

FINAL

FINDING OF NO SIGIFICANT IMPACT Upland Wash Sediment Control Project

**U.S. Department of the Interior
Bureau of Reclamation
Yuma Area Office**

In accordance with the National Environmental Policy Act (NEPA) of 1969, as amended, and based on the following, the Bureau of Reclamation (Reclamation) has determined that implementation of the Proposed Action (Alternative C) to construct sediment control structures at Mule Wash, Paradise Point Wash, and Quien Sabe Wash along the Colorado River (River) would not result in a significant impact on the quality of the human and natural environment. The attached Environmental Assessment (EA) provides details on the proposed action and an analysis of the potential impacts and should be used as a companion document to this Finding of No Significant Impact (FONSI).

Reclamation needs a solution to decrease the maintenance activity involving wash fans within the River. Reclamation proposes to reduce or eliminate wash fan deposition by constructing upland sediment control structures. The purpose of constructing upland control structures is to capture upland sediment before it reaches the River channel, therefore reducing the amount of maintenance required to operate the river efficiently and effectively. Capturing and controlling sediment prior to its introduction into the River has the potential to minimize channel constrictions, thus maintaining more efficient channel capacities for water delivery. Reducing wash fan deposits within the River channel should lessen the need to deploy heavy equipment into the River channel to conduct sediment removal operations, minimizing impacts to bankline soils, aquatic species, and riparian vegetation.

The analysis presented in the EA focused on those resource areas identified as potentially affected by the alternatives considered, including the No Action. Reclamation determined that the potential effects on transportation, population, and recreation were negligible and did not conduct further analysis. Reclamation assessed the potential effects on land use, air quality, biological resources, cultural resources, Indian trust assets, environmental justice and socioeconomic conditions, hazardous materials and solid waste, noise, water resources, geology and soils, visual resources, floodplain, and cumulative impacts. The potential for impacts was reduced by using mitigation measures and best management practices (BMPs) where applicable.

Reclamation identified several BMPs to avoid, minimize, or mitigate adverse effects that may result from the Proposed Action. A brief summary of the environmental commitments and practices Reclamation has committed to are listed below:

Air Quality

- Vehicle and equipment traffic will be limited to paved or graveled roads as much as possible.
- Vehicle speed shall not exceed 15 miles per hour within the construction limits.
- Where equipment traffic, excavation, or demolition is required outside of paved or graveled roads, water or soil binders will be applied to exposed surfaces.
- Equipment will be properly maintained to minimize exhaust emissions and equipment idling will be limited to five minutes or less.
- Ground disturbing activities will cease temporarily when wind speeds at the site exceed 15 miles per hour, determined by local weather observations or reports.
- Only water will be utilized for dust mitigation.
- Reclamation will coordinate with the Colorado River Indian Tribe's (CRIT) Attorney General's Office, Environmental Protection Office (EPO), and the Water Wheel and Paradise Point Resorts managers before construction activities commence on and adjacent to CRIT land.

Biological Resources

- Project construction limits and activities will be restricted to highly disturbed areas in order to avoid and minimize impacts to native vegetation and wildlife to the extent practical.
- All construction areas will target areas closest to the River and existing roads (Highway 95 and bankline access roads) in order to minimize impacts to undisturbed desert wash riparian vegetation located in higher upland areas.
- Staging areas and improvements to access roads will be limited to previously disturbed areas and located away from the main wash area.
- All construction equipment will be cleaned and free of plant parts before moving onto construction sites.
- Trash and food materials will be properly contained within vehicles or closed refuse bins while on site, and will be regularly removed from the construction site for proper disposal.
- Worker training will be provided to construction personnel prior to commencing activities on resource protection measures.
- In coordination with the U.S. Army Corps of Engineers (USACE), U.S. Fish and Wildlife Service and state wildlife agencies, cobble material removed from behind the upland structures during maintenance activities may be placed along the River shorelines to enhance fish spawning habitat in the area.
- Reclamation will coordinate with CRIT's Attorney General's Office and EPO, and the Water Wheel and Paradise Point Resort managers before construction activities commence on and adjacent to CRIT land.

Cultural Resources

- Consultation with the State Historic Preservation Officer (SHPO) under Section 106 of the National Historic Preservation Act was completed for the Proposed Action.

- Reclamation will coordinate with the CRIT Attorney General's Office, Museum, and Tribal Historic Preservation Officer (THPO) prior to the project commencing.
- Reclamation will request that a CRIT tribal monitor be at the site during construction activities.

Indian Trust Assets (ITAs)

- To ensure ITAs are not impacted, Reclamation will coordinate project details with CRIT's Attorney General's Office, THPO, and Museum before construction activities commence on and adjacent to CRIT land.

Hazardous Materials and Solid Waste

- A site specific contingency spill plan will be developed and implemented. The plan should consist of reporting guidelines in the event of a spill, good housekeeping techniques, and employee training in the use of required equipment and proper handling of potentially hazardous materials.
- Hazardous materials used for this project will be contained within vessels engineered for safe storage and removal.
- Staging areas for refueling of equipment will be located outside the wash area and away from the River to prevent any accidental fuel leakage from contaminating surface water, groundwater, or soils.

Water Resources

- Coordination with the USACE and appropriate state water resource agencies will be conducted prior to the project commencing in order to obtain Clean Water Act (CWA) Section 404 and 401 permit authorizations.
- During construction, no refueling equipment shall be permitted within the River and/or the wash area.
- Staging areas will be located outside the wash areas.
- Upland structures will not divert flow.
- Once the CWA 404 permit is secured, Reclamation will obtain written authorization from CRIT before construction activities commence on and adjacent to CRIT land.

Based on the analysis of the environmental impacts, BMPs, and environmental commitments, as presented in the EA, Reclamation has concluded that implementation of the Proposed Action (Alternative C) does not pose a significant adverse impact to the quality of the human and natural environment.


 Maria Ramirez, Area Manager
 Yuma Area Office


 Date

RECLAMATION

Managing Water in the West

Final Environmental Assessment

Upland Wash Sediment Control Project



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

December 2016

Mission Statements

The U.S. Department of the Interior protects America's natural resources and heritage, honors our cultural and tribal communities, and supplies the energy to power our future.

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.

Environmental Assessment

Upland Wash Sediment Control Project

Prepared by

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Acronyms and Abbreviations

AGFD	Arizona Game and Fish Department
APE	Area of Potential Effect
BMPs	Best Management Practices
BLM	Bureau of Land Management
CFR	Code of Federal Regulations
CRFWLS	Colorado River Front Work and Levee System
CRIT	Colorado River Indian Tribes
CVCA	Cibola Valley Conservation Area
CWA	Clean Water Act
EA	Environmental Assessment
EO	Executive Order
EPA	Environmental Protection Agency
EPO	Environmental Protection Office
ESA	Endangered Species Act
FONSI	Finding of No Significant Impact
HPO	Historic Preservation Office
ITAs	Indian Trust Assets
LCR	Lower Colorado River
MSCP	Multi-Species Conservation Program
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NOx	Nitrogen Oxides
NRHP	National Register of Historic Places
NWR	National Wildlife Refuge
O&M	Operation and Maintenance
OHWM	Ordinary High Water Mark
PM ₁₀	Particulate Matter that is 10 microns in diameter or less
POLs	Petroleum, Oil, and Lubricants
PVER	Palo Verde Ecological Reserve
Reclamation	Bureau of Reclamation
River	Colorado River
RM	River Mile
SHPO	State Historic Preservation Office
US	United States
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
VOCs	Volatile Organic Compounds
YAO	Yuma Area Office
YCR	Yuma clapper rail

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1.0 Purpose of and Need for Proposed Action

1.1 Introduction

The Bureau of Reclamation (Reclamation) has prepared this environmental assessment (EA) to evaluate potential impacts associated with the proposed upland wash fans sediment control project. This EA was prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (42 UCS 4321 et seq.), the Council on Environmental Quality regulations (40 CFR 1500-1508) for implementing NEPA, and the Department of the Interior's NEPA Regulations (43 CFR Part 46), and Reclamation Manual NEPA Policy (ENV P03). Reclamation is the lead Federal agency pursuant to NEPA.

1.2 Location

Six sites have been identified along the lower Colorado River (LCR), in the vicinity of Blythe, California. The project is located in the Parker and Palo Verde Divisions of the LCR. The project sites lie on both the Arizona and California sides of the river in La Paz and Riverside Counties, at approximate River Miles 105.7 and 105.9 for Gould Wash South site, 106.5 for Gould Wash North site, 107.4 for Mule Wash South site, 110.1 for Mule Wash North site, 142.8 for Paradise Point Wash site and 151.7 for Quien Sabe Wash site. See Figures 1 through 3 for project locations.

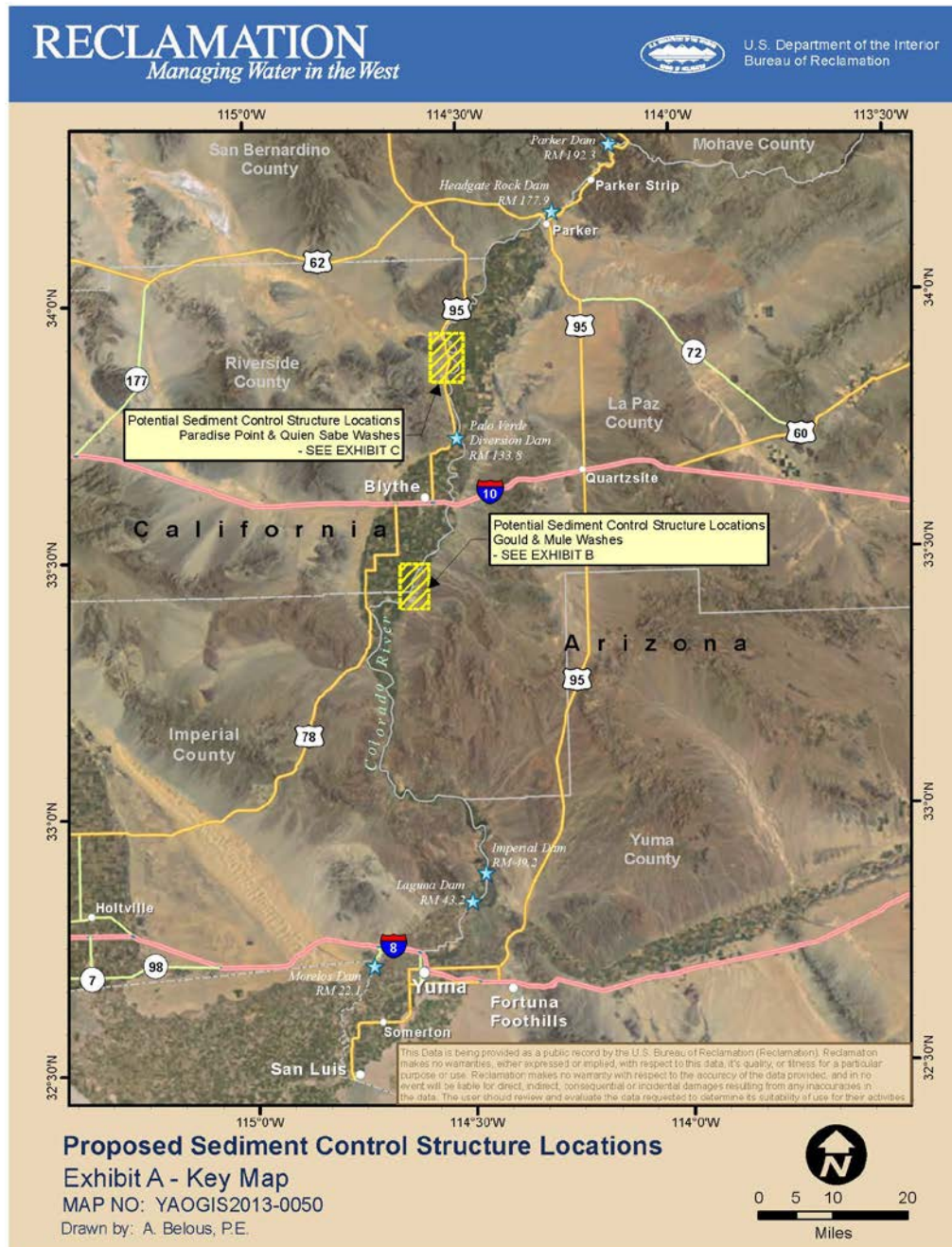


Figure 1. Location Map

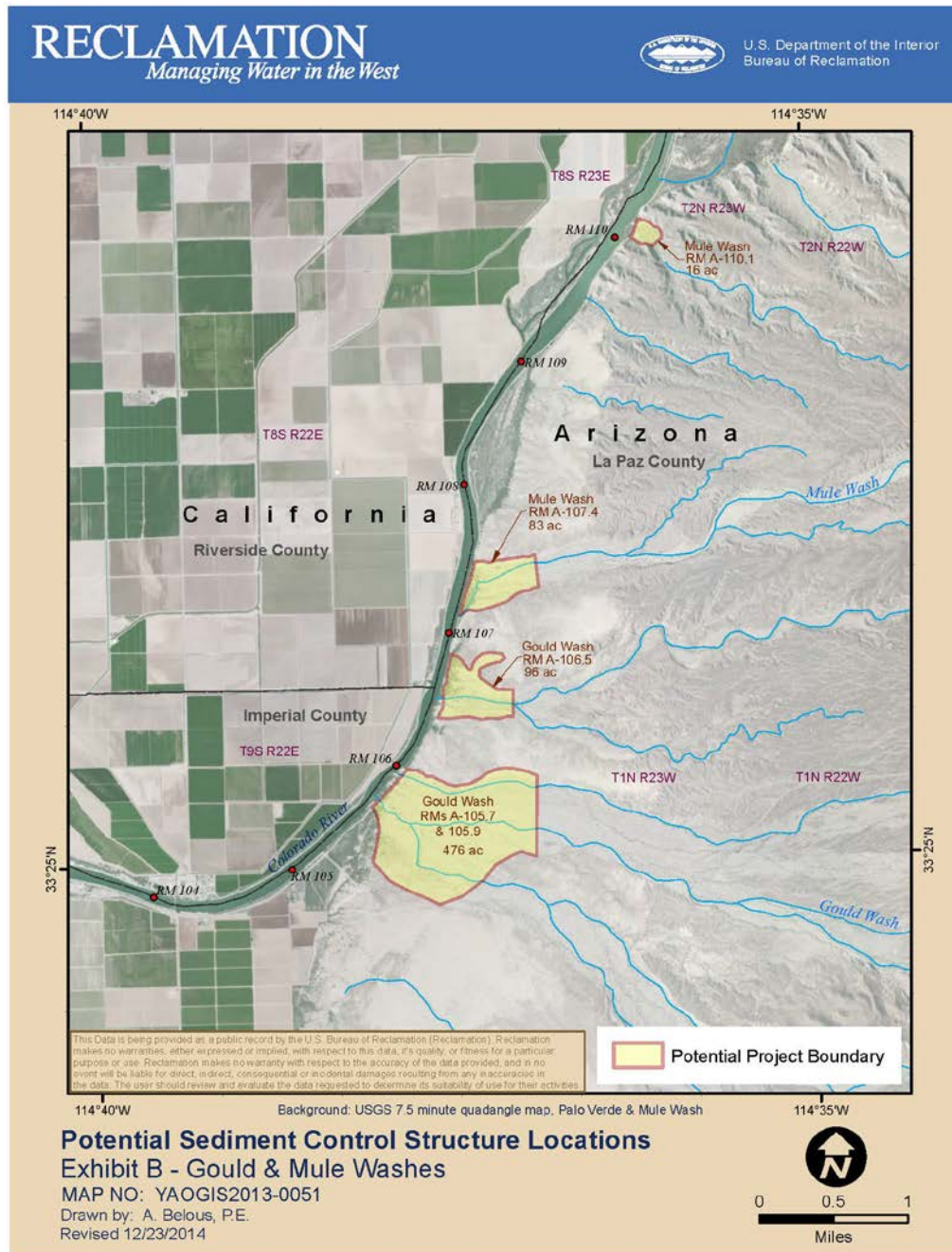


Figure 2. Site Map – Arizona sites area of potential effect (APE).

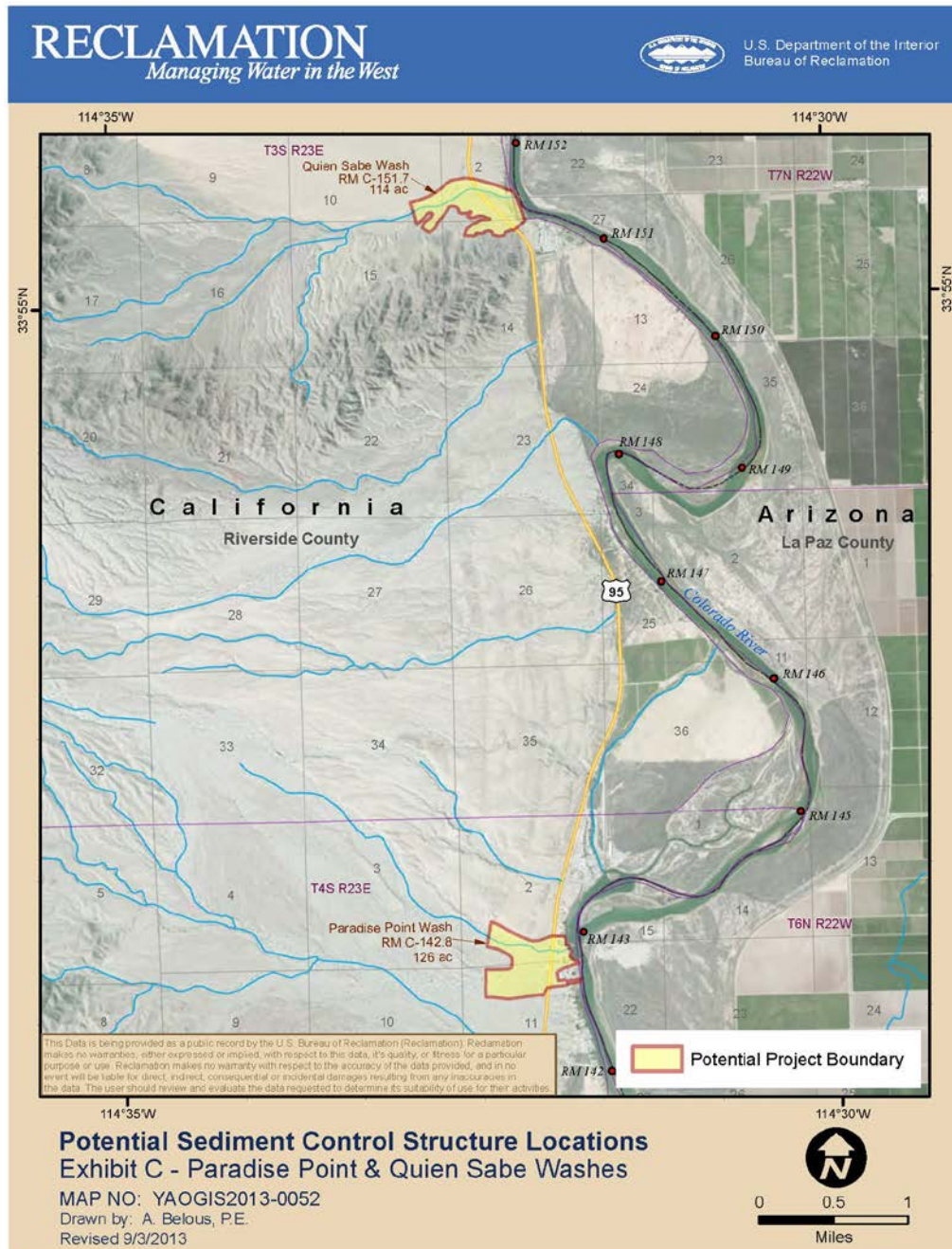


Figure 3. Site Map – California sites APE.



Photo 1. Quien Sabe Wash site (RM 151.7) facing west.



Photo 2. Quien Sabe Wash site facing east. Note Colorado River in background.



Photo 3. Paradise Point Wash site (RM 142.8) facing west.



Photo 4. Paradise Point Wash site facing east towards Colorado River.



Photo 5. Mule Wash (RM 110.1) site facing east.



Photo 6. Mule Wash South (RM 107.4) site facing east.



Photo 7. Mule Wash South (RM 107.4) site facing southeast from bluff to north.



Photo 8. Gould Wash North (RM 106.5) site facing east. Note off road vehicle impacts to wash area.



Photo 9. Gould Wash South (RM 105.7) site facing east.



Photo 10. Gould Wash South (RM 105.7) site facing east.

1.3 Background

Rainfall events have the potential to cause flooding within normally dry washes along the Colorado River (River). Wash flows can transport large volumes of sediment which are deposited into the River channel in the form of wash fans. United States Bureau of Reclamation (Reclamation) personnel identified several large wash fans at the outlets of the Quien Sabe, Paradise Point, Mule, and Gould Washes in southwestern Arizona and southeastern California. Over the past 14 years, Reclamation has periodically removed sediment from these locations. Sediment amounts ranged from 2,500 cubic yards up to 16,000 cubic yards of material. These wash fans have reduced the channel capacity of the River, caused localized sedimentation issues, and are directing concentrated, high-velocity flows towards opposing banklines and bankline structures. Bankline structures are vital to protect adjacent private, tribal, and public lands and facilities. Currently, the River does not possess sufficient stream power to transport all sizes of wash fan material downstream to maintain a clear channel to ensure continued and reliable water operations. If not removed, the wash fans will increase in size causing flows to further impinge upon opposing banklines, possibly resulting in bank failure and damage to adjacent lands and facilities. Wash fans could also pose navigational hazards to the general public, who use the river system for recreational purposes.

Reclamation obtains permits and routinely deploys heavy equipment within river channel boundaries to remove large wash fans. With constrained budgets, fish and wildlife considerations, permitting requirements, and a limited timeframe for removal (November through January), it has become a heightened challenge to address and remove wash fans in this manner.

1.4 Purpose and Need

Reclamation needs a solution to decrease the maintenance activity involving wash fans along the River. Reclamation proposes to reduce or eliminate wash fan deposition by constructing upland sediment control structures. The purpose of constructing upland control structures is to capture upland sediment before it reaches the River channel, therefore reducing the amount of maintenance required to operate the river efficiently and effectively. Capturing and controlling sediment prior to its introduction into the River has the potential to minimize channel constrictions, thus maintaining more efficient channel capacities for water delivery. Reducing wash fan deposits within the River channel should lessen the need to deploy heavy equipment into the River channel to conduct removal operations, minimizing impacts to bankline soils, aquatic species, and riparian vegetation.

1.5 Determinations to be Made

This EA will be distributed to appropriate decision-makers within Reclamation for review to determine whether a Finding of No Significant Impact (FONSI) is appropriate. This decision will be based on a determination that all potential impacts are either not significant or can be reduced to not significant levels through the implementation of mitigation measures. If any potential impacts are considered significant and cannot be avoided or reduced to not significant levels, the preparation and processing of an Environmental Impact Statement is required.

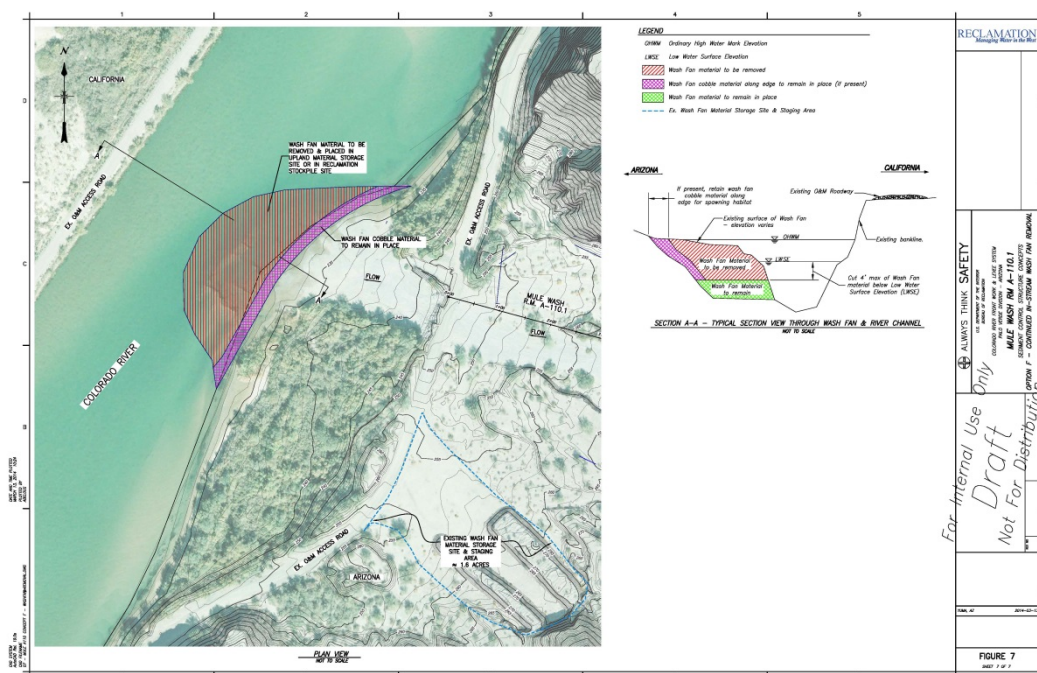
2.0 Alternatives Considered

This chapter describes the alternatives considered for the proposed Upland Wash Sediment Control Project activities. It includes the Proposed Action and No Action alternatives.

2.1 No Action Alternative

NEPA guidelines require that an EA evaluate the “No Action” alternative in addition to the Proposed Action. The no action alternative provides a basis for comparison of the environmental consequences of the Proposed Action. In this EA, the no action alternative assumes that the Project would not occur and the selected wash fans would be removed and maintained in the current manner.

Under the No Action alternative, upland wash sediment control structures would not be constructed and the river would continue to be maintained with heavy equipment by removing material after it enters the River.



2.2 Proposed Action

2.2.1 Alternative A - Debris Fences

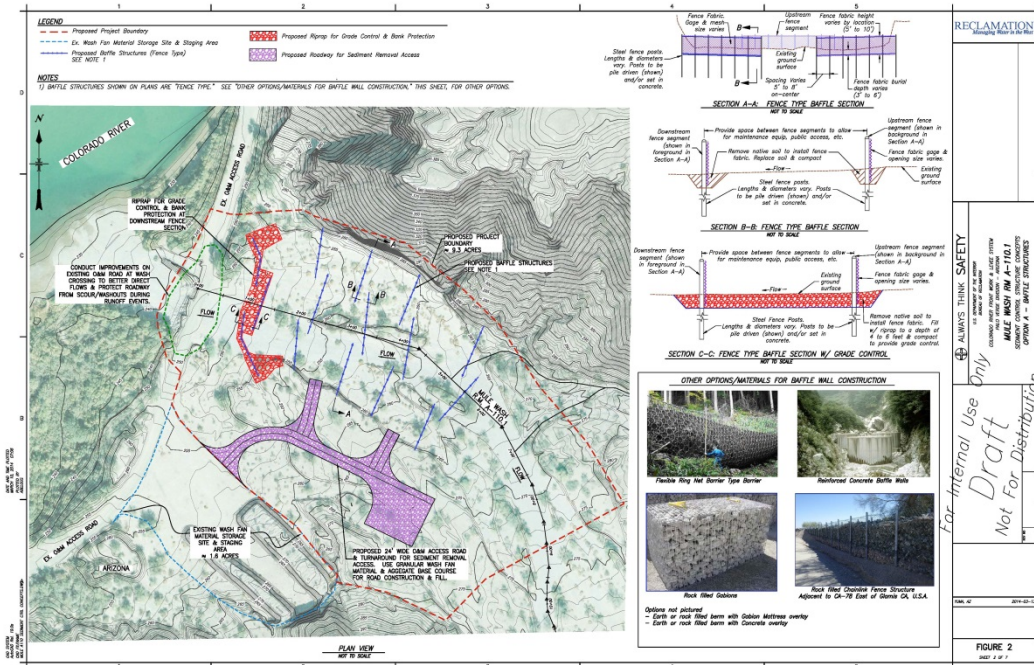


Figure 5. Debris Fence, Mule Wash Site

Six sites have been identified for construction of upland sediment control structures. However, of the six sites, three have been selected for implementation, Mule Wash north located at RM 110.1, Paradise Point located at RM 142.8, and Quien Sabe located at RM 151.7. These three wash areas were selected based on higher critical needs for protecting adjacent banklines and adjacent facilities.

The remaining wash sites will be implemented at later dates after the first three sites have been constructed and evaluated. Site specific analysis and follow-up coordination and consultations with resource and regulatory agencies will be conducted at a future date when the three remaining upland wash areas are proposed for construction.

Debris Barriers

Debris barriers are used to capture or reduce the volume of sediment, cobbles, large rocks, boulders and floating debris that are entrained by high-velocity flows. The structures are set perpendicular to the direction of flow and extend across the entire width of the channel. In general one or more debris barriers are placed in series to capture material. Examples include debris fences and debris barrier walls.

Debris Fences

Debris fences are permeable, fence type barriers used to dissipate the energy of sediment and debris laden flood flows. The two types of debris fences discussed herein are rigid and flexible debris fences.

Rigid Debris Fences

Rigid debris fences are constructed using vertical posts that are set in concrete foundations or are pile driven. Diameters and post thickness vary depending on flow velocities and expected impacts from entrained debris. The posts may or may not be interlinked using fence fabric and/or wire mesh.

Advantages from a river management perspective are: the structures do not impound water and allow smaller debris to pass through and enter the river channel, which provide spawning habit for fish.

Selection of fence fabric, post dimensions, and foundation design require careful analyses as these features are subject to failure due to high velocities and entrained debris. Heavy gage coated steel posts or piles similar to those used in “open grid-type check dams” are recommended as they have proven to be effective, durable measures.



Photo 11. A debris rack/fence (no fence fabric) used to capture material upstream of a culvert. Photo courtesy of the Federal Highway Administration.

<http://www.fhwa.dot.gov/engineering/hydraulics/pubs/04016/hec0905.cfm>

Flexible Debris Fences

High-strength flexible ring-net barriers are a form of flexible fencing that is used to capture debris and mudflow deposits while allowing pore water and smaller sediments to pass through. The performance of these structures was analyzed in areas of the Pyreneese in Erill and Portaine, Spain. The results indicated that the barriers were able to sustain debris volumes of about 25,000 cubic-meters (33,000 cubic-yards) from multiple events (Geobrugg AG, 2010). According to Geobrugg AG, use of this option versus traditional concrete structures yields a cost-savings of about 30 to 50 percent.

Advantages from a river management perspective are: the structures do not impound water and allow smaller debris to pass through and enter the river channel, which provide spawning habitat for fish.



Photo 12. A flexible ring-net barrier that is impounding debris. Notice the sediment laden water that is passing through the structure. Source: <http://www.geobrugg.com>

Debris Barrier Walls

Debris barrier walls are constructed across canyon mouths in Southern California in areas subject to mudslides. The walls are typically constructed using large timbers supported by rails set in a concrete foundation. Many of these structures were placed as temporary measures; however, it was documented that both filled and unfilled barriers as old as 15-years, were observed to be in good condition in the San Gabriel Mountains near Glendora, California (United States Army Corps of Engineers (USACE) 1993).



Photo 13: Debris Barrier Wall in Southern California.
Source: USACE (1993) Assessment of Structural Flood-Control Measures on Alluvial Fans

2.2.1.1 Construction Activities (Mule Wash North RM 110.1)

Structures will be constructed in order to capture sediment behind the fences. Fences would be constructed by driving poles and stringing a wire mesh fence along its length (see Figure 5).

Debris fence structures are proposed to be approximately five feet tall with one and half feet below existing grade and three and a half feet above existing grade placed perpendicular to the flow of the stream. Fences are designed to be approximately 100 feet long varying in lengths between 96 and 128 feet with a width of under six inches. A total of 15 debris fence structures will be placed within the Mule Wash North site. Each fence will be supported by metal poles 20 feet long spaced at eight foot intervals. Poles are proposed to be driven approximately 15 feet deep with five feet of poles supporting fence with approximately three and a half feet of pole above existing grade. Variations in the number and size of fences may vary from site to site but the main design features will be used at each site. Trenches for fencing will be backfilled with native material. Some vegetation grubbing will be required but will be minimized to the extent practical. No riparian trees or wetland vegetation will be impacted.

Bankline headwalls are a component of the proposed structure. Riprap will be buried in trenches two feet deep with one foot of material exposed for a total depth of three feet of riprap along bankline headwalls. This feature will serve as grade control, bank protection and access road. Approximately 1,600 cubic yards of riprap will be placed.

The site also incorporates the improvement of existing access roads to bring materials to the sites and access the wash areas. Some sections of the road will be built above grade with fill, while other sections will be cut into grade. Lengths of roads would be about 500 feet in length and 24 feet wide. Existing roads and trails, including staging area will be established outside the wash areas.

In addition, staging areas for equipment and refueling will be established within the access roads. Staging areas will encompass an approximate area of 200 by 200 feet. Staging area would be located away from the wash area. Accumulated material will be placed in upland sites.

Equipment expected to be used during construction activities will be dozers, excavators, crane, haul trucks, water trucks, and service trucks.

2.2.1.2 Maintenance Activities

Once construction activities are completed, Reclamation will perform operation and maintenance (O&M) activities on the facilities periodically, as needed, to maintain function of the structures. O&M activities would consist of the periodic removal of accumulated sediment from behind the structures, repair of fence structures, and upgrades to existing access roads. Material removed will be used for improving and/or rebuilding access roads in the area.

2.2.2 Alternative B - Check Dams

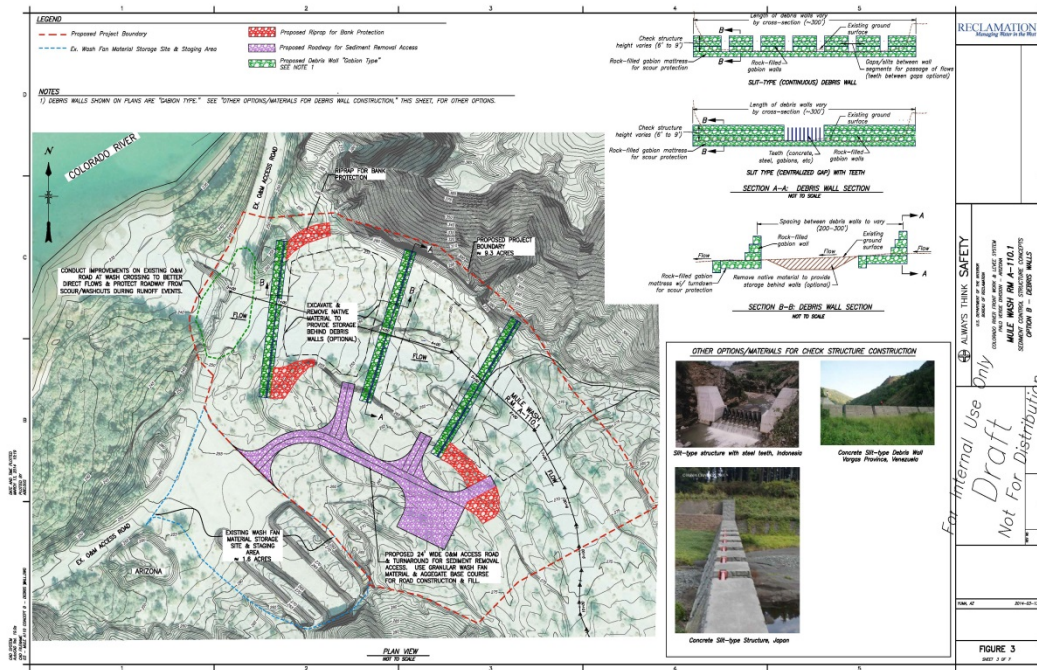


Figure 6. Check Dam

Closed-type (continuous) and open-type (discontinuous) are two types of check dams that are being considered for installation within ephemeral tributaries of the Lower Colorado River. The following subsections discuss both types of check dams as well as construction materials.

Closed-Type (Continuous) Check Dam

Closed-type check dams are installed across the width of ephemeral stream channels and are usually placed in series. The structures reduce the energy of flash flood flows and in doing such, capture material entrained within. Closed check dams are commonly used to control debris flows in Southern California, Colorado, Italy, Spain, Switzerland, Japan and other countries within the Asian-Pacific. Due to the continuous close-type construction, all material is impounded behind the structure unless flows overtop the notched weir. Material captured may be removed via heavy equipment and placed in temporary material storage sites for future use. The structures are generally equipped with downstream toe protection and/or energy dissipation measures.

昭和42年災害前後の住吉川五助堰堤(上流側から)



Photo 14. Closed-type concrete check dam in Sumiyoshi River, Rokko Mountain, Japan, 1967.
Source: Mizuyama, T (2008) Structural Countermeasures for Debris Flow Disasters

Discontinuous Open-Type Check Dams

Discontinuous open-type check dams extend across the width of the channel; however, unlike close-type check dams these structures have one or more vertical openings that extend from the base of the dam, upward to the overflow weir elevation. The openings allow power water and smaller debris to flow through the structures while trapping larger debris behind them. Like closed type check dams, these structures are usually placed in series. Open-type check dams are commonly used to control debris flows in Japan and other countries within the Asian-Pacific. From a river management perspective, open-type check dams are preferred over closed-type check dams as they have the potential to allow smaller cobbles to pass through and enter the river channel, thus providing material for fish spawning habitat. Material captured behind these check dams may be removed via heavy equipment and placed in temporary material storage sites for future use. The structures are generally equipped with downstream toe protection and/or energy dissipation measures.

General types of open-type check dams are slit-type and grid-type shown in Figure 6.



Photo 15. Slit-type check dam in Vargas Province, Venezuela

Source: <http://www.sabo-int.org/projects/venezuela.html>



Photo 16. Open grid-type check dam

Source: Mizuyama, T (2008) *Structural Countermeasures for Debris Flow Disasters*

Check Dam Material Options

Options for construction include loose-rock, wire-rock (gabion), mass concrete, and reinforced concrete, and masonry. Reclamation will focus on the gabions and reinforced concrete options.

Rock-and-Wire (Gabions)

Rock-and-wire structures, also known as gabions, are wire mesh baskets filled with rock, crushed concrete, or other suitable materials to form flexible, permeable, monolithic structures.

Past experience in Los Angeles area water sheds proved that rock-and-wire structures are more durable than loose-rock structures; however, there were cases where continuous impacts from entrained debris broke the wire mesh causing

failures of these structures. The New Year's Eve Flood of 1934 resulted in the numerous failures, which led to their abandonment.

Despite this type of event, gabions continue to be used throughout the world for applications such as check dams, channel lining, and retaining walls. Manufacturing methods have improved and options such as heavy gage wire, double twisted hexagonal mesh, and different grades of protective coatings exist. Gabions are both permeable and flexible and can conform better to settlement than loose rock, concrete, or masonry type structures. Past failures during the New Year's Eve Flood of 1934 did not elaborate on whether or not downstream toe protection was provided. In the event that gabions were used, rock-filled Reno mattresses would be placed downstream of the check dams to protect against undercutting.

Advantages of the gabion method include permeability of the structure walls, flexibility and strength, and the accessibility/availability of fill material (rock from stockpile sites and/or recycled material from wash fan material storage sites). Gabions are a viable option and are recommended for consideration.



Photo 17. Gabion check dam in Moranbah, Queensland, Australia. Notice the Reno-mattress placed downstream of the check structure for scour protection. Photo by Prospect Contractors, Australia. http://www.prospectcontractors.com.au/anglo_coal.html

Reinforced Concrete

Construction of reinforced concrete check dams entails setting forms, placing and tying reinforcing steel, and placing concrete to create continuous impervious walls across the washes of concern. The walls require a continuous, reinforced concrete footing and a scour protection pad with a turned down edge to prevent head-cutting and failure.

Parameters such as the size and spacing of reinforcing steel, wall and footing thicknesses, and the height and length of the structures would vary at each site and would depend on variables such as topography and hydraulic conditions. As discussed in the previous section, Japan has an interest in using reinforced concrete versus mass concrete since it is more capable of withstand impacts from entrained debris.

Large quantities of concrete and reinforcing steel are not stocked at Reclamation's Yuma Area Office and would require procurement. Concrete trucks and equipment would need to be deployed to the sites and in some remote areas access may be difficult and not cost effective. Despite some of these challenges reinforced concrete walls have been used successfully and are a possible alternative.

2.2.2.1 Construction Activities

Check structure debris walls would be constructed out of gabion baskets formed by using wire baskets and filling them with rocks of various sizes. A notch or comb design will be implemented on the top edge of the debris wall to capture large sediments such as rocks or boulders, allowing smaller particles to continue downstream over or through the structure.

Check dam structures will consist of a series of wire gabion baskets that will be filled with rock. The fill material for gabion baskets would be obtained from existing stockpiles at each project area. The gabions will be stacked and wired together to form a continuous water permeable structure that will span the wash channel. Intermittent gaps between the check structure segments will allow passage of flows.

The structures will be located near the mouth, the midway point, and the upper most section of each wash in order to capture sediment from rain storm events. Spacing between check structures will be approximately 200 and 300 feet apart. To address concerns that structures are not undercut by flood water, the gabion foundation of each structure will be installed on a one foot thick, nine foot wide gabion mattress installed by trenching below the existing grade of the wash channel. In situ materials will provide a stable base for structure construction, however any unsuitable base materials found will be removed and replaced with compacted granular backfill. Because the structures will be constructed to span the wash channels, the trenches dug for their foundation may vary between 300 and 400 feet long and after they are filled with rock they will be approximately 10 feet wide.

Equipment expected to be used during construction activities will be dozers, excavators, crane, haul trucks, water trucks, and service trucks.

Headwalls, access roads and road crossings will be similar to debris fence design in 2.2.1.1.

2.2.2.2 Maintenance Activities

Once construction activities are completed, Reclamation will perform O&M activities on the facilities periodically, as needed, to maintain function of the structures. O&M activities would consist of removal of accumulated sediment from behind the structures, repair of structures, and upgrades to existing access roads. Accumulated material will be placed in upland sites. Material removed will be used for improving/rebuilding access roads in the area.

2.2.3 Alternative C – Flexible Approach

Reclamation's third alternative, Alternative C or Flexible approach, entails using a combination of the two above mentioned structure types at each location depending on site characteristics and watershed drainage.

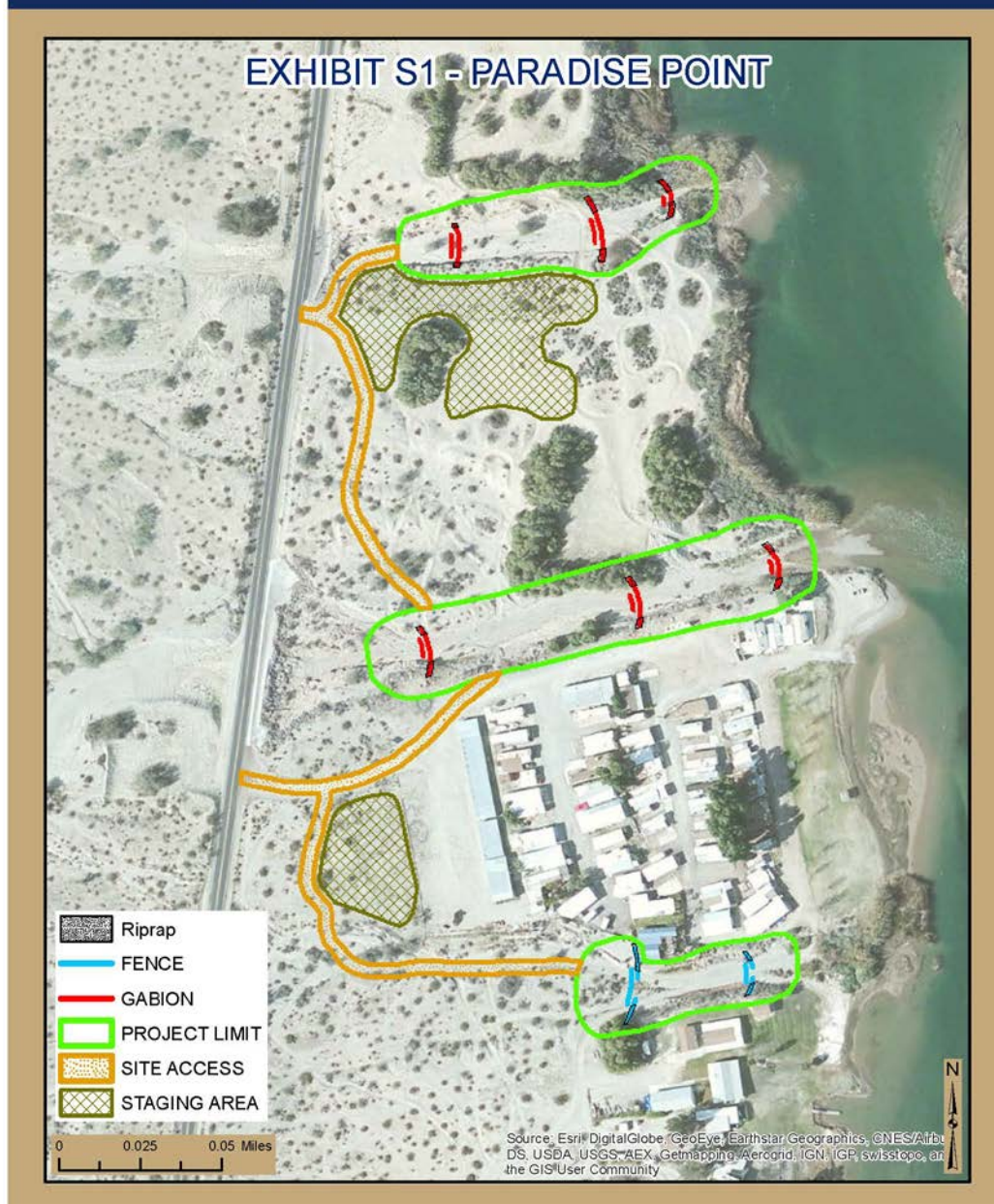


Figure 7. Paradise Point Wash site

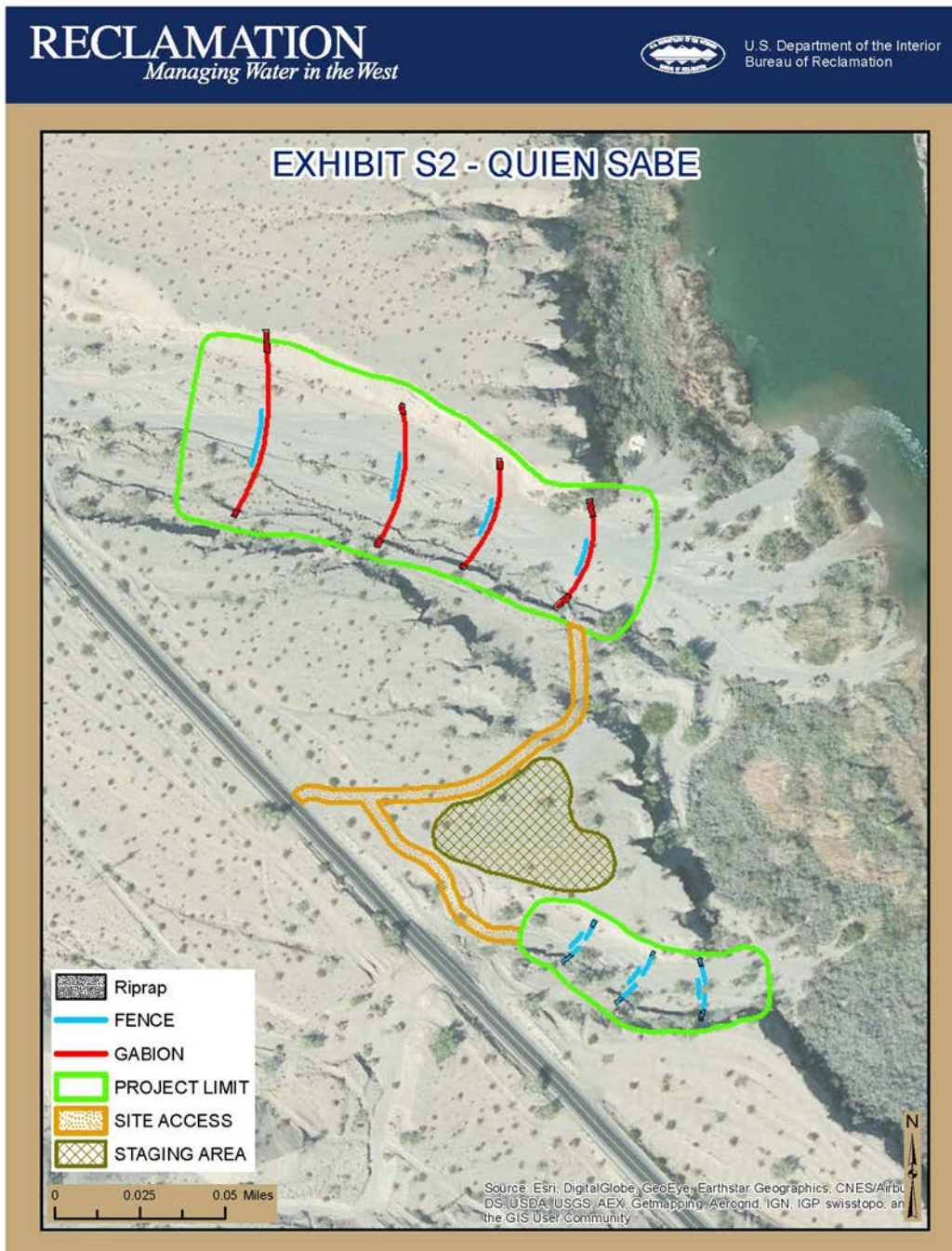


Figure 8. Quien Sabe Wash site

2.2.3.1 Construction Activities (Paradise Point and Quien Sabe)

Paradise Point Wash will consist of installing a series of gabion and debris fences within the wash area (see Figure 7). Twelve gabion and six debris fence sediment control structures will be installed within three separate fingers of the wash. In order to minimize impacts to higher upland areas, all construction activities will be conducted between Highway 95 and the river. Gabion structures lengths will vary between a minimum of 12 feet and a maximum of 107 feet. After the gabion

structures are filled with rock, their average width will be six feet (above grade). Approximately 1,214 cubic yards of riprap will be used as fill material for the gabion structures. Debris fence lengths will vary between a minimum of 14 feet and a maximum of 59 feet. Debris fence structures are proposed to be approximately 7 feet tall with 1 foot below existing grade and 6 feet above existing grade placed perpendicular to the flow of the stream. In order to prevent erosion, bank protection (riprap) will be placed at the end points of each structure that abuts the wash banks. A total of 144 cubic yards of riprap will be used for bank protection.

Quien Sabe Wash will also consist of installing a series of gabion and debris fences within the wash area see Figure 8. Four gabion and 13 debris fence sediment control structures will be installed within two separate fingers of the wash. In order to minimize impacts to higher upland areas, all construction activities will be conducted between Highway 95 and the river. Gabion structures lengths will vary between a minimum of 178 feet and a maximum of 250 feet. After the gabion structures are filled with rock, their average width will be six feet above existing grade. Approximately 1,666 cubic yards of riprap will be used to fill the gabion structures. Debris fence lengths will vary between a minimum of 24 feet and a maximum of 80 feet. Debris fence structures are proposed to be approximately 7 feet tall with 1 foot below existing grade and 6 feet above existing grade placed perpendicular to the flow of the stream. In order to prevent erosion, bank protection (riprap) will be placed at the end points of each structure that abuts the wash bank. A total of 116 cubic yards of riprap will be used for bank protection. Please see Figure 9 for cross sections of gabion and debris fence structures to be used at Paradise Point and Quien Sabe.

Equipment expected to be used during construction activities will be; Dozers, excavators, crane, haul trucks, water trucks, and service trucks.

Access roads and road crossings will be similar to debris fence design in 2.2.1.1

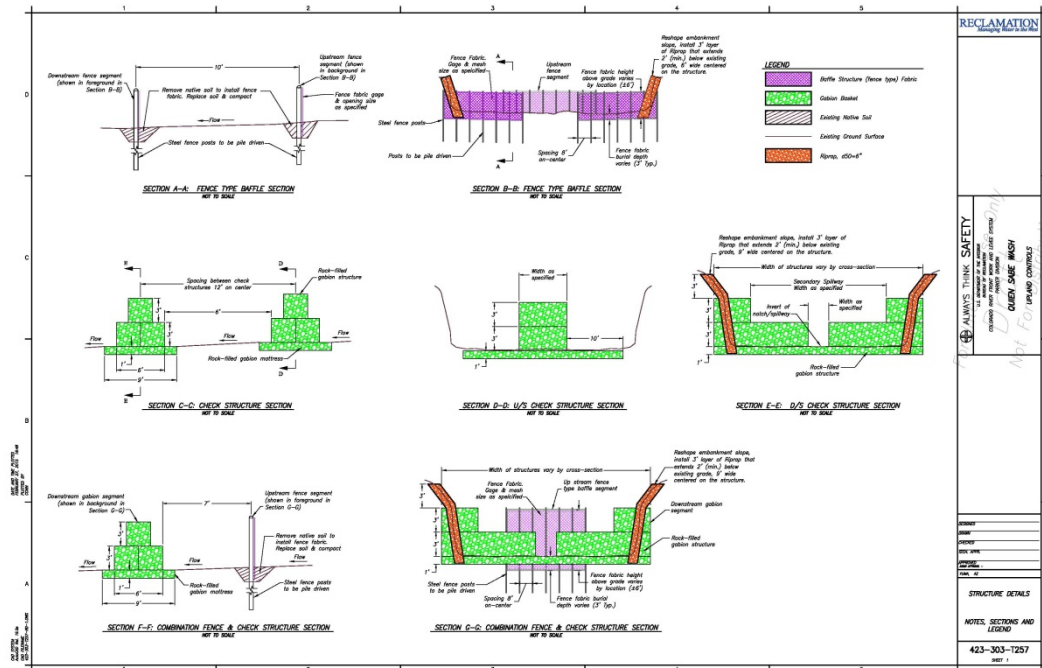


Figure 9. Structure Cross Sections

2.2.3.2 Maintenance Activities

Once construction activities are completed, Reclamation will perform O&M on the facilities periodically, as needed, to maintain function of the structures. O&M activities would consist of removal of accumulated sediment from behind the structures, repair of fence structures, and upgrades to existing access roads.

2.3 Actions Considered but Eliminated for Detailed Analysis

2.3.1 Debris Basins

The primary focus of debris basins is to trap sediment and debris transported by flash flood flows. Velocities quickly decrease upon entering the basins due to the enlarged cross-sectional area, resulting in the capture of said material and the temporary detention of flood waters. Basins are generally placed near the apex of debris fans or in confined sections of stream channels or canyons. The two types of basins discussed herein are permanent and non-permanent debris basins.

Permanent Debris Basins

Permanent debris basins consist of a large excavated basin with either an armored earthen berm or large wall (concrete or gabions) located at the basin's downstream end, which extends across the entire width of the channel. A perforated/slotted riser is installed within the basin to allow floodwaters to drain out of the basin at a



Photo 18. Dunsmuir Debris Basin, Los Angeles County, California.

Temporary Debris Basins

Temporary debris basins are frequently used within Southern California watersheds after fires (USACE 1993). Installation of this measure involves excavating a pit or basin to capture a portion of the material transported during events. Riprap or another hard method for grade control may be required downstream of the basins to provide scour protection. In general this would not be installed as a “stand-alone method” and would be used in conjunction with debris barriers, check dams and/or baffles in order to provide additional storage volume behind them.

Temporary stand-alone basins were excavated at the Gould and Mule Wash sites located approximately 15 miles south of Ehrenberg, Arizona, in approximately 2006. The basins were successful at capturing sediment; however, they were undersized and quickly filled after subsequent flash flood events.

If installed within the ephemeral tributaries of the Colorado River, the purpose of these temporary basins would not be to capture all material, but to instead reduce the volume deposited in the form of wash fans, thus reducing the frequency and need to deploy heavy equipment within River channel boundaries.

2.3.2 River Jetties

This option entails the in-water construction of river jetties along banklines opposite the wash fans. The jetties would protect the bankline immediately across from the channel; however, it would only transfer the sediment and debris issues

3.0 Affected Environment

This section describes the existing environmental resources in the project area that may be affected by the proposed action and the No Action alternative, if implemented. It also serves as the baseline for the comparisons of alternatives. The following critical elements of the human environment are not present or would not be affected by the alternatives; therefore, they will not be addressed in this EA: Transportation, Population, and Recreation.

3.1 Land Use

3.1.1 Affected Environment

Arizona sites are located on Federal lands Withdrawn for project purposes by Reclamation. A portion of two project sites proposed in California are located on the Colorado River Indian Tribes (CRIT) Reservation. State Highway 95 runs through the project area in the California side. Sites in Arizona are bordered by State of Arizona or BLM lands. Sites in California are located adjacent and within the exterior boundaries of CRIT's Water Wheel and Paradise Point Resorts. A Reclamation access road runs through the sites on the Arizona side.

3.1.2 Environmental Consequences

No Action – Under this alternative, use and status of the land would not change.

Proposed Action – There would be no change in land use or status. Management of adjacent lands would not be impacted.

3.1.3 Management and Mitigation Measures

No mitigation measures are proposed. Reclamation will coordinate with CRIT Attorney General's Office, Water Resources Department, Environmental Protection Office and BLM prior to construction of projects on and adjacent to CRIT land.

3.2 Air Quality

3.2.1 Affected Environment

The two sites proposed for California are located within the Mojave Desert Air Quality Management District. The four sites proposed for Arizona are located within La Paz County and outside the nearest PM₁₀ non-attainment area located near Yuma, Arizona.

The Clean Air Act, as amended in 1990, requires EPA to set National Ambient Air Quality Standards (NAAQS) for wide-spread pollutants from numerous and

diverse sources considered harmful to public health and the environment. Riverside County is designated by the EPA as a Nonattainment Area for five NAAQS. PM₁₀ is defined as particulate matter that is 10 micrometers in diameter or smaller. A portion of Riverside County, not including the project area, is designated as a Serious Nonattainment Area for the PM₁₀ NAAQS. A portion of Yuma County, not including the project area, is designated as a Moderate Nonattainment Area for the PM₁₀ NAAQS.

3.2.2 Environmental Consequences

No Action - Under the No Action Alternative air quality in the area would not change from its present readings.

Impacts common to all action alternatives – Construction activities associated with the proposed action have the potential to release small amounts of ozone precursors such as nitrogen oxides (NOx) or volatile organic compounds (VOCs) from vehicle and machine exhaust. Ground disturbance associated with the movement of dirt and other dry material has the potential to generate dust, resulting in an increase in PM₁₀ emissions.

3.2.3 Management and Mitigation Measures

Best Management Practices (BMPs) would be followed to limit dust and PM₁₀ emissions, including at a minimum:

- Vehicle and equipment traffic would be limited to paved or graveled roads as much as possible.
- Vehicle speed shall not exceed 15 miles per hour within the construction limits.
- Where equipment traffic, excavation, or demolition is required outside of paved or graveled roads, water or soil binders would be applied to exposed surfaces.
- Equipment should be properly maintained to minimize exhaust emissions and equipment idling would be limited to five minutes or less.
- Ground disturbing activities would cease temporarily when wind speeds at the site exceed 15 miles per hour, determined by local weather observations or reports.
- Only water will be utilized for dust mitigation.
- Reclamation will coordinate with CRIT's Attorney General's Office, EPO, and the Water Wheel and Paradise Point Resorts managers before construction activities commence on and adjacent to CRIT land.

3.3 Biological Resources

3.3.1 Affected Environment

The sites where the project structures are proposed to be located are heavily disturbed by off road vehicles, roads, and intermittent high water events. The

Mule and Gould Wash areas are used for accessing the river and camping spots. The Paradise and Quien Sabe Wash areas are located adjacent to several River Recreational Vehicle resorts. No wetland vegetation is present within the upland wash areas, see photos 1 thru 10. Vegetation along the lower Colorado River armored banks consists of linear phragmites with intermittent clusters of cattail/bulrush along the shorelines, and saltcedar with some mesquite (*Prosopis spp.*) along the upper banks. Only a few scattered riparian trees exist in the area, mostly along the banks of the Colorado River, however a few Gooding's willow trees exist within the following backwaters areas: C-10 (Ehlers) located across the River (California side) from Mule and Gould Wash areas, and the Aha Quin backwater area located between the Paradise Point and Quien Sabe Washes in California. Upland vegetation common to all areas are Palo Verde, Smoketree, saltcedar (*Tamarix chinensis*), arrowweed (*Pluchea sericea*), quailbush (*Atriplex lentiformis*) and some scattered mesquite (*Prosopis pubescens*) in the upland areas.

Desert wash riparian vegetation provide habitat for common mammals such as coyote (*Canis latrans*), bobcat (*Felis rufus*), desert cottontail (*Sylvilagus audubonii*), several species of rodents and bats, striped skunk (*Mephitis mephitis*), and raccoon (*Procyon lotor*) (Anderson and Ohmart 1984). The Colorado River corridor provides important habitat for migratory birds, both upland species and waterfowl, as well as habitat for resident species. Common birds include various egrets, herons, and owls, Gambel's quail (*Callipepla gambelii*), white-winged dove (*Zenaida asiatica*), mourning dove (*Zenaida macroura*), flycatchers, and woodpeckers. Reptiles and amphibians are represented by several species of lizards, snakes, toads, and frogs, many of which are native to the area. Other species known to occur in the adjacent areas are the desert bighorn sheep (*Ovis canadensis nelsoni*), great egret, least bittern (*Ixobrychus exilis*), and the western burrowing owl (*Athene cunicularia hypugaea*).

Federally listed threatened or endangered wildlife species potentially occurring in the vicinity of the project area were identified using information from the United States Fish and Wildlife Service (USFWS) (endangered species list by county) for Riverside County and La Paz County.

There are six federally listed threatened, endangered, or candidate species which may occur in the vicinity of the project area:

Razorback sucker (*Xyrauchen texanus*) – The razorback sucker was listed as an endangered species on October 23, 1991. Historically, the razorback sucker inhabited the Colorado River and its tributaries from Wyoming to the Gulf of California. Most razorback suckers in the LCR Multi-Species Conservation Program (MSCP) planning area are currently restricted to Lake Mohave, with smaller populations occurring in the Colorado River below Davis Dam, Lake Mead, and Senator Wash Reservoir (Bradford and Vlach 1995). Critical habitat was designated for the razorback sucker on April 20, 1994, and, within the LCR

MSCP planning area, includes Lake Mead to its full-pool elevation; the River between Hoover Dam and Davis Dam, including Lake Mohave to its full-pool elevation; and the River and 100-year floodplain between Parker Dam and Imperial Dam. Razorback suckers are found in the Palo Verde Division near the A-7 and A-10 backwaters, however information about the use of the wash fans formed by any of the washes impacted by this project are unknown. MSCP is not actively stocking or monitoring razorback suckers in this area. All project activities would be conducted away from the main River channel.

Southwestern willow flycatcher (*Empidonax traillii extimus*) – The southwestern willow flycatcher was proposed for listing in 1993 and was federally listed as an endangered species in February 27, 1995. The USFWS designated critical habitat on October 19, 2005. Throughout its range, the southwestern willow flycatcher is a riparian obligate, insectivore that breeds in summer along rivers, streams, and other wetlands where dense willow, cottonwood, saltcedar, or other similarly structured riparian vegetation occurs (USFWS 2002). No suitable habitat exists for nesting Southwestern willow flycatcher within the project areas. The backwater areas C-10 and Aha Quin are located away from the project sites.

Yuma clapper rail (*Rallus longirostris yumanensis*) – The Yuma clapper rail is listed as an endangered species and threatened under the California Endangered Species Act. There is no designated critical habitat. In the US, the Yuma clapper rail is associated primarily with freshwater marshes, with the highest densities of this subspecies occurring in mature stands of dense to moderately dense cattails and bulrushes. In the LCR MSCP planning area, Yuma clapper rail populations are considered regionally significant. Population centers for this subspecies include Imperial Division, Imperial National Wildlife Refuge (NWR), Cibola NWR, Mittry Lake, West Pond, Bill Williams River Delta, Topock Gorge, and Topock Marsh (LCR MSCP, 2004b). No habitat exists for Yuma clapper rail within the project areas. The proposed project will not impact wetland vegetation.

Yellow-billed cuckoo (*Coccyzus americanus*) - The yellow-billed cuckoo is a USFWS candidate species for listing under the endangered species act (ESA) and is listed as endangered under California ESA. Western yellow-billed cuckoos require structurally complex riparian habitats with tall trees and a dense woody vegetative understory (Halterman 1991, Hughes 1999). No habitat for yellow-billed cuckoo exists within the project areas.

Desert tortoise (*Gopherus agassizii*) - The Mojave population was listed as a threatened species on April 2, 1990, and critical habitat was designated in 1994. The Mohave population of desert tortoise occurs primarily within the creosote, shadscale, blackbush, and Joshua tree series of Mojave desert scrub and the lower Colorado River Valley subdivision of Sonoran desert scrub. Optimal habitat has been characterized as creosote bush scrub in which precipitation ranges from two to eight inches, diversity of perennial plants is relatively high, and production of ephemerals is high (Luckenbach 1982, Turner and Brown 1982, and Turner

1982). Soils must be friable enough for digging of burrows, but firm enough so that burrows do not collapse. In Arizona, the Mojave population generally occupies desertscrub communities in the basins and bajadas but is also found on rocky slopes and is typically found below elevations of 4,000 feet.

In California, the Mojave population is typically associated with gravelly flats or sandy soils with some clay, but are occasionally found in windblown sand or in rocky terrain and occur below sea level to an elevation of 7,300 feet, but the most favorable habitat occurs at elevations of approximately 1,000 to 3,000 feet (Luckenbach 1982). There is no critical habitat for the Mohave desert tortoise near the proposed California project sites. Project impacts for both of the sites located in California will be limited to a highly disturbed area that has been segmented by Highway 95 and the river.

The preferred habitat for the Sonoran population of the desert tortoise in Arizona is primarily rocky hillsides and bajadas of Mojave and Sonoran desertscrub but may encroach into desert grasslands, juniper woodland, and interior chaparral habitats. Sonoran populations are found from approximately 1,000 feet to 7,800 feet in elevation. The proposed wash areas are heavily impacted by off road vehicle use, adjacent development, and periodic flash flooding.

3.3.2 Environmental Consequences

No Action - Under the No Action Alternative, no structures would be constructed. There would be no impacts to biological resources from the construction of new facilities, however impacts from in stream removal of wash fans would remain. These impacts could include indirect impacts to razorback sucker and other fish from removing wash fan material from the Colorado River. In stream removal of wash fans has the potential to remove the entire wash fan, leaving less gravel and cobble rock material used for spawning fish. Impacts from in stream removal can be minimized by conducting work outside of the razorback sucker spawning season. No other impacts to wildlife would occur.

Proposed Action – The proposed project would have minimal impact to vegetation and wildlife in the project areas. The construction footprints proposed for the six project areas are heavily impacted by high water flows in the washes, off road vehicle use, roads, and other maintenance activities such as stockpiling of wash fan material removed during previous in stream activities. The majority of the proposed construction limits are devoid of vegetation.

Construction limits for the first three sites proposed for construction are: Mule Wash North (RM 110.1) 10 acres, Paradise Point Wash (RM 142.8) 20 acres, and Quien Sabe (RM 151.7) 32 acres. Construction limits for the three remaining sites Mule Wash south (RM 107.4), Gould Wash North (RM 106.5), and Gould Wash South (RM 105.9) will be determined at a later date.

Total permanent surface area impacts for Mule Wash North associated with the placement of debris fencing, improvements to existing access roads, establishing a staging area, and placing riprap bank protection will be approximately two acres.

Total permanent surface area impacts for the Paradise Point Wash associated with the placement of gabion and debris fence structures, improvements to access roads, establishing a staging area, and placing riprap bank protection will be approximately three acres.

Total permanent surface area impacts for the Quien Sabe Wash associated with the placement of gabion and debris fencing, improvements to access roads, establishing a staging area, and placing riprap bank protection will be approximately one acre.

Temporary impacts associated with O&M activities will consist of periodically removing accumulated sediments from behind the control structures.

Ground dwelling small mammals, birds and reptiles may be temporarily impacted by vehicle use and the moving of materials during construction. These impacts are temporary and localized and will be inconsequential once construction of the facilities is completed. Maintenance of the facilities may also cause short term, localized disturbances from vehicles and other equipment used to remove material behind structures or to repair or maintain structures damaged by storm events. No riparian or wetland habitat will be disturbed. Some upland desert wash habitat may be impacted; however, any native trees and shrubs located within the construction area will be avoided to the extent practical.

Beneficial impacts to razorback sucker could exist by eliminating large quantities of sediment/sand entering the river, reducing habitat available for spawning fish. Large rocks would not likely make it past sediment control structures, however smaller sized rocks, cobble, and gravels would make it to the river, providing spawning habitat in the form of gravel bars that would likely be submerged by river flows. In stream removal of wash fans would be reduced, providing benefits to fish by not impacting river habitat with the frequency and magnitude that exists with current methods.

3.3.3 Management and Mitigation Measures

The following avoidance and minimization measures would be implemented when constructing the upland structures:

- Project construction limits and activities will be restricted to highly disturbed areas in order to avoid and minimize impacts to native vegetation and wildlife to the extent practical.
- All construction areas will target areas closest to the River and existing roads (Highway 95 and bankline access roads) in order to minimize

impacts to undisturbed desert wash riparian vegetation located in higher upland areas.

- Staging areas and improvements to access roads would be limited to previously disturbed areas and located away from the main wash area.
- All construction equipment will be cleaned and free of plant parts before moving into construction sites.
- Trash and food materials will be properly contained within vehicles or closed refuse bins while on site, and will be regularly removed from the construction site for proper disposal.
- Worker training will be provided to construction personnel prior to commencing activities on resource protection measures.
- In coordination with the USACE, USFWS and state wildlife agencies, cobble material removed from behind the upland structures during maintenance activities may be placed along the river shorelines to enhance fish spawning habitat in the area.
- Reclamation will coordinate with CRIT's Attorney General's Office and EPO before construction activities commence on and adjacent to CRIT land

By avoiding direct impacts to wetland, riparian, and riverine habitats, and limiting construction impacts to previously disturbed areas, impacts to listed species will be beneficial, insignificant or discountable.

3.4 Cultural Resources

3.4.1 Affected Environment

The National Historic Preservation Act (NHPA) establishes national policy for protecting significant cultural resources that are defined as "historic properties" under 36 CFR 60.4. NHPA Section 106 (36 CFR §800) requires that Federal agencies consider and evaluate the effect that Federal projects may have on historic properties under their jurisdiction. The area of potential effect for this undertaking includes the locations noted in Section 2.2 (above).

Cultural Resources Surveys were conducted on all proposed sites. For Arizona proposed project locations within the four parcels located south of Interstate 10 a Class III cultural resources survey inventory was performed. This inventory covered 671 acres between the four parcels, see Figure 2 for APE. The inventory resulted in eight new cultural sites and eight isolated occurrences. Two previously recorded sites were also identified.

For California proposed facilities, 240 acres were inventoried within two parcels located north of Interstate 10 along Highway 95 and adjacent to the west side of the Colorado River (see Figure 3 for APE). The inventory did not result in the identification of cultural sites or historic properties. The effort did record 11

isolated occurrences, none of which are eligible for inclusion to the National Register of Historic Places (NRHP) and no further management is considered.

3.4.2 Environmental Consequences

In accordance with 36 CFR Part 800.5 Reclamation has applied the criteria of adverse effect to historic properties subject to the No Action and Proposed Action Alternative to determine if they would directly or indirectly alter any of the characteristics of historic properties that qualify them for inclusion in the NRHP.

No Action - Under the No Action Alternative, no structures would be built. This alternative would maintain the current status of the sites located within the project boundaries identified in the Cultural Resources Survey Report.

Proposed Action - The effects to the sites identified in the Cultural Resources Survey Report will not be adverse.

3.4.3 Management and Mitigation Measures

In accordance with 36 CFR Part 800.5 Reclamation has applied the criteria of adverse effect to historic properties to determine if the Proposed Action would directly or indirectly alter any of the characteristics of historic properties that qualify them for inclusion in the NRHP.

- Construction activities will be designed to avoid and minimize impacts to cultural resources by limiting project activities to previously disturbed areas.
- Consultation with the State Historic Preservation Officer (SHPO) under Section 106 of the NHPA will be conducted prior to implementing the Proposed Action.
- Reclamation will coordinate with the CRIT Attorney General's Office, Museum and CRIT's Tribal Historic Preservation Officer (THPO) prior to project commencing.
- Reclamation will request that a CRIT tribal monitor be at the site during construction activities for projects on and adjacent to CRIT land.

If during the course of any activities associated with the implementation of the Proposed Action any sites, buildings, structures, or objects not addressed in this assessment are discovered, activities will cease in the vicinity of the resource. Reclamation's Environmental Group Manager and project archaeologist will be notified immediately. Reclamation shall ensure that the stipulations of 36 CFR Part 800.11 are satisfied before activities in the vicinity of the previously unidentified property resume.

3.5 Indian Trust Assets

3.5.1 Affected Environment

Indian Trust Assets (ITAs) are legal interests in property held in trust by the US for Indian tribes or individuals, or property in which the US is charged by law to protect for Indian tribes or individuals. In accordance with the Indian Trusts Fund Management Reform Act of 1994, as amended, all the Department of the Interior agencies, including Reclamation, are responsible for protecting ITAs from adverse impacts resulting from their programs and activities. In cooperation with tribes, Federal agencies must inventory and evaluate assets, and mitigate or compensate for adverse impacts to the asset. While most ITAs are located on reservation lands, they may also be located off-reservation. Examples of ITAs include, but are not limited to, land, minerals, rights to hunt, fish, and gather, and water rights.

3.5.2 Environmental Consequences

Reclamation departmental ITA policy requires the agency to address potential impacts to ITAs even if impacts are found to be non-significant. The policy states that Reclamation will carry out its activities in a manner which protects ITA's and avoid adverse impacts when possible. The proposed structures in California are located adjacent and within the exterior boundaries of the CRIT Reservation.

Trust Lands

The Proposed Action in California is partially located on ITA lands; the tribal lands are located along the Colorado River in California on the CRIT Reservation. The Water Wheel and Paradise Point resorts are located adjacent and within the Quien Sabe and Paradise point wash project areas.

Water Rights

Currently, the CRIT Reservation possesses present Decreed rights to use Colorado River water.

Hunting, Fishing, and Gathering Rights

The Colorado River and its tributaries provide habitat for sensitive fish and wildlife species, especially in the riparian woodlands and marshes. Some members of the tribe still collect a variety of plants, which are eaten as well as used for medicinal and ceremonial purposes, and in traditional craft production (LCR MSCP 2004c).

3.5.2.1 No Action Alternative

Under the No Action Alternative, construction of the structures would not take place. Therefore, no change to Federal actions will occur that could result in an adverse effect to identified ITAs.

3.5.2.2 Proposed Action

Trust Lands

The Proposed Action will not interfere with any Trust Lands. The project does not prevent the use or management of any tribal owned enterprises or Trust Lands.

Water Rights

The Proposed Action will not interfere with Colorado Indian Tribes Reservation's reserved water rights. The Proposed Action will not result in a change to any tribal water right, or to the diversion or delivery of tribal water entitlements.

Hunting, Fishing, and Gathering Rights

The Proposed Action will not interfere with any hunting, river access points, fishing or gathering rights which could be exercised by any tribe.

3.5.3 Management and Mitigation Measures

To ensure ITAs are not impacted Reclamation will coordinate project details with CRIT's Attorney General's Office, Tribal HPO, and Museum before construction activities commence on this and future projects.

3.6 Environmental Justice and Socio-Economic Conditions

3.6.1 Affected Environment

Executive Order (EO) 12898 requires Federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the US.

Minority populations include all persons identified by the Census of Population and Housing to be of Hispanic or Latino Origin, as well as, non-Hispanic persons who are African American, American Indian and Alaska Native, Native Hawaiian or other Pacific Islander.

Low-income populations are those that fall within the annual statistical poverty thresholds from the Bureau of the Census for the 2010 Census. The definition of poverty is dependent on the size of the family. For example, the poverty threshold for a family of three is \$17,374; whereas, \$22,314 is the threshold for a family of four (U.S. Census Bureau 2010b). If the total income of a person's family is less than the threshold appropriate for that family, then the person is considered as being below the poverty level. Information on total population, minority population, and poverty status for La Paz and Riverside Counties and Blythe, CA is provided in Table 1.

Table 1

Location	Total Population	Percent Minority	Percent Population Living Below Poverty Level
La Paz County, AZ	20,489	39.7	20.2
Riverside County, CA	2,189,641	19.3	15.6
Blythe, CA	20,817	40.5	16.1
Source: US Census Bureau 2010a			

3.6.2 Environmental Consequences

No Action - Under the No Action Alternative, the project will not take place. Therefore, no Federal actions will occur that could result in a disproportionately high and adverse effect on the health or environment of minority or low-income populations.

Proposed Action - Implementation of the Proposed Action Alternatives would not disproportionately affect the minority and impoverished population in the area. Based on the analysis for air quality, water resources, and hazardous materials in this EA, changes resulting from implementing the project will not result in proportionately high and adverse impacts to the environment or to the health of low-income and minority populations.

3.6.3 Management and Mitigation Measures

No mitigation measures are proposed for the environmental justice and socio-economic conditions section.

3.7 Hazardous Materials and Solid Waste

3.7.1 Affected Environment

No hazardous materials are currently used or stored anywhere at the proposed structure location sites.

3.7.2 Environmental Consequences

No Action - Under this alternative Petroleum, Oils, and Lubricants (POLs) from maintenance vehicles have the potential to enter the river from in water wash fan removal activities.

Proposed Action – Under this alternative, waste POLs would be generated, in addition to standard waste created during continued operations.

The proposed improvements would potentially have a positive effect with regard to hazardous materials and solid waste by reducing the use of wheeled and

tracked vehicles for in stream removal of wash fans, which have the potential to introduce small quantities of POLs found on construction vehicles.

3.7.3 Management and Mitigation Measures

Mitigation actions designed to limit the potential impact of hazardous materials or solid waste would be implemented according to State and Federal regulations. Other hazardous materials anticipated to be used during construction of the project are small volumes of petroleum hydrocarbons and their derivatives (for example, fuels, oils, lubricants, and solvents) required to operate the equipment used in the construction activities. These materials are those routinely associated with the operation and maintenance of heavy equipment or other support vehicles, including gasoline, diesel fuels, and hydraulic fluids.

- A site specific contingency spill plan should be developed and implemented. The plan should consist of reporting guidelines in the event of a spill, good housekeeping techniques, and employee training in the use of required equipment and proper handling of potentially hazardous materials.
- Hazardous materials used for this project would be contained within vessels engineered for safe storage.
- Staging areas for refueling of equipment would be located outside the wash area and away from the River to prevent any accidental fuel leakage from contaminating surface water, groundwater, or soils.

3.8 Noise

3.8.1 Affected Environment

Noise that currently exists in the area generally comes from river recreation (motor boats), farming operations, farming equipment, and vehicle travel along US Highway 95 in California and the levee road in Arizona. Residences in the general vicinity include the town of Cibola, the Water Wheel RV Park, and Paradise Point RV Park in California.

3.8.2 Environmental Consequences

No Action - In the No Action Alternative, current noise levels including noise from river recreation, highway, and farming operations would continue at the present levels.

Proposed Action - The use of equipment during the implementation of the project will slightly increase noise disturbance in the vicinity of where work is occurring. This could affect adjacent areas. Noise would be decreased by minimizing the frequency of using motorized equipment to remove large sediment fans from the River.

3.8.3 Management and Mitigation Measures

No mitigation measures are necessary because noise levels would continue to be consistent with current ongoing operations and adjacent recreational activities. Additionally, the project would be conducted in phases which will further minimize any excessive noise levels within the project area.

3.9 Water Resources

3.9.1 Affected Environment

The Colorado River is the nearest source of surface water in the area.

The U.S. Army Corps of Engineers (USACE), under Section 404 of the Clean Water Act (CWA), regulates the discharge of dredged, excavated, or fill material in wetlands, streams, rivers, and other US waters. The Colorado River and associated project wash areas are USACE jurisdictional areas identified within the project area.

3.9.2 Environmental Consequences

No Action – Implementation of the No Action Alternative would not entail any construction activity; therefore, no impacts to surface water, or jurisdictional waters would occur due to construction however in water removal of wash fans has the potential to impact the River itself temporarily.

Proposed Action – The Proposed Action Alternatives' impacts on water resources are anticipated to be minimal, with no changes to water delivery operations. Project activities would be conducted in phases in order to ensure water delivery operations are not impacted. Potential impacts to surface water could include water quality degradation. Although highly unlikely, spills from construction activities could migrate into surface water conduits or infiltrate the groundwater, contaminating the source. If a spill were to occur, the impacts to water resources could be minimized with immediate response and clean-up procedures.

No construction components of the Proposed Action Alternatives would affect surface waters of the US, as no fill material will be discharged into the Colorado River.

3.9.3 Management and Mitigation Measures

- Coordination with the USACE and appropriate state water resource agency will be conducted prior to implementation of the project in order to obtain CWA Section 404 and 401 permit authorizations.
- During construction, no refueling equipment should be permitted within the River and/or the wash area.
- Staging areas will be located outside the wash areas.
- Upland structures will not divert flow.

- Reclamation will coordinate with CRIT's Attorney General's Office and Water Resources Department before construction activities commence on and adjacent to CRIT land.

3.10 Geology and Soils

3.10.1 Affected Environment

The LCR area of Arizona, Nevada, and California is located in the lower portion of the Basin and Range geomorphic province, within the western Sonoran Desert. This area is characterized by numerous mountain ranges that rise abruptly from broad, plain-like valleys or basins. The basins are composed of silt-filled channels and alluvial fans, fan terraces, and floodplains, consisting of Quaternary sand, gravel, and conglomerate. Limited soil horizon development indicates young unstable alluvial and floodplain surfaces of late Holocene age, subject to periodic flooding, sedimentation, and dynamic alteration. The LCR generally consists of narrow stretches confined by resistant bedrock cliffs and bluffs and broad areas lined by low-lying alluvial floodplains. The active floodplain is bounded by steep, active slopes (escarpments), active sand dunes, and washes (arroyos). The floodplain has low relief and includes the stream channel and associated features such as point bars and abandoned channels or meanders. Sand splays, point bars, and meander scrolls are typically underlain by coarse-grained alluvium, whereas broad shallow channels and backswamps are more clay-rich (Parsons et al. 1986).

The soils on the Colorado River floodplain are saline. The salinity is the result of accumulated salts from alluvial deposits and subsequent evaporation of soil moisture. The rainfall is not sufficient to leach these salts below the plant root zone; therefore, a continuing accumulation of salts occurs. These salts are primarily calcium, sodium, magnesium, chloride, and sulfate. An excessive amount of toxic salts in the soil can delay or prevent seed germination, decrease available water capacity, interfere with plant growth, and impede the movement of air and water through the soil.

3.10.2 Environmental Consequences

No Action - Under this alternative, there would be no changes to soils. Disturbances resulting from off road vehicle use and flash floods would continue as they are currently.

Proposed Action - Implementation of the Proposed Action Alternatives would disturb soils during construction and follow-up maintenance activities.

3.10.3 Management and Mitigation Measures

No mitigation measures proposed. Reclamation will continue to coordinate with CRIT's Attorney General's Office and EPO before construction activities commence on and adjacent to CRIT land.

3.11 Visual Resources

3.11.1 Affected Environment

Visual resources consist of natural and manmade features that give a particular environment its aesthetic qualities. Landscape character is evaluated to assess whether the project will appear compatible with the existing features or would contrast noticeably with the setting and appear out of place. Visual sensitivity includes public values, goals, awareness, and concern regarding visual quality.

Visual resources within the project area generally include open space, agricultural areas, degraded wetland areas, and desert upland habitats located in and near the Colorado River floodplain. Prominent vegetation includes agricultural land and patches of desert scrub, salt cedar, and common reed. Other visible structures in the area consist of the recreational vehicle parks located along Highway 95 in California and river control structures (i.e. levees and bankline roads).

3.11.2 Environmental Consequences

No Action - Under the No Action Alternative, no changes would occur to the sites characteristics.

Proposed Action – Implementation of the Proposed Action Alternatives will not significantly impact the visual characteristics of the area. The structures are similar in height to surrounding vegetation and may eventually be covered by volunteer re-vegetation of the sites.

3.11.3 Management and Mitigation Measures

No mitigation measures proposed. Reclamation will coordinate with CRIT's Attorney General's Office and EPO before construction activities commence on and adjacent to CRIT land.

3.12 Floodplain

3.12.1 Affected Environment

The Colorado River Floodway Protection Act, Public Law 99-450, was signed into law on October 8, 1986. The Act calls for the establishment of a federally declared floodway from Davis Dam to the Southerly International Boundary between the United States and Mexico. In accordance with Section 5 (a) of the public law, Reclamation developed maps that show the floodplain for the LCR. In addition, EO 11988, Floodplain Management, May 24, 1977, requires avoiding or minimizing harm associated with the occupancy or modification of a floodplain. The base floodplain is an area expected to be inundated by floodwaters on the average of once in 100 years.

The Colorado River is also subject to flooding throughout the winter and spring season from rapid snowmelt in the upper Colorado River Watershed. The major flood control structures on the lower Colorado River are the Glen Canyon and Hoover Dams. The two water storage levels in these major reservoirs are regulated in association with the small reservoirs to provide flood protection, year-round water use, and hydro-electric power. In combination with these storage facilities, Reclamation has developed extensive levee systems along many parts of the river to ensure safe passage of water during periods of high flow.

3.11.2 Environmental Consequences

No Action - The No Action Alternative would not impact the integrity of the lower Colorado River floodplain.

Proposed Action - Implementation of the Proposed Action Alternatives would not impact the integrity of the lower Colorado River floodplain's flow regime.

3.12.3 Management and Mitigation Measures

No mitigation measures proposed.

3.13 Cumulative Effects of the Proposed Action

Cumulative effect is the impact on the environment that results from the incremental impacts of an action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or nonfederal) or person undertakes such actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7). Several former, current and planned projects either located within or in the vicinity of the planning area and having the potential to impact common resources will be addressed in this section.

The Yuma Area Office's (YAO) Parker and Palo Verde Division Bankline Repairs

Under the Colorado River Front Work and Levee System (CRFWLS) Act of 1946 (as amended) Reclamation has responsibility along the lower Colorado River for flood control. The CRFWLS authorizes Reclamation to improve, stabilize, and maintain the river channel so that it can handle flows resulting from flood control operations and floods of local origin. In the Parker Division and Palo Verde Division, the following activities are continuous along the river: reinforcing bankline and levees, removing wash fans, maintaining river access roads, and conducting excavation activities to remove excess sediment along the river in critical areas in order to protect Reclamation facilities.

YAO's River Mile 165.5 Bankline Stabilization

Reclamation proposes to stabilize in the near future a reach of bankline (1,000 feet in length) along the lower Colorado River. Severe bankline erosion is presently occurring along the Arizona bankline upstream of the Agnes Wilson Bridge, at River Mile 165.0. Stabilization of the bankline will contain and prevent further erosion.

The project area is located on the lower Colorado River (La Paz County), between Parker, Arizona, and Blythe, California.

Reclamation staff met with CRIT's Environmental Protection Office (EPO) on site on June 4, 2015 to discuss the initial concept plan. Reclamation will continue to work with CRIT EPO on future plans for the proposed project area in order to address concerns and assist in ensuring river access and public safety along the bankline is incorporated into the design. Once a draft design is developed, it will be provided to the CRIT for review and concurrence.

No Name Lake, Ahakhav, Deer Island, and Aha Quin Culvert Repair and Maintenance Activities

Reclamation will continue to work with the CRIT to address concerns related to the CRIT management of the backwaters and maintenance requirements. Reclamation and CRIT met on September 14 and October 23 of 2015 to discuss the technical aspects of the projects. Reclamation anticipates that the first phase of culvert replacement activities may occur during the 2016/2017 low water time period of November through February.

EPA's Site Assessment Activities Work Plan for Paradise Point Camp

The general site activities include the following:

- Soil boring advancement and soil sampling
- Monitoring well installation
- Groundwater monitoring
- Site survey
- Drinking water sampling

Reclamation does not anticipate any conflicts with EPA's project and the proposed project. EPA's activities were scheduled to occur prior to the proposed project in the Summer of 2015. Reclamation will continue to coordinate with EPA and CRIT regarding any potential impacts which may occur due to the proximity of the proposed project to EPA's work site and activities.

YAO's Palo Verde Division Backwater Improvement Project

Reclamation conducts maintenance and improvement activities to five backwaters located along the lower Colorado River's Palo Verde Division, just south of Blythe, California.

1. A-7 backwater located on the Arizona side of the river between RM 120.5 to 117.3.
2. A-10 backwater located on the Arizona side of the river between RM 115.2 to 113.8.
3. C-5 backwater located on the California side of the river between RM 119.0 to 117.3.
4. C-8 backwater located on the California side of the river between RM 114.7 to 113.8.
5. C-10 backwater located on the California side of the river between RM 110.6 to 109.1

Reclamation has various maintenance requirements for the backwater sites mentioned above including: ensuring inlet/outlet structures are functioning properly for the benefit of fish and wildlife purposes. Rehabilitation activities consist of restoring existing inlet and outlet structures in order to improve water circulation through the backwaters. Existing structures are not conveying sufficient flow through the backwaters due to being plugged with sediment.

MSCP's Palo Verde Ecological Reserve

The Palo Verde Ecological Reserve (PVER) encompasses more than 1,300 acres. This property (formerly known as the Travis Ranch) has been made available to the LCR MSCP for habitat restoration activities by the California Department of Fish and Wildlife.

The eastern boundary of the property (more than four miles) is adjacent to the Colorado River, and the western boundary is adjacent to active agricultural fields. The PVER has an extensive infrastructure consisting of miles of lined irrigation ditches, roads, and a pump. Currently, the acreage is leased to a contract farmer and is planted with crops of alfalfa and wheat. Each year a portion of the active crop acreage will be taken out of production to develop the next phase of native habitat. The intent is to create as much riparian habitat as practical. Generally, all phases at PVER are targeted for southwestern willow flycatcher, yellow-billed cuckoo, and other covered species.

The restoration includes a mosaic of habitats that contain areas of riparian species (including mesquite) and ground covers or open areas. Ground cover is an effective method of controlling non-native species and provides another layer of vegetation for habitat. Ground covers are planted with transplants or by seed;

costs vary with the methods of planting used. Mesquite trees are generally planted by a tree planter or auger.

MSCP's Cibola Valley Conservation Area

In 2007, the Bureau of Reclamation secured 1,309 acres of land within the Cibola Valley Irrigation and Drainage District in southwestern Arizona and established the Cibola Valley Conservation Area (CVCA). In September 2007, the property was conveyed to the Arizona Game and Fish Department (AGFD) through an agreement among AGFD, Reclamation, the Mohave County Water Authority, and The Conservation Fund. Under the agreement, AGFD retains title to the property and leases the land and water rights to Reclamation until April 5, 2055 as part of the LCR MSCP. Several farmers also have short-term leases on portions of the land for crop production. Within the CVCA, Reclamation is planting former agricultural fields with native riparian cottonwood-willow, and mesquite habitats for species defined in the LCR MSCP Final Habitat Conservation Plan, including the southwestern willow flycatcher and yellow-billed cuckoo. Cottonwood, willow, and honey mesquite are planted to create an integrated mosaic of habitats resembling riparian communities that were historically present in the Colorado River floodplain. When feasible, areas of standing water or moist soil, and open areas with ground cover and low shrubs are incorporated into the design.

The CVCA will be developed over a number of years through phased restoration activities. A phase-specific restoration plan is prepared each fiscal year, which documents the planning, design, planting, and monitoring requirements of that phase. An annual report is prepared each year summarizing restoration and monitoring activities conducted during the previous year.

To date, six phases of the site have been restored with riparian habitat, honey mesquite, and upland buffer areas in varying densities of trees per acre to help determine the most suitable planting methodology. Phases 1-3 were primarily planted with cotton-wood and willow. Phases 4-6 were planted with primarily honey mesquite. No additional planting is scheduled until at least 2016 or until the long-term water requirements of Phases 1-6 both for maintenance and to meet species-specific performance standards have been quantified.

3.13.1 Impacts by Resource

Land Use

The Proposed Action Alternative would not change any land uses in the area and/or disrupt any established land configurations, wildlife or recreational areas. Implementation of the Proposed Action Alternative, in conjunction with the other actions is not anticipated to have negative cumulative impacts to land use.

Air Quality

Implementation of the Proposed Action and other actions described in section 3.13 may result in increased area emissions associated with construction activities. Due to the mobile nature and short duration of most emission sources, project emissions in combination with future emission sources would not be expected to contribute to an exceedance of an ambient air quality standard. As a result, the Proposed Action, in combination with other foreseeable projects and mitigation requirements, would not produce significant cumulative impacts to air quality and climate conditions.

Biological Resources

The Proposed Action Alternative and the above mentioned projects in section 3.13 have the potential for biological impacts due to short-term habitat loss for sensitive and common wildlife species. However, several of the projects are restoration and enhancement projects that are designed to benefit targeted species and other wildlife that utilize the proposed project site, resulting in a net positive impact over the duration of the proposed project implementation. With incorporation of avoidance, minimization, and mitigation measures the Proposed Action Alternative, in conjunction with the other actions, is not anticipated to have negative cumulative impacts to biological resources.

Cultural Resources

Reclamation has made a finding of no adverse effect to historic properties for the activities associated with the implementation of the Proposed Action. During the implementation phase of projects identified in section 3.13, there is potential for unforeseen cultural resources to be discovered or damaged. Reclamation has established “stop work” procedures that shall be implemented should and unanticipated discovery situation arise. Additionally, a CRIT monitor will be requested during construction of the two California sites. Therefore, the Proposed Action, in conjunction with other projects listed in section 3.13, would not result in significant cumulative impacts on cultural resources.

Indian Trust Assets

To ensure ITAs or other resources of tribal concern in the project area or other tribal resources are protected from implementation of the Proposed Action Reclamation will coordinate with the CRIT Attorney General’s Office prior to project commencing on CRIT land. Therefore, the Proposed Action, in combination with other proposed or on-going projects, would not cause disproportionate cumulative effects on ITAs.

Environmental Justice and Socioeconomic

The Proposed Action would have negligible effects on population, housing, and other socioeconomic issues. The Proposed Action would not displace persons or housing, nor would it induce substantial population growth in the area, either directly or indirectly. The types of potential effects identified (e.g., increased noise, and fugitive dust) for the Proposed Action and the other projects would be localized and short-term. The Proposed Action, in combination with other

foreseeable projects described in section 3.13, is not expected to have a cumulatively significant impact on socioeconomics and minority or low-income populations.

Hazardous Materials

The project site is not located in close proximity to any known or suspected hazardous waste or petroleum waste sites. However, incidental spills of petroleum products could occur during construction activities, and such spills could result in significant impacts to water quality. With the implementation of mitigation measures, the risks of incidental spills would be reduced to less than significant. Other projects described in section 3.13 have hazards/hazardous materials related impacts due to construction activities. However, with anticipated mitigation measures, these risks would be cumulatively less than significant as these impacts are localized and temporary.

Noise

The Proposed Action Alternative would require some use of heavy equipment to assist in the construction of sediment control structures. Overall, proposed project activities would be phased out over a couple of years to minimize noise impacts. Other projects described in section 3.13 would have similar temporary construction noise. The Proposed Action, in conjunction with the other actions, is not anticipated to have long term negative cumulative impacts in the vicinity of the proposed project area.

Water Resources

The Proposed Action would have beneficial impacts by ensuring water deliveries to area users continue to be met. The Proposed Action, in conjunction with other proposed or on-going projects described in section 3.13, would not result in cumulatively significant impacts to water resources.

4.0 Consultation, Coordination, and List of Preparers

4.1 Agencies Consulted

An electronic copy of this EA has been posted for public viewing on Reclamation's Yuma Area Office web site at <http://www.usbr.gov/lc/yuma/>. Paper copies of the Notice of Availability memorandum and EA were distributed to the following entities:

Colorado River Indian Tribes	Bureau of Land Management
CA Department of Fish and Wildlife	AZ Game and Fish Department
Quechan Indian Tribe	Cocopah Indian Tribe
Yuma Audubon Society	US Fish and Wildlife Service
US Environmental Protection Agency	

Consultations with the State Historic Preservation Office are ongoing under Section 106 of the NHPA (36 Part 800) for undertaking involving Federal facilities.

AZ State Parks; State Historic Preservation Office
CA State Parks; State Historic Preservation Office

4.2 List of Preparers

4.2.1 Bureau of Reclamation

Nicholas Heatwole	Environmental Protection Specialist
Julian DeSantiago	Group Manager, Environmental Planning and Compliance
James Kangas	Archaeologist
Alex Belous	Engineer
Jay Nemeth	Engineer

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APPENDIX

YAO-7210
ENV-6.00

JUL 29 2013

Interested Parties (See Enclosed List)

Subject: Issue Scoping Request for Upland Wash Sediment Project Proposed by the Bureau of Reclamation

Dear Agency or Organization:

This letter is to inform you that the Bureau of Reclamation Yuma Area Office is in the process of developing a proposed project for upland wash sediment containment along the lower Colorado River. Reclamation is exploring methods to better manage and control sediment transported by wash (ephemeral stream) flows, prior to its introduction into the lower Colorado River (River) channel. Rainfall events have the potential to cause flooding within normally dry washes along the River. Wash flows can transport large volumes of sediment which are deposited into the River channel in the form of wash fans, see enclosed photo.

Reclamation personnel identified several large wash fans at the outlets of the Quien Sabe, Paradise Point, Mule, and Gould Washes. These wash fans have reduced channel capacities, caused localized sedimentation issues, and are directing concentrated, high-velocity flows towards opposing bankline structure. Bankline structures are vital to protect adjacent private, tribal, and public lands and facilities. At present, the River does not possess sufficient stream power to transport all sizes of wash fan material downstream to maintain a clear channel to ensure continued and reliable water operations. If left unmaintained, the wash fans will increase in size causing flows to further impinge upon opposing banklines, resulting in bank failure and damage to adjacent lands and facilities. Wash fans could also pose navigational hazards to the general public, who use the river system for recreational purposes.

Currently, Reclamation obtains permits and routinely deploys heavy equipment within river channel boundaries to remove large wash fans. With constrained budgets, fish and wildlife considerations, permitting requirements, and a limited timeframe for removal (November through January), it has become a heightened challenge to address and remove wash fans in an effective manner. The U.S. Army Corps of Engineers and Los Angeles County Department Public Works have implemented measures such as debris basins and check structures that are installed upland and away from the River to capture and control sediment upstream of critical flood-control infrastructure and communities. Reclamation plans to evaluate these methods and others to develop solutions to better manage sediment transported by the Quien Sabe, Paradise Point, Mule, and Gould Washes prior to its introduction into the Colorado River.

Capturing and controlling sediment prior to its introduction into the River has the potential to minimize river channel constrictions, thus maintaining more efficient channel capacities for water delivery. Reducing wash fan deposits within the River channel should lessen the need to deploy heavy equipment into the River channel to conduct removal operations, minimizing impacts to bankline soils, aquatic species, and riparian vegetation.

As part of our Environmental Assessment (EA) process, Reclamation is inviting agencies and other individuals/entities that have an interest in these operations to provide comments to us to help identify issues to address in the EA.

Enclosed are copies of the maps showing the proposed project areas. If you have any questions or comments regarding this letter or would like to be placed on the mailing list for this project please contact Mr. Nicholas Heatwole, Environmental Protection Specialist, at (928) 343-8111 or by electronic mail at nheatwole@usbr.gov. Although comments are accepted throughout the NEPA process, we encourage comments specific to this scoping letter by September 6, 2013.

Sincerely,

CHRISTOPHER M. WALLIS

Christopher Wallis, Chief
Resource Management Office

Enclosures – 4

Photo

Exhibit A – Key Map

Exhibit B – Gould and Mule Washes Map

Exhibit C – Paradise Point and Quien Sabe Map

2200 Larson (w/encls)

7001

✓ 7210 Heatwole (w/encls)

WBR:NHeatwole:pt:07/25/2013:928-343-8111

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Proposed Sediment Control Structure Locations

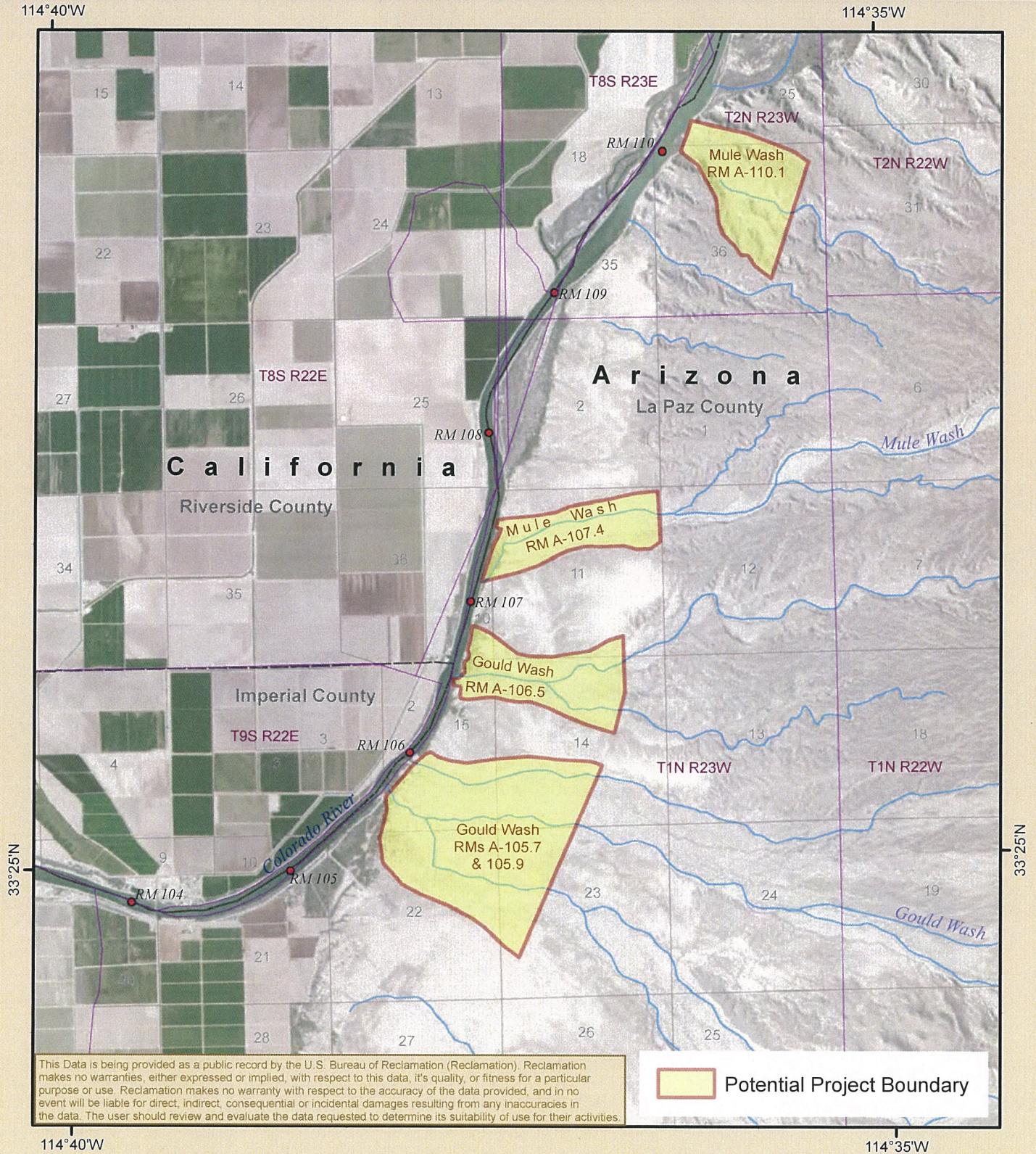
Exhibit A - Key Map

MAP NO: YAOGIS2013-0050

Drawn by: A. Belous, P.E.



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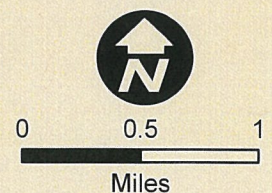


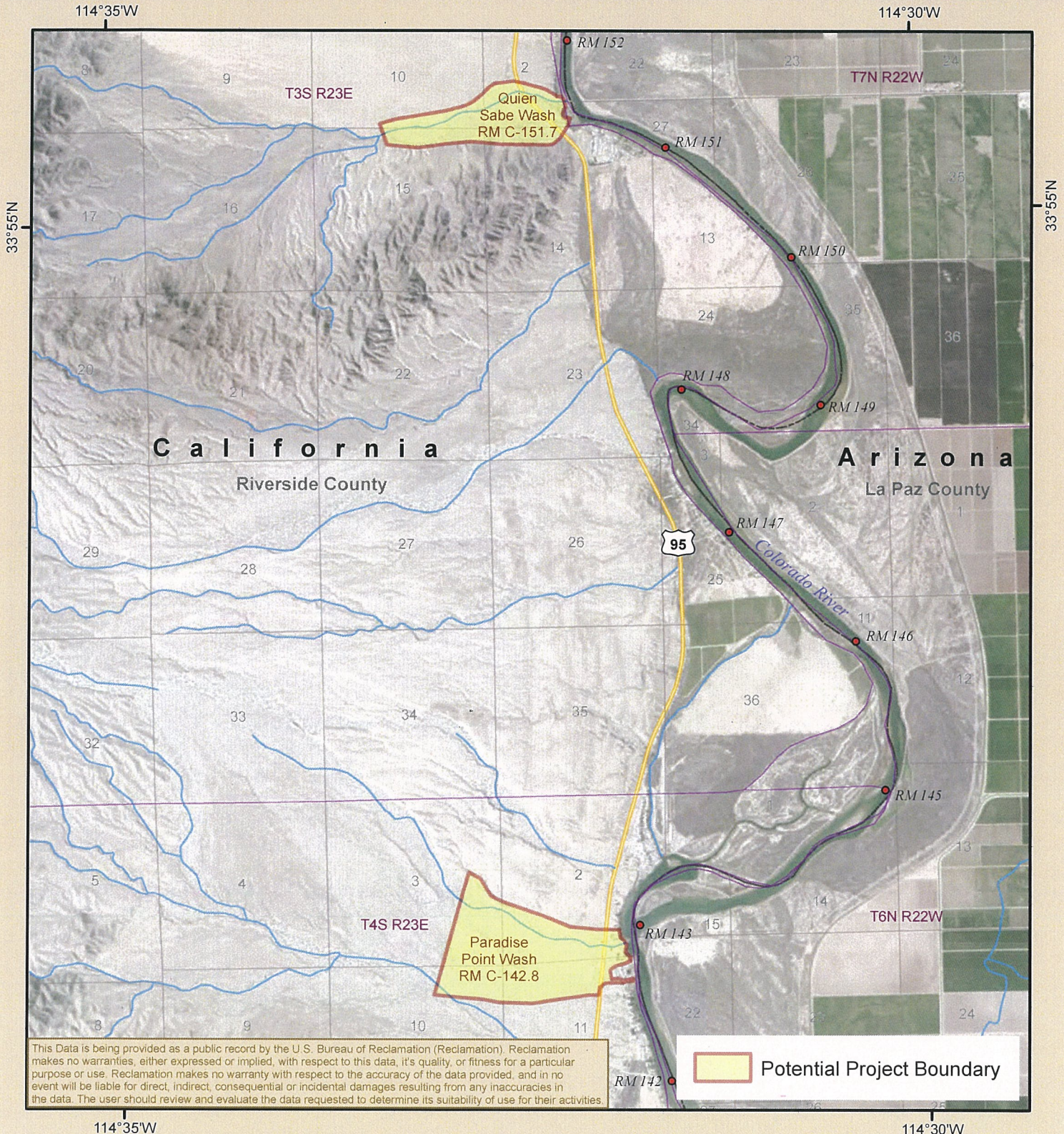
Potential Sediment Control Structure Locations

Exhibit B - Gould & Mule Washes

MAP NO: YAOGIS2013-0051

Drawn by: A. Belous, P.E.



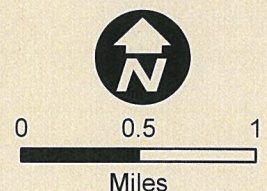


Potential Sediment Control Structure Locations

Exhibit C - Paradise Point & Quien Sabe Washes

MAP NO: YAOGIS2013-0052

Drawn by: A. Belous, P.E.





THE STATE OF ARIZONA
GAME AND FISH DEPARTMENT

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August 8, 2013

Mr. Nicholas Heatwole
Environmental Protection Specialist
Bureau of Reclamation
Yuma Area Office
7301 Calle Agua Salada
Yuma, AZ 85364

Dear Mr. Heatwole:

The Arizona Game and Fish Department (Department) has reviewed your letter dated July 29, 2013 requesting scoping comments on the proposed Environmental Assessment (EA) for improving the management of sediment transport by washes into the Colorado River. The Department has worked with the Bureau in the past on the removal of the wash fans created by the sediment transport. We are aware of the problems for the Bureau's river operations created by these fans. However, as we have noted in the past, these fans, especially gravel based fans, create fish spawning habitat in a reach of the river with little spawning habitat. We believe this project creates an opportunity to explore innovative approaches that can create spawning habitat and improve the Bureau's management of sediment control. We would be pleased to partner with the Bureau in exploring potential approaches.

Thank you for the opportunity to provide these scoping comments. If you have any questions you may contact me at 928-341-4047.

Sincerely,

William Knowles
Habitat Program Manager
Region IV, Yuma

cc: Pat Barber, Region IV Supervisor
Laura Canaca, PEP Supervisor, Habitat Branch
Jim Hinkle, Assistant Director, Field Operations

AGFD # M13-08082639

Environmental Assessment (EA)

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United States Department of the Interior

U.S. Fish and Wildlife Service

Arizona Ecological Services Office

2321 West Royal Palm Road, Suite 103

Phoenix, Arizona 85021-4951

Telephone: (602) 242-0210 Fax: (602) 242-2513



In reply refer to:

AESO/SE

02EAAZ00-2013-CPA-0039

02EAAZ00-2013-TA-0286

August 12, 2013

Memorandum

To: Director, Resource Management Office, Yuma Area Office, Bureau of Reclamation, Yuma, Arizona (YAO-7210, ENV-6.00)

From: Field Supervisor

Subject: Scoping Comments for Upland Wash Sediment Project, La Paz County, Arizona and Riverside County, California

This responds to your July 29, 2013, request for Fish and Wildlife Service (FWS) comments for the National Environmental Policy Act (NEPA) process for the subject potential action.

The removal of material from the wash fans in the Colorado River under consideration for this project (Quien Sabe, Paradise Point, Mule, and Gould washes) is a covered action for the Bureau of Reclamation (Reclamation) under the Lower Colorado River Multi-Species Conservation Program (LCR MSCP). Removal of materials from these wash fans was recently proposed by Reclamation and concurred with by FWS.

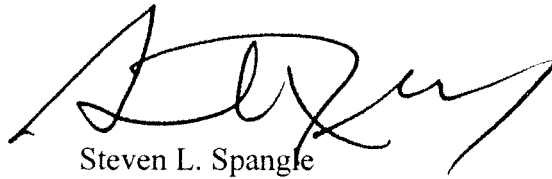
FWS understands the desire of Reclamation to address the accumulation of material in these wash fans as it affects water flow, bank stability, and navigational safety. While additional bank stabilization is included in the LCR MSCP, the FWS is in favor of limiting its use on the Colorado River to the maximum extent practicable. Limiting the amount of material that moves into these wash fans through examination of upland debris basins and check structures merits evaluation.

Our concerns with the evaluation of these methods are related to effects to the upland wash areas that support wildlife values and availability of wash fans to provide habitat for fish. The occupied range of the candidate Sonoran desert tortoise (*Gopherus morafkaii*) is within your project area in Arizona, and the threatened Mohave desert tortoise (*Gopherus agassizii*) is in the project area in California. Effects to these tortoise species from construction and operation of these methods should be considered. Any elimination of or alterations to desert wash riparian vegetation that supports migratory birds should also be evaluated.

Wash fans can provide spawning and nursery areas for the endangered bonytail (*Gila elegans*)

and razorback sucker (*Xyrauchen texanus*) as well as resting and feeding habitats in the lower Colorado River. For the LCR MSCP, Reclamation recognized the importance of these wash fan habitats by limiting the amount of material that would be removed when such removal was necessary (pages 2-40 through 2-43 of the LCR MSCP Biological Assessment). We understand that the Colorado River is unable to move the coarser-grained materials that are in or are moved into the wash fans by floods, and the existing material is likely to remain at some level. However, we are concerned that there will be some erosion of the existing wash fans if their supply of finer materials is cut off or reduced. The size and efficiency of the debris basins and check structures will alter that inflow, and the effects of that reduction should be evaluated.

Thank you for the opportunity to provide scoping comments on this potential project. If we can be of further assistance, please contact Lesley Fitzpatrick at (602) 242-0210 (x236) or me (x244).



Steven L. Spangle

cc (electronic):

Project Manager, LCR MSCP, Boulder City, NV
pep@azgfd.gov, Arizona Game and Fish Department, Phoenix, AZ
Assistant Field Supervisor, Fish and Wildlife Service, Tucson, AZ

W:\Lesley Fitzpatrick\2013- 0286 Upland Wash USBR scoping.docx:egg

MAR 16 2015

YAO-7210
ENV-6.00

Interested Parties (See Enclosed List)

Subject: Upland Wash Sediment Control Project (Project) – Draft Environmental Assessment (EA)
Notice of Availability

Dear Ladies and Gentlemen:

The Bureau of Reclamation is proposing to construct and maintain sediment control structures along select washes on the Colorado River (River).

Reclamation needs a solution to decrease the maintenance activity involving wash fans along the River. Reclamation proposes to reduce or eliminate wash fan deposition by constructing upland control structures. The purpose of constructing upland control structures is to capture upland sediment before it reaches the River channel, therefore reducing the amount of maintenance required to operate the River efficiently and effectively. Capturing and controlling sediment prior to its introduction into the River has the potential to minimize River channel constrictions, thus maintaining more efficient channel capacities for water delivery. Reducing wash fan deposits within the River channel should lessen the need to deploy heavy equipment into the River channel to conduct removal operations, minimizing impacts to bankline soils, aquatic species, and riparian vegetation.

Pursuant to the National Environmental Policy Act and Reclamation guidelines, a draft EA was prepared and is available for a 30-day review. The deadline for receipt of comments is 30 days from the date of this letter. In addition, this EA has been posted on Reclamation's Yuma Area Office web page <http://www.usbr.gov/lc/yuma/>. Comments may be mailed to Mr. Nicholas Heatwole at the Bureau of Reclamation, Yuma Area Office, 7301 Calle Agua Salada, Yuma, Arizona 85364.

If you have any questions regarding the project, please contact Nick Heatwole at 928-343-8111, or nheatwole@usbr.gov.

Sincerely,

Julian DeSantiago

Julian DeSantiago, Manager
Environmental Compliance and Planning Group

Enclosure

See Distribution List on next page.

Distribution List

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Senior Project Manager
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Yuma Proving Ground
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Mr. John Kalish
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Mr. John McDonald
Field Manager
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Yuma Field Office
Attention: Ms. Erica Stewart
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Ms. Lesley Fitzpatrick
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Mr. Bill Knowles
Habitat Program Manager
Region IV
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Mr. Grant Buma
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Mr. Roger Patterson
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Mr. Cary Meister
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Yuma, AZ 85364
(w/encls to ea)

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7200 w/o encl

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WBR:NHeatwole:ptsosie:03/13/2015:928-343-8111

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DeSantiago, Julian <jdesantiago@usbr.gov>

Draft EA Upland Wash Sediment Control Project

Bill Knowles <BKnowles@azgfd.gov>

Wed, Apr 15, 2015 at 2:32 PM

To: "DeSantiago, Julian" <jdesantiago@usbr.gov>

I reviewed the EA and we discussed at meeting with WSFWS and ACOE. I do not see a need for further comments. If you need more than this e-mail, let me know.

Bill

Bill Knowles

AGFD

Habitat Program Manager

Region IV

9140 E. 28th Street

Yuma AZ 85364

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State of California - Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Inland Deserts Region
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www.wildlife.ca.gov

EDMUND G. BROWN JR., Governor
CHARLTON H. BONHAM, Director



April 14th, 2015

Mr. Nicholas Heatwole
Bureau of Reclamation, Yuma Area Office
7301 Calle Agua Salada, AZ 85364

Subject: Upland Wash Sediment Control Project - Draft Environmental Assessment
Comments

Dear Mr. Nicholas Heatwole:

The Department of Fish and Wildlife (Department) appreciates this opportunity to comment on the Notice of Availability for the Upland Wash Sediment Control Project. The project proposes a solution to decrease the maintenance activity involving wash fans along the river. This solution will reduce or eliminate wash fan deposition by constructing upland control structures.

To enable Department staff to adequately review and comment on the proposed project, we recommend the following information be included in any environmental document prepared for the proposed project:

1. A complete assessment of the flora and fauna within and adjacent to the project area, with particular emphasis upon identifying endangered, threatened, and locally unique species and sensitive habitats.
 - a. A thorough assessment of special status native plant populations and natural communities. More information about survey and monitoring protocols and guidelines can be found at:
http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/Protocols_for_Surveying_and_Evaluating_Impacts.pdf.
 - b. A complete assessment of sensitive fish, wildlife, reptile, and amphibian species. Seasonal variations in use of the project area should also be addressed. Focused species-specific surveys, conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable, are required. Acceptable species-specific survey procedures should be developed in consultation with the California Department of Fish and Wildlife and the U.S. Fish and Wildlife Service.
 - c. Rare, threatened, and endangered species to be addressed should

Conserving California's Wildlife Since 1870

include all those which meet the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA).

- d. The Department's California Natural Diversity Data Base (CNDDB) in Sacramento should be contacted to obtain current information on any previously reported sensitive species and habitats, including Significant Natural Areas identified under Chapter 12 of the Fish and Game Code. The Department requests that data found through assessments and surveys be submitted to the CNDDB using the online field survey form along with a map indicating rare populations or other key information. The CNDDB form to report findings can be found at http://www.dfg.ca.gov/biogeodata/cnddb/submitting_data_to_cnddb.asp.
 - e. If the project has the potential to impact the western burrowing owl (*Athene cunicularia*), a California Species of Special Concern, the Department recommends that focused burrowing owl surveys be conducted on the project site to determine how many occupied owl burrows will be impacted. The burrowing owl is protected under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (50 C.F.R. Section 10.13) and Sections 3503, 3503.5, and 3513 of the Fish and Game Code, which prohibit take of all birds and their nests including raptors. Breeding season surveys (February 1 to August 31) should be done to provide adequate information about burrowing owls present in and adjacent to an area that will be disturbed by a project or activity. This will enable the Department, reviewing agencies, and the public to effectively assess potential impacts and will guide the development of avoidance, minimization, and mitigation measures. The Department's Staff Report on Burrowing Owl Mitigation (2012) provides the appropriate survey protocols and mitigation guidelines.
(<http://www.dfg.ca.gov/wildlife/nongame/docs/BUOWStaffReport.pdf>)
 - f. If the project has the potential to impact the desert tortoise (*Gopherus agassizii*), which is state and federal listed, the Department recommends a qualified biologist to conduct focused surveys according to U.S. Fish and Wildlife Service (USFWS) and/or Department protocol. The Field Survey Protocol for Any Federal Action that May Occur within the Range of the Desert Tortoise (January 1992) provides the appropriate survey protocols and information, which can be found at http://www.dfg.ca.gov/wildlife/nongame/docs/desert_tortoise_focused_survey_protocol.pdf
2. A thorough discussion of direct, indirect, and cumulative impacts expected to adversely affect biological resources, with specific measures to offset such impacts.
 - a. Knowledge of the regional setting is critical to an assessment of

environmental impacts and that special emphasis should be placed on resources that are rare or unique to the region.

- b. Project impacts should be analyzed relative to their effects on off-site habitats. Specifically, this should include nearby public lands, open space, adjacent natural habitats, and riparian ecosystems. Impacts to and maintenance of wildlife corridor/movement areas, including access to undisturbed habitat in adjacent areas, should be fully evaluated and provided.
 - c. The zoning of areas for development projects or other uses that are nearby or adjacent to natural areas may inadvertently contribute to wildlife-human interactions. A discussion of possible conflicts and mitigation measures to reduce these conflicts should be included in the environmental document.
 - d. A cumulative effects analysis should be developed. General and specific plans, as well as past, present, and anticipated future projects, should be analyzed relative to their impacts on similar plant communities and wildlife habitats.
 - e. The document should include an analysis of the effect that the project may have on completion and implementation of regional and /or sub-regional conservation programs. Under § 2800-2840 of the Fish and Game Code, the Department, through the Natural Communities Conservation Planning (NCCP) program, is coordinating with local jurisdictions, landowners and the Federal Government to preserve local and regional biological diversity. The Department recommends that the lead agency ensure that the development of this and other proposed projects do not preclude long-term conservation planning options and that projects conform with other requirements of the NCCP program. Jurisdictions participating in the NCCP should assess specific projects for consistency with the NCCP Conservation Guidelines.
3. A range of alternatives should be analyzed to ensure that alternatives to the proposed project are fully considered and evaluated. A range of alternatives which avoid or otherwise minimize impacts to sensitive biological resource should be included. Specific alternative locations should also be evaluated in areas with lower resource sensitivity where appropriate.
- a. Mitigation measures for project impacts to sensitive plants, animals, and habitats should emphasize evaluation and selection of alternatives which avoid or otherwise minimize project impacts. Off-site compensation for unavoidable impacts through acquisition and protection of high-quality habitat elsewhere should be addressed.

- b. The Department considers Rare Natural Communities as threatened habitats having both regional and local significance. Thus, these communities should be fully avoided and otherwise protected from project-related impacts.
 - c. The Department generally does not support the use of relocation, salvage, and /or transplantation as mitigation for impacts to rare, threatened, or endangered species. Department studies have shown that these efforts are experimental in nature and largely unsuccessful.
- 4. If take of species of plants or animals listed under the California Endangered Species Act (CESA) cannot be avoided during Project activities, please be advised that an Incidental Take Permit (ITP) would be warranted. CESA Permits are issued to conserve, protect, enhance, and restore State-listed threatened or endangered species and their habitats. Issuance of an ITP is subject to CEQA documentation; therefore, CDFW recommends that the CEQA document identify and analyze potentially significant impacts, propose measures to mitigate impacts to less than significant levels, and include a mitigation monitoring and reporting program. If the proposed Project could impact CESA-listed species, early consultation is encouraged. CDFW is available to discuss ways to avoid, minimize, and mitigate potential Project impacts. More information on the CESA permitting process can be found on the CDFW website at <http://www.dfg.ca.gov/habcon/cesa>. The following information is requested to address all project impacts to listed species:
 - a. Biological mitigation monitoring and reporting proposals should be of sufficient detail and resolution to satisfy the requirements for a CESA Permit.
 - b. A Department-approved Mitigation Agreement and Mitigation Plan is required for plants listed as rare under the Native Plant Protection Act.
- 5. Fish and Game Code Section 2080.1 states the requirements and procedures for a 2080.1 Consistency Determination. Section 2080.1 allows an applicant who has obtained a federal incidental take statement pursuant to a federal Section 7 consultation or a federal Section 10(a) incidental take permit to notify the Director in writing that the applicant has been issued an incidental take statement or an incidental take permit pursuant to the federal Endangered Species Act of 1973. The applicant must submit the federal opinion incidental take statement or permit to the CDFW Director for a determination as to whether the federal document is "consistent" with CESA. Receipt of the application by the Director starts a 30-day clock for processing the Consistency Determination.

In order for the Department to issue a Consistency Determination, the Department must determine that the conditions specified in the federal incidental take statement or the federal incidental take permit are consistent with CESA. If

the Department determines that the federal statement/permit is not consistent with CESA, the applicant must apply for a State Incidental Take Permit under section 2081(b) of the Fish and Game Code.

The exception provided in Fish and Game Code section 2080.1 to CESA's take prohibition can be used only for species that are listed under both federal Endangered Species Act and CESA, and cannot be applied to species that are listed by the State but not federally listed.

6. The Department opposes the elimination of watercourses and/or their channelization or conversion to subsurface drains. All wetlands and watercourses, whether intermittent or perennial, must be retained and provided with substantial setbacks which preserve the riparian and aquatic values and maintain their value to on-site and off-site wildlife populations.
 - a. The Department has direct authority under Fish and Game code § 1600 et seq. In regard to any proposed activity which would divert, obstruct, or affect the natural flow or change the bed, channel, or bank of any river, stream, or lake.
 - b. The Department is emphasizing in comment letters on projects with impacts to lakes or streambeds, that alternatives and mitigation measures must be addressed in CEQA-certified documents prior to submittal of an application of a Lake and Streambed Alteration Agreement (LSAA). Any information which is supplied to the Department after the CEQA process is complete will not have been subject to the public review requirements of CEQA.
 - c. In order for the Department to process a LSAA agreement, the CEQA-certified documents must include an analysis of the impacts of the proposed project on the lake or streambed, an analysis of the biological resources present on the site, copies of biological studies conducted on the site, biological survey methodology, and a discussion of any alternative, avoidance, or mitigation measures which will reduce the impacts of the proposed development to a level of insignificance. In addition, a discussion of potential adverse impacts from any increased runoff, sedimentation, soil erosion, and/or pollutants on streams and watercourses on or near the project site, with mitigation measures proposed to alleviate such impacts must be included in the CEQA-certified documents.

The Department appreciates the opportunity to comment on this project. Should you have any questions or concerns, please contact Richard Kim, Environmental Scientist, at (760) 922-6783 or Richard.Kim@wildlife.ca.gov. Thank you.

Sincerely,



Chris Hayes
Deputy Regional Manager
Inland Deserts Region



COLORADO RIVER INDIAN TRIBES

Colorado River Indian Reservation

26600 MOHAVE RD.
PARKER, ARIZONA 85344
TELEPHONE (928) 669-9211
FAX (928) 669-1216

May 14, 2015
Dennis Patch, Chairman
Colorado River Indian Tribes
2600 Mohave Road
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Via Certified Mail

United States Bureau of Reclamation
Yuma Area Office
Maria Ramirez, Area Office Manager
7301 Calle Agua Salada
Yuma AZ 85364

Douglas Hendrix, Bureau of Reclamation
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Project Name/No.
3437

Re: Comments of the Colorado River Indian Tribes on the Bureau of Reclamation's
Proposed Upland Wash Sediment Control Project

Dear Ms. Ramirez,

The Colorado River Indian Tribes ("CRIT"), and its respective departments—Environmental Protection Office ("EPO"); Water Resources Department ("Water Resources"); and Museum/Tribal Historic Preservation Office ("THPO")—submits the following comments on the Draft Environmental Assessment ("DEA") prepared by United States Department of Interior, Bureau of Reclamation, Yuma Area Office ("BOR") for the Upland Wash Sediment Control Project (the "Project").

As a preliminary matter, CRIT appreciates the BOR's interest in addressing sedimentation control on the Colorado River. CRIT, however, is disheartened by the DEA's failure to accurately identify the land status of the Project and the BOR's noncompliance with the requirements of the Indian Trust Asset Policy. Section 3.1, of the DEA describes the location of the two California sites, Quien Sabe Wash and Paradise Point Wash, as follows:

Environmental Assessment (EA)

3.1 Land Use

3.1.1 Affected Environment

All sites are located on Federal lands Withdrawn for project purposes by Reclamation. Sites proposed to be located in California are adjacent to the Colorado River Indian Tribes (CRIT) Reservation. State Highway 95 runs through the project area in the California side. Sites in Arizona are bordered by State of Arizona or BLM lands. A Reclamation access road runs through the sites on the Arizona side.

(DEA at pg. 34) CRIT must ask BOR to correct some of this information. The problem the project seeks to address is the build-up of alluvial sediment deposits in the River channel itself – which is wholly within the Colorado River Indian Reservation (“CRIR”) at the Quien Sabe Wash and Paradise Point Wash locations. The two proposed project work sites at Quien Sabe Wash abut the Reservation Boundary, with the “project limit” boundary of the downstream work site touching, or even crossing into the Reservation boundary. See Enclosure B. However, at Paradise Point Wash, all three of the work sites identified cross within the boundaries of the Reservation. See Enclosure B. Although the Washes have their origins in the surrounding mountains, and some of the proposed work areas extend outside the CRIR boundary, the primary work zones as described in the DEA are immediately adjacent to the Colorado River, and in large part, within the Reservation.

The DEA characterizes the Proposed Action location as follows:

Trust Lands

The Proposed Action is not located on ITA lands; the nearest tribal lands are located directly across the Colorado River from the project areas in California. There are no tribal residences and/or facilities within the project area.

(DEA, Section 3.5.2, at pg. 42) The DEA’s misidentification of the Project location as entirely outside the CRIR has unfortunate policy consequences, resulting in a failure to carry out the appropriate Indian Trust Asset (“ITA”) evaluation as described in Section 3.5:

3.5 Indian Trust Assets

3.5.1 Affected Environment

Indian Trust Assets (ITAs) are legal interests in property held in trust by the US for Indian tribes or individuals, or property in which the US is charged by law to protect for Indian tribes or individuals. In accordance with the Indian Trusts Fund Management Reform Act of 1994, as amended, all the Department of the Interior agencies, including Reclamation, are responsible for protecting ITAs from adverse impacts resulting from their programs and activities. In cooperation with tribes, Federal agencies must inventory and evaluate assets, and mitigate or compensate for adverse impacts to the asset.

3.5.2 Environmental Consequences

Reclamation departmental policy requires the agency to address potential impacts to ITAs even if impacts are found to be non-significant. The proposed structures in California are located near the CRIT Reservation.

In order to satisfy these policy objectives and meet the requirements of the Indian Trust Fund Management Reform Act of 1994, the DEA must also be revised to address potential adverse impacts to ITA's.

CRIT provides the following General and Departmental Comments:

I. General Comments

3.0 Affected Environment-

The proposed action occurs adjacent to the Water Wheel Resort and the Paradise Point Resort which are CRIT owned enterprises. Therefore, both population and recreation should have been analyzed in the DEA.

3.1 Land Use-

As previously stated, the proposed actions are located both adjacent and within the exterior boundaries of CRIT.

3.2 Air Quality

The DEA should correct, and identify that the project areas are designated Nonattainment for five criteria National Ambient Air Quality Standards ("NAAQS") pollutants per United States Environmental Protection Agency ("EPA") mapping.

<http://www.epa.gov/airquality/greenbook/map/mapnpoll.pdf>

Therefore, mitigation measures identified in Section 3.2.3 should be more stringent and address actions to prevent ground level ozone. Presently, the EPA is proposing more stringent rules putting the proposed project areas in nonattainment for ozone as a result of health based impacts. If EPA would have been appropriately consulted on the DEA, additional information may have been identified. Additional best management practices recommended by EPO considering how close the proposed project is to both Water Wheel and Paradise Point, is utilizing only water for dust mitigation, no ground disturbance when wind speeds exceed 15 miles per hour and identify how that will be determined, and no heavy equipment (diesel) idling that exceeds 5 minutes.

3.3 Biological Resources

See "EPO Site Review" summary below.

3.4 Cultural Resources

CRIT Museum should have been identified as a consulting when considering that Cultural Resource Surveys occurred within CRIT boundaries, cultural resources are should be considered "high" ITA's, and CRIT Museum staff would have participated and/or observed the Class III

survey activities. Again, if appropriate consultation occurred, it would have been identified that CRIT has an identified Tribal Historic Preservation Officer.

3.5 Indian Trust Assets

The Indian Trusts Fund Management Reform Act of 1994 is identified in the DEA, however, Reclamations Indian Trust Policy should have been identified and upheld.

3.13 Cumulative Effects

The DEA discusses work to be done in the future at River Mile 165.5, but within the text describes it as River Mile 165.0. No map is presented with this information. A drive along the levee road in this area showed only one spot where there is a break in the rip rap along the edge of the road. The Colorado River Front and Levee System Act obligates BOR to assist in the preservation of public works on the River.

If work is to be done here, can it be accomplished in such a way that it is accessible to the public? The armoring of the river banks over the years has removed access to the river for tribal fishermen, picnickers, hunters, tribal gatherers, and those that would like to recreate on the shoreline. Rip rap is too unstable to navigate across it. The Colorado River Front and Levee System Act obligates BOR to assist in the preservation of public works on the River. BOR needs to make public works accessible.

4.1 Agencies Consulted

CRIT EPO was not contacted prior to the issuance of the DEA. Indeed, CRIT EPO only learned of the DEA's existence as a result of a phone call from EPO to BOR regarding other projects along the Colorado River. The BIA and the BOR's Native American Affairs Office (W-6100) should also have been contacted to facilitate inter-governmental consultation on the Project.

I. EPO Site Review

A walkover and review of Quien Sabé Wash was conducted by CRIT EPO on April 8, 2014. See Enclosure A. Quien Sabé Wash is just over a third of a mile long, and the wash fan that extends from it is large and well vegetated. The plants occupying this area are mature and a healthy native exotic mix of trees, shrubs, forbs with marsh plants well established on the up and downstream edges of the fan, as well as the interior-where the elevation must be lower. This riparian/wetland zone appears to be habitat for riparian and marsh species including the Yuma Clapper Rail and Southwestern Willow Flycatcher.

The wash fan itself has been colonized by large mesquite (mostly *Prosopis glandulosa* var. *torreyana*), willow (*Salix Gooddingii*), tamarisk (two varieties), palms (both date and fan palms), arrowweed (*Pluchea sericea*), the invasive *Arundo donax*, and multiple forbs. The shorelines just upstream and downstream (at the outlet of the lower wash scheduled for treatment) are wonderful marshes, dominated by giant bulrush (*Schoenoplectus* species), and cattail (*Typha*

species) grows just inland of the bulrush, plus within the higher vegetation, where there is a depression and the ground is lower.

A walkover of the project area at Quien Sabe Wash showed little evidence of material deposited into the river in recent times. No boulders, gravel bars, or sand bars appeared at the end of the Quien Sabé wash. The downstream wash, demonstrated in the second picture, ended in dense vegetation, and it was observed in the photos that sand with rock in it had been deposited by floodwaters (but no branches, rocks or sand/soil piled against trees). In the main body of Quien Sabé Wash, away from the riparian vegetation, there was some evidence within the wash of material deposition. However, closer to the Colorado River none was noted piled against the vegetation that covered the ground. On the two roads that lead to the Colorado River, CRIT EPO did not observe either rutted by water. Instead, both were fairly level, with no large stones (upland sediment) observed within the driving zone. There seemed to be considerable erosion just below the roads under the cement aprons that are attached to the downstream side of Highway 95.

The “access” roads mapped in the DEA are set in locations where the ground is extremely steep. It will take significant work just to build roads that will support the heavy equipment identified in the DEA. However, just downstream of both washes is a road that may function as an access road. This road leads towards the riparian vegetation, around the bluff and into the larger Quien Sabé Wash.

Based on CRIT EPO’s review of the DEA and site visit, it has the following questions and comments:

- a. What is the overall purpose of the Project? If it is to lessen navigational hazards for recreational and other vessels on the river, will this work alleviate the changes in flow that are apparently going to occur according to the BOR Water Supply and Demand Plan? In other words, will the effect of significantly altering washes become only a short term resolution of a much larger dilemma?
- b. What is the cost of this work? Is it a more cost-effective approach than the previous methods BOR used to address sedimentation? (*e.g.*, What was the BOR cost of removal of 16,000 cubic yards of sand/rock in 2014 from the Colorado River?)
- c. The DEA states that once sediment has been removed from the river (which we agree is highly detrimental to the aquatic ecosystem), cobble is placed back into the water, to improve fish spawning habitat. Where is the cobble that came from last year’s dredging stored?
- d. It was the understanding of CRIT EPO from discussions with BOR personnel and a visit to the spoil piles, that the 16,000 cubic yards of sediment removed at Paradise Point was mostly sand. If sand is the main component of the wash fans within the river, and the proposed plans call for fencing that will allow the sand through, how will the problem be solved? At Quien Sabé Wash, there doesn’t seem to be any large boulders moving down the wash, so will the construction of these structures, that will forever alter the washes, actually accomplish the stated purpose?

- e. How many times has it been necessary to remove the wash fans?
- f. How many times has Quien Sabé Wash flooded in the last fifty years? Looking back at Google Earth images, the wash fan and width of the Colorado River have not changed in the last twenty years. Large spoil piles found close to the foot of the mesa at Quien Sabé are evidence of removal of material at least once. Please notice the photos of the old spoil show very few large rocks, mostly sand. Since that time a significant area of riparian wetland has returned, and this should not be put at risk by heavy equipment upstream. The DEA states that “[t]he structures are similar in height to surrounding vegetation and may eventually be covered by volunteer re-vegetation of the sites.” No evidence of colonization of the much older spoil piles was observed, partly because the spoil is higher than the native ground, thus the increased elevation puts water out of the reach of seedlings. Does the BOR expect plants to grow on the caged gabions full of rip rap?
- g. The enclosed photos show sand with large rocks (the size of the large rocks in the old spoil pile) in the foreground. Observe that the sand and these rocks are close to the riparian vegetation. Rather than storm events carrying the rocks to the river, and depositing them in the river channel (which is what BOR is trying to prevent), nature has accomplished the same function. The vegetation that now grows extensively on an aged wash fan –perhaps higher enough in elevation than the upland wash- effectively catches and holds the very sediment that BOR proposes to control. Would BOR consider partnering with CRIT to conduct restoration tasks that assist this natural sediment control.
- h. The DEA states that the sediment from the wash will direct the river to flow against the opposite bank, causing erosion. However, both banks opposite the washes (Paradise Point and Quien Sabé) have been heavily armored with rip rap in the last ten years; therefore, it appears the purpose and need to implement the project may not be necessary.

Though this maintenance may be authorized under the Colorado River Front and Levee System Act (“CRFLS”), science has shown us that some activities undermine the natural processes that support the creation of habitat for birds, fish, and other wildlife. For example, the riparian vegetation and large wood that are often cleared from streams are actually critical to maintaining suitable stream temperatures for fisheries as well as birds, both listed and not. CRIT EPO requests that the BOR consider modification of the Project to maintain the riparian corridor and preserve a functioning wetland.

The CRIT EPO suggests that an Environmental Impact Statement should be developed with regard to the proposed federal action. Furthermore, formal consultation should be initiated and a presentation to Tribal Council on the Project should be conducted.

II. Water Resources Department Review

Similar to CRIT EPO’s comments, CRIT Water Resources states that it was not aware that a DEA was being planned. While it has been in communication with the BOR about improved sedimentation control in the Project area, it was not contacted during the formation of the DEA.

As a result, the DEA mistakenly identifies the Proposed Project as off-Reservation. As shown in Enclosure B, the Paradise Point affected washes are partially on-Reservation. Similarly, the Quien Sabe washes are immediately adjacent to, and within, the Reservation.

Additionally, the BOR neglected to contact other relevant and interested parties such as Caltrans. Caltrans has been working continuously within the Project area, in the vicinity of California Highway 95, for decades. A drive along CA Highway 95, south of Agnes Wilson Road, reveals numerous experimental flood control installations that Caltrans has constructed in an attempt to protect the highway. Because flood control is ongoing in the Project area, the BOR should consult with Caltrans for better inter-agency cooperation.

Regarding the Project, the DEA states that BOR proposes to use fences and gabions to slow the flow in the washes from storm events. This approach has been tried by Caltrans along CA Highway 95. A comparison of their results and what BOR expects to gain from their proposed approach would be helpful. A major concern regarding the use of gabions and fences is that they will eventually fill up and need to be cleaned to remain operation. It is unclear who will be responsible for this maintenance. If they fill up during a major storm event the water will have to go somewhere and that is a major concern for Paradise Point Resort and residents downstream. CRIT Water Resources has been in communication with Ralph Garcia, Maintenance Supervisor for CalTrans on Highway 95 regarding the work they have done and are doing west of the highway. CRIT Water Resources, Paradise Point Resort, and area residents have concern regarding the flow path of the wash which has been altered by CalTrans upstream (west of the highway) and the impact it might have on the Project. The flow path was changed by the recent storm event which was unusually severe and then changed again by excavation by CalTrans. Has this been considered in the model used to design the current proposed Project?

During the recent storm event, which was unusually severe, the natural flow paths of the braided drainage pattern were altered by high flows in the washes which overtopped the usual channels. Residents, in a panic to save their property and protect their bank line, initiated some drainage work on their own. This work was not coordinated. The manager of Paradise Point, Mr. Tom Iezzi, has taken the initiative to provide some coordination but he is concerned that the work they have done could have some detrimental effects on the overall drainage in the area. Mr. Iezzi has offered to coordinate further work of this nature that might be required. The natural flow of the wash was altered at Paradise Point to accommodate construction of the Resort so now the wash at that point flows directly into the side of the dike that was constructed to divert the flow. In the case of a major storm event such as the one recently which caused so much damage this fragile dike could likely fail. Mr. Iezzi feels that the dike at that point should be armored as should all of the artificial channels which have been constructed to control the flow. We recommend close coordination with Mr. Iezzi during construction to address the raised concerns.

While not included in this DEA, CRIT Water Resources seeks to highlight an ongoing concern on the West Channel at the CRIT Aha Quinn Resort. This channel was excavated and maintained by BOR for years. In recent years the channel has ceased to flow as it once did. CRIT Water Resources has raised this issue with BOR many times over the past few years with no response. This is a serious health hazard because the stagnant pools left in the channel have become breeding grounds for mosquitoes. West Nile virus has been confirmed in the area and so

residents are afraid to go outside of their homes for fear of contracting the virus. They wonder why this Project has received higher priority. Similarly, bank line stabilization and removal of navigational hazards has been a problem for years along this reach of the River. The situation has become so bad in recent years that local residents have had to do work at their own expense to save their bank line and maintain access to the River from their property. So they too are wondering why this Project has received a higher priority.

CRIT Water Resources looks forward to working with BOR to coordinate improved inter-agency sedimentation control in the Project area and to facilitate communication within CRIT on this Project and the above-referenced related concerns.

II. Cultural Review

CRIT THPO was never contacted during any archaeological review of the proposed on-reservation project sites. Upon learning that an archeological review was occurring in May 2014 on the Quien Sabe and Paradise Point Washes, CRIT THPO attempted to contact the BOR but found out that the field work had already been completed.

After learning about this DEA, CRIT THPO completed a cultural walkover of the two on-reservation washes and adjacent areas extending to California Highway 95 and the vicinity of Quien Sabe Point. Various cultural resources were located within this review area. Similarly, during a review of the Paradise Point Wash and adjacent areas, cultural resources were also located. Based upon its cultural walkovers, CRIT THPO recommends that the method of excavation and Quien Sabe and Paradise Point Washes be scaled back to avoid damage to the cultural resources located within, and traversing, these project areas. CRIT THPO emphasizes that it views the Area of Potential Effect ("APE") to be broader than just the project sites because cultural resources are inter-connected within this region.

Due to the confidentiality of these resources and concerns that the BOR has previously failed to incorporate CRIT THPO into their archaeological review of the project areas, CRIT THPO refrains from disclosing the nature and location of the items identified. CRIT THPO looks forward to working with the BOR during anticipated government-to-government consultation, to address its cultural resource concerns regarding the Project

III. Summary

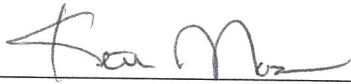
CRIT requests that the BOR amend the DEA to accurately reflect and account for the on-Reservation status of the Project. As stated, the DEA is inaccurate As stated, because the DEA inaccurately deems the Project off-Reservation Section Reservation CRIT requests that the BOR initiate formal consultation and commence engagement of the Tribes during all stages of the proposed Project.

In conclusion, CRIT requests that BOR provide a written response to the concerns raised in this letter. Please include in your response a detailed explanation of how it intends to address the legal, environmental and cultural issues discussed herein. Please address your response, and all future formal communications to the CRIT Chairman's Office, with copies to each department

identified herein, CRIT Environmental Protection Office, CRIT Department of Water Resources, CRIT Museum, and the CRIT Office of the Attorney General.

Thank you for the opportunity to provide these comments on the Proposed Upland Wash Sediment Control Project, and we look forward to consulting further with BOR on this Project and related issues in the near future.

Sincerely,



Dennis Patch, **ACTING**
CRIT Chairman

Enclosures; A and B

cc: Tribal Council

Rebecca A. Loudbear, CRIT Attorney General

Fatima Abbas, CRIT Deputy Attorney General

Wilene Fisher-Holt, Director, CRIT Museum/CRIT THPO

Wilfred J. Nabahe, Director, CRIT EPO

Grant Buma, Director, Water Resources

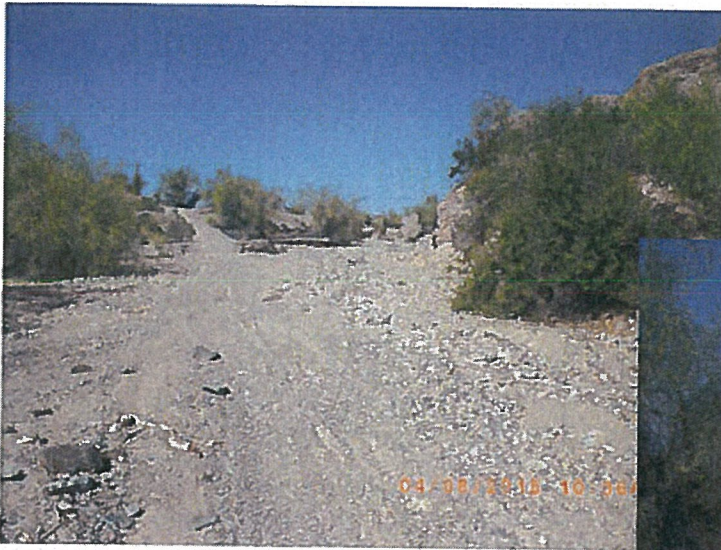
Carl Harper, Director, CRIT Fish and Game

Tom Iezzi, Manager, Paradise Point Resort

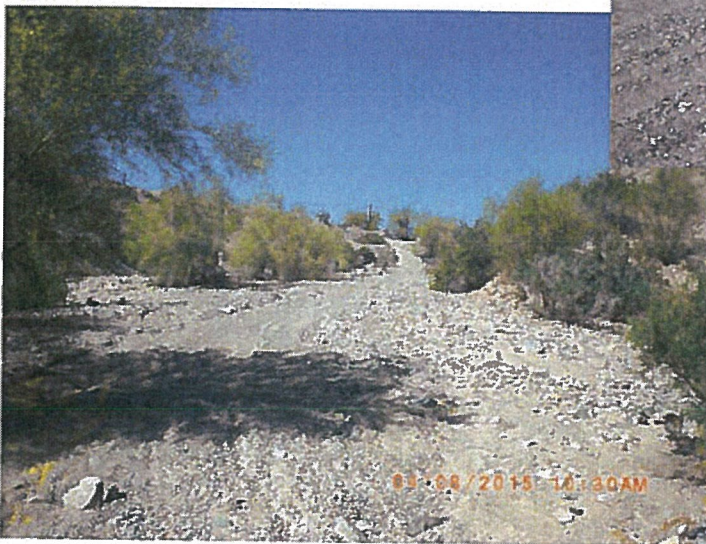
Scott Hildebrand, Manager, Water Wheel and Aha Quinn Resorts

Enclosure A

Photos of Quien Sabé Wash and Adjacent Wash Downstream



Second (adjacent) Wash, on the downstream side of Quien Sabé Wash



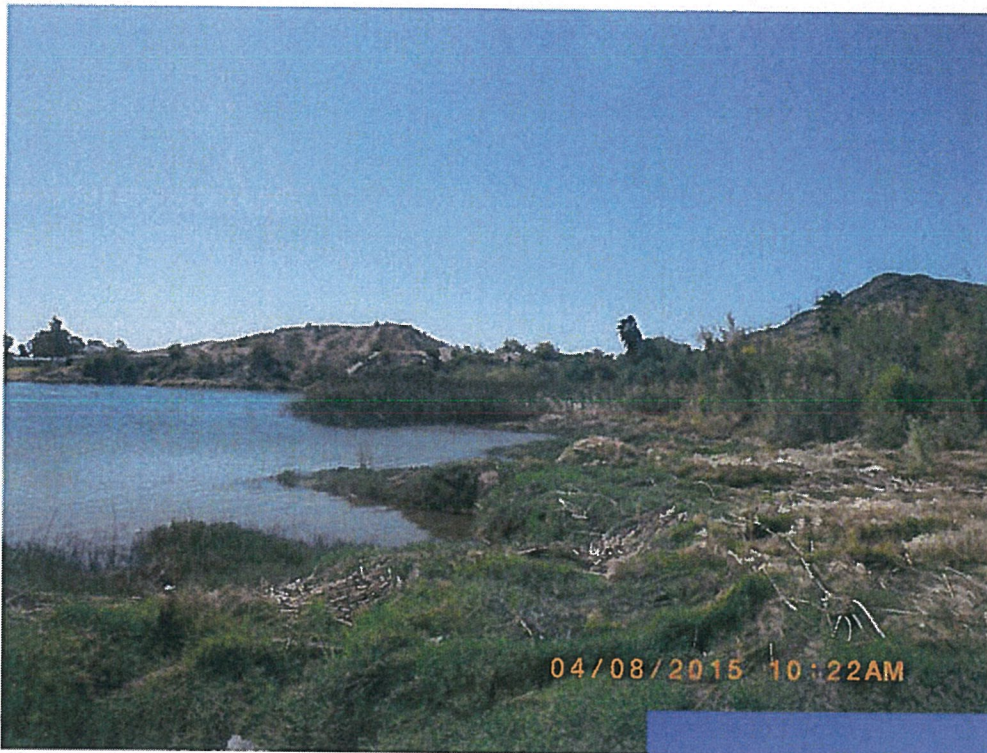


**Notice Cattails in the middle of the trees,
signifying hydric wetland soil.**

**Riparian Zone growing on the Wash Fan
of Quien Sabé Wash**

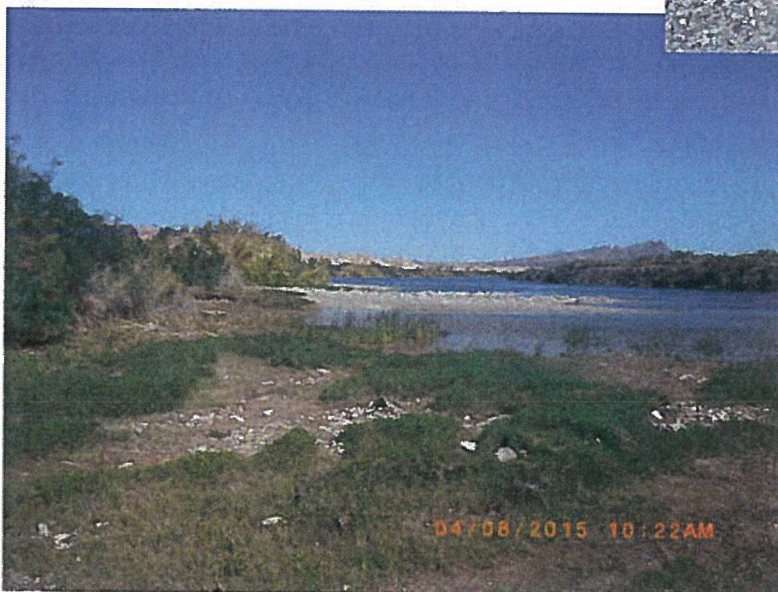
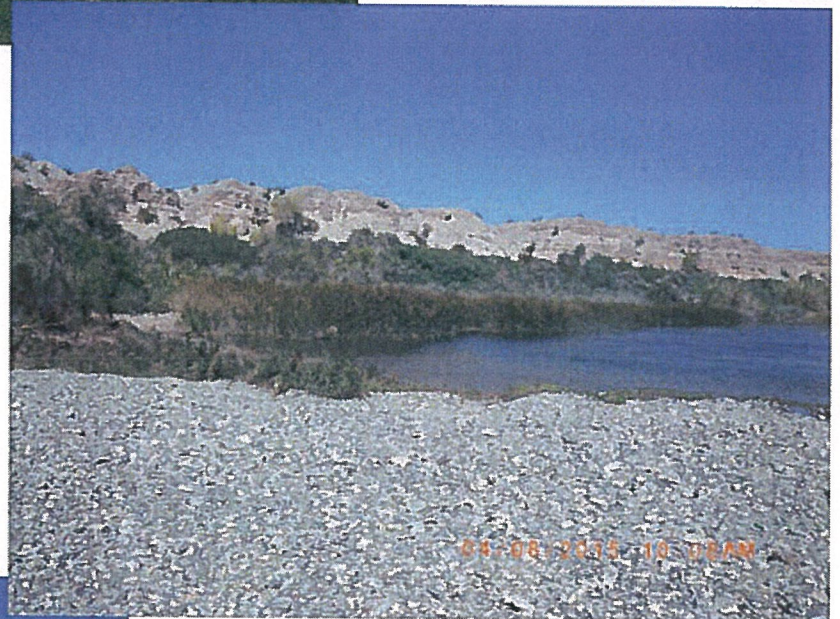


**Goodding's Willow are the large trees,
also there are Honey Mesquite,
Arrowweed, Saltcedar, Palms and Cane.**

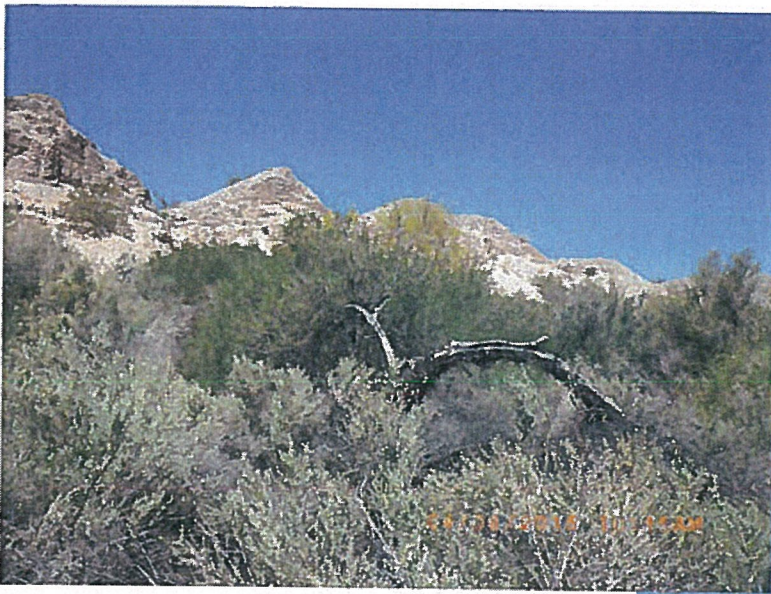


Wetland at the Downstream end of Quien Sabé Wash

And wetland on the Upstream end of Quien Sabé Wash

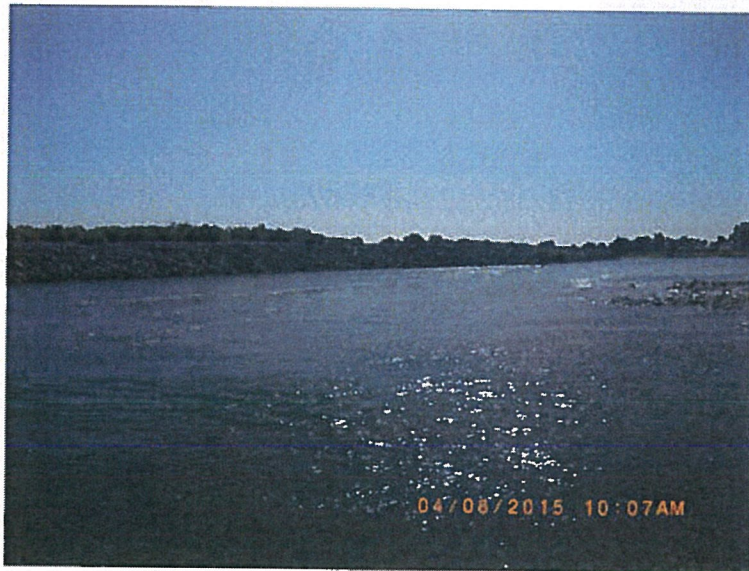
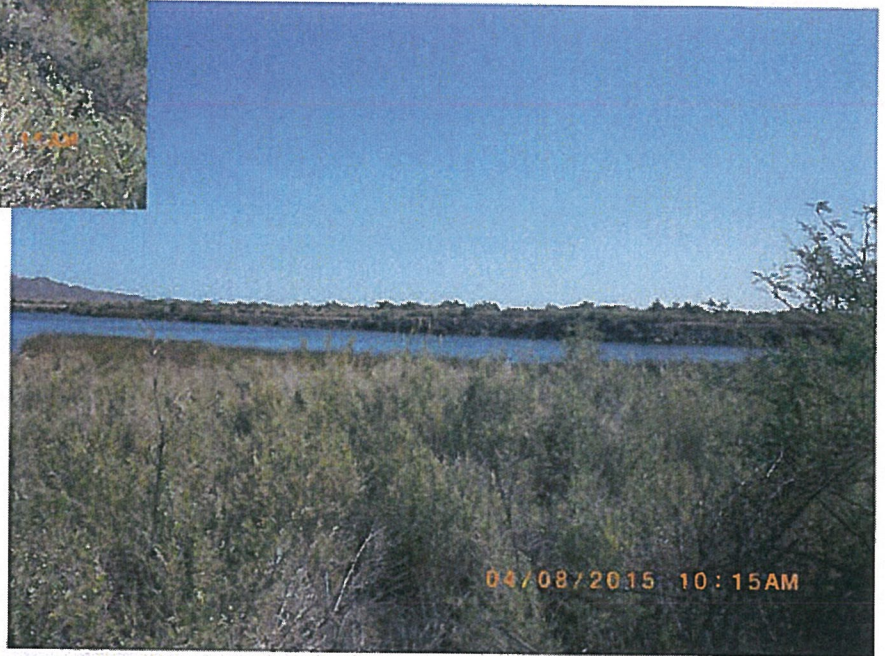


Wash Fan extending into river at low water

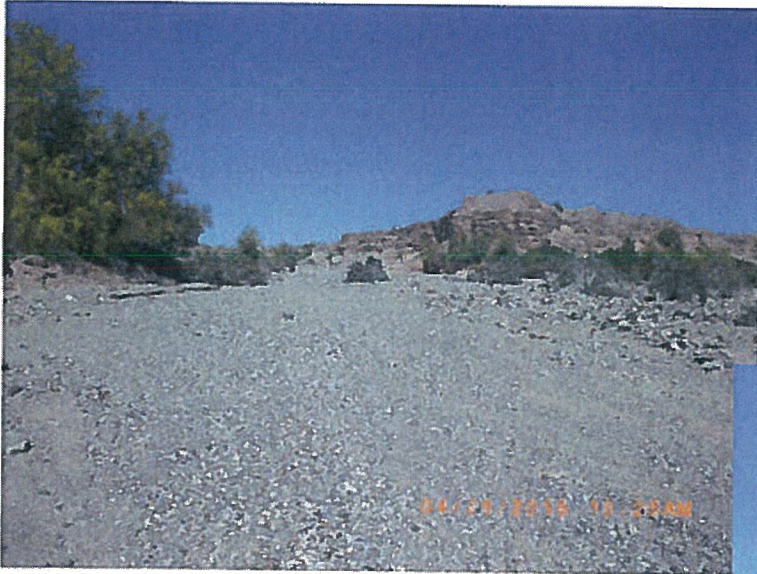


Mesquite Thicket upstream of Quien Sabé Wash, looking towards the mesa, and towards the wetland and river.

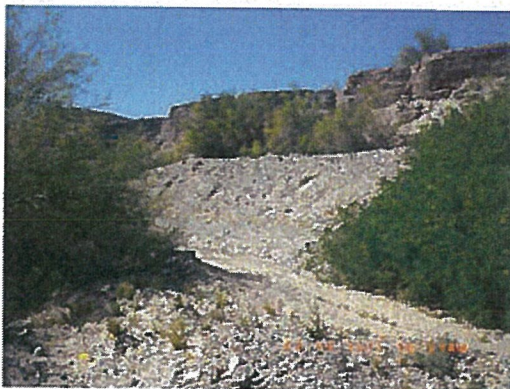
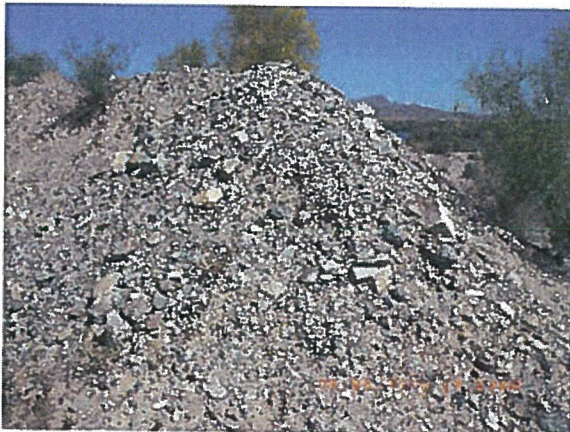
Note the armoring the opposite bank begins well upstream of the wash fan.



Armoring continues well past the wash fan, downstream.



Road in Quien Sabé Wash, no ruts.



Old
spoil pile
showing
size of
boulders
and



sand/gravel that was removed previously.

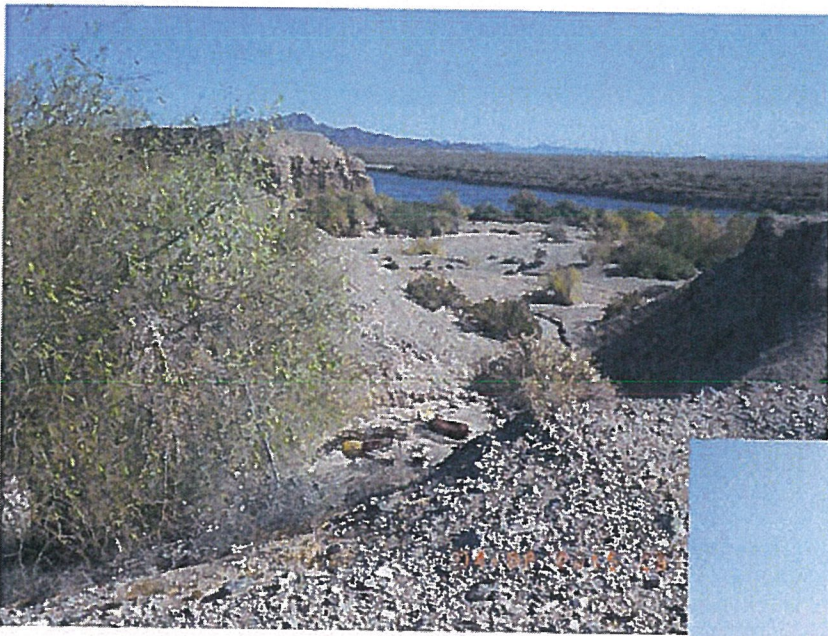


Other views of old spoil piles.

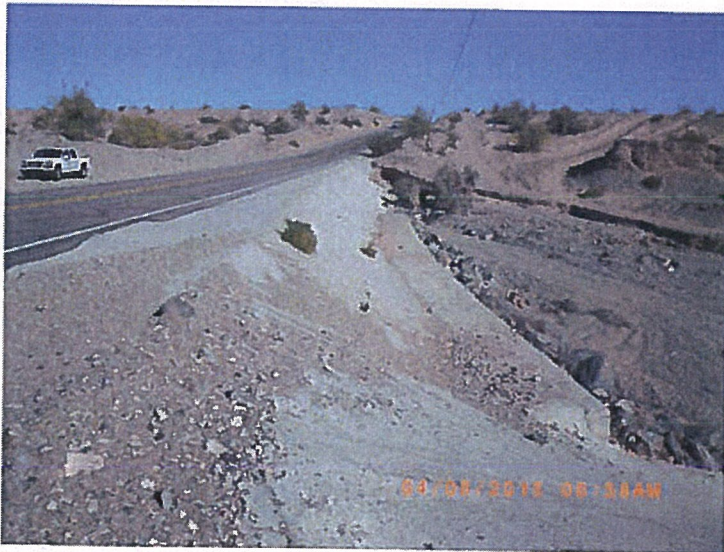


Riparian Zone with larger rocks and sand piled up next to plants; not carried to the river, but held back by vegetation.



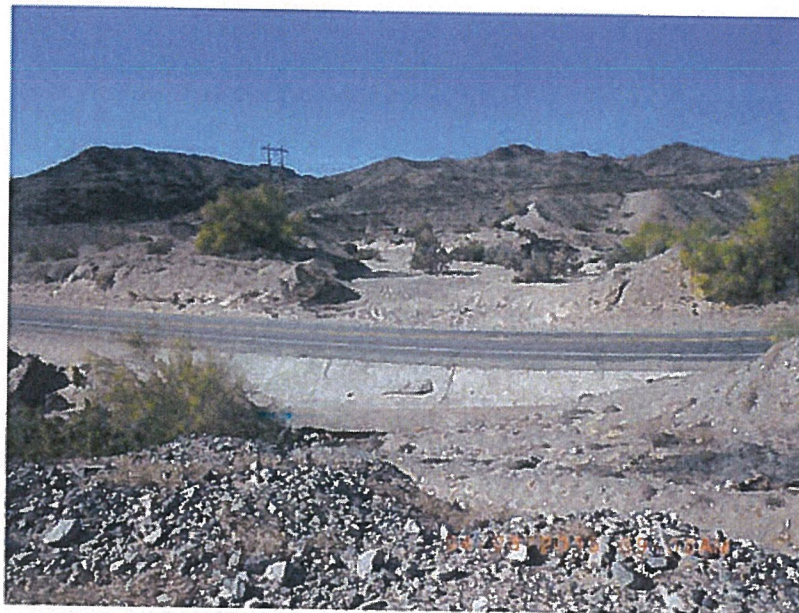


Approximate site of one access road.

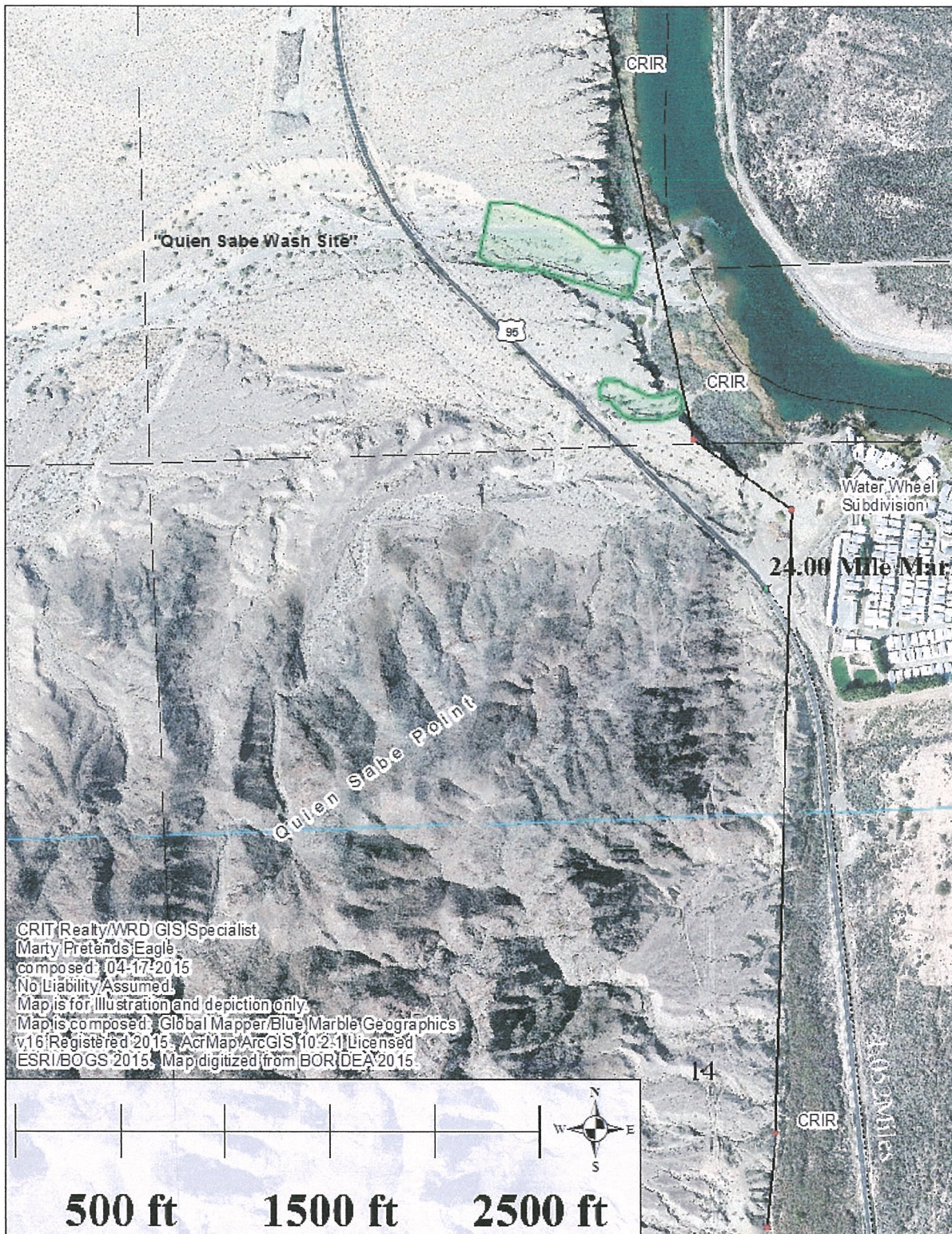


Approximate site of second access road.

Cement apron at Quien Sabé Wash, above, and adjacent wash. Large rocks in the washes are rip rap, not native.



Enclosure B



These maps are shown below:





"Quien Sabe Wash Site"

CRIR

95

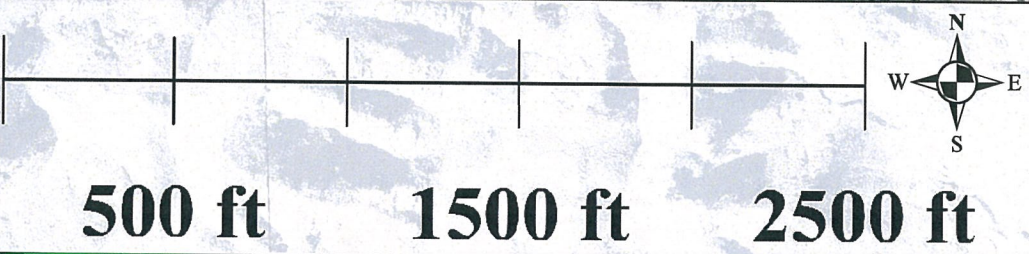
CRIR

Water Wheel Subdivision

24.00 Mile Mark

Quien Sabe Point

CRIT Realty/WRD GIS Specialist
Marty Pretends Eagle
composed: 04-17-2015
No Liability Assumed.
Map is for illustration and depiction only.
Map is composed: Global Mapper/Blue Marble Geographics
v16 Registered 2015. AcrMap/ArcGIS 10.2.1 Licensed
ESRI/BOGS 2015. Map digitized from BOR/DEA 2015.



14

CRIR

1052 Miles



Paradise Point Wash

95

CRIR

CRIR

Paradise Point
Subdivision

CRIR

8.412 Miles

CRIT Realty/WRD GIS Specialist
Marty Pretends Eagle

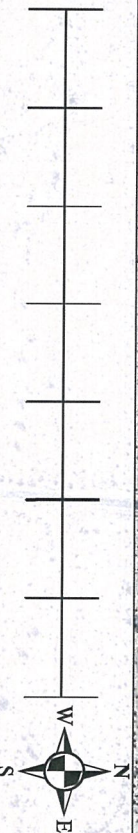
composed: 04-17-2015
No Liability Assumed.

Map is for, Illustration and depiction only.

Map is composed: Global Mapper/Blue Marble Geographics
v16 Registered 2015. ArcMap ArcGIS 10.2.1 Licensed

ESR/BOGS 2015. Map digitized from BOR DEA 2015.

250 ft 1000 ft 1750 ft



JUL 20 2015

YAO-7210
ENV-3.00

CERTIFIED – RETURN RECEIPT REQUESTED (70142120000185143195)

Honorable Dennis Patch
Chairman
Colorado River Indian Tribes
26600 Mohave Road
Parker, AZ 85344

Subject: Colorado River Indian Tribes Comments on the Bureau of Reclamation's Proposed Upland
Wash Sediment Control Project (Project)

Dear Chairman Patch:

Reclamation has received the subject letter pertaining to the draft environmental assessment (EA) for the subject Project, dated May 14, 2015. The draft EA will not be finalized until a response is provided to you and the departments noted in the letter. Additionally, I am looking forward in meeting with you and the Tribal Council on Monday, July 27, 2015, from 1:30 pm to 3:30 pm, to discuss the concerns raised in your letter.

I look forward to meeting with you on this Project and other projects in the area. If you have any questions please call me at 928-343-8123.

Sincerely,

MARIA RAMIREZ

Maria Ramirez
Area Manager

cc: Colorado River Indian Tribes
Ms. Wilene Fisher-Holt
Director
Tribal Historic Preservation Officer
26600 Mohave Road
Parker, AZ 85344

Continued on next page.

Continued from previous page.

cc: Colorado River Indian Tribes
Mr. Grant Buma
Water Resources Department
26600 Mohave Road
Parker, AZ 85344

Colorado River Indian Tribes
Mr. Wilfred J. Nabahe
Environmental Protection Office
26600 Mohave Road
Parker, AZ 85344

Colorado River Indian Tribes
Ms. Rebecca A. Loudbear
Attorney General
26600 Mohave Road
Parker, AZ 85344

Colorado River Indian Tribes
Mr. Carl Harper
Director
Fish and Game
26600 Mohave Road
Parker, AZ 85344

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CERTIFIED – RETURN RECEIPT REQUESTED (70142120000185143133)

Honorable Dennis Patch
Chairman
Colorado River Indian Tribes
26600 Mohave Road
Parker, AZ 85344

Subject: Response to Comments on the Draft Environmental Assessment (DEA) for the Proposed
Uplands Wash Sediment Control Project – Parker Division, Arizona

Dear Chairman Patch:

This is in response to your letter dated May 14, 2015, in which you expressed concerns related to the proposed Upland Wash Sediment Control project. Thank you for your comments and for the opportunity for me and my staff to address the Colorado River Indian Tribes (CRIT) Tribal Council on July 27, 2015, and discuss the concerns in your letter. I believe the July 27th meeting was productive and resulted in a better understanding of the Tribes desires and beliefs. At this meeting, both the Tribe and Reclamation agreed that pausing and reconvening with the Tribe's representative to discuss specific details of the project contained in the DEA would be beneficial to both parties. The meeting was held on September 14, 2015, and I want to express my appreciation to Mr. Doug Bonamici and the Tribe's staff for hosting the meeting. The following is a summary of the discussion held and response to the concerns in your letter.

3.1 Land Use – Reclamation will accurately identify CRIT land and Trust lands in the final Environmental Assessment (FEA). The correction will show that a portion of the construction area is located on CRIT land as the maps you provided demonstrate.

3.5 Indian Trust Assets (ITA) – The FEA will show that the project boundaries lay on Trust Lands and the ITA section will also be revised.

3.0 Affected Environment – The FEA will analyze any potential impacts resulting from the proposed project to the residents and recreational use of the Water Wheel and Paradise Point Resorts.

3.2 Air Quality – The Air Quality Section in the FEA will be revised to show additional best management practices recommended by the CRIT Environmental Protection Office (EPO).

3.4 Cultural Resources – Reclamation will continue to coordinate with the CRIT Museum department and CRIT's Tribal Historic Preservation Officer (HPO) in order to improve current and future proposed projects on CRIT land.

The FEA will be revised to show that a CRIT tribal monitor will be requested to be at the site during construction activities. Both the CRIT Tribal HPO and Museum will be properly coordinated with on this and future projects.

3.13 Cumulative Effects – Regarding the proposed bankline repair work at River Mile 165.5 and identified in the DEA under the Cumulative Effects Section, the bankline repair project proposes to address erosion issues along a half mile stretch of Colorado River (river). There are currently steep drop-offs adjacent to the river due to bank erosion that prohibits access to the river at this location. Removal of non-native vegetation overgrowth and restoration of the bankline should address some of the issues noted.

Reclamation staff met with the CRIT's EPO on site on June 4, 2015, to discuss the proposed work. Reclamation will continue work with the CRIT EPO to address concerns and assist in ensuring river access and public safety along the bankline is incorporated into the design. Once a draft design is developed, it will be provided to the CRIT for review and concurrence.

The FEA will also address the culvert repair and maintenance activities associated with the following backwaters in the Cumulative Impacts Section: No Name Lake, Ahakhav, Deer Island, and Aha Quin. Reclamation will continue work with the CRIT to address concerns related to the CRIT management of the backwaters and maintenance requirements. As agreed upon at the September 14th meeting, Reclamation and the CRIT EPO and Ahakhav Director will meet with Reclamation on October 23rd to discuss the technical aspects of the project. Reclamation stated that due to the acquisitions and permitting process, culvert replacement activities would occur during the 2016/2017 low water time period of November through February.

4.1 Agencies Consulted – The DEA was provided to the CRIT Chairman, Water Resources Department (WRD), and the Tribal HPO on March 16, 2015, for a 30-day review period. As requested at the July 27th meeting, all future CRIT coordination will be conducted through the CRIT Attorney General's Office. Specifically, at the September 14th meeting, I was informed that Mr. Doug Bonamici will be Reclamation's point of contact from this point forward.

3.3 Biological Resources (EPO Site Review) – Regarding the Quien Sabe wash fan, removal of the wash fan will avoid and minimize impacts to existing wetland and riparian vegetation. The goal is to remove as much accumulated sediment as allowable under the U.S. Army Corps of Engineers (USACE) Regional General Permit (RGP) No. 62 (*Bureau of Reclamation Operation and Maintenance Activities Lower Colorado River*) permit requirements to ensure the wash fan material will not impact the river's flows and redirect them to the opposite bankline causing property loss to CRIT land. Prior to removal of this wash fan, Reclamation will coordinate with the Tribal EPO to mark environmental sensitive areas to avoid.

As indicated by the Tribal EPO, Reclamation will work with the Tribal EPO to select the access roads that will meet both parties' requirements and avoid unnecessary impacts to area resources.

Response to other questions and comments from the Tribal EPO:

- a. The overall purpose of the proposed upland project is to capture as much upland sediment material before it reaches the main river channel, therefore reducing the amount of maintenance required to operate the river efficiently and effectively. This activity is not designed to alleviate navigation hazards for recreational access, but ensuring the river will not change course. However, recreational use on the river can benefit from this project. This project can be

considered a long term solution; however, success is all dependent on the frequency, intensity, and size of rain storm events.

- b. The cost of removing the Paradise Point wash fan was about \$130,000. This action only removed a limited amount of material, per RGP 62 permit requirements. After the Paradise Point wash fan was removed by Reclamation in 2013, follow up coordination with CRIT's WRD and area residents resulted in working cooperatively to allow use of our 404 permit by area residents to return to the project area this past winter and remove additional material along the shoreline in order to reestablish river access to the Paradise Point resort. The initial net cost to install the proposed upland control structures is roughly the same as continuing the removal of wash fans in the river. If successful, we will see the benefit coming in the form of reduced frequency of maintenance activity, smaller material in the river accumulates and creates wash fans less frequently and larger material is captured upland in smaller quantities than we now remove.
- c. Not all wash fans have cobble material. Based on our past experiences in removing wash fans along the lower river, each site's material base is unique. Our current practice when removing wash fans is to leave a portion of the wash fan in place for spawning habitat, if required, and/or place cobble material, if available, back into the river.
- d. The proposed structures are not meant to alter the washes. As indicated by the CRIT WRD the washes have been altered upstream and near the resort areas. This action will help capture sediment (some sand and larger debris). The structures will act as filters and allow water to seep through and trap as much material as possible.
- e. Wash fan removal activities are dictated by several factors: frequency and size of a rain storm events, the probability for impacting the opposite side bankline, and emergency situations where sediment accumulation can impact adjacent property. Additionally, the ongoing drought we are currently experiencing impacts the scheduling of wash fan removal and seeking alternative solutions, in this case the proposed project. All river activities are conducted under the auspices of the Colorado Front Work and Levee System Act.
- f. Vegetation will not grow on the caged gabions because maintenance activities will be conducted to repair them and remove sediment and debris. However, adjacent areas in the lower spots closest to the structures could colonize with new vegetation. Vegetation may grow in the adjacent areas, all dependent of rain storm events and public use of the areas. The areas selected for construction are highly impacted by off road vehicle use and ephemeral stream erosion.
- g. There is opportunity for Reclamation to assist the Tribal EPO in future restoration projects. Reclamation has previously provided funding to CRIT via grant agreements for riparian activities at the Ahakhav Tribal Preserve under the Endangered Species Program and improving the West Channel's culvert crossing under the Technical Assistance Program. Both programs are available for CRIT to apply and use for small scale restoration projects.
- h. The banklines located directly across from the Paradise Point and Quien Sabe washes are armored. These banklines require continuous monitoring and repairs due to the constant pressure the flow of the river coming from the wash fans creates. The wash fans push the flow into the opposite side of the channel, creating a deep narrow channel along the bank which, left unchecked, will undercut the bankline armoring present. To ensure that the integrity of the

bankline is not compromised, this proposal along with wash fan maintenance activities alleviates this issue.

Reclamation projects along the river are designed to avoid and minimize impacts to the environment. In this case, the structures will be placed in areas already impacted by off road vehicle use. Wash fan removal activities target the sandbars. Wetland and native riparian vegetation would not be impacted. However, during emergency situations certain vegetation types would need to be impacted if a large rain event poses threats to life and/or property.

Tribal EPO suggested an EIS be prepared for the proposed Uplands Sediment Control Project. An EA was prepared for this action because the activities listed in the EA have been limited to previously disturbed areas, and overall impacts have been reduced through the Management and Mitigation Measures listed in the EA.

WRD Review – Regarding the issue of maintenance responsibility for the upland structures, Reclamation will have sole responsibility for the upkeep of the proposed structures as mention in the DEA under Section 2.2.3.2 (*Maintenance Activities*). Reclamation will monitor and perform routine maintenance on them so that they will function as designed and not impact adjacent properties. As indicated by CRIT's WRD, the upstream wash areas have been altered; these structures will benefit CRIT by reducing sediment accumulation in the river. Proposed structures under this project are designed to capture sediment and debris, and will not alter flow and cause impacts to adjacent CRIT property.

Regarding issues associated with the West Channel located at the CRIT Aha Quin Resort, this area falls outside the scope of the current proposed Uplands Wash Sediment Control Project's DEA. However, as mentioned in the September 14th meeting, a discussion of the Aha Quin backwater will be included in the FEA under the Cumulative Effects Section. In order to identify a long term solution, Reclamation and CRIT will meet on January 6, 2016, and begin working cooperatively to develop feasible solutions for the West Channel issue.

In the past years, Reclamation has worked closely with the WRD, and will continue to maintain the lines of communication and the positive working relationship with the WRD and with the EPO. Following are examples of projects that both CRIT and Reclamation have achieved:

- In 2008, Reclamation replaced the culvert crossing and removed a sandbar at Manson's Wash.
- In response to area sedimentation concerns raised by the Aha Quin Resort, in 2012 a grant agreement (No. R12AP34010) in the amount of \$75,000 and a subsequent modification (Modification No. 1) to the grant in the amount for \$40,000 was awarded to CRIT under Reclamation's Technical Assistance Program for the CRIT Channel Improvement and Bankline Stabilization Project. The grant agreement allowed the following activities to be funded:
 - Excavating and removal of roadbed material (250 feet long) located above the existing non-functioning West Channel culvert.
 - Removal and replacement of the existing (480-inches x 60-feet) galvanized culvert pipe.
 - Backfill of site area with existing soil and additional roadbed above culvert (approximately 2,300 yards)
 - Cleaning, clearing, armoring, and re-vegetation of streambed channel in immediate proximity of the new water conveyance channel crossing area.

Cultural Review – The proposed Uplands Wash Sediment Control project has been scaled down to minimize ground disturbance and to avoid any potential impacts to cultural resources in the surrounding area. To avoid and minimize impacts to cultural resources located in the surrounding upland areas, the structures will be placed on the east side of Highway 95, in areas that have been previously impacted by off road vehicle use, and along the path of washes which has been previously eroded by rain storm events.

Based on our July 27th meeting, proposed project activities will not occur on the adjacent bluff area of the Quien Sabe wash. There is flexibility in the placement of the structures to avoid impacting any cultural sites that may be located within the current construction boundary. Prior to installation of the upland structures, Reclamation will contact CRIT's Tribal HPO to request a tribal monitor be present during construction activities.

In summary, Reclamation will amend the DEA to incorporate the changes described herein and will provide a copy to you by early-December. As requested at the September 14th meeting, Reclamation is working on developing a Parker Division Comprehensive Program Plan (Plan) for the Parker Division and a copy will be made available to the CRIT. The Plan is expected to identify work in the Parker Division for the next three to five years.

In closing, I want to extend my appreciation to you, the Tribal Council, and your staff for working with us in resolving the concerns raised by the CRIT. Also as requested, all future formal communication will be addressed to the CRIT Chairman's office with copies to each department identified in your May 14th letter.

I look forward to continuing to work with you on this project and future projects along the river. If there are any questions related to the FEA, please contact Mr. Julian DeSantiago, Environmental Planning and Compliance Group Manager, at 928-343-8259 or jdesantiago@usbr.gov.

Sincerely,

MARIA RAMIREZ

Maria Ramirez
Area Manager

cc: Colorado River Indian Tribes
Mr. Doug Bonamici
Law Clerk, Attorney General
26600 Mohave Road
Parker, AZ 85344

Colorado River Indian Tribes
Mr. Grant Buma
Water Resources Department
26600 Mohave Road
Parker, AZ 85344

cc: Continued on next page.

Continued from previous page.

Colorado River Indian Tribes
Ms. Wilene Fisher-Holt
Director
Tribal Historic Preservation Officer
26600 Mohave Road
Parker, AZ 85344

Colorado River Indian Tribes
Mr. Carl Harper
Director
Fish and Game
26600 Mohave Road
Parker, AZ 85344

Colorado River Indian Tribes
Mr. Scott Hildebrand
Manager, Water Wheel and Aha Quin Resorts
26600 Mohave Road
Parker, AZ 85344

Colorado River Indian Tribes
Mr. Tom Iezzi
Manager, Paradise Point Resort
26600 Mohave Road
Parker, AZ 85344

Colorado River Indian Tribes
Ms. Rebecca A. Loudbear
Attorney General
26600 Mohave Road
Parker, AZ 85344

Colorado River Indian Tribes
Mr. Wilfred J. Nabahe
Environmental Protection Office
26600 Mohave Road
Parker, AZ 85344

Colorado River Indian Tribes
Tribal Council
26600 Mohave Road
Parker, AZ 85344

2000 Scott
6200 Lee
7000

7001
~~7200~~
7210 Heatwole

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MAR 13 2015

YAO-7210
ENV-7.00

MEMORANDUM

To: Field Supervisor, Ecological Services Field Office, United States Fish and Wildlife Services,
2321 West Royal Palm Road, Suite 103, Phoenix, AZ 85012-4951
Attention: Ms. Lesley Fitzpatrick

From: Julian DeSantiago
Manager, Environmental Compliance and Planning Group

Subject: Informal Section 7 Consultation for the Proposed Upland Wash Sediment Control Project

In accordance with Section 7 of the Endangered Species Act, as amended, please consider the attached Environmental Assessment for the Upland Wash Sediment Control Project as our Biological Assessment. The proposed project would capture upland sediment before it reaches the Colorado River (River) channel, therefore reducing the amount of maintenance required to operate the River efficiently and effectively. Capturing and controlling sediment prior to its introduction into the River has the potential to minimize river channel constrictions, thus maintaining more efficient channel capacities for water delivery. Reducing wash fan deposits within the River channel should lessen the need to deploy heavy equipment into the River channel to conduct removal operations, minimizing impacts to bankline soils, aquatic species, and riparian vegetation.

Based on the analysis of potential effects of the proposed action, we have determined that the project "may effect, but is not likely to adversely affect" the razorback sucker (*Xyrauchen texanus*), Yuma clapper rail (*Rallus longirostris yumanensis*), the Sonoran and Mojave desert tortoises (*Gopherus agassizii*), the southwestern willow flycatcher (*Empidonax traillii extimus*), and the yellow-billed cuckoo (*Coccyzus americanus*). We ask for your concurrence with our determination of effects for these species, based on implementation of management and mitigation measures that will avoid and minimize impacts to endangered species by avoiding the habitat of these species.

As always, we appreciate your timely responses to such requests. Please do not hesitate to contact Mr. Nicholas Heatwole at 929-343-8111, or by electronic mail at nheatwole@usbr.gov, with any questions or comments regarding this request.

Attachment

7001
~~7200~~ DeSantiago (w/o att)
7210 Heatwole (w/o att)

WBR:NHeatwole:ptsosie:03/11/2015:928-343-8111
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United States Department of the Interior

U.S. Fish and Wildlife Service

Arizona Ecological Services Office

2321 West Royal Palm Road, Suite 103

Phoenix, Arizona 85021-4951

Telephone: (602) 242-0210 Fax: (602) 242-2513 OFFICIAL FILE COPY - YAO



In reply refer to:

AESO/SE

02EAAZ00-2013-I-0286

April 16, 2015

RECEIVED DATE APR 23 2015

IMH Code

ENV-8.00

Control No.

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Folder No.

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Memorandum

Project Name/No.

3437

To: Manager, Bureau of Reclamation, Environmental Planning and Compliance Group,
Yuma Area Office, Yuma, Arizona (YAO-7210: J. DeSantiago)

From: Field Supervisor

Subject: Wash Sediment Control Project (Parker and Palo Verde Divisions), La Paz County,
Arizona and Riverside County, California

Thank you for your correspondence and Biological Assessment (BA) dated March 13, 2015, received in our office on March 18. This memorandum responds to your request for Fish and Wildlife Service (FWS) concurrence, under section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.), with your determination for construction and maintenance of upland sediment control features in the Parker and Palo Verde divisions of the Colorado River in La Paz County, Arizona and Riverside County, California, as a covered action under the Lower Colorado River Multi-Species Conservation Program (LCR MSCP). This memorandum serves as our FWS concurrence for this project under the ESA and Fish and Wildlife Coordination Act (48 stat. 401, as amended; 16 U.S.C. 61 et seq.). You determined that construction and maintenance of upland sediment control features "may affect, but is not likely to adversely affect" the razorback sucker (*Xyrauchen texanus*), Yuma clapper rail (*Rallus longirostris yumanensis*), Sonoran and Mojave desert tortoises (*Gopherus agassizii*), southwestern willow flycatcher (*Empidonax traillii extimus*), and yellow-billed cuckoo (*Coccyzus americanus*). We concur with your determination and provide our rationale below.

A complete description of the proposed action is found in the BA, dated March 2015. Reclamation proposes to construct a series of debris barriers and check dams in side channels along the Colorado River to control and eliminate sediment wash fans in the main river channel. Reducing wash fan deposits should lessen the need to use heavy equipment in the main river channel to remove these channel hazards. Six locations have been selected for construction of upland sediment control structures. Three will be implemented as part of the current action; including Mule Wash, Paradise Point, and Quien Sabe.

Sediment control structures will consist of a series of debris barriers or check dams in each wash, or a combination of both. These barriers will be used to capture or reduce downstream movement of sediment, cobble, large rocks, boulders, and floating debris during high-velocity flow events. Structures will be constructed perpendicular to the stream channel and may include downstream toe protection and/or energy dissipation measures such as gabions and rock-filled Reno mattresses. Structures that allow smaller debris to pass through the entire river to provide

Uplands Wash Sediment Control Project

spawning habitat for fish are preferable and will be used when practical. For each structure, Reclamation will perform operation and maintenance activities periodically and as needed to maintain function of the structures. These activities will include removal of accumulated sediment and repair to barrier or dam structures. Accumulated sediment will be taken off site and used for access road maintenance and/or placed along river shorelines to enhance fish spawning habitat.

A complete description of the proposed management and mitigation measures are outlined in the BA. The following measures are especially pertinent to the effects of the action on listed and proposed listed species:

- Project construction limits and activities will be restricted to highly disturbed areas in order to avoid and minimize impacts to native vegetation and wildlife to the extent practical.
- All construction will target areas closest to the river and existing roads (Highway 95 and bankline access roads) in order to minimize impacts to undisturbed desert wash riparian vegetation located in higher upland areas.
- Staging areas and improvements to access roads would be limited to previously disturbed areas and located away from the main wash.
- All construction equipment will be cleaned and free of plant parts before moving into construction sites.
- Trash and food materials will be properly contained within vehicles or closed refuse bins while on site, and will be regularly removed from the construction site for proper disposal.
- Worker training will be provided to construction personnel prior to commencing activities on resource protection measures.
- In coordination with the United States Army Corp of Engineers, FWS and state wildlife agencies, cobble material removed from behind the upland structures during maintenance activities may be placed along the river shorelines to enhance fish spawning habitat in the area.

We concur with your determination that the proposed action may affect, but is not likely to adversely affect razorback sucker, Yuma clapper rail, Sonoran and Mojave desert tortoises, southwestern willow flycatcher, and yellow-billed cuckoo for the following reasons:

- Razorback suckers will not be affected by this action because all project activities, and use of heavy equipment, will be conducted away from the main river channel, where fish are present.
- The project locations are in heavily disturbed areas with few scattered riparian trees, and most trees are along the main river channel. Limited vegetation removal is required for this action.
- Yuma clapper rail will not be affected by this action because there is no habitat (wetland vegetation) in the project area and birds are unlikely to be present.
- Southwestern willow flycatcher will not be affected by this action because there is little to no habitat (riparian trees) in the project area and birds are unlikely to be present.

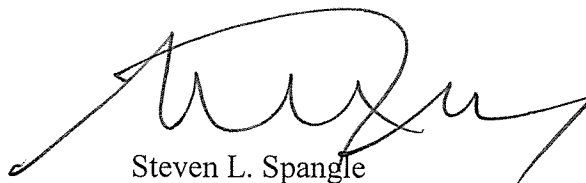
- Yellow-billed cuckoo will not be affected by this action because there is little to no habitat (riparian trees) in the project area and birds are unlikely to be present.
- It is not likely that the Mojave population of desert tortoises will be affected by this action because the project is limited to highly disturbed areas where tortoises are unlikely to be present. There is no critical habitat in the project area.

Additionally, the proposed project occurs within the range of the candidate Sonoran desert tortoise. We are currently conducting a review of the Sonoran desert tortoise to determine whether it should be proposed for listing or withdrawn from candidate status. We recommend coordination with the Arizona Game and Fish Department, and incorporation of their Guidelines for Handling Sonoran Desert Tortoises Encountered on Development Projects (<http://www.azgfd.gov/hgis/pdfs/Tortoisehandlingguidelines.pdf>) into the proposed project.

FWS recommends monitoring river shorelines and vegetation downstream of the confluence of each wash and the River for indications of increased erosion due to loss of upland sediment input. Excessive erosion which causes loss of vegetation may be of concern because vegetation often provides habitat for wildlife, including listed species. Reclamation should document the completion of the proposed action in the appropriate annual report for LCR MSCP covered activities.

Thank you for your efforts to conserve threatened and endangered species. No further section 7 consultation is required for this project at this time. Should project plans change, or if information on the distribution or abundance of listed species or critical habitat becomes available, this determination may need to be reconsidered. In all future correspondence on this project, please refer to the consultation number 02EAAZ00-2013-I-0286. We also encourage you to coordinate the review of this project with the Arizona Game and Fish Department.

Should you require further assistance or if you have any questions, please contact Jessica Gwinn (x249) or Lesley Fitzpatrick (x239).



Steven L. Spangle

cc: Program Manager, LCR MSCP, Bureau of Reclamation, Boulder City, NV (LC-8000)
Federal Projects, Fish and Wildlife Service, Phoenix, AZ
Mr. William Miller, Corps of Engineers, Phoenix, AZ
Ms. Marjorie Blaine, Corps of Engineers, Tucson, AZ

Chief, Habitat Branch, Arizona Game and Fish Department, Phoenix, AZ (pep@azgfd.gov)
Brian Wooldridge, Fish and Wildlife Service, Flagstaff, AZ (brian_wooldridge@fws.gov)
Jeff Servoss, Fish and Wildlife Service, Tucson, AZ (jeff_servoss@fws.gov)
Greg Beatty, Fish and Wildlife Service, Phoenix, AZ (greg_beaty@fws.gov)
Susan Sferra, Fish and Wildlife Service, Tucson, AZ (susan_sferra@fws.gov)

MAR 05 2015

YAO-7210
ENV-3.00

CERTIFIED – RETURN RECEIPT REQUESTED (70122210000130194610)

Mr. James Garrison
State Historic Preservation Office
Arizona State Parks
1300 West Washington
Phoenix, AZ 85007

Subject: Consultation Under Section 106 of the National Historic Preservation Act for the
Construction of Upland Wash Sediment Control Structures in Mule Wash and
Gould Wash in La Paz County, Arizona

Dear Mr. Garrison:

The Bureau of Reclamation, Yuma Area Office, is planning to construct upland wash sediment control structures at Mule Wash North and Mule Wash South (Mule Wash) and Gould Wash North and Gould Wash South (Gould Wash) in La Paz County, Arizona (Enclosure 1). This is a federally funded project and meets the definition of an undertaking subject to Section 106 review under 36 CFR Part 800.16(y). The project area of potential effect (APE) is a total of 195.6 acres.

Reclamation contracted with EnviroSystems Management (ESM) of Flagstaff, Arizona, for cultural resources surveys in the construction planning areas. The areas surveyed by ESM exceed the size of the APEs. The methodology and result of the survey is described in the enclosed report titled: *Class III Cultural Resources Inventory of 671 Acres for the Upland Wash Control Structures Project, Palo Verde and Parker Divisions on the Lower Colorado River, Yuma County, Arizona* (Enclosure 2).

Reclamation has completed a review of the undertaking in compliance with Section 106 of the National Historic Preservation Act (36 CFR Part 800) and has enclosed a document titled: *Review under Section 106 of the National Historic Preservation Act for the Construction of Sediment Control Structures at Mule Wash and Gould Wash in La Paz County, Arizona* (Enclosure 3). Historic properties are located in the APE and Reclamation is consulting on our finding of No Adverse Effect for the undertaking. Additionally, Reclamation is concurrently consulting with the tribes regarding scoping, identification of historic properties, and our assessment of effect upon them in coordination with the National Environmental Policy Act as defined in 36 CFR 800.8.

Reclamation is providing the enclosed survey report and Section 106 review for your review and comment. If you have questions or concerns regarding the undertaking please contact Mr. James Kangas, Archaeologist, at 702-293-8392 or jkangas@usbr.gov, within 30 days of receiving this letter.

Sincerely,

MARIA RAMIREZ

Maria Ramirez
Area Manager

Enclosures – 3

cc: Mr. John Kalish
Field Manager
Bureau of Land Management
Palm Springs South Coast Field Office
1201 Bird Center Drive
Palm Springs, CA 92262

Mr. John MacDonald
Field Manager
Bureau of Land Management
Yuma Field Office
2555 East Gila Ridge Road
Yuma, AZ 85365

Ms. Jill McCormick
Cultural Resource Manager
Cocopah Indian Tribe
14515 South Veterans Drive
Somerton, AZ 85350

Ms. Wilene Fisher-Holt
Tribal Historic Preservation Officer
Colorado River Indian Tribes
26600 Mohave Road
Parker, AZ 85344

Ms. Arlene Kingery
Tribal Historic Preservation Officer
Quechan Indian Tribe
P.O. Box 1899
Yuma, AZ 85366
(w/encls to each)

bc: LC-2631 (w/o encls)

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7210 Heatwole (w/encls)

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Douglas A. Ducey
Governor

Sue Black
Executive Director

DOE N/AE

State Parks Board
R.J. Cardin, Chairman
Kay Daggett, Vice-Chairman
Walter D. Armer Jr., Vail
Mark Brnovich, Phoenix
Alan Everett, Sedona
Larry Landry, Phoenix

In reply, refer to SHPO-2015-0243(124393)

March 25, 2015

Maria Ramirez
Area Manager
Bureau of Reclamation
Yuma Area Office
7301 Calle Agua Salada
Yuma, AZ 85364
Attn: James Kangas

Re: Mule Wash and Gould Wash Sediment Control Structures, La Paz County, Arizona

Dear Ms. Ramirez:

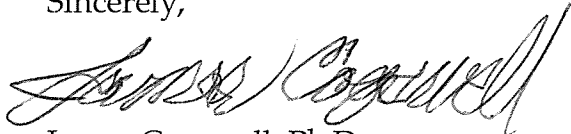
Thank you for consulting with the Arizona State Preservation Office on the above-referenced undertaking pursuant to the implementing regulations of the National Historic Preservation Act. I have reviewed the cultural resources survey report, "Class III Cultural Resources Inventory of 671 Acres for the Upland Wash Control Structures Project, Palo Verde and Parker Divisions on the Lower Colorado River, Yuma County, Arizona," as well as the project and cultural resources review produced by Mr. James Kangas, dated February 18, 2015, and your March 5, 2015 cover letter. To this end, I have the following comments:

1. I concur with your determinations that the newly recorded archaeological sites AZ R:10:94(ASM) and AZ R:10:96(ASM) are not eligible for listing in the National Register of Historic Places (NRHP).
2. Concerning the newly recorded historic Yuma-Ehrenberg Road, AZ R:10:99(ASM), I do not believe that the consultant provided sufficient information to document the significance of the road in its entirety for an NRHP eligibility determination. However, the consultant did document that the segment of the road within the undertaking's Area of Potential Effects (APE) has lost sufficient integrity to make it an ineligible, non-contributor to that road.
3. I agree with the report's conclusion that it is highly likely that site BLM AZ-050-677 has been destroyed, particularly because survey in the surrounding area failed to locate an equivalent site.
4. Concerning site AZ R:10:1(ASM), the Ripley Intaglio Complex, I concur that the proposed activity within the Mule Wash North APE will occur within a non-contributing component of the site that has been significantly compromised by prior disturbance and where no cultural materials were identified (report page 22). Thus, there should be no direct adverse effects. However, the report (Figure

- 4) shows numerous unspecified features on the uplands in proximity to the Mule Wash North APE. If these are intaglios or other features where lines of sight may be important, there may be indirect, visual adverse effects to these features that would be beyond my ability to discern. Because of this, I recommend that the Bureau of Reclamation consult with the appropriate Native American Tribes, perhaps including a site visit, to see if they have concerns about visual or other effects to these features.
5. Subject to any Tribal concerns, I concur with your finding of No Adverse Effect for the project as proposed.
 6. Has the Bureau of Reclamation investigated (smaller?) erosion control techniques upstream that would reduce or eliminate the need of these planned structures? Otherwise, it seems to me that Reclamation will eventually face the same problem once these planned control structures fill up with sediment. Won't the streams then overflow and discharge sediment into the Colorado River?

Please keep this office informed of your consultation efforts with Native American Tribes, the Bureau of Land Management, and the Arizona State Land Department, particularly if they raise any issues or concerns. As always, I appreciate your cooperation with this office in support of historic preservation requirements. If you have any questions or concerns, please feel free to contact me at 602/542-7142, or email me at jcogswell@azstateparks.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'James Cogswell', written in a cursive style.

James Cogswell, Ph.D.
Archaeological Compliance Specialist
State Historic Preservation Office

JAN 21 2015

YAO-7210
ENV-3.00

CERTIFIED MAIL – RETURN RECEIPT REQUESTED (70122210000130194481)

Ms. Carol Rowland-Nawi
California State Historic Preservation Officer
1725 23rd Street, Suite 100
Sacramento, CA 95816

Subject: Consultation on a Finding of No Historic Properties Affected for the Construction of
Sediment Control Structures in the Paradise Point Wash and Quien Sabe Wash in Riverside
County, California

Dear Ms. Rowland-Nawi:

The Bureau of Reclamation, Yuma Area Office, is planning to construct sediment control structures at Paradise Point Wash located in Township 4 South, Range 23 East, Sections 2 and 11 (USGS Big Maria Mountains SE Quad, California-Arizona, San Bernardino Meridian), and Quien Sabe Wash located in Township 3 South, Range 23 East, Sections 11 and 14 (USGS Big Maria Mountains NE Quad, California-Arizona, San Bernardino Meridian), near their confluences with the Colorado River. The project areas of potential effect (APE) are 65 and 64 acres respectively. See enclosed location map (Enclosure 1).

Reclamation contracted with EnviroSystems Management (ESM) of Flagstaff, Arizona, for cultural resources surveys within both washes. In addition to conducting a survey of the APEs, ESM surveyed a total of 126 acres at Paradise Point Wash and 114 acres at Quien Sabe Wash. The methodology and result of the surveys are described in the enclosed report titled *Class III Cultural Resources Inventory of 240 Acres for Upland Wash Control Structures Project, Palo Verde and Parker Divisions on the Lower Colorado River, Riverside County, California* (Enclosure 2).

Reclamation has completed a review of the undertaking in compliance with Section 106 of the National Historic Preservation Act (36 CFR Part 800). Please find the enclosed document titled *Review under Section 106 of the National Historic Preservation Act for the Construction of Sediment Control Structures at Paradise Point and Quien Sabe Washes in Riverside County, California* (Enclosure 3). No Historic Properties are located in the APEs. Therefore, Reclamation has made a finding of No Historic Properties Affected for the undertaking.

Reclamation is providing the enclosed survey report and Section 106 review for your review and comment. If you have questions or concerns regarding the undertaking please contact

Mr. James Kangas, Archaeologist, at 702-293-8392 or jkangas@usbr.gov within 30 days of receiving this letter.

Sincerely,

MARIA RAMIREZ

Maria Ramirez
Area Manager

Enclosures – 3

cc: Mr. John MacDonald
Field Manager
Bureau of Land Management
Yuma Field Office
2555 East Gila Ridge Road
Yuma, AZ 85365

Mr. John Kalish
Field Manager
Bureau of Land Management
Palm Springs South Coast Field Office
1201 Bird Center Drive
Palm Springs, CA 92262

Ms. Arlene Kingery
Tribal Historic Preservation Officer
Quechan Indian Tribe
P.O. Box 1899
Yuma, AZ 85366

Ms. Jill McCormick
Cultural Resource Manager
Cocopah Indian Tribe
14515 South Veterans Drive
Somerton, AZ 85350

Ms. Wilene Fisher-Holt
Tribal Historic Preservation Officer
Colorado River Indian Tribes
26600 Mohave Road
Parker, AZ 85344
(w/encls to each)

bc: LC-2631 (w/o encls)

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Control No. 15005922

Folder No. 1312348-0

Project Name/No.
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Cultural Resources - National Historic Preservation Act

**OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION**

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SACRAMENTO, CA 95816-7100
(916) 445-7000 Fax: (916) 445-7053
calshpo@parks.ca.gov
www.ohp.parks.ca.gov



February 26, 2015

Reply in Reference To: BUR_2015_0128_001

Maria Ramirez, Area Manager
Bureau of Reclamation, Lower Colorado Region
Yuma Area Office
7301 Calle Agua Salada
Yuma, AZ 85364

RE: Sediment Control Structures in the Paradise Point Wash and Quien Sabe Wash, Riverside County, California; (YAO-7210, ENV-3.00).

Dear Ms. Ramirez:

Thank you for seeking my consultation regarding the above noted undertaking. Pursuant to 36 CFR Part 800 (as amended 8-05-04) regulations implementing Section 106 of the National Historic Preservation Act (NHPA), the Bureau of Reclamation (Reclamation) is seeking my comments regarding the effects that the above named project will have on historic properties.

Reclamation proposes to construct sediment control structures in the Paradise Point Wash and Quien Sabe Wash near their confluence with the Colorado River. This will involve installation of check dams (gabions filled with rock) requiring a six foot wide trench excavated to a depth of four feet for each of the gabions. The length of these trenches will vary between 50 and 250 feet long. A series of debris fences consisting of chain link fencing on six foot poles will be installed in the trenches ranging in length from fifty to 100 feet long and spaced fifteen to sixteen feet below the floor of the trench. After backfilling, the fence will extend three feet above the grade of the wash channel. An operations and maintenance road will be constructed to facilitate equipment access and staging; using existing piles of old wash fan material. These roads will range between 300 and 500 feet long and 24 feet wide. Access to the project location will be on existing roads.

In addition to your letter received January 28, 2015, you have submitted the *Class III Cultural Resources Inventory of 240 Acres for the Upland Wash Control Structures Project, Palo Verde and Parker Divisions on the Lower Colorado River, Riverside County, California* (EnviroSystems Management, Inc., August 12, 2014) and the *Review under Section 106 of the National Historic Preservation Act for the Construction of Sediment Control Structures at Paradise Point and Quien Sabe Washes in Riverside County, California* (Kangas, December 9, 2014) as evidence of your efforts to identify and evaluate historic properties in the project APE.

Archival research included a records search at the Bureau of Land Management, Yuma Field Office; Eastern Information Center in July 2014; and Arizona State Museum AZSITE online database. No previously recorded cultural resources were identified within the APE. A pedestrian surface survey was conducted on April 24-25, 2014, utilizing transects at fifteen meter intervals,

of the APE and a surrounding buffer zone. The Class III inventory report (August 2014) states no cultural resources were identified within the Quien Sabe Wash APE and describes eleven “*Isolated Occurrences (IO)*” found during the pedestrian survey at the Paradise Point Wash location:

IO#	Description	Age
1	Large historic-era trash dump	1960s-1970s
2	Historic-era trash dump	1960s-1970s
3	Sparse lithic scatter	prehistoric
4	Historic-era trash dump	1960s-1970s
5	Historic-era trash dump	1960s-1970s
6	1958 cadastral marker	1960s-1970s
7	Mining claim	1960s-1970s
8	Large historic-era trash dump	1960s-1970s
9	Historic-era trash dump	1960s-1970s
10	Rock circle: forty foot diameter, interior rock piles and pathways	Prehistoric (listed in submitted documentation as post 1970s)
11	Historic-era trash dump	1960s-1970s

The document also states that only nine of the above “*IOs*” are within the APE for the project; however, mapping provided shows all eleven resources within the APE. The “*Isolated Occurrences*” appear to not be considered archaeological resources due to the statement, “*no cultural resource sites....were identified within the two parcels.*” However, ten of the IOs meet the definition of an archaeological site. Page 19 of the Class III inventory also states “*all of the IO’s are modern/recent or historic in affiliation.*” Historic-era sites as well as prehistoric sites must be considered under Section 106 of the National Historic Preservation Act (NHPA). In addition, two of the above listed IOs are prehistoric sites. All of the IOs are archaeological sites except the 1958 cadastral marker which is considered an isolate. All meet the 45 year threshold for identification efforts which takes into considered a lag time to accommodate any resource that may reach fifty years in age prior to construction.

Insufficient documentation was provided regarding Native American Consultation being conducted for this project. The only possible evidence was found in your January 21, 2015 submission letter stating the letter was “cc’d” to the Cocopah and Colorado Indian Tribes. Besides not complying with 36 CFR §800.2(4)(c) this is of further concern because in the Class III Inventory report (August 2014), IO#10, a rock circle with interior rock piles was listed as dating to post-1970. Had consultation been conducted for this project, it would likely have been revealed that this feature is a possible geo-glyph, prehistoric in origin and occurs throughout the region. Photos of similar geo-glyphs can be obtained through an internet search which I found associated with the Cocopah Tribe in a cursory search. Because of changes in settlement patterns and migration throughout prehistoric times, tribal land boundaries are not static. Consultation should, at a minimum, be conducted with the following Native American groups:

- Yuma Indians: Cocopah, Hualapai, Mohave, Quechan Tribes;
- Halichidhoma: Colorado River Reservation;
- Mohave: Chemehuevi Tribes;

Pursuant to 36 CFR §800.4(d)(1) Reclamation has determined there will be *No Historic Properties Affected* by the proposed project. I do not concur with this finding based on the information provided. Please supply the following information:

1. Portions of the APE lie on land under the jurisdiction of the Bureau of Land Management (BLM). Will the BLM be consulting on this project in addition to Reclamation? Has the BLM agreed to defer lead agency status for this project to Reclamation? If so please provide documentation from BLM stating Reclamation is acting as lead agency.
2. The APE map in the Class III report is different in than the Section 106 review document (December 2014). The December 2014 APE shows a larger APE in both the Quien Sabe Wash and Paradise Point Wash locations. The area surveyed was only described in acres; no map was provided. Please provide a map of the area surveyed in relation to the APE.
3. Provide documentation of Native American consultation as discussed above. Include who was contacted, the date(s) of contact, date(s) of follow-up calls, comments or lack of comments received and Reclamation response(s) to comments. Please provide a sample copy of the initial consultation outreach letter.
4. Page 21 of the Class III Inventory states there were eleven IOs recorded. The Advisory Council of Historic Preservation (ACHP) defines an archaeological site as "*a location that contains the physical evidence of past human behavior that allows for its interpretation.*" Please provide the site records for these resources on the appropriate DPR 523 recordation forms(s).
5. Reclamation has stated that no historic properties lie within the APE; however, none of the cultural resources were evaluated. Please provide evaluations for cultural resources within the APE that includes a context statement (historic or prehistoric as appropriate) and evaluation against all four of the NRHP Criteria. Previous surveys in both locations show a number of archaeological sites in the vicinity of both locations in the same topographic, wash environment. The evaluation should also discuss whether each site may be part of an archaeological district.
6. I would also like to add that the addition of the project design plans and photographs in the documents submitted were a great help in understanding the project components and project locations. Their inclusion is much appreciated.

Thank you for seeking my comments and considering historic properties as part of your project planning. I look forward to continuing consultation with you on this project. If you have any questions or concerns regarding archaeological resources, please contact Associate State Archaeologist, Kim Tanksley at (916) 445-7035 or by email at kim.tanksley@parks.ca.gov. Any questions concerning the built environment should be directed to State Historian, Kathleen Forrest at (916)445-7022 or by email at kathleen.forest@parks.ca.gov.

Sincerely,



Carol Roland-Nawi, PhD
State Historic Preservation Officer

APR 30 2015

YAO-7210
ENV-3.00

CERTIFIED – RETURN RECEIPT REQUESTED (70142120000185143065)

Ms. Carol Rowland-Nawi
California State Historic Preservation Officer
1725 23rd Street, Suite 100
Sacramento, CA 95816

Subject: Amended Consultation for the Construction of Sediment Control Structures in the Paradise Point Wash and Quien Sabe Wash in Riverside County, California (BUR 2015 0128 001)

Dear Ms. Rowland-Nawi:

On January 21, 2015, the Bureau of Reclamation's Yuma Area Office initiated a consultation with your office on our finding of effect for the construction of sediment control structures at Paradise Point Wash and Quien Sabe Wash on Reclamation land in Riverside County, California (Enclosure 1). Reclamation also submitted a report describing the methodology and result of the survey conducted for the project that was prepared by EnviroSystems Management (ESM). The report is titled: *Class III Cultural Resources Inventory of 240 Acres for Upland Wash Control Structures Project, Palo Verde and Parker Divisions on the Lower Colorado River, Riverside County, California*.

Initiation and Status of the Section 106 Review

A review of the undertaking was conducted by Ms. Kim Tanksley. On March 3, 2015, we received a response from Ms. Tanksley (dated February 26, 2015) indicating that she did not concur with our finding of effect and requesting additional information.

Since Reclamation initiated the consultation for this undertaking, the size and location of the Paradise Point and Quien Sabe Wash area of potential effects (APEs) has been changed. The smaller revised APEs are now located east of US Highway 95, much closer to the wash's confluences with the Colorado River. The revised Paradise Point Wash APE is approximately 21 acres and is located in Township 4 South, Range 23 East, Sections 2 and 11. The revised Quien Sabe Wash APE is approximately 24 acres and is located in Township 3 South, Range 23 East, Sections 11 and 14 (Enclosures 2, 3, and 4). The design and basic method of construction of the control structures has not changed, but will be scaled down relative to the smaller APEs.

In this letter we would like to clarify some information about the jurisdiction of the Bureau of Land Management of the project lands that was the subject of a comment in Ms. Tanksley's letter.

Portions of the APE lie on land under the jurisdiction of the Bureau of Land Management (BLM). Will the BLM be consulting on this project in addition to Reclamation? Has the BLM agreed to defer lead agency status for this project to Reclamation? If so please provide documentation from BLM stating Reclamation is acting as lead agency.

The maps in the survey report prepared by EMS incorrectly show that the survey area and APEs are on BLM land. Actually, these lands are Reclamation-withdrawn lands under Secretarial Order dated July 7, 1902, and further authorized by the Congressional Act dated January 21, 1927, for the Reclamation's responsibilities authorized under the Colorado River Front Work and Levee System. Additionally, these lands are managed by the BLM solely for recreation and wildlife activities as stipulated in the *Department of the Interior, 613 Departmental Manual: Chapter 1* (DM 613). This is an error that has become embedded in maps that show lands along the lower Colorado River subject to DM 613. The APEs are located completely on Reclamation-withdrawn land. However, Reclamation has discussed the project and consulted with the BLM about the undertaking.

Ms. Tanksley also commented on our efforts to consult with Native American Tribes.

Provide documentation of Native American consultation...Include who was contacted, the date(s) of contact, date(s) of follow-up calls, comments or lack of comments received and Reclamation response(s) to comments. Please provide a sample copy of the initial consultation outreach letter... Consultation should, at a minimum, be conducted with the following Native American groups: Yuma Indians; Cocopah, Hualapai, Mohave, Quechan Tribes; Halichidhoma: Colorado River Reservation; Mohave: Chemehuevi Tribes;

Reclamation recognizes the important role your office plays as a participant in the Section 106 process, and we appreciate your recommendations on how to improve and expedite the process. As the Water Master for the Colorado River, Reclamation routinely meets with and keeps the River Tribes informed about our planned activities related to water and land management on the Colorado River. Consultations with the Tribes on the lower Colorado River can be complicated due to the complexity of tribal relationships and affiliations. For example, members that are enrolled with one Tribe may maintain an affiliation and live in communities and reservations of a different Tribe.

Reclamation previously contacted the California Native American Heritage Commission and consulted with the Quechan Indian Tribe (Fort Yuma Reservation), Cocopah Indian Tribe (Cocopah Indian Reservation), and the Colorado River Indian Tribes (Colorado River Indian Reservation). These Tribes have a demonstrated interest in the area and the project.

Reclamation has not consulted with the Halichidhoma. They were driven out of the area by the Quechan and Mojave Indian Tribes centuries ago and settled on the middle Gila and Salt Rivers (i.e., Salt River Pima-Maricopa Indian Community). The Chemehuevi moved into the void created by the flight of the Halichidhoma. The Chemehuevi people are now spread out over several different federally-recognized tribes including the Colorado River Indian Tribes, which we consulted. Some Chemehuevi also live on the Fort Mojave Indian Reservation. Members of the Fort Mojave Tribe live on the Colorado Indian Reservation and the Fort Mojave Indian Reservation and actively communicate with each other. The Hualapai (People of the Tall Pines) consider themselves to be a mountain peoples. Some enrolled tribal members live at the Fort Yuma Reservation (Quechan Indian Tribe) and the Fort Mojave Indian Reservation (Mojave Indian Tribe), while the majority of the enrolled members live on the Hualapai Indian Reservation in Mohave and Coconino Counties, Arizona.

Reclamation previously consulted with the Quechan Indian Tribe, Cocopah Indian Tribe, and the Colorado River Indian Tribes. However, with the revision of the APEs, Reclamation will amend our consultations with the previously consulted tribes and consult directly with the Fort Mojave and Hualapai Tribes. We have enclosed the sample tribal consultation letters that will be sent concurrently with this letter for your project files (Enclosure 5).

Agency Undertaking Finding of Effect

The APEs are located on Reclamation land in areas that have been adequately surveyed by EMS (Enclosures 6 and 7). No cultural resources sites or traditional cultural properties are located in the APEs. The revision of the APEs coincidentally addresses several of Ms. Tanksley's comments in her letter regarding contemporary cultural manifestations, cultural resource sites, and isolated finds that were identified by EMS during the survey that are now outside of the revised APEs. Therefore, Reclamation is informing you of our finding that no historic properties are in the APE.

Discovery Clause

If during the course of any activities associated with this undertaking, any districts, sites, buildings, structures, or objects not included in this consultation are discovered, activities will cease in the vicinity of the resource. Reclamation shall ensure that the stipulations of 36 CFR Part 800.13 are satisfied before activities in the vicinity of the previously unidentified property resume. If there are changes that involve impact/effect outside of the area that has been surveyed for the project, Reclamation shall initiate a new consultation under 36 CFR Part 800.

If you have questions or concerns regarding this undertaking please contact Mr. James Kangas, Archaeologist, at 702-293-8392 or jkangas@usbr.gov within 30 days of receiving this letter.

Sincerely,

For Michael Norris

Maria Ramirez
Area Manager

Enclosures – 7

bc: LC-2631 (w/o encls)

7001

7200 DeSantiago (w encls)

7210 Heatwole (w/o encls)

WBR:JDeSantiago:ptsosie:04/22/2015:928-343-8259

Rewritten:JDeSantiago:ptsosie:04/29/2015:928-343-8259

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APR 30 2015

YAO-7210
ENV-3.00

CERTIFIED – RETURN RECEIPT REQUESTED (70142120000185143003)

Colorado River Indian Tribes
Attn: Ms. Wilene Fisher-Holt
Tribal Historic Preservation Officer
26600 Mohave Road
Parker, AZ 85344

Subject: Amended Consultation for the Construction of Sediment Control Structures in the Paradise Point Wash and Quien Sabe Wash in Riverside County, California

Dear Ms. Fisher-Holt:

On January 21, 2015, the Bureau of Reclamation's Yuma Area Office initiated a consultation with the Colorado River Indian Tribe on our finding of effect for an undertaking that involves the construction of sediment control structures at Paradise Point Wash and Quien Sabe Wash on Reclamation land in Riverside County, California (Enclosure 1). Reclamation also submitted a report describing the methodology and result of the survey conducted for the project that was prepared by EnviroSystems Management (ESM). The report is titled: *Class III Cultural Resources Inventory of 240 Acres for Upland Wash Control Structures Project, Palo Verde and Parker Divisions on the Lower Colorado River, Riverside County, California.*

Initiation and Status of the Section 106 Review

In the time period that has lapsed since Reclamation initiated the consultation for this undertaking, the size and location of the Paradise Point and Quien Sabe Wash areas of potential effect (APEs) has been changed. The smaller revised APEs are now located east of US Highway 95, much closer to the wash's confluences with the Colorado River. The revised Paradise Point Wash APE is approximately 21 acres and is located in Township 4 South, Range 23 East, Sections 2 and 11. The revised Quien Sabe Wash APE is approximately 24 acres and is located in Township 3 South, Range 23 East, Sections 11 and 14 (Enclosures 2, 3, and 4). The design and basic method of construction of the control structures has not changed, but will be scaled down relative to the smaller APEs.

Agency Undertaking Finding of Effect

The APEs are located on Reclamation land in areas that have been adequately surveyed by EMS (Enclosures 5 and 6). No cultural resources sites are located in the APEs. Therefore, Reclamation is informing you of our finding that no historic properties are in the APE.

Discovery Clause

If during the course of any activities associated with this undertaking, any districts, sites, buildings, structures, or objects not included in this consultation are discovered, activities will cease in the vicinity of the resource. Reclamation shall ensure that the stipulations of 36 CFR Part 800.13 are satisfied before

activities in the vicinity of the previously unidentified property resume. If there are changes that involve impact/effect outside of the area that has been surveyed for the project, Reclamation shall initiate a new consultation under 36 CFR Part 800.

If you have questions or concerns regarding this undertaking please contact Mr. James Kangas, Archaeologist, at 702-293-8392 or jkangas@usbr.gov within 30 days of receiving this letter.

Sincerely,

For

Michael Norris

Maria Ramirez
Area Manager

Enclosures – 6

cc: Ms. Carol Rowland-Nawi
California State Historic Preservation Officer
1725 23rd Street, Suite 100
Sacramento, CA 95816
(w/encls)

bc: LC-2631 (w/o encls)

7001

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7210 Heatwole (w/o encl)

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Rewritten:JDeSantiago:ptsosie:04/29/2015:928-343-8259
Dir:7000\DeSantiago\7200-04.003 (15)



THE COCOPAH INDIAN TRIBE

Cultural Resource Department

14515 S. Veterans Drive

Somerton, Arizona 85350

Telephone (928) 503-2291

Fax (928) 627-3173

CCR-027-15-001

January 30, 2015

James Kangas, Archaeologist
Bureau of Reclamation
Lower Colorado Regional Office
P.O. Box 61470
Boulder City, NV 89006-1470

RE: Consultation on a Finding of No Historic Properties Affected for the Construction of Sediment Control Structures in the Paradise Point Wash and Quien Sabe Wash in Riverside County, California

Dear Mr. Kangas:

The Cultural Resources Department of the Cocopah Indian Tribe appreciates your consultation efforts on this project and would like to thank you for the opportunity to comment on the above referenced project. The Department concurs with your determinations of No Historic Properties Affected for the undertaking.

If you have any questions or need additional information please feel free to contact the Cultural Resource Department. We will be happy to assist you with any future concerns or questions. Again, thank you for your efforts in this matter and we look forward to working with you on future projects.

Sincerely,

H. Jill McCormick, M.A.
Cultural Resource Manager