0	93.9	90.8

Source: U.S. Census Bureau, 2012–2016, American Community Survey Five-Year Estimates

As shown in Table 3 the percent of the population living below the poverty level in CT 9412 (40.5 percent) and CT 9413 (51.3 percent) is considered to be meaningfully higher than the comparison population of Pinal County (11.8 percent) and the State of Arizona (12.9 percent). Based on this minority and low-income analysis, and in accordance with EO 12898, CTs 9412 and 9413, warrant further analysis to identify the potential for disproportionately high and adverse human health or environmental effects.

Table 3. Families living below the poverty level

Census Category	Arizona	Pinal County	CT 9412	CT 9413
Total estimated families for which poverty was determined	1,606,188	93,354	1,175	413
Families with income in the past 12 months below poverty level	206,752	10,991	476	212
Percentage of families living below poverty level	12.9	11.8	40.5	51.3

Source: U.S. Census Bureau, 2012–2016, American Community Survey Five-Year Estimates

3.4.2 Environmental Consequences

No Action

Under the no action alternative, there would be no impact on populations or communities defined under EO 12898. Existing conditions would be expected to continue into the foreseeable future.

Proposed Action

There are two clusters of residential areas in the study area: Casa Blanca and Bapchule (see Figure 1); however, much of the population is dispersed in this agricultural area.

Impacts to populations protected under EO 12898 could occur along segments of the project footprint. With the Proposed Action, short-term construction-related impacts on the population would be expected when construction is ongoing in the vicinity of sensitive receptors, including residences. These temporary impacts could include the generation of air pollutants (e.g., dust), an increase in noise levels, public safety risk associated with the construction site, and disruption of traffic patterns associated with the movement of construction material and equipment on public roads. In accordance with local and regional rules, regulations, and ordinances, mitigation

measures would be implemented to minimize these effects throughout the construction area. Because no construction is anticipated directly adjacent to the population clusters located in Casa Blanca and Bapchule but instead would occur adjacent to dispersed homes throughout the project footprint, populations protected under EO 12898 would not be disproportionately affected. However, implementation of the Proposed Action would result in temporary construction jobs for local residents.

Cumulative Impacts

When considered with past, present, and reasonably foreseeable future actions, the Proposed Action would have a minor to moderate beneficial impact on environmental justice, with the potential to create additional agricultural jobs in the study area.

3.5 INDIAN TRUST ASSETS

3.5.1 Affected Environment

Indian Trust Assets (ITAs) are legal assets associated with rights or property held in trust by the United States for the benefit of federally recognized Indian Tribes or individual tribal members. The United States, as trustee, protects and maintains the specific rights reserved by, or granted to, Indian tribes or individuals by treaties, statutes, and executive orders. This section describes ITAs that have the potential to be impacted by the proposed actions.

3.5.2 Environmental Consequences

No Action

Under the no action alternative, the current irrigation infrastructure would not be modernized. Without construction, age-related deterioration to the existing structures would be expected to continue, and fallowed land would not be put into agriculture production.

Proposed Action

With the Community's rights to CAP water as a primary ITA, consideration was given to the project's potential to impact irrigation water availability. The project would not interfere with irrigation water delivery. The proposed rehabilitation would extend the useful life of the distribution facilities, ensuring future deliveries of available irrigation water. The proposed rehabilitation would have a beneficial effect on the Community's access to water. Due to concrete lining, improved flow measurement, and improved control features, the Proposed Action would improve operational efficiencies of the system, increase the reliability of water deliveries, and reduce water losses from the system (i.e., conserve water). By lining the canals with concrete, water losses through seepage would be reduced. The Proposed Action would include improvements designed to control surface water, such as new check structures, therefore reducing water losses related to water spillage.

In addition, the value of any existing, unused lands that are put into agricultural production due to the proposed project would be enhanced. The conserved water would enable the Community to develop additional on-Reservation land and put more of its irrigation water to beneficial use.

Cumulative Impacts

Implementation of the Proposed Action would allow for existing, unused agricultural lands to be brought into production and extend the life of the current irrigation system, protecting water supplies. It would offset somewhat the past, present, and reasonably foreseeable future actions that have resulted in irrigation water losses and the conversion of agricultural land to other uses.

3.6 CULTURAL RESOURCES

Cultural resources are properties that reflect the heritage of local communities, states, and nations. Properties judged to be significant and to retain sufficient integrity to convey that significance are termed "historic properties" and are afforded certain protections in accordance with state and federal legislation. The National Historic Preservation Act (NHPA) defines historic properties as sites, buildings, structures, districts, and objects included in, or eligible for inclusion in, the National Register of Historic Places (NRHP), as well as the artifacts, records, and remains related to such properties. Traditional Cultural Properties (TCPs) (including sacred sites) having heritage value for contemporary communities (often, but not necessarily, Native American groups) also can be listed in the NRHP because of their association with historic cultural practices or beliefs that are important in maintaining the cultural identities of such communities.

Section 106 of the NHPA requires federal agencies to take into account the effects of their activities and programs on historic properties. Regulations for *Protection of Historic Properties* (36 CFR 800), which primarily implement Section 106, were most recently amended in 2004. These regulations define a process for responsible federal agencies to consult with the State Historic Preservation Office (SHPO) or the Tribal Historic Preservation Office, Native American groups, other interested parties, and, at times, the Advisory Council on Historic Preservation to ensure that historic properties are duly considered as federal projects are planned and implemented.

3.6.1 Affected Environment

In conjunction with P-MIP, four Class I and Class III cultural resource surveys were conducted in the area of potential effects (APE) by the Community Cultural Resource Management Program to identify all previous archaeological investigations and documented cultural resources within one-eighth mile of the APE (Woodson 2018a, 2018b, 2018c, 2018d). The purpose of the surveys was to assess the potential adverse effect(s) of the Proposed Action on cultural properties listed in or eligible for listing in the NRHP. Historically produced maps and records were inspected for any other cultural resources within the APE that may not yet be adequately documented. Historically documented cultural resources generally include linear features, such as canals and transportation corridors, as well as domestic, public, or religious structures. An attempt was also made to identify

TCPs. The APE for the Proposed Action includes the area within the PIE that would be potentially impacted by the construction of the Proposed Action.

The Class I and Class III cultural resources investigations identified 46 cultural properties that have been documented in the study area, 26 of which are situated directly within the APE (Table 4). In addition, four historical Akimel O'odham irrigation canals, one prehistoric Hohokam irrigation canal, a historic Akimel O'odham cemetery, and the historical Euroamerican Butterfield Overland Mail Road are inferred to be present within the APE. Thirteen of the 26 previously documented properties within the APE have been determined eligible for inclusion in the NRHP, 2 have been determined ineligible, and another 11 require further data to adequately evaluate their NRHP eligibility status.

Table 4. Cultural resources within the APE

Canal	Gila River Site No.	Other Site No.[a]	Site Type	Eligibility
13	485 (Canals 13 and 14)	U:13:2 (ARS)	Prehistoric village, historical habitation, canals	Eligible (D)
		U:13:3 (ASM)	Prehistoric village, historical habitation, canals	Eligible (D)
		U:13:9 (ASM)	Prehistoric village, historical habitation, canals	Eligible (D)
		U:13:146 (ASM)	Prehistoric village, historical habitation, canals	Eligible (D)
		GR-905	Prehistoric village, historical habitation, canals	Eligible (D)
	488	–	Artifact scatter	Requires more data
	493	–	Artifact scatter, canals	Eligible (D)
	494	–	Artifact scatter, canal	Eligible (D)
	742	–	Artifact scatter	Requires more data
	744	–	Prehistoric village, historical habitation, canals	Eligible (D)
	768	–	Artifact scatter, canals	Requires more data
	800	–	Artifact scatter	Requires more data
	806	–	Artifact scatter	Requires more data
	851	–	Artifact scatter	Ineligible
	918	Stotonic Canal	Canal	Eligible (D)

Table 4. Cultural resources within the APE				
Canal	**Gila River Site No.**	**Other Site No.[a]**	**Site Type**	**Eligibility**
	931	Sweetwater Site	Historic village, artifact scatter, canals	Eligible (D)
		U:13:10 (ASM)	Historic village, artifact scatter, canals	Eligible (D)
		U:13:13 (ASM);	Historic village, artifact scatter, canals	Eligible (D)
		U:13:15 (ASM);	Historic village, artifact scatter, canals	Eligible (D)
		U:13:16 (ASM);	Historic village, artifact scatter, canals	Eligible (D)
		U:13:34 (ASM);	Historic village, artifact scatter, canals	Eligible (D)
		U:13:86 (ASM);	Historic village, artifact scatter, canals	Eligible (D)
		U:13:2 (ASU)	Historic village, artifact scatter, canals	Eligible (D)
	1183	–	Artifact scatter	Eligible (D)
	1607	–	Artifact scatter	Eligible (D)
	1608	–	Prehistoric habitation, artifact scatter	Eligible (D)
	1618	–	Habitation	Eligible (D)
	1695 (Canals 13 and 14)	Alkali Camp Canal	Canal	Eligible (D)
	7001 (Both Canals 13 and 14)	–	Roadside memorial (F.44, F.47, F.49, F.50, and F.51)	Ineligible
	–	U:13:44 (ASM)	Village	Requires more data
	–	U:13:45 (ASM)	Village	Requires more data
14	452	–	Artifact scatter	Requires more data
	477	–	Artifact scatter	Requires more data

Table 4. Cultural resources within the APE				
Canal	**Gila River Site No.**	**Other Site No.[a]**	**Site Type**	**Eligibility**
	490	–	Artifact scatter	Requires more data
	491	–	Artifact scatter	Requires more data
	599	–	Artifact scatter	Requires more data
	631	–	Artifact scatter	Eligible (D)
	633	–	Artifact scatter	Requires more data
13, 14, 15, and 16	1422	SCIP Irrigation System; Casa Blanca Canal; U:13:250 (ASM)	Canal	Eligible (A)
		AZ U:13:143 (ASM)	Artifact scatter	Requires more data
		U:13:229 (ASM)	Artifact scatter/ habitation	Ineligible
		ACS 4	Artifact scatter	Ineligible

[a] ACS = Archaeological Consulting Services, Ltd., ARS = Archaeological Research Services, Inc., ASM = Arizona State Museum, ASU = Arizona State University, AZ = Arizona, F = Feature, GR = Gila River

3.6.2 Environmental Consequences

No Action

Under the no action alternative, it is assumed that current limited agricultural production would continue and that there would be "no adverse effect" on historic properties (cultural resources listed in, or eligible for listing in, the NRHP.

Proposed Action

The SCIP irrigation system is NRHP-eligible as a district; however, this property has been extensively documented through archival and historical research (Pfaff 1994, 1996). Prior to the creation of the Community Tribal Historic Preservation Office in 2009, SHPO agreed that the documentation is "acceptable mitigation under Section 106 for any adverse impacts" (Pfaff 1996). The Proposed Action would have no adverse effect on the historical integrity of the SCIP irrigation system; therefore, no further cultural resource investigations are recommended. The Proposed Action is anticipated to have no adverse effect on any identified archaeological resources within the APE. Table 5 summarizes the proposed treatment for each of the cultural resources within or adjacent to the APE. All roadside memorials within the APE would be avoided by construction activities. In addition, a cultural monitor will be present to observe all ground-disturbing activities within the vicinity of all 26 cultural resources within the APE.

No Indian sacred sites are identified within the project footprint, nor would the Proposed Action limit access to, and ceremonial use of, Indian sacred sites by Indian religious practitioners.

Table 5. Cultural resources and their proposed treatment within the APE

Gila River Site No.	Other Site No.	Eligibility	Proposed Action	Reference
485	U:13:2 (ARS), U:13:3 (ASM), U:13:9 (ARS), U:13:146 (ASM), GR-905	Eligible (D)	Monitor	Eiselt et al. 2002; Fertelmes and Loendorf 2013
488	–	Requires more data	Monitor	Eiselt et al. 2002
493	–	Eligible (D)	Monitor	Eiselt et al. 2002
494	–	Eligible (D)	Monitor	Eiselt et al. 2002
742	–	Requires more data	Monitor	Eiselt et al. 2002; Wright 2011
744	U:13:145 (ASM), U:13:3 (ARS), U:13:8 (ARS)	Eligible (D)	Monitor	Eiselt et al. 2002; Fertelmes and Loendorf 2013
768	–	Requires more data	Monitor	Eiselt et al. 2002
800	–	Requires more data	Monitor	Eiselt et al. 2002
806	–	Requires more data	Monitor	Eiselt et al. 2002
851	–	Ineligible	None	Fertelmes and Loendorf 2013; Landreth and Loendorf 2008
918	Stotonic Canal	Eligible (D)	Monitor	Woodson 2002
931	Sweetwater Site, U:13:10, U:13:13, U:13:15, U:13:16, U:13:34, U:13:86 (ASM), U:13:2 (ASU)	Eligible (D)	Monitor	Eiselt et al. 2002; Woodson 2002; Wright 2011
1183	–	Requires more data	Monitor	CRMP site files
1607	–	Eligible (D)	Monitor	CRMP site files
1608	–	Eligible (D)	Monitor	CRMP site files
1618	–	Eligible (D)	Monitor	CRMP site files
1695	Alkali Camp Canal	Eligible (D)	Monitor	CRMP site files
7001	Roadside Memorial F.49	Ineligible	Avoid	Fertelmes 2015
7001	Roadside Memorial F.50	Ineligible	Avoid	Fertelmes 2015
7001	Roadside Memorial F.51	Ineligible	Avoid	Fertelmes 2015
–	SCIP Irrigation System	Eligible (A)	Monitor	Pfaff 1994, 1996
–	U:13:44 (ASM)	Requires more data	Monitor	Wood 1971, 1972
–	U:13:45 (ASM)	Requires more data	Monitor	Wood 1971, 1972

Table 5. Cultural resources and their proposed treatment within the APE

Gila River Site No.	Other Site No.	Eligibility	Proposed Action	Reference
491	–	Requires more data	Monitor	Eiselt et al. 2002; Rinker 2001
599	–	Requires more data	Monitor	Eiselt et al. 2002
631	–	Eligible (D)	Monitor	Eiselt et al. 2002; Neily and Darling 2001
633	–	Requires more data	Monitor	Eiselt et al. 2002
7001	Roadside Memorial F.47	Ineligible	Avoid	Fertelmes 2016
7001	Roadside Memorial F.44	Ineligible	Avoid	Fertelmes 2016
1422	SCIP Irrigation System; Casa Blanca Canal; U:13:250 (ASM)	Eligible (A)	Monitor	Pfaff 1994, 1996

– = not applicable; ASM = Arizona State Museum; ASU = Arizona State University;
ARS = Archaeological Research Services, Inc.; CRMP = Cultural Resource Management Program, GR = Gila River

Cumulative Impacts

This EA is tiered to the Final Programmatic Environmental Impact Statement for the Pima-Maricopa Irrigation Project (Reclamation 1997). Since, the proposed action would have no effects to cultural resources, there would be no cumulative impacts on cultural resources from the Proposed Action. Should cultural resources be discovered during construction, all work in the vicinity of the discovery would cease and the archaeological monitor would provide procedures.

Mitigation

- All roadside memorials within the area of potential effects will be avoided by construction. If avoidance of a roadside memorial is not possible, the Pima-Maricopa Irrigation Project is responsible for consulting with the Gila River Indian Community Tribal Historic Preservation Office to assist in the relocation of the memorial prior to its disturbance.
- An archaeological monitor will be present to observe all ground-disturbing activities within the vicinity of known cultural resources within the area of potential effects.

3.7 GEOLOGY AND SOILS

3.7.1 Affected Environment

The project footprint is in the Lower Colorado River Valley subdivision of the Sonoran desertscrub portion of the Basin and Range Physiographic Province in Pinal County, Arizona (Brown 1994). The Basin and Range topography is the result of Pliocene and Miocene east–west–directed extensional tectonic movement (spreading) creating north–south–oriented mountain ranges with intervening north–south–oriented desert plains (U.S. Geological Survey

[USGS] 2018). This province is characterized by broad, subparallel mountain ranges. Young alluvium and alluvium with less abundant talus and eolian deposits (Arizona Geological Survey 2000) characterize much of the project footprint. The Gila River, north of the project footprint, is a meandering, braided stream that is characteristic of a more mature topography.

Several soil types exist in the study area. The main representative soil types include Casa Grande complex; Casa Grande clay loam; Gadsden silty clay loam; Redun-Shontic complex; Shontik-Redun complex; and Yahana-Indio complex (NRCS 2018). These soil complexes are commonly referred to as sandy loams and loamy alluviums with minor amounts of silt loam and are characterized by sands, gravels, and silty clays, which allow a moderate absorption of storm water to seep into the ground. These are well-drained soils, runoff is medium, and the hazard of water erosion is slight to moderate. No hydric soils are mapped within the project footprint (NRCS 2018).

3.7.2 Environmental Consequences

No Action

Under the no action alternative, undeveloped lands would not be disturbed by construction activities. Fallow agricultural fields and undeveloped lands would not be developed and would continue to be subjected to the effects of wind and water erosion.

Proposed Action

The potential for land subsidence and earth fissuring is not expected to increase because no increase in ground water pumping is expected to result from the Proposed Action, therefore no decline in the level of ground water is expected. The proposed concrete lining would eliminate much of the seepage of irrigation water to ground water along the affected laterals; however, there would be an expected increase in irrigation water seepage to the ground water with increases in agricultural production. The increase in irrigation water seepage would be offset somewhat by increases in evapotranspiration by crops. Ultimately, the distribution of water seepage would be altered with the project and it is expected that any overall change in the quantity of water seepage to the ground water would be localized and minor. Additionally, the Proposed Action would not likely be affected by seismic activity because of the low seismic potential in the area.

With the Proposed Action, materials generated from project excavation would be largely offset by fill requirements associated with lining the laterals and other support facilities within the PIE. The project has been designed to balance the earthwork; therefore, excess excavated materials would be transported to adjacent construction areas needing fill. Depending on scheduling, some excavated material may need to be temporarily stockpiled until needed. These temporary stockpiles would be within the designated PIE. Excess excavation is not anticipated. If excess materials are encountered during construction, such as unsuitable material, these materials would be spoiled within the PIE along the maintenance roads. If there is not adequate space for the unanticipated excess material within the PIE, it would need to be transported to other tribal-approved sites for storage.

The Proposed Action would directly disturb surface soils within the project footprint due to the removal of vegetation, operation of large equipment, and the use of trucks to transfer sediment to storage areas, increasing the potential for soil erosion and sedimentation. Erosion control measures, including physical barriers and post-construction site stabilization, would be used to control storm water runoff and associated sedimentation. With the use of these measures, soil erosion and sedimentation from the temporary stockpiling of sediment would constitute a minor but ongoing effect on project operations.

Cumulative Impacts

Impacts associated with the implementation of the Proposed Action would be minimal to historic, ongoing, and reasonably foreseeable future uses in the study area.

Mitigation

- Erosion control measures and post-construction site stabilization will be implemented within the project footprint, as necessary.
- Structural barriers and best management practices will be used to prevent the removed sediment from discharging downstream.
- Any excess materials will be spoiled within the permanent irrigation easement or in an approved disposal site.

3.8 WATER RESOURCES AND WATER QUALITY

3.8.1 Affected Environment

The study area is within the Middle Gila River watershed (Arizona Department of Environmental Quality 2018). The Gila River is north of the study area. Several small, unnamed ephemeral washes, which outfall to the Gila River, are within the project footprint. In addition, numerous braids of the Santa Cruz Wash occur in the western portion of the study area, crossing beneath Maricopa Road (SR 347).

The 649-mile Gila River originates in western New Mexico, flows generally west–southwest across Arizona, and outlets to the Colorado River near the city of Yuma, Arizona. Coolidge Dam, approximately 75 miles upstream of the study area, is the only major dam on the Gila River. The Coolidge Dam impounds the Gila River, creating the San Carlos Reservoir. Downstream from the Coolidge Dam is the Ashurst–Hayden Diversion Dam. At this location, the river flow is diverted for irrigation throughout central Arizona. Stream flow within the Gila River upstream of the Ashurst–Hayden Diversion Dam is highly variable and dependent on upstream releases from Coolidge Dam, flows from tributaries, including the San Pedro River (downstream of Coolidge Dam), and precipitation in the area.

The U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory mapping tool identifies locations with conditions that make it likely that a wetland could be found in a particular area. As shown in Figure 10, three of the Santa Cruz Wash braids in the western

portion of the study area are considered potential freshwater emergent wetlands by the USFWS (USFWS 2018a). These braids are considered non-tidal wetlands dominated by trees, shrubs, persistent emergent grasses, and emergent mosses or lichens. Surface water may be present in the braids for extended periods, especially early in the growing season, but is likely absent by the end of the growing season in most years.

Irrigation water that flows through the laterals comes from the Casa Blanca Canal. Water in the Casa Blanca Canal is diverted from the Gila River and conveyed approximately 36 miles through a SCIP canal system. Other sources of water in the Casa Blanca Canal include a portion of the Community's CAP water entitlement and ground water from various wells.

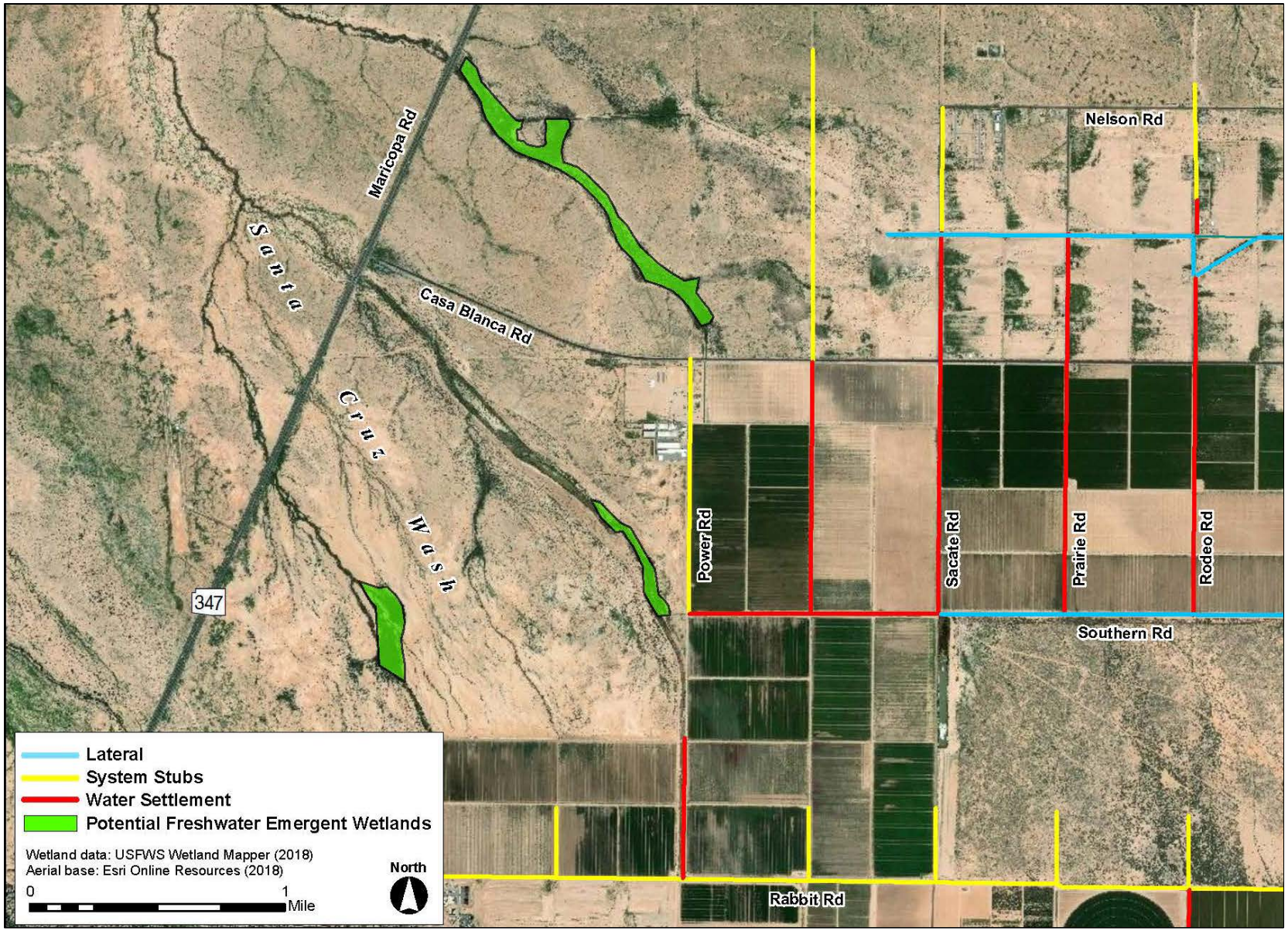

Figure 10. Potential freshwater emergent wetlands

The U.S. Army Corps of Engineers (Corps) regulates the discharge of fill material in Waters of the United States, pursuant to Section 404 of the Clean Water Act, and issues permits for actions proposed within such waters. In discussions between the Corps and P-MIP, the Corps discussed the applicability of using a Clean Water Act exemption for construction and maintenance of irrigation ditches (40 CFR 232.3[c][3]). They concluded that any discharge associated with the Casa Blanca Laterals would be related to construction or maintenance of farm irrigation ditches, and functionally related to irrigation ditches. Due to the nature of the project activities, Reclamation subsequently determined that this exemption applies to the project and that no further consultation with the Corps or Section 404 permitting is required for the Proposed Action (Appendix A).

3.8.2 Environmental Consequences

No Action

Under the no action alternative, fallow agricultural fields, undeveloped lands, and earthen laterals would continue to be subjected to the effects of wind and water erosion resulting in continued impacts to water resources and water quality.

Proposed Action

Lining of the laterals under the Proposed Action would eliminate seepage and result in the conservation of irrigation water. Temporary impacts to surface water quality could result due to construction activities (i.e., sediment discharges). Excavation materials would be stockpiled away from the laterals and natural drainages to minimize the risk of unintentional transport of excavated materials into surface water supplies. Project construction would require the short-term use of fuels, lubricants, and other fluids to operate construction equipment, which would have the potential to contaminate water resources via accidental discharge. The use, storage, and disposal of these materials would be in accordance with federal and state regulations to minimize potential impacts to water resources and downstream water quality.

A high groundwater table in the study area is high in dissolved solids and minerals (Stantec Consulting Services 2013). Salt buildup is managed on agricultural fields by farmers, who apply additional water to the fields, as needed, to leach salt out of the plant root zone. Water flow from irrigation tailwater to the areas containing freshwater emergent wetlands would continue under the construction of the Proposed Action. However, the volume may decease with the improved efficiency of the system.

Cumulative Impacts

The effects of the additional use of fertilizers and pesticides, as well as the increase of salt in the groundwater, would be incremental to historic, ongoing, and reasonable future uses within the project footprint. However, in the future, Total Channel Control on the Casa Blanca Canal will eventually reduce tailwater flows to areas containing emergent wetlands.

3.9 BIOLOGICAL RESOURCES

3.9.1 Affected Environment

The study area lies between 1,120 and 1,190 feet in elevation[1] on relatively flat terrain in the middle Gila River Valley. The Gila River is approximately 0.5 mile north of the northernmost east–west canal. The Gila River north of the project is ephemeral and does not have significant desert or riparian vegetation along the wash bed. The study area is primarily existing agricultural farmland with residential development throughout, and little native vegetation exists.

Vegetation

The study area consists of active and fallow agricultural fields; related infrastructure, including access roads and irrigation canals; and limited residential development interspersed with natural terrain and native plants. The native plant community in the area is classified as Lower Colorado River Valley subdivision of the Sonoran Desertscrub biotic community (Brown 1994). Some natural vegetation exists in undeveloped areas, which includes native and nonnative species. Native species in the study area include four-wing saltbush (*Atriplex canescens*), wolfberry (*Lycium* spp.), mesquite species (*Prosopis* spp.), creosote bush *(Larrea tridentata),* globemallow (*Sphaeralcea* spp.), and desertbroom *(Baccharis sarothroides).* Nonnative species identified in the study area, primarily disturbed areas, include tamarisk (*Tamarix* spp.), Bermudagrass (*Cynodon dactylon*), and Russian thistle (*Salsola kali*).

Native Plants

Many plants in the study area are protected by the Gila River Indian Community Native Plant Ordinance, which protects native Arizona plants on Gila River Indian Community lands. Protected species can include the native species (e.g. mesquite (*Prosopis* spp.), Cactus species, etc.) discussed in the above paragraph.

Invasive Species

EO 13112 regarding invasive species requires measures that help to prevent the introduction of invasive species. Invasive species, including tamarisk, Bermudagrass, and Russian thistle, are found in the study area.

Wildlife

Due to previous ground disturbance and the prevalence of agriculture, most of the study area consists of low-quality habitat for wildlife. Previous disturbance contributes to the lack of wildlife connectivity and increased habitat fragmentation, particularly for medium and large animals. This low-quality habitat is present around the periphery of these fields; along the outside edges of canal maintenance roads; and where vegetation has been allowed to establish within the canals. Surrounding areas, such as agricultural fields and residential developments, may demonstrate an increased abundance of small mammals and birds that prefer open habitat

[1] Elevation in this document is referenced to mean sea level.

like agricultural fields (i.e. non-native songbirds and burrowing owls), but because of the small size of habitat patches and the lack of connectivity, this habitat would not likely support large animals. This marginal habitat occurs primarily north of Nelson Road and Rabbit Road.

Native desert habitat found outside the cultivated agricultural area likely supports various levels of wildlife use. Some examples of wildlife expected to inhabit the natural desert surrounding the study area are zebra-tailed lizards (*Callisaurus draconoides*), rattlesnakes (*Crotalus* spp.), desert cottontail (*Sylvilagus audubonii*), black-tailed jackrabbits (*Lepus californicus*), round-tailed ground squirrels (*Xerospermophilus tereticaudus*), mice (*Peromyscus* spp.), javelina (*Pecari tajacu*), and coyotes (*Canis latrans*). Breeding birds may include Cooper's hawk (*Accipiter cooperii*), Gambel's quail (*Lophortyx gambelii*), mourning dove (*Zenaida macroura*), Gila woodpecker (*Melanerpes uropygialis*), curve-billed thrasher (*Toxostoma curvirostra*), phainopepla (*Phainopepla nitens*), verdin (*Auriparus flaviceps*), burrowing owl (*Athene cunicularia hypugea*), and roadrunner (*Geococcyx californianus*) (Brown 1994). Many of these species likely use the habitat found in the surrounding agricultural fields and canal access roads.

Migratory Birds

Vegetation in the study area, some of which may be lost during construction if it is adjacent to canals, supports migratory bird breeding habitat, including potential nesting support structures. Trees, particularly along abandoned canals and in undisturbed habitat, may provide nesting sites during the nesting season, which is generally described as March 1 to August 31.

Western Burrowing Owl

In Arizona, the Western burrowing owl occurs in open areas, generally year-round, with only a few winter records on the Colorado Plateau in the northeast part of the state. They are known from the Navajo Nation, broad valleys near Seligman, along the bottomlands of the Colorado River, the Lower Colorado River Valley, the Yuma area, south and southeast Arizona, and in agricultural areas (deVos 1998).

Their habitat is variable in open, well-drained grasslands, steppes, deserts, prairies, and commonly found near and adjacent to agricultural lands, often associated with burrowing mammals. They are sometimes found in open areas such as vacant lots near human habitation, golf courses, or airports (deVos 1998).

Federally Listed Species

The USFWS Information for Planning and Consultation (IPaC) System website was accessed on August 30, 2018, to obtain an official list of federally protected species with the potential to occur within the project footprint, but no proposed or designated critical habitat is found in the study area (USFWS 2018b) (Appendix B). Three species (Sonoran Pronghorn Antelope (*Antilocapra Americana sonoriensis*), Yellow-billed Cuckoo (*Coccyzus americanus*) and Northern Mexican Gartersnake (*Thamnophis eques megalops*)) were identified as potentially occurring within or near the study area. The natural history for each species was reviewed to determine habitat and life history requirements and to assess potential habitat in the study area.

A qualified biologist (Maria M. Altemus, EcoPlan Associates, Inc.) reviewed this list and determined that no suitable habitat for federally listed species occurs in the study area.

Riparian Areas and Wetlands

Per the National Wetlands Inventory, potential freshwater emergent wetlands are located in the western edge of the study area (USFWS 2018a). At the northwest corner of the study area, there is a 2.57-acre freshwater pond (USFWS 2018a). At the northern edge of the study area, there is a 24.87-acre freshwater forested/shrub wetland (USFWS 2018a). Riparian vegetation in the study area is sparse; however, small, isolated stands and ribbons of riparian vegetation, including tamarisk, Goodding's willow (*Salix gooddingii*), and tree tobacco (*Nicotiana glauca*), are present adjacent to a few canals. No marsh vegetation was identified in the study area based on the field visit and an overview of aerial photography.

3.9.2 Environmental Consequences

Vegetation, Native Plants, and Invasive Species

No Action

Under the no action alternative, the existing canal irrigation system would not be rehabilitated or otherwise modernized. Existing impacts to vegetation, native plants, and invasive species would continue under the no action alternative.

Proposed Action

Project construction under the Proposed Action would result in permanent and temporary impacts on vegetation. Vegetation removal would occur along the proposed rehabilitated canals. Vegetation along canals ranges from none (bare soil) to dense stands of trees and shrubs, which include mesquite and desertbroom. Construction would have impacts through loss of vegetation from clearing activities along the laterals and the potential spread of invasive plant species from associated disturbance.

Cumulative Impacts

Project effects on vegetation resources would be incremental to the past and reasonably foreseeable future actions, which are related predominantly to agricultural activity. The incremental effect of the proposed project on vegetation would be mostly short-term and negligible. Agricultural fields in the study area are in various states of disturbance based on how recently the field was cultivated, ranging from currently in use to partial recolonization by nonagricultural plants (native and nonnative) on fallow fields. In the future, if additional fields are put into cultivation, the chance they are recolonized by nonagricultural vegetation decreases.

Mitigation

- To prevent the introduction and establishment of invasive weed species, all construction equipment will be power-washed at the contractor's off-site equipment storage facility prior to entering the construction site.
- To prevent the off-site transport of invasive species seeds from the site, the contractor will power-wash all equipment prior to leaving the site.
- Where appropriate, all disturbed soils that will not be landscaped or otherwise permanently stabilized by construction will be seeded using species native to the study area.

Wildlife, Migratory Birds, and Western Burrowing Owls

No Action

Under the no action alternative, the existing canal irrigation system would not be rehabilitated or otherwise modernized. No impacts to wildlife or their existing habitat would occur as a result of the No Action alternative.

Proposed Action

Permanent impacts to wildlife under the Proposed Action include the removal of habitat within the canals as a result of project construction activities. Additionally, there would be permanent impacts resulting from the utilization of 19,740 acres of additional, currently unused agricultural land. This EA tiers from the Pima-Maricopa Irrigation Project EIS, in which the impacts of the utilization of the agricultural fields was examined in detail (Reclamation 1997). Development of new agricultural lands may result in fragmentation of existing habitat and disruption of travel corridors. Individual small mammals, lizards, and snakes may be impacted during construction by crushing, loss of habitat (vegetation clearing), and/or disruption of movement and foraging activities. Under the Proposed Action, construction activities would result in some displacement or avoidance by wildlife in adjacent natural areas due to noise and/or human presence. Rehabilitating the canals would increase moisture levels and the availability of water may improve conditions for many wildlife species present in the study area. Construction would impact migratory bird nesting habitat through the loss of vegetation.

The Proposed Action would also temporarily impact 860 acres of potential plant and wildlife habitat, as a result of construction activities along the canals. Much of this land has been developed for agriculture; however, even developed lands can represent suitable wildlife habitat. For example, burrowing owls are known to inhabit abandoned agricultural fields and the berms surrounding active or fallow fields (deVos 1998). Project construction may impact the burrowing owl by eliminating burrows or otherwise disturbing their habitat.

Cumulative Impacts

Project effects on wildlife resources would be incremental to the past and reasonably foreseeable future actions, which are related primarily to agricultural activity in the study area. Cumulative Impacts resulting from the Proposed Action could result in localized effects on existing, but

unused agricultural land, but the severity and extent of such impacts would be minor given the limited scope of the Proposed Action. Rehabilitation of the canals would likely increase the frequency in which agricultural fields in the study area are put into cultivation, resulting in a decrease in suitability for many wildlife species.

Mitigation

- The P-MIP will employ a qualified biologist to ensure compliance with the Migratory Bird Treaty Act. Every attempt will be made to complete land-clearing activities from September 1 through February 28 to avoid the breeding season of migratory birds. If clearing activities occur during the breeding period (March 1 through August 31), a qualified biologist will begin surveying the area in mid-February to determine the presence or absence of nesting birds.
- Between March 1 and August 31, all vegetation scheduled to be disturbed by the proposed project that may contain active bird nests will be surveyed immediately prior (within 48 hours) to being disturbed. If an active nest or nests are discovered, vegetation-clearing activities will not be allowed to proceed in the vicinity of the nest(s). No activities will occur within an appropriate buffered distance from active nests until after the young birds have fledged from the nest.
- The contractor will employ a qualified biologist to complete a preconstruction survey for burrowing owls 96 hours prior to construction in all suitable habitat that will be disturbed. The biologist will possess a burrowing owl survey protocol training certificate issued by the Arizona Game and Fish Department. Upon completion of the surveys, the contractor will provide survey results to the U.S. Bureau of Reclamation - Phoenix Area Office.
- If any burrowing owls are located during preconstruction surveys or construction, the contractor will employ a qualified biologist or organization holding a permit from the U.S. Fish and Wildlife Service to relocate burrowing owls from the study area, as appropriate.
- If burrowing owls or active burrows are identified during the preconstruction surveys or during construction, no construction activities will take place within 100 feet of any active burrows until the owls are relocated or any young birds have fledged from the nest.
- Contractor personnel will be instructed not to collect, disturb, or molest wildlife species.

Federally Listed Species

No Action

Under the no action alternative, the existing irrigation system would not be rehabilitated or otherwise modernized. The total area cultivated would not be different than those lands currently irrigated, and there would be no impacts to federally listed species or critical habitat.

Proposed Action

It was determined that the yellow-billed cuckoo, the Sonoran pronghorn, and the Northern Mexican gartersnake would not likely be found in the study area because suitable habitat for

these species does not occur in the study area. Therefore, the Proposed Action would not impact federally listed species or critical habitat.

Cumulative Impacts

There would be no project-related effects on federally listed species or critical habitat; therefore, the project would not contribute to the effects of past and reasonably foreseeable future actions, which are related predominantly to agricultural activity.

Riparian Areas and Wetlands

No Action

Under the no action alternative, the existing irrigation system would not be rehabilitated or otherwise modernized. The total area cultivated would not be different than those lands currently irrigated, and there would be no impacts to riparian areas and wetlands.

Proposed Action

Water flow from irrigation tailwater to the potential freshwater emergent wetlands would continue under the construction of the Proposed Action. However, the volume may decrease with the improved efficiency of the system. The freshwater pond would not be affected by the Proposed Action.

Cumulative Impacts

Project effects on riparian areas and wetlands would be incremental to past and reasonably foreseeable future actions, which are related predominantly to agricultural activity. The incremental effect of the proposed project on riparian areas and wetlands would be mostly long-term and inconsequential. In the future, irrigation channel efficiency upgrades on the Casa Blanca Canal would eventually reduce tailwater flows to the potential emergent wetlands.

3.10 AIR QUALITY

3.10.1 Affected Environment

As directed by the federal Clean Air Act (CAA), the U.S. Environmental Protection Agency (EPA) established National Ambient Air Quality Standards (NAAQS) for six "criteria" pollutants in 40 CFR 50. These standards were adopted by the EPA to protect the public health and welfare. The six pollutants of concern are carbon monoxide (CO), nitrogen dioxide (NO_2), ozone, sulfur dioxide (SO_2), lead, and particulate matter ($PM_{10,}$ inhalable coarse particles less than 10 but 2.5 or more microns in diameter, and $PM_{2.5,}$ fine particles less than 2.5 microns in diameter). States are required to adopt standards that are at least as stringent as the NAAQS.

The CAA requires that states classify air basins (or portions thereof) as either "attainment" or "nonattainment" with respect to criteria pollutants. If an air basin does not meet the NAAQS for one or more pollutants, then the area is classified as "nonattainment" for that pollutant. For nonattainment areas, states are required to formulate and submit State Implementation Plans

to the EPA that outline measures the state would use to attain and maintain compliance with NAAQS (40 CFR 51).

In January 2011, the EPA approved the Tribal Implementation Plan for the Community (Community 2008). Community lands in Maricopa County are currently designated attainment/unclassifiable for the following NAAQS pollutants: 8-hour ozone, CO, NO_2, SO_2, $PM_{2.5}$, and PM_{10}. In 2001, the EPA designated Community lands attainment/unclassifiable under the 8-hour ozone NAAQS and designated the Community a separate Air Quality Control Region to manage ozone. In the study area, air quality is affected primarily by fugitive dust emissions from agricultural activity, traffic on unpaved roads, and vehicle emissions on paved roads.

The project is not located within any nonattainment or maintenance areas for emission constituents

3.10.2 Environmental Consequences

No Action

Under the no action alternative, there would be no direct impact to air quality because no project construction would occur. Existing sources and activities of air pollutant emissions—fugitive emissions from agricultural activity, traffic on unpaved roads, and vehicle emissions on paved roads—would persist into the foreseeable future.

Proposed Action

Operations associated with the Proposed Action would increase the generation of fugitive dust in the study area. The use of unpaved roads (for site access as well as for site operations) would result in a minor but ongoing increase in particulates (PM_{10}).

Under high wind conditions, sediment stored on-site could become a source of fugitive dust. However, due to the coarse nature of the sediment being removed and stored, the presence of fine particles in these sediment piles would be limited, and any dust generated from these piles would be expected to be minor, intermittent, and localized.

The operation of motor vehicles, including trucks, and other heavy equipment during project construction would generate minor amounts of engine combustion products such as nitrogen and NO_2, CO_2, CO, and reactive organic gases. The emissions generated on-site would not produce measurable changes in ambient concentrations of regulated pollutants or result in a change in attainment status for the air quality region. In consideration of GHGs, the annual emission of CO_2-equivalent GHGs from the Proposed Action would be substantially below the threshold proposed by the CEQ to be relevant to the decision-making process.

Construction activities, including the operation of earthmoving equipment, would generate fugitive dust, a minor transient effect on ambient air quality in the study area. The temporary operation of construction equipment and motor vehicles would generate minor amounts of engine combustion products described previously.

The gaseous and particulate emissions would contribute to pollutants emitted into the atmosphere from other natural and human sources. These sources include fugitive dust from nearby agricultural operations and vehicular travel on unpaved rural roads, and the emission of engine combustion products from vehicular travel on local roadways in the study area. Long-term impacts from agricultural activities may make minor contributions to overall levels of PM_{10}. Several tradeoffs must be considered when estimating the long-term net contribution of agricultural lands. No estimates have been made to determine the amounts of PM_{10} generated from the existing farmland and/or sparsely vegetated desert lands and, therefore, it is unknown whether agricultural development would result in an increase or decrease of fugitive dust.

Susceptible periods for agriculture are during field preparation, planting, and early stages of crop growth when cover is developing. During these periods, farmers would employ best management practices to prevent soil erosion and generation of PM_{10}. The emissions generated on-site during construction and agricultural production would not produce measurable changes in ambient concentrations of regulated pollutants or result in a change in attainment status for the air quality region.

Cumulative Impacts

The Proposed Action would have no cumulative impacts on air quality.

Mitigation

- The contractor will obtain an Earth Moving Permit, including a Dust Control Plan, from the Community Department of Environmental Quality.
- The contractor will minimize land disturbance during site preparation and construction.
- To suppress dust on unpaved roads during construction, the contractor will use watering trucks, chemical dust suppressants, or other reasonable precautions.
- With the exception of long-term storage of sediment, unused materials will be removed from the project footprint following construction.
- All disturbed lands that will not be permanently incorporated into project operations, except sediment piles, will be revegetated or otherwise stabilized.

4.0 ENVIRONMENTAL COMMITMENTS

The following section is a comprehensive listing of the mitigation measures incorporated into the EA. These mitigation measures will be implemented as part of the proposed project.

P-MIP/Contractor Responsibilities

- All roadside memorials within the area of potential effects will be avoided by construction. If avoidance of a roadside memorial is not possible, the Pima-Maricopa Irrigation Project is responsible for consulting with the Gila River Indian Community Tribal Historic Preservation Office to assist in the relocation of the memorial prior to its disturbance.
- An archaeological monitor will be present to observe all ground-disturbing activities within the vicinity of known cultural resources within the area of potential effects.
- Erosion control measures and post-construction site stabilization will be implemented within the project footprint, as necessary.
- Structural barriers and best management practices will be used to prevent the removed sediment from discharging downstream.
- Any excess materials will be spoiled within the permanent irrigation easement or in an approved disposal site.
- To prevent the introduction and establishment of invasive weed species, all construction equipment will be power-washed at the contractor's off-site equipment storage facility prior to entering the construction site.
- To prevent the off-site transport of invasive species seeds from the site, the contractor will power-wash all equipment prior to leaving the site.
- Where appropriate, all disturbed soils that will not be landscaped or otherwise permanently stabilized by construction will be seeded using species native to the study area.
- The P-MIP will employ a qualified biologist to ensure compliance with the Migratory Bird Treaty Act. Every attempt will be made to complete land-clearing activities from September 1 through February 28 to avoid the breeding season of migratory birds. If clearing activities occur during the breeding period (March 1 through August 31), a qualified biologist will begin surveying the area in mid-February to determine the presence or absence of nesting birds.
- Between March 1 and August 31, all vegetation scheduled to be disturbed by the proposed project that may contain active bird nests will be surveyed immediately prior (within 48 hours) to being disturbed. If an active nest or nests are discovered, vegetation-clearing activities will not be allowed to proceed in the vicinity of the nest(s). No activities will occur within an appropriate buffered distance from active nests until after the young birds have fledged from the nest.

- The contractor will employ a qualified biologist to complete a preconstruction survey for burrowing owls 96 hours prior to construction in all suitable habitat that will be disturbed. The biologist will possess a burrowing owl survey protocol training certificate issued by the Arizona Game and Fish Department. Upon completion of the surveys, the contractor will provide survey results to the U.S. Bureau of Reclamation - Phoenix Area Office.
- If any burrowing owls are located during preconstruction surveys or construction, the contractor will employ a qualified biologist or organization holding a permit from the U.S. Fish and Wildlife Service to relocate burrowing owls from the study area, as appropriate.
- If burrowing owls or active burrows are identified during the preconstruction surveys or during construction, no construction activities will take place within 100 feet of any active burrows until the owls are relocated or any young birds have fledged from the nest.
- Contractor personnel will be instructed not to collect, disturb, or molest wildlife species.
- The contractor will obtain an Earth Moving Permit, including a Dust Control Plan, from the Community Department of Environmental Quality.
- The contractor will minimize land disturbance during site preparation and construction.
- To suppress dust on unpaved roads during construction, the contractor will use watering trucks, chemical dust suppressants, or other reasonable precautions.
- With the exception of long-term storage of sediment, unused materials will be removed from the project footprint following construction.
- All disturbed lands that will not be permanently incorporated into project operations, except sediment piles, will be revegetated or otherwise stabilized.

5.0 CONSULTATION AND COORDINATION

5.1 LIST OF AGENCIES AND PERSONS CONTACTED

Reclamation submitted information on the project proposal to the following entities during the development of this Draft EA. The names of the individuals are retained in the administrative record.

5.1.1 Indian Communities

- Ak-Chin Indian Community
- Gila River Indian Community
- Hopi Tribe

5.1.2 Local Government Agencies

- City of Maricopa City Manager
- City of Maricopa Public Works
- Pinal County Public Works
- Maricopa County Flood Control District

5.1.3 State Agencies

- Arizona Department of Environmental Quality
- Arizona Department of Transportation
- Arizona Game and Fish Department
- Arizona Department of Water Resources

5.1.4 Federal Agencies

- BIA
- Corps
- NRCS
- USFWS
- USGS

5.1.5 Other Organizations

- El Paso Natural Gas
- Gila River Farms
- Gila River Indian Irrigation and Drainage District
- Southwest Gas

5.2 PUBLIC INVOLVEMENT

Agency and public scoping for the project began March 19, 2018 and ended April 30, 2018. No public scoping meetings were held for this project. No comments were received.

6.0 LIST OF PREPARERS

This EA has been prepared by P-MIP, Reclamation, and NRCS with the assistance of EcoPlan Associates, Inc.

The following individuals participated in the development of this document:

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_____. 2018c. *Class III Cultural Resources Survey for the Pima-Maricopa Irrigation Project's (P-MIP) Proposed Improvements to San Carlos Irrigation Project (SCIP) Canal 15 and Its Laterals in the Casa Blanca Area, District 5, Gila River Indian Community, Arizona.* P-MIP Report No. 2017-16. Cultural Resource Management Program. Gila River Indian Community, Sacaton, Arizona.

_____. 2018d. *Class III Cultural Resources Survey for the Pima-Maricopa Irrigation Project's (P-MIP) Proposed Improvements to San Carlos Irrigation Project (SCIP) Canal 16 and Its Laterals in the Casa Blanca Area, District 5, Gila River Indian Community, Arizona.* P-MIP Report No. 2017-17. Cultural Resource Management Program. Gila River Indian Community, Sacaton, Arizona.

Wright, D.K. 2011. *Cultural Resources Testing for CRIC Department of Transportation Improvements to Sweetwater Circle Road in the Sweetwater Subdivision, Gila River Indian Community, Pinal County, Arizona*. CRMP Technical Report No. 2009-14. Cultural Resources Management Program, Gila River Indian Community, Sacaton, Arizona.

Appendix A

Agency Correspondence

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, CORPS OF ENGINEERS
ARIZONA-NEVADA AREA OFFICE
3636 NORTH CENTRAL AVENUE, SUITE 900
PHOENIX, ARIZONA 85012-1939

REPLY TO
ATTENTION OF:

August 23, 2011

Office of the Chief
Regulatory Division

Mr. Ian Shavitz
Akin Gump Strauss Hauer & Feld L.L.P.
1333 New Hampshire Avenue NW
Washington, District of Columbia 20036-1564

File Number: SPL-2011-00471-SDM

Dear Mr. Shavitz:

I am responding to your letter dated July 26, 2011 regarding the proposal by the Gila River Indian Community to conduct construction and maintenance activities on a section of the Pima-Maricopa Irrigation Project (P-MIP) known as the Casa Blanca Canal. The project involves construction and maintenance activities to Canal 11 and Canal 12, and the appurtenant drain that protects these canals from storm water flow. The proposed work primarily involves reshaping and lining the irrigation canals; reshaping and removing vegetation and accumulated sediment from drainage channels; and installing and replacing structures that are appurtenant and functionally related to the irrigation channel, including siphons, drop structures and check structures. The projects are located within the Gila River Indian Community, Pinal County, Arizona, as shown on the attached maps.

We have reviewed the proposed activities described in your letter and have concluded that the discharges are directly associated with the "Construction or maintenance of farm…irrigation ditches," and the maintenance, grade control and repair or abandonment of the drainage features are "appurtenant and functionally related to irrigation ditches" as identified in 33 CFR Part 323.4(a)(3). The "recapture" provision at 33 CFR Part 323.4(b) does not apply to the proposed activities.

Based on the information you have provided, we have determined the proposed project qualifies for the Clean Water Act exemption pursuant to 33 CFR Part 323.4. Therefore, the activity is not prohibited by, or subject to, regulation under Section 404 of the Clean Water Act.

Thank you for your letter. If you have questions please contact me at (602) 230-6950 or by e-mail at sallie.mcguire@usace.army.mil

Please be advised that you can now comment on your experience with Regulatory Division by accessing the Corps web-based customer survey form at: http://per2.nwp.usace.army.mil/survey.html.

Sincerely,

Sallie McGuire

Sallie McGuire
Chief, Arizona Branch
Regulatory Division

Appendix B

U.S. Fish and Wildlife Service
Information for Planning and Consultation
Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Arizona Ecological Services Field Office
9828 North 31st Ave
#c3
Phoenix, AZ 85051-2517
(602) 242-0210

Project Summary

Consultation Code: 02EAAZ00-2018-SLI-1198

Event Code: 02EAAZ00-2018-E-02702

Project Name: Casa Blanca Canal CB-III Laterals

Project Type: WATER SUPPLY / DELIVERY

Project Description: Pima-Maricopa Irrigation Project (P-MIP) is proposing the rehabilitation or lining of 41 miles of existing earthen or pipline laterals and/or sub-laterals serving the Casa Blanca Canal service area. However, there are a total of 71 miles of laterals and sub-laterals in the Casa Blanca Canal service area that will be reviewed in the environmental assessment. The additional 30 miles of laterals and sub-laterals will be cleared for future projects.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/33.110368425421164N111.92628150230472W

Counties: Pinal, AZ

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Sonoran Pronghorn *Antilocapra americana sonoriensis* Population: U.S.A. (AZ), Mexico No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4750	Experimental Population, Non-Essential

Birds

NAME	STATUS
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **proposed** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Reptiles

NAME	STATUS
Northern Mexican Gartersnake *Thamnophis eques megalops* There is **proposed** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7655	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Arizona Ecological Services Field Office
9828 North 31st Ave
#c3
Phoenix, AZ 85051-2517
Phone: (602) 242-0210 Fax: (602) 242-2513
http://www.fws.gov/southwest/es/arizona/
http://www.fws.gov/southwest/es/EndangeredSpecies_Main.html

In Reply Refer To:
Consultation Code: 02EAAZ00-2018-SLI-1198
Event Code: 02EAAZ00-2018-E-02702
Project Name: Casa Blanca Canal CB-III Laterals

August 30, 2018

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The Fish and Wildlife Service (Service) is providing this list under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). The list you have generated identifies threatened, endangered, proposed, and candidate species, and designated and proposed critical habitat, that may occur within one or more delineated United States Geological Survey 7.5 minute quadrangles with which your project polygon intersects. Each quadrangle covers, at minimum, 49 square miles. In some cases, a species does not currently occur within a quadrangle but occurs nearby and could be affected by a project. Please refer to the species information links found at:
http://www.fws.gov/southwest/es/arizona/Docs_Species.htm
http://www.fws.gov/southwest/es/arizona/Documents/MiscDocs/AZSpeciesReference.pdf .

The purpose of the Act is to provide a means whereby threatened and endangered species and the habitats upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of Federal trust resources and to consult with us if their projects may affect federally listed species and/or designated critical habitat. A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, we recommend preparing a biological evaluation similar to a Biological Assessment to determine whether the project may

affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If the Federal action agency determines that listed species or critical habitat may be affected by a federally funded, permitted or authorized activity, the agency must consult with us pursuant to 50 CFR 402. Note that a "may affect" determination includes effects that may not be adverse and that may be beneficial, insignificant, or discountable. You should request consultation with us even if only one individual or habitat segment may be affected. The effects analysis should include the entire action area, which often extends well outside the project boundary or "footprint." For example, projects that involve streams and river systems should consider downstream effects. If the Federal action agency determines that the action may jeopardize a proposed species or adversely modify proposed critical habitat, the agency must enter into a section 7 conference. The agency may choose to confer with us on an action that may affect proposed species or critical habitat.
Candidate species are those for which there is sufficient information to support a proposal for listing. Although candidate species have no legal protection under the Act, we recommend considering them in the planning process in the event they become proposed or listed prior to project completion. More information on the regulations (50 CFR 402) and procedures for section 7 consultation, including the role of permit or license applicants, can be found in our Endangered Species Consultation Handbook at:
http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF.

We also advise you to consider species protected under the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703-712) and the Bald and Golden Eagle Protection Act (Eagle Act) (16 U.S.C. 668 et seq.). The MBTA prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when authorized by the Service. The Eagle Act prohibits anyone, without a permit, from taking (including disturbing) eagles, and their parts, nests, or eggs. Currently 1026 species of birds are protected by the MBTA, including species such as the western burrowing owl (Athene cunicularia hypugea). Protected western burrowing owls are often found in urban areas and may use their nest/burrows year-round; destruction of the burrow may result in the unpermitted take of the owl or their eggs.

If a bald eagle (or golden eagle) nest occurs in or near the proposed project area, you should evaluate your project to determine whether it is likely to disturb or harm eagles. The National Bald Eagle Management Guidelines provide recommendations to minimize potential project impacts to bald eagles:
https://www.fws.gov/migratorybirds/pdf/management/
nationalbaldeaglenanagementguidelines.pdf
https://www.fws.gov/birds/management/managed-species/eagle-management.php.

The Division of Migratory Birds (505/248-7882) administers and issues permits under the MBTA and Eagle Act, while our office can provide guidance and Technical Assistance. For more information regarding the MBTA, BGEPA, and permitting processes, please visit the following: https://www.fws.gov/birds/policies-and-regulations/incidental-take.php. Guidance for minimizing impacts to migratory birds for communication tower projects (e.g. cellular, digital

television, radio, and emergency broadcast) can be found at: https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds/collisions/communication-towers.php.

Activities that involve streams (including intermittent streams) and/or wetlands are regulated by the U.S. Army Corps of Engineers (Corps). We recommend that you contact the Corps to determine their interest in proposed projects in these areas. For activities within a National Wildlife Refuge, we recommend that you contact refuge staff for specific information about refuge resources.
If your action is on tribal land or has implications for off-reservation tribal interests, we encourage you to contact the tribe(s) and the Bureau of Indian Affairs (BIA) to discuss potential tribal concerns, and to invite any affected tribe and the BIA to participate in the section 7 consultation. In keeping with our tribal trust responsibility, we will notify tribes that may be affected by proposed actions when section 7 consultation is initiated.

We also recommend you seek additional information and coordinate your project with the Arizona Game and Fish Department. Information on known species detections, special status species, and Arizona species of greatest conservation need, such as the western burrowing owl and the Sonoran desert tortoise (Gopherus morafkai) can be found by using their Online Environmental Review Tool, administered through the Heritage Data Management System and Project Evaluation Program https://www.azgfd.com/Wildlife/HeritageFund/.

For additional communications regarding this project, please refer to the consultation Tracking Number in the header of this letter. We appreciate your concern for threatened and endangered species. If we may be of further assistance, please contact our following offices for projects in these areas:

Northern Arizona: Flagstaff Office 928/556-2001
Central Arizona: Phoenix office 602/242-0210
Southern Arizona: Tucson Office 520/670-6144

Sincerely,
/s/ Steven L. Spangle Field Supervisor

Attachment

Attachment(s):

- Official Species List