Arizona Water Protection Fund
FY 2011 Grant Application Review

Application # WPF0396 **Applicant:** City of Yuma

Title of Project: Paradise Cove Riparian and Wetland Restoration Project.

Additional materials were submitted with this application that could not be reproduced and distributed for review. These materials may be reviewed in person at the Arizona Water Protection Fund offices at (3550 N. Central Avenue, 2nd Floor, Phoenix). The additional materials available are the following:

_____ **Maps**
_____ **Photographs**
___X___ **Disk**
_____ **Other**

WPF0396

RECEIVED

SEP 01 2010

Water Protection Fund

Arizona Water Protection Fund
Application Cover Page
FY 2011

Title of Project: Paradise Cove Riparian and wetland Restoration Project

Type of Project:
- [x] Capital or Other
- [ ] Water Conservation
- [ ] Research

Stream Type:
- [x] Perennial
- [ ] Intermittent
- [ ] Ephemeral

Your level of commitment to maintenance of project benefits and capital improvements:
- [ ] < 5 years
- [ ] 5-10 years
- [ ] 11-15 years
- [x] 16-20 years

Applicant Information:

Name/Organization:	City of Yuma
Address 1:	One City Plaza
Address 2:	P.O. Box 13014
City:	Yuma
State:	Arizona
ZIP Code:	85366-3014
Phone:	(928) 373-5195
Fax:	(520) 373-5191
Tax ID No.:	86-6000273

Inside an AMA: Yes [ ] No [x]

If yes, which AMA:
- [ ] Phoenix
- [ ] Tucson
- [ ] Prescott
- [ ] Pinal
- [ ] Santa Cruz

Type of Application:
- [x] New
- [ ] Continuation

Contact Person:

Name:	C. Kevin Eatherly
Title:	CIP Project Manager
Phone:	(938) 373-5195
Fax:	(520) 373-5191
e-mail:	Kevin.Eatherly@YumaAZ.gov

Any Previous AWPF Grants:
[x] Yes [ ] No

If yes, please provide Grant #(s):
04-124WPF

Arizona Water Protection Fund Grant Amount Requested:

$889,842.35

If the application is funded, will the Grantee intend to request an advance:
[x] **Yes** [ ] **No**

Matching Funds Obtained and Secured:

Applicant/Agency/Organization:	Amount ($):
1. Applicant	$0.00
2. Bureau of Land Management	$30,000.00
3.	
Total:	$30,000.00

Has your legal counsel or contracting authority reviewed and accepted the Grant Award Contract General Provisions?
[ ] Yes [ ] No [ ] N/A

Signature of the undersigned certifies understanding and compliance with all terms, conditions, and specifications in the attached application. Additionally, signature certifies that all information provided by the applicant is true and accurate. The undersigned acknowledges that intentional presentation of any false or fraudulent information or knowingly concealing a material fact regarding this application is subject to criminal penalties as provided in A.R.S. Title 13. The Arizona Water Protection Fund Commission may approve Grant Awards with modifications to scope items, methodology, schedule, final products, and/or budget.

Gregory K. Wilkinson	City Administrator / 928-373-5011
Typed Name of Applicant or Applicant's Authorized Representative	**Title and Telephone Number**
For	9-1-10
Signature	**Date Signed**

RESOLUTION NO. R2010-51

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF YUMA, ARIZONA, AUTHORIZING THE SUBMISSION OF AN APPLICATION AND EXECUTION OF AN AGREEMENT FOR AN ARIZONA WATER PROTECTION FUND GRANT FOR WETLANDS RESTORATION AT PARADISE COVE

WHEREAS, since 2003, the Yuma community has successfully secured and expended over $3,000,000.00 in Arizona Water Protection Fund (AWPF) grants for the restoration of the Yuma East Wetlands; and,

WHEREAS, the City of Yuma is interested in applying for AWPF grant funding in the amount of $889,842.00 for the clearing, excavation, planting and irrigation of approximately 50-acre wetland restoration project in the riverfront area commonly referred to as "Paradise Cove", located adjacent to the Figueroa Wastewater Treatment Plant ; and,

WHEREAS, the Paradise Cove project will advance the City's goals of wetlands restoration and will promote the optimal functioning of the Figueroa Wastewater Treatment Plant; and,

WHEREAS, the Bureau of Land Management, which has operational responsibility for the federal land encompassing Paradise Cove, has offered to make the land available on a long-term basis to the City for the purposes of wetlands restoration; and,

WHEREAS, the Bureau of Reclamation has expressed its strong support for the Paradise Cove project; and,

WHEREAS, the City of Yuma will provide the water necessary for the Paradise Cove wetlands restoration project through the use of the treated effluent from the Figueroa Wastewater Treatment plant; and,

WHEREAS, procedures established by the Arizona Water Protection Fund require the applicant to certify by Resolution the application, signature, authorization of matching funds being provided by the Bureau of Land Management, and authorization to sign a participant agreement.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Yuma as follows:

SECTION 1: That the filing of an application for Arizona Water Protection Funds is hereby approved;

SECTION 2: That the City of Yuma agrees to comply with all appropriate procedures, guidelines, and requirements established by the Arizona Water Protection Fund as part of the application process, including a commitment of 20 years of maintenance of the wetlands;

SECTION 3: That the City of Yuma certifies that it will comply with all appropriate state and Federal regulations, policies, guidelines, and requirements as they relate to the application;

SECTION 4: That the City of Yuma certifies that the matching funds in the amount of $80,000.00 is being provided by the Bureau of Land Management;

SECTION 5: That the City Administrator or designee, is authorized to conduct all negotiations, execute and submit all documents including, but not limited to, application, agreements, contracts, and amendments which may be necessary for the project.

Adopted this 1st day of September, 2010.

APPROVED:

Alan L. Krieger
Mayor

ATTESTED:

Lynda L. Bushong
City Clerk

APPROVED AS TO FORM:

Steven W. Moore
City Attorney

JPA 10-039

ATTORNEY APPROVAL FORM FOR THE CITY OF YUMA

I have reviewed the above referenced Intergovernmental Agreement between the State of Arizona, acting by and through its DEPARTMENT OF TRANSPORTATION, and the CITY OF YUMA, an Agreement among public agencies which, has been reviewed pursuant to A.R.S. § 11-951 through § 11-954 and declare this Agreement to be in proper form and within the powers and authority granted to the City under the laws of the State of Arizona.

No opinion is expressed as to the authority of the State to enter into this Agreement.

DATED this 24th day of August, 2010.

Steven Moore

City Attorney

Executive Summary

This project proposes to restore a total of 50.4 acres, including 1.2 acres of open water channels, 6.8 acres of native marsh, 21.4 acres of enhanced cottonwood/willow riparian habitat and 21acres of mesquite and upland habitat along the lower Colorado River located near Yuma, Arizona. The project area will be irrigated by treated effluent water, already approved and on-site, from the City of Yuma's Figueroa Avenue Water Pollution Control Facility (WPCF). Paradise Cove is located on the lower Colorado River, west of the Yuma West Wetlands and adjacent to the town of Yuma, AZ. SHPO permitting, preliminary site analyses, restoration concept design and initial clearing of areas above the ordinary high water mark at Paradise Cove have been completed. This proposal will fund the additional permitting, subsequent clearing and restoration of the native aquatic, wetland, riparian, and upland habitats at Paradise Cove.

The aquatic, wetland, and riparian ecosystems of the lower Colorado River have been greatly altered and reduced by over a century of water development projects, deforestation, agriculture and development, and non-native species invasion. These activities have decimated native stands of cottonwood, willow, and mesquite, and have promoted the establishment and proliferation of invasive species such as tamarisk and common reed. Seasonal flooding that provided alluvial seed beds of native cottonwood and willow have ceased to occur causing the demise of natural recruitment of these species as well as ending the natural process of soil desalinization. Also, historic wetlands, aquatic habitats, and back water channels have filled in with sediment due to the lack of scouring flood flows. The ecological integrity of this system has been compromised. Wildlife species, particularly resident and migratory bird populations, have declined with the loss of suitable cottonwood/willow and bulrush/cattail habitat. In the arid southwest, native wetland and riparian habitats have disproportionately higher species diversity and density than any other habitat type in the overall landscape, however have become extremely threatened.

In an effort to recover the existing native habitats and restore the areas dominated by invasive vegetation on the lower Colorado River, the City of Yuma and the Bureau of Land Management along with a partnership of other federal, state and non-profit entities are proposing to restore 50.4 acres of open water, wetland, riparian, and upland habitat. This monumental restoration is Phase 3 of a three phase restoration plan, and encompasses the largest area of the three phases. Phases 1 and 2 have been completed, totaling 18 acres of restored native riparian habitat. Habitat restoration for this project will follow similar techniques utilized to restore and enhance the successful Yuma East Wetlands Project. These techniques include excavation of existing and proposed open water ponds and channels, bioengineering and containerized stock planting of native species, and both drip and flood irrigation. Follow up clearing focusing on the wetland areas and bank line along the Colorado River, which require an environmental assessment and Section 404 compliance, will be conducted as part of this proposal. The BLM has invested over $80,000 for site analyses, restoration concept design and to conduct the initial site clearing.

Funding of this proposal will increase habitat availability on the lower Colorado River by connecting native habitats in the Yuma West and East Wetlands, which will benefit an abundance of wildlife. This linkage will inevitably restore ecological integrity and provide critical habitat for declining wildlife species. In order to accomplish this 50.4 acre riparian and wetland restoration, the following objectives have been proposed:

1. Create approximately 1.2 acres of open water channel by restoring and extending the existing channel.
2. Restore approximately 6.8 acres of self sustaining wetland habitat, 21.4 acres of cottonwood/ willow habitat and 21 acres of native mesquite and upland habitat.
3. Obtain valuable data to apply to future restoration activities along the lower Colorado River.

This will be accomplished by completing the following tasks:

1. Submit an environmental assessment and conduct wetland delineation and obtain Section 404 of the Clean Water Act clearance.
2. Conduct follow up bank line and wetland clearing.
3. Conduct Topographical Surveys and Engineer Design on Channel Grading.
4. Create 50.4 acres of open water, channels, riparian and wetland habitats.
5. Maintain the restored area to ensure successful establishment of the habitat.
6. Monitor the success of the techniques used.

Introduction

Background:

Riparian ecosystems are renowned for their high levels of biodiversity, productivity, and dynamism (Noss and Cooperrider 1994). In the arid southwest, these ecosystems comprise of the smallest habitat areas, but support a disproportionately higher species diversity and density than any other habitat type in the overall landscape. However, particularly in Arizona, these ecosystems are increasingly imperiled due to extensive modification and exotic species invasion. The lower Colorado, including Paradise Cove, and Gila River channels and their associated wetlands have been modified extensively by over a century of flood-control, water delivery, and agricultural activities, which have affected the native vegetation and wildlife that depend on them.

In an effort to restore the native riparian, wetland, and aquatic habitats of Arizona, the City of Yuma and Bureau of Land Management (BLM) along with federal, state and non-profit partners, including Yuma Crossing National Heritage Area, Arizona Game and Fish Department, Bureau of Reclamation, and U.S. Fish and Wildlife Service are proposing to restore 50.4 acres of native riparian, wetland, and upland habitat at Paradise Cove along the lower Colorado River. Attached with this submittal is the completed unsigned City of Yuma Resolution. A fully executed resolution will be submitted by September 10th. The City of Yuma Resolution will not be completed until September 2nd, due to the fact that next City Council meeting is on September 1st. This monumental restoration effort is Phase 3 of a three phase restoration plan, and encompasses the largest area of the three phases. Phases 1 and 2 have been completed by the BLM, and encompass a combined total of 18 acres of restored native riparian habitat. The primary goal of implementing this restoration is to restore native habitat for both resident and migratory wildlife species along the Lower Colorado River. Some of these include species of special concern, such as the southwestern willow flycatcher (*Empidonax traillii extimus*), the yellow-billed cuckoo (*Coccyzus americanus*), Yuma hispid cotton rat (*Sigmodon hispidus eremicus*), and MacNeill's sootywing skipper (*Polypore graceless*). The restoration of these habitats will involve, but is not be limited to, three main activities:

- Completing the permitting process, by conducting a wetland delineation, revision of the environmental document and Section 404 of the Clean Water Act permit
- Revegetating riparian areas with cottonwood/willow/ mesquite, and other native species, wetland areas with native bulrush and the bank line of open water channels with willow and native bulrush
- Enhancing flow through degrading marshes of dense cattail and bulrush

The Paradise Cove project area encompasses 50.4 acres on the lower Colorado River. **Figure 1** shows the Paradise Cove area, which is located in Sections 28 and 29, Township 16 South, Range 22 East, of the Gila/Salt River Base and Meridian, in Yuma County, Arizona. One of the most ecologically altered riparian landscapes in the southwest; Paradise Cove has sustained nearly a century of flow regulation, channelization, non-native species invasion, mining, and wildfires.

It is now largely comprised of exotic invasive vegetation such as, tamarisk (*Tamarix pentandra*) and common reed (*Phragmites* sp.). **Figure 2** is an aerial map showing project acreage, project location boundaries, and water source. **Figure 3** is the project schematic detailed map of the Paradise Cove Restoration site. **Figure 4** is an artist rendering of completed restoration and **Figure 5** shows photos of existing site conditions.

This project would restore an additional 50.4 acres of riparian, wetland and upland habitat along the lower Colorado River. The project will consist of enhancing and restoring 1.2 acres of open water channels, 6.8 acres of native marsh, 21.4 acres of enhanced cottonwood and willow riparian habitat and 21 acres of mesquite and upland habitat (**Figure 3**). The restoration techniques that will be employed to conduct this restoration will follow those utilized in the successful riparian and wetland restoration projects of the Yuma East Wetlands Project. These techniques include: excavation of the existing and proposed channels and open water areas, using stop-log gates to control water levels and supply flood irrigation from treated effluent, bioengineering and containerized stock planting of native wetland and riparian species, and maintenance and monitoring activities to insure project success. The treated effluent provided by the City of Yuma's Figueroa Avenue Water Pollution Control Facility (WPCF) produces high quality water that is released back into the Colorado River at the Paradise Cove site, which has allowed the City of Yuma to receive a return flow credit. The treated effluent will be used to irrigate the restoration site, which will further filter the water and provide cleaner water to the Colorado River. Currently, the return flow at Paradise Cove is 6.5- 8 mgd (million gallons per day) or approximately 7,281 acre feet per year, which is a sufficient amount of water flow to sustain the proposed restoration. The City of Yuma is in the process of upgrading the Figueroa Wastewater Treatment Plant. To that end, the City has budgeted $23,000,000 in Capital Improvement Project # 8.0404 for the purpose of upgrading the plant and increasing the capacity to meet new Arizona Pollutant Discharge Elimination System (AZPDES) requirements for discharge to the Colorado River. With the considerable water flow emanating from the plant, the City sees this as a unique opportunity to integrate this effort with the long-standing efforts for wetlands restoration which the community has undertaken in the Yuma East Wetlands.

Momentum to restore Paradise Cove has been initiated. Some environmental and archeological permits have been acquired, a restoration conceptual design was completed and the initial invasive species clearing was conducted. The restoration of this site will provide connectivity to other restored habitats within the Yuma area, including Phase I and 2 and the Yuma West and East Wetlands, and increase the ecological integrity. This native habitat connectivity will benefit both resident and migrating wildlife. Without this restoration, this potential wildlife habitat will degrade further.

Goal(s):

1. Establish 50.4 acres of self-sustaining native habitat, including 1.2 acres of open water channels, 6.8 acres of native marsh, 21.4 acres of enhanced cottonwood and willow riparian habitat and 21 acres of mesquite and upland habitat along the Lower Colorado River.
2. Provide increased water quality of treated effluent to the Colorado River.

3. Monitor the project success of the 50.4 acre aquatic, wetland, riparian, and upland revegetation project through plant monitoring.

Objective(s):

1. Create approximately 1.2 acres of open water channels to flood irrigate the project site.
2. Restore approximately 6.8 acres of self sustaining wetland habitat supported by flood irrigation adjacent to the open water channel.
3. Restore approximately 21.4 acres of self-sustaining native cottonwood/willow habitat adjacent to the backwater channel.
4. Restore approximately 21 acres of mesquite and upland habitat in the higher terraces of the site.
5. Obtain valuable data to apply to future restoration activities within the YEW.

Statement of problem(s):

- Damaged/Degrading riparian and wetland habitat.
- Increased soil salinities due to insufficient water-flow through historic channels and wetlands.
- Excessive reproduction of exotic plant species.
- Insufficient reproduction of native plant species.
- Lack of critical habitat for several endangered species including the southwestern willow flycatcher and other wildlife species.

Statement of cause(s) of the problem(s):

- Dams
- River channelization
- Siltation of historic river channels and backwaters
- Introduction of highly flammable, quickly-regenerating, exotic tamarisk
- Human encroachment /Development

Statement of project-related remedies or solutions:

1. Remove exotic plant species from a 50.4 acre area of Paradise Cove and revegetate this area with native wetland, riparian, and upland species.
2. Excavate existing and proposed channels and restore water flow and native wetland plants in the degrading wetlands within the Paradise Cove Project.
3. Monitor the revegetation site for potential success of other revegetation efforts within the Paradise Cove Project.

Statement of project years of benefit:

The 50.4 acre revegetation stand will be primarily rooted to the water table or planted within 3-6 feet of the water table, and therefore should become self-sustaining by the end of the first full growing season.

The City of Yuma and BLM intend to work to monitor the success of this project, and will use the information to plan and, where feasible, implement control programs in the foreseeable future. Follow-up maintenance required at this 50.4 acre site will consist of limited fire control, weed eradication, and tree stand evaluation. The City of Yuma will be responsible for follow-up maintenance of the Paradise Cove site for at least 20 years post project term. The projected years of benefit for this project should exceed 50 years.

Project Location & Environmental Contaminant Information
FY 2011

Project Location Information			
1. County: Yuma	2. Section: 28&29	3. Township: 16S	4. Range: 22E SBM

5. Watershed: Lower Colorado River

6. 8 or 10 Digit Hydrologic Unit Code (HUC): 15030108

7. Name of USGS Topographic Map where project area is located: Yuma West

8. State Legislative District: 24

(Information available at: http://159.87.126.6/mapping/default2.asp?tname=Original.2009.Legislative.Map&org2009leg=on&service=ircmaps&init=true)

9. Land ownership of project area: Bureau of Land Management

10. Current land use of project area: Degrading Wildlife Habitat

11. Size of project area (in acres): 50.4

12. Stream Name: Lower Colorado River

13. Length of stream through project area: 5,090 LF

14. Miles of stream benefited: 0.96 miles

15. Acres of riparian habitat: 50.4 acres will be:

- ☐ Enhanced
- ☐ Maintained
- ☒ Restored
- ☐ Created

16. Provide directions to the project site from the nearest city or town. List any special access requirements:
From Downtown Yuma, head West on W 1st street. Then turn on N 22nd Ave. Turn left on W Levee Road before the irrigation channel, then turn right at the first bridge crossing the irrigation channel. Follow the dirt road straight to the project

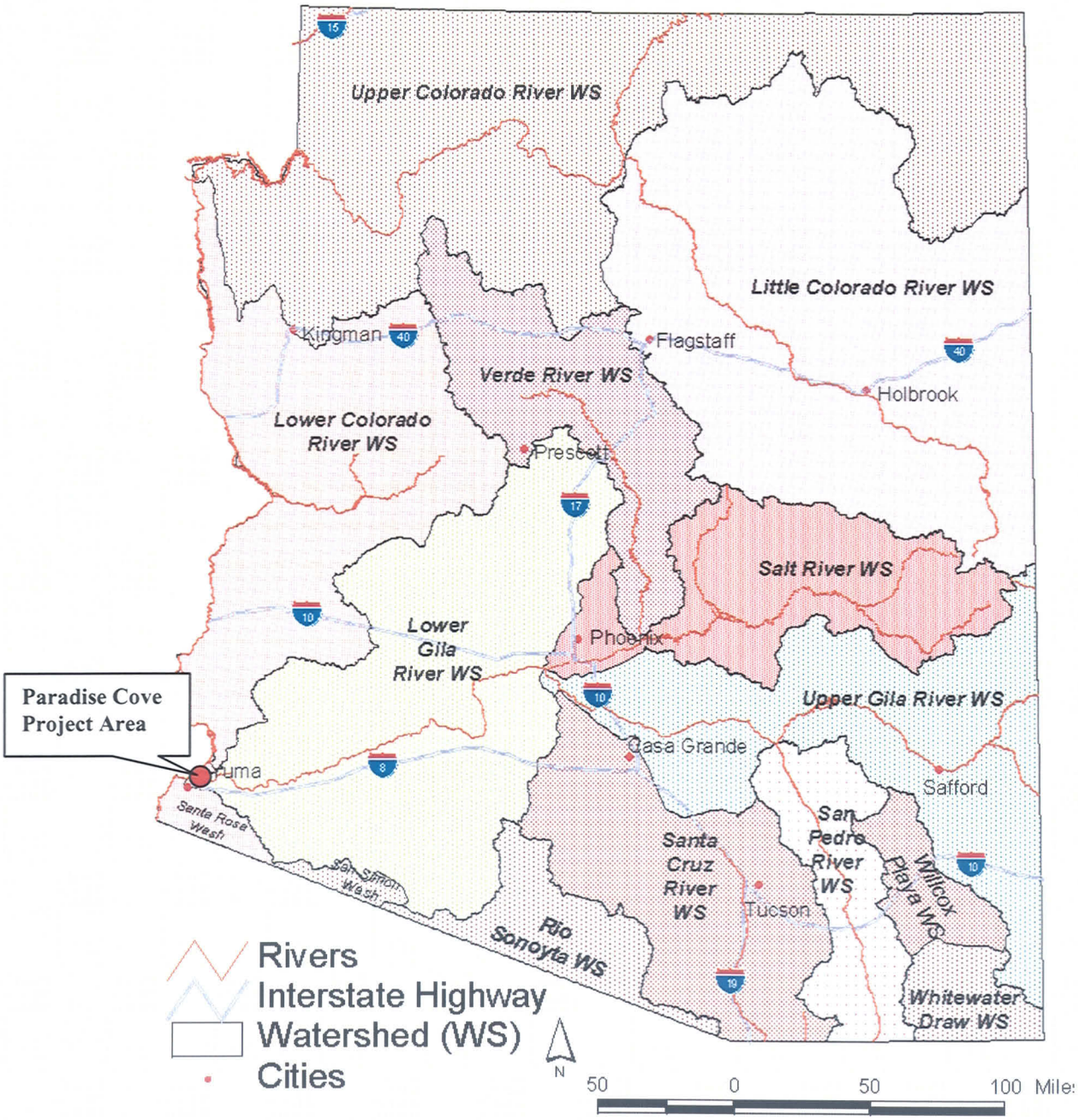
Environmental Contaminant Location Information

1. Does your project site contain known environmental contaminants? ☐ **YES** ☒ **NO** If yes, please identify the contaminant(s) and enclose data about the location and levels of contaminants:

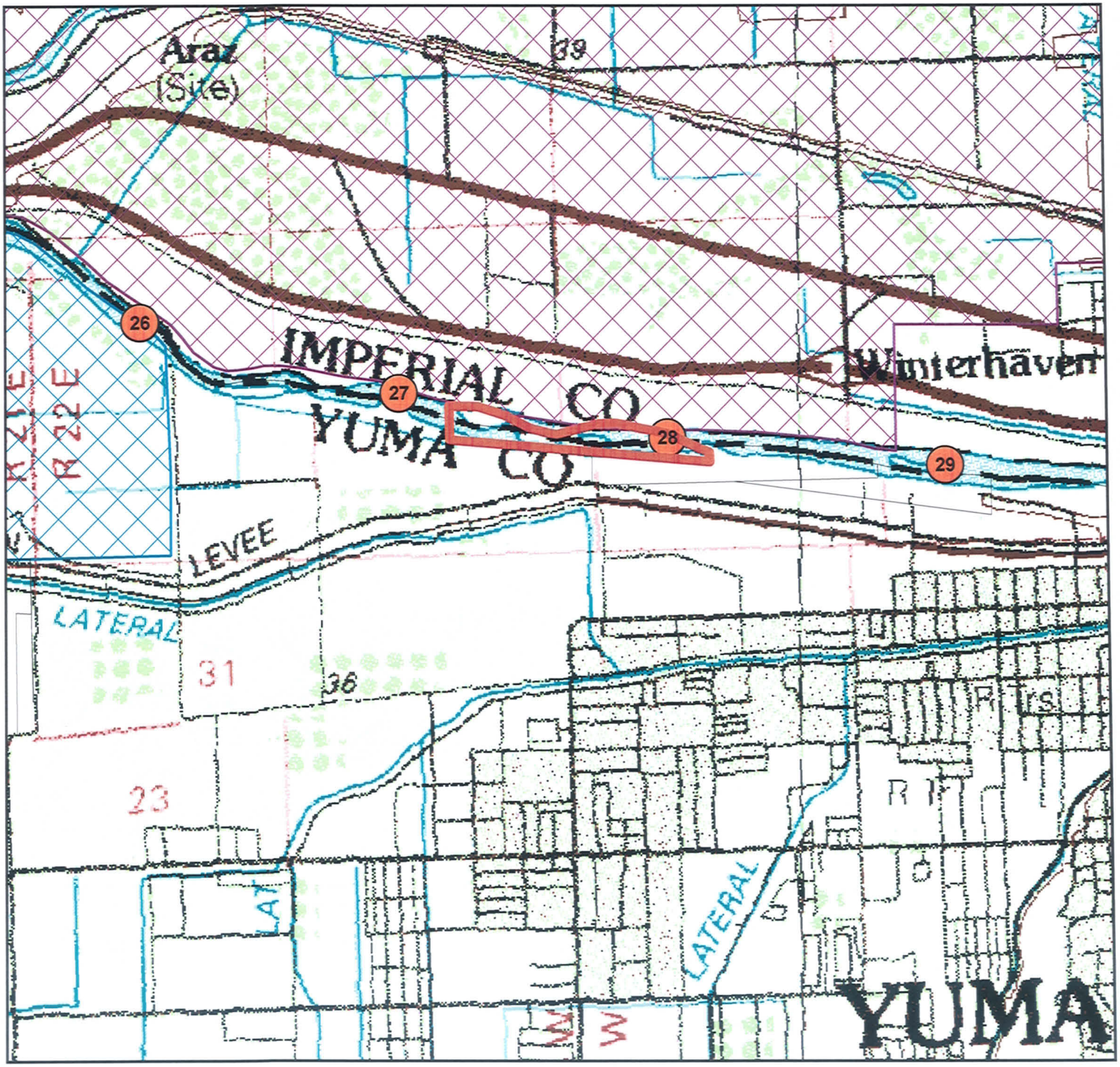
2. Are there known environmental contaminants in the project vicinity? ☐ **YES** ☒ **NO** If yes, please identify the contaminant(s) and enclose data about the location and levels of contaminants:

3. Are you asking for Arizona Water Protection Fund monies to identify whether or not environmental contaminants are present? ☐ **YES** ☒ **NO**

Arizona Watershed Map
FY 2011



Title of Project: **<u>Paradise Cove Riparian and Wetlands Restoration Project</u>**



Paradise Cove Riparian and Wetland Restoration Project

Legend

- boundary
- Colorado River Miles
- Quechan Tribal Lands

Arizona Land Ownership

- Other Public + Private
- Cocopah Tribal Lands

Map Sources:
USGS- 7.5 Min Quad
US Bureau of Reclamation- Rivermiles
Map Information:
UTM, NAD 1927, ZONE 11

1 inch = 2,500 feet

0 1,300 2,600 5,200 7,800 10,400 Feet

0.25 0.125 0 0.25 0.5 0.75 1 Miles

N

LOCATION MAP
FIGURE 1

Fred Phillips Consulting, LLC
401 SOUTH LEROUX STREET
FLAGSTAFF, AZ
86001
TEL 928 773 1530
FAX 928 774 4166
Ecosystem Restoration Land Planning

DESIGNED FOR:
BUREAU OF LAND
MANAGEMENT
& THE CITY OF YUMA

REV.	COMMENT	DATE

PARADISE COVE RIPARIAN AND WETLAND RESTORATION

BLM

YUMA, ARIZONA

SHEET TITLE :
AERIAL

Scale: 1" = 600'
0' 600' NORTH

DATE: AUGUST 13, 2010
JOB NO.: 09002
DRAWN BY: DB
DESIGNED BY: FOP/DB
CHECKED BY: FOP

SHEET NO.:
FIGURE 2

DESIGN LEGEND

- Irrigation Pump
- OPEN WATER - 1.2 AC
- GIANT BULRUSH - 6.3 AC
- SANDBAR WILLOW / INLAND SALT GRASS - 2.1 AC / 5,641 LF
- GOODING WILLOW / INLAND SALT GRASS - 4.2 AC
- COTTONWOOD / ALKALAI SACATON - 13.3 AC
- HONEY MESQUITE / 4 WING SALT BUSH - 21 AC
- THREE SQUARE - 0.5 AC
- WOLFBERRY / INLAND SALT GRASS - 0.7 AC
- FIRE BREAK - 1.1 AC

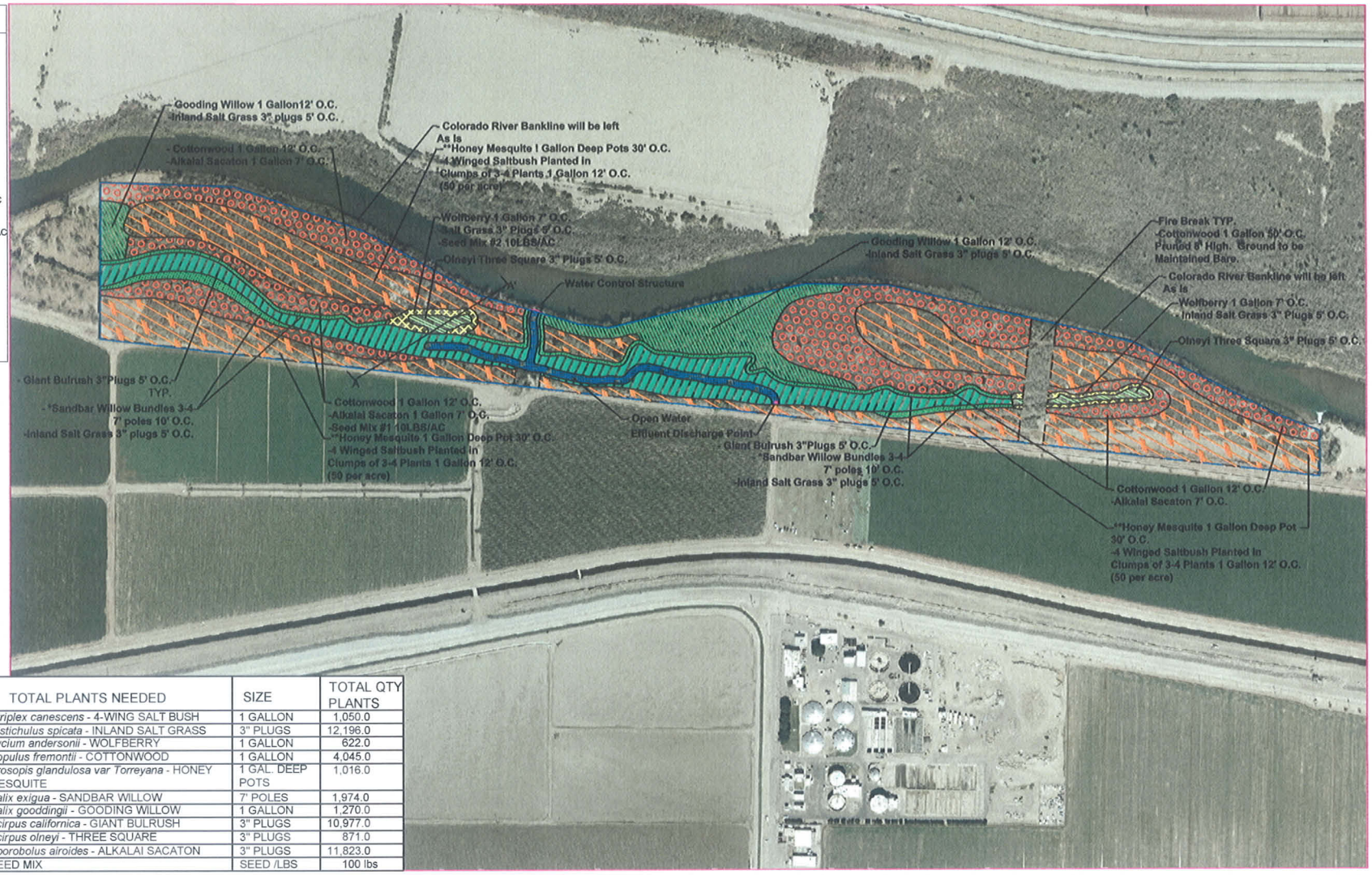
*Cluster Plantings

All willow pole plantings will be soaked for a minimum of 7 days prior to planting. The entire pole will be under water while being soaked.

Once poles are removed from water they will not spend more than 12 hours out of water before planting. Each cluster will have 3 poles at least 7' in length with a minimum diameter of 1/2". Holes will be augured at least 4' deep and at a 6" diameter. All poles will be planted at least 4' deep in the augured holes. The above ground portion of the pole will be cut at a maximum height of 2' high and a minimum height of 18'. When planted all poles will be slurried in with a water auger leaving no air gaps between pole and soil. Maintaining maximum soil to stem contact. The tops of all poles will be sealed with latex paint to seal in moisture. The fields will be watered immediately after planting of clusters.

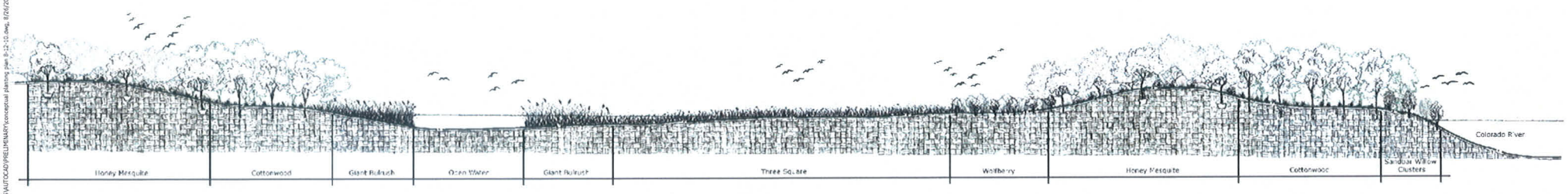
** Honey Mesquites

All Honey Mesquites need to be wrapped in tubex after installation - 1,049



TOTAL PLANTS NEEDED	SIZE	TOTAL QTY PLANTS
Atriplex canescens - 4-WING SALT BUSH	1 GALLON	1,050.0
Distichulus spicata - INLAND SALT GRASS	3" PLUGS	12,196.0
Lycium andersonii - WOLFBERRY	1 GALLON	622.0
Populus fremontii - COTTONWOOD	1 GALLON	4,045.0
Prosopis glandulosa var Torreyana - HONEY MESQUITE	1 GAL. DEEP POTS	1,016.0
Salix exigua - SANDBAR WILLOW	7' POLES	1,974.0
Salix gooddingii - GOODING WILLOW	1 GALLON	1,270.0
Scirpus californica - GIANT BULRUSH	3" PLUGS	10,977.0
Scirpus olneyi - THREE SQUARE	3" PLUGS	871.0
Sporobolus airoides - ALKALAI SACATON	3" PLUGS	11,823.0
SEED MIX	SEED /LBS	100 lbs

Cross Section A-A' (N.T.S.)



Fred Phillips Consulting, LLC
401 SOUTH LEROUX STREET
FLAGSTAFF, AZ
86001
TEL 928 773 1530
FAX 928 774 4166
Ecosystem Restoration Land Planning

DESIGNED FOR:
BUREAU OF LAND MANAGEMENT
& THE CITY OF YUMA

REV.	COMMENT	DATE
1	REVISED OPEN WATER ACREAGE	8/12/10

PARADISE COVE RIPARIAN AND WETLAND RESTORATION

BLM

YUMA, ARIZONA

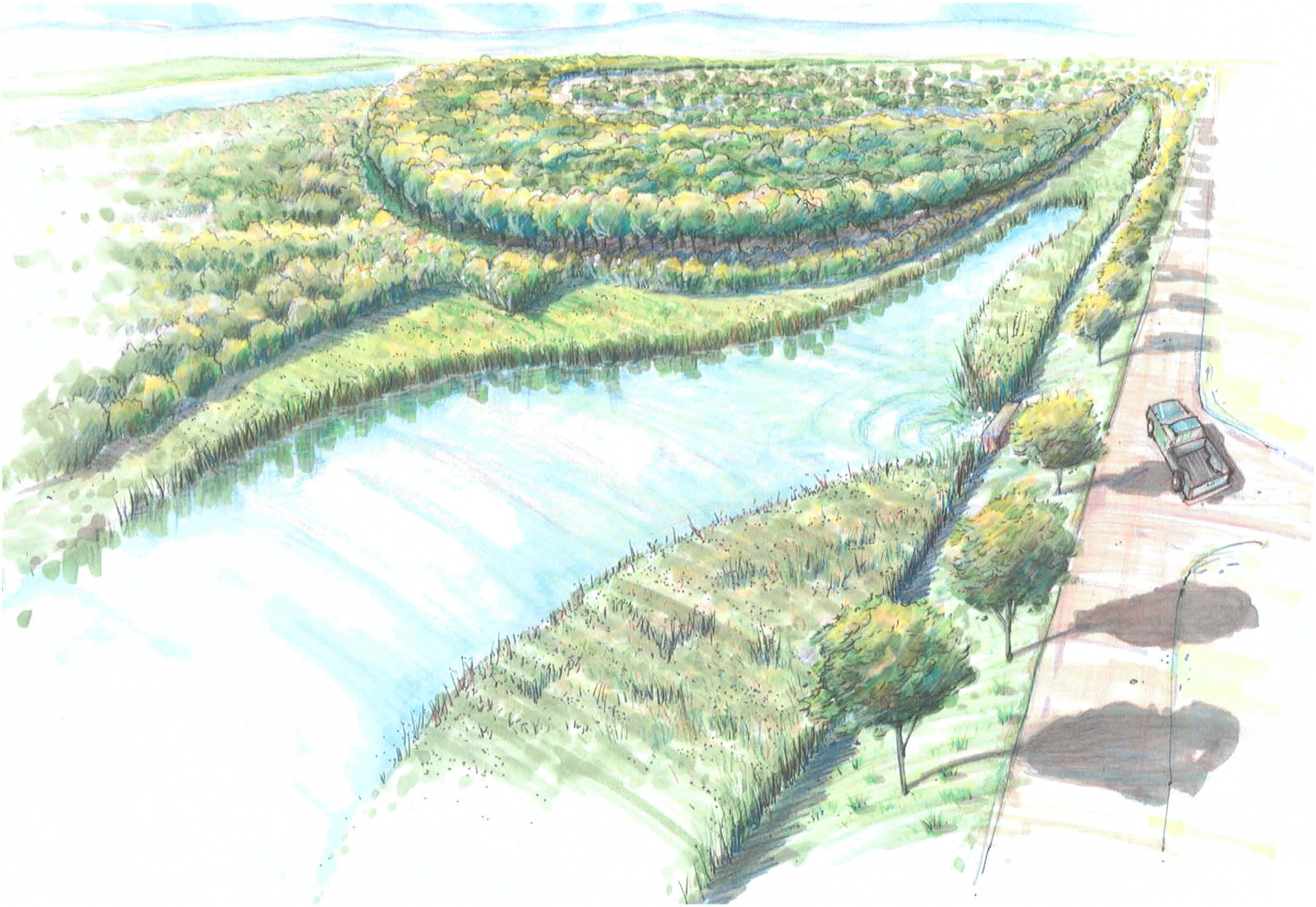
SHEET TITLE :
PLANTING DESIGN

Scale: 1" = 620'

0' 620' NORTH

DATE: MARCH 24, 2009
JOB NO.: 09002
DRAWN BY: DB
DESIGNED BY: FOP/DB
CHECKED BY: FOP

SHEET NO.:
FIGURE 3



BLM Paradise Cove

Fred Phillips Consulting

Date 1/26/10

Wetlands Restoration Drawing

Figure 4

Scope of Work: Task Descriptions

Task #1: Permits, Authorizations, Clearances and Agreements

Task Description: The Grantee shall obtain all permits, authorizations, clearances and agreements necessary to conduct the work described in this Scope of Work, including but not limited to:

- Cultural resource clearance (SHPO)
- NEPA compliance
- Necessary access agreements and resolutions in support of the project.
- Wetland Delineation
- USFWS Section 7 consultation
- USACOE Section 404 Permit
- Arizona Pollutant Discharge Elimination System (AZPDES)
- Aquifer Protection Permit (APP)
- Subcontractor Agreements

All existing permit letters are provided as an attachment at the end of this document, including the City of Yuma and Bureau of Land Management Resolutions and City of Yuma water allocations. NEPA compliance (USFWS Section 7 Consultation), wetland delineation, and a USACOE Section 404 Permit will be completed with grant funds.

Task Purpose: To comply with all local, state and federal permit requirements, environmental laws such as NEPA and obtain legal access to project area.

Deliverable Description: Copy of all necessary permits, authorizations, agreements, and clearances necessary to implement the Scope of Work.
Deliverable Due Date: Prior to any ground disturbing activities
AWPF Reimbursable Cost: $40,339.43

Task #2: Depth to Water and Soil Salinity Analyses

Task Description: The Depth to Water and Soil Salinity Analyses were completed for the project during the design of the conceptual restoration plan. This task included evaluating the soil texture and salinity and depth to the water table within 5 transects across the site. Soils were evaluated at a total of 36 points and depth to water was evaluated at 34 points along these transects. The results will be used for evaluating the site conditions and selecting the appropriate native species to plant in each habitat type.

Task Purpose: To provide detailed information about the site and soil conditions in order to develop planting and monitoring designs. These maps will specify the percent of area suitable for the various riparian and wetland species (cottonwood/willow/mesquite).

Deliverable Description: The report will include a discussion of the depth to water and soil salinity analysis activities at the 49.6 acre site and will include a soil salinity and depth to water table maps of the site and all data collected. All maps will be to scale.
Deliverable due date: 1 month after final contract execution
AWPF Reimbursable cost: $0

Task #3: Prepare and Submit Restoration and Monitoring Plans

Task Description: The Grantee shall prepare and submit all plans necessary to conduct the Scope of Work described below. The project work plans shall consist of the following:

- Site Clearing Plan
  The Site Clearing Plan will describe all the clearing activities and methodologies for invasive species removal for the 50.4 acre site. Invasive species were cleared above the ordinary high water mark along the Colorado River and in non-wet areas during July 2010. Areas below the high water mark and wet areas will be cleared once the remaining permits are obtained. In previously cleared areas, re-sprouting vegetation will be removed, burned and mulched. In the areas below the ordinary high water mark and in wet areas, invasive vegetation will be cleared by removing the root mass. This plan will contain a map that will delineate the cleared and un-cleared areas and the different clearing techniques that will be utilized.

- Excavation, Grading and Water Structure Schematic Design for CMAR Contract
  Once site clearing is completed, the project design team and contractors will complete the final excavation, grading and CMAR design for the completion of the following by the Grantee:

  1. Excavation of the existing open water channel within the revegetation site. The open water channel and wetland areas will be connected to the City of Yuma's Figueroa Avenue Water Pollution Control Facility (WPCF). The bank line of this channel and graded riparian areas will be revegetated after the 50.4 acre revegetation plan is completed.
  2. Grading and leveling of the riparian and wetland areas adjacent to the open water channel.
  3. Construction of a stop log structure that will enable the water level in the channel to be raised and lowered.

- Revegetation Planting Design/Construction Documents for 50.4 Acre Revegetation Site
  Based on the data collected in the Depth to Water and Soil Salinity Analyses in Task #2 the Grantee will develop a Revegetation Plan. The Revegetation Plan will include the following details:

1. A detailed planting design for the revegetation of the 21.4 acres of cottonwood/willow habitat and 21 acres of mesquite bosque. The plan will include plant species type, plant spacing and planting methods.
2. A detailed planting design for the revegetation of a 6.8 acre wetland/marsh habitat along the excavated channel.

The Revegetation Plan will also include a discussion of the irrigation schedule, invasive species control, and all maintenance activities and schedules.

- Monitoring Plan
  The Monitoring Plan shall be designed to evaluate the success of the revegetation efforts and survival of the species planted. Monitoring activities shall consist of, but not be limited to photo points and measurement of vegetation growth and vigor. The Monitoring Plan shall also describe routine monitoring for damage to the revegetation due to wildlife or human activities. The Monitoring Plan shall include, at a minimum:

  - Map(s), to scale, of the Project Area showing the proposed monitoring sites
  - Attributes to be measured
  - Rationale for the number and location of monitoring points
  - Procedures used to measure attributes
  - Equipment list
  - Discussion of quality assurance/quality control
  - Sample data sheets and photo point record sheets

Task Purpose: To develop detailed plans for constructing and monitoring 50.4 acres of riparian, wetland and aquatic habitat at Paradise Cove located on the Lower Colorado River.

Deliverable Description:

1. Site Clearing Plan
2. Excavation, Grading and CMAR Design plan for Grantee
3. 50.4 Acre Revegetation Plan
4. Revegetation Monitoring Plan

Deliverable Due Date: Site Clearing Plan will be submitted one month after Contract Execution and completion of the remaining plans will be after appropriate work needed for completion of plan.
AWPF Reimbursable Cost: $66,676.05

Task #4: Implement Site Clearing Plan

Task Description: In July 2010 portions of the site were cleared using a hydro-axe mulcher and bulldozer. All invasive vegetation above the ordinary high water mark and non-wet areas was mulched onsite and then sprayed with Garlon 4 herbicide.

Therefore, additional site clearing will need to be conducted in wetland and bank line areas that were not cleared. Also, areas that were treated will need to be re-treated to control recolonizing vegetation. Clearing will include herbicide treatments on the re-colonizing invasive tamarisk and phragmites, excavating invasive species' root mass in wet areas, and burning excavated woody material. The re-colonizing invasive tamarisk and phragmites will be cleared using a bulldozer and the material will be mulched using a front end loader. The created mulch will be dispersed throughout the site or burned. Details for clearing activities will be listed in the site clearing plan.

Task Purpose: To clear invasive vegetation from the site and enable native plant restoration.

Deliverable Description: A report with photo/written documentation and map to scale, with a scale of the cleared 50.4 acre area.
Deliverable Due Date: 2 months after final contract execution.
AWPF Reimbursable cost: $42,726.60

Task #5: Implement Site Land Leveling and Excavation and Water Control Structures

Task Description: Excavation of a 1,705 linear foot channel will be conducted using an amphibious excavator, low-track and bulldozer. The channel will be dredged until an average width of 20-30 feet and an average depth of 4-7 feet is attained. The channel banks will be contoured on a 3:1 slope to accommodate small flows. The 6.8 acres of marsh and wetland habitat adjacent to the open water channel and along the Colorado River will be graded to fulfill the appropriate habitat conditions. The wetland habitats will be excavated down to the saturated soil zone adjacent to the channels. These areas will be excavated to just above the water table to provide wetland conditions and flood irrigation from the open water channel. The 21.4 acre cottonwood and willow riparian habitat area will be excavated down to within the depth to water tolerance range of these species. The remaining 21 acres of mesquite bosque habitat will retain the current topography.

Valuable existing native habitat (cattail/bulrush, cottonwood/willow and mesquite) will be avoided during excavation. A stop log structure will be positioned on the north boundary of the property in order to raise and lower the water levels in the channel. More detailed plans for this task are outlined in the revegetation and monitoring plans section at the end of this grant.

Task Purpose: The primary purpose is to create 1.2 acres of open water channel habitat that could be used to irrigate surrounding wetland and riparian areas, 6.8 acres of lowered wetland habitat, and 21.4 acres of cottonwood/willow habitat. This new topographic configuration will diversify habitats for terrestrial and wetland wildlife.

Deliverable Description:
1. A report including photos and written documentation showing the completion of the open water channel excavation and wetland and riparian habitat grading.

The report will also include an as built drawing to scale of the completed work and any problems encountered during this phase of the project.
Deliverable due dates: 6 months after final contract execution
AWPF Reimbursable cost: $355,465.95

Task #6: Revegetate 49.2 Acres of Native Habitat

Task Description: The 49.2 acres of wetland, riparian and upland area will be re-vegetated with the appropriate vegetation that matches the site conditions based on the Depth to Water and Soil Salinity Analysis completed in Task #2. The channel bankline will be planted with low-lying wetland vegetation on the toe of the slope within the channel and the slope will be planted with sandbar willow. Native seed will be dispersed throughout the slope plantings to inhibit exotic weed regeneration. All plant material in this area will be planted in the ground water, therefore irrigation is not necessary.

The graded and leveled 6.8 acre wetland area along the channel will primarily be planted with threesquare and giant bulrush. The 21.4 acre cottonwood and willow habitat will be planted using a combination of techniques. This area should have a shallow depth to water where poles could be planted directly into the water table. The cottonwood and willow habitat will be seeded with native riparian seed species (alkali sacaton, inland saltgrass and other native species) to prevent the regeneration of invasive species. These wetland and riparian areas will be flood irrigated by the raising the water levels in the channel with the stoplog structure. Prior to planting, native plant propagules, poles, and plugs will be prepared for planting. In areas where the depth to water is too deep and soil salinities are too high for cottonwood and willow, mesquites will be planted (21 acres). The mesquite bosque habitats will be irrigated using drip irrigation.

The site will be maintained during the first two growing seasons. This will include irrigation system operation and maintenance, site weeding and replanting of dead trees. More detailed plans on this task are outlined in the revegetation and monitoring plans section at the end of this grant.

Task Purpose: The purpose of this task is to restore 49.2 acres of native wetland, riparian and upland habitat on the lower Colorado River and to ensure successful establishment of plantings.

Deliverable Description:
1. Annual/Bi-annual reports including planting and irrigation plans, photos, and project revegetation activities to date.
2. A final year report describing all revegetation construction activities for the 50.4 acre project.
Deliverable due dates: 12, 18, 24, 36 Months after Contract Execution
AWPF Reimbursable cost: $328,223.81

Task #7: Post Revegetation Monitoring Surveys

Task Description: Following revegetation efforts, the monitoring activities outlined in the Monitoring Plan will be conducted. Plant monitoring will occur two times during the growing season (May-October). Monitoring transects will be established to encompass at least 3% of all the planted representative vegetation at the 50.4 acre project. The variables that will be monitored will include native tree and shrub height measurements, survivorship, condition, and factors affecting growth; rate of exotic weed recolonization; and success of native herbaceous ground cover growth. Monitoring will help determine success of the project by documenting native wetland and riparian vegetation establishment and survivorship and control of exotic species re-growth. Additionally, this monitoring effort will help guide future revegetation efforts along the lower Colorado River.

Deliverable Description: Annual and final monitoring reports on the revegetation activities and growth success for the 50.4 acre project. The reports will include a detailed description of all monitoring activities and results and will include photos, growth data, cover analyses, and a map to scale of the project activities to date.

Deliverable due dates: 12 and 24 months after contract execution.
AWPF Reimbursable cost: $15,003.45

Task #8: Overall Project Coordination

Task Description: For every project of this scale there must be a coordinator that is intimately familiar with the grant contract, the deliverables involved and the standard procedures of the AWPF program. The City of Yuma and the project consultant will execute the project coordination. Project coordination will include negotiating contracts with outside services involved with the project to make sure: 1.) All deliverables are being fulfilled as stated in the contract. 2.) All reporting information and budgetary forms are submitted to the AWPF in a timely matter in accordance with the grant contract. 3.) That any problems or difficulties that arise during the grant project are addressed and satisfactorily resolved. The Project coordination will also include gathering deliverables from the involved parties and packaging the quarterly, annual and final reports necessary for project completion.

Task Purpose: To update AWPF on all project activities and ensure that all project activities are properly coordinated and progressing in a timely manner.

Deliverable description: Semi-Annual Progress Reports with a narrative of all project activities that relate to the deliverables in Tasks #1- 7, including photographs, all data collected in tabular or graphical format, and a map to scale.

Deliverable due date: As needed and stated with the other deliverables described in this grant application.
AWPF Reimbursable Cost: $26,775.00

Task #9: Final Report

Task Description: The Grantee shall prepare and submit a comprehensive final report in accordance with the Arizona Water Protection Fund Final Report Guidelines. The final report shall include a summary of all methodologies used, outcomes of all Tasks, analysis of all Project data, suggestions for any changes or future actions, and an evaluation of the success of meeting project objectives. The Grantee shall provide all data generated under this Contract, unless otherwise specified in the Special Provisions.

Task Purpose: To provide a comprehensive final report for public distribution that gives a detailed description of the project and showcases its benefits to the State of Arizona.

Deliverable description: Final report
Deliverable due date: 36 months after contract execution
AWPF Fixed Cost: $14,632.07

DETAILED BUDGET BREAKDOWN
City Of Yuma
Paradise Cove Riparian And Wetland Restoration Proejct

Item	AWPF Funding Request Item/Hours	Unit	Rate	Total
Task #1 Permits, Authorizations, Clearances and Agreements				
Wetland Delineation				
Outside Services				
Data Collection And Review	10	Hours	$75.00	$ 750.00
Principal, Certified Delineator	10	Hours	$85.00	$ 850.00
Restoration Designer, Certified Delineator (Includes Travel Time)	45	Hours	$75.00	$ 3,375.00
Field Technician (Includes Travel Time)	45	Hours	$55.00	$ 2,475.00
Botanist	16	Hours	$70.00	$ 1,120.00
Other direct costs:				
Trimble GPS Rental	5	Days	$90.00	$ 450.00
Per Diem	10	Days	$90.00	$ 900.00
Mileage	700	Miles	$0.41	$ 287.00
Wetland Delineation Report - Analyze Field Data, Map, and Photo Sheets Production				
Outside Services				
Principal, Certified Delineator	8	Hours	$85.00	$ 680.00
Restoration Designert, Certified Delineator	40	Hours	$75.00	$ 3,000.00
Ecologist - Photos, Contact Sheets	16	Hours	$75.00	$ 1,200.00
GIS/AutoCAD Operator	24	Hours	$60.00	$ 1,440.00
Other direct costs:				
Printing Materials Postage				
Fed EX	6	each	$20.00	$ 120.00
Color Copies 8.5x11"	100	each	$1.00	$ 100.00
B&W Copies 8.5x11"	300	each	$0.10	$ 30.00
Coil Binding	6	each	$5.25	$ 31.50
24"x36" Color Plots	72	square feet	$5.00	$ 360.00
Completion of USFWS NEPA Process (BE, EIS, Section Seven)				
Outside Services				
Principal	40	Hours	$85.00	$ 3,400.00
Principal Biologis, MS	60	Hours	$75.00	$ 4,500.00
Ecologist, MS	40	Hours	$75.00	$ 3,000.00
Restoration Designer/AutoCAD/GIS Mapping	20	Hours	$60.00	$ 1,200.00
Completion of ACOE 404 Dredging and Restoration Process				
Pricipal	60	Hours	$85.00	$ 5,100.00
PC Biologist, MS	54	Hours	$75.00	$ 4,050.00
Subtotal				$ 38,418.50
Administration: (5%)				$ 1,920.93
Total for Task #1				**$ 40,339.43**
Task #2: Depth to Water and Soil Salinity Analyses and Concept Design				
Completed; see matching budget				
Total for Task #2				**$0.00**

Item	AWPF Funding Request Item/Hours	Unit	Rate	Total
Task #3 Prepare and Submit Restoration and Monitoring Plans				
Site Clearing and Herbicide Spraying Plan				
Outside Services:				
Principle	12	Hours	$ 85.00	$ 1,020.00
Restoration Ecologist, MS	12	Hours	$ 75.00	$ 900.00
Autocadd/Arcview Operator	16	Hours	$ 60.00	$ 960.00
Other direct costs:				
Printing /Materials				
	Color Copies			
Color Copies 11x17"	20	each	$ 2.00	$ 40.00
Color Copies 8.5X11"	40	each	$ 1.00	$ 40.00
B&W Copies 8.5"X11"	100	each	$ 0.10	$ 10.00
Excavation, Grading and Water Structure Schematic Design for CMAR Contract				
Outside Services				
Grading Deisgn Principle	40	Hours	$ 85.00	$ 3,400.00
Topo Survey Civil Engineer, PE	40	Hours	$ 105.00	$ 4,200.00
Topo Survey Engineering Tech	60	Hours	$ 75.00	$ 4,500.00
Grading Design Civil Engineer, PE	75	Hours	$ 105.00	$ 7,875.00
Grading Design Engineering Tech	90	Hours	$ 75.00	$ 6,750.00
AutoCAD/Arc view Operator	40	Hours	$ 60.00	$ 2,400.00
CMAR Contractor	60	hours	$ 65.00	$ 3,900.00

Item	AWPF Funding Request			
	Item/Hours	Unit	Rate	Total
Other Direct Costs:				
Printing /Materials				
	Color Copies			
Color Copies 11x17"	50	each	$ 2.00	$ 100.00
Color Copies 8.5X11"	100	each	$ 1.00	$ 3,900.00
B&W Copies 8.5"X11"	300	each	$ 0.10	$ 30.00
Surbey Equipment and Rental	5	days	$ 120.00	$ 600.00
Engineer Travel	8	Days	$ 96.00	$ 768.00
Engineer Mileage	600	Miles	$ 0.41	$ 246.00
Prinincipal Travel	3	Days	$ 96.00	$ 288.00
Principal Mileage	600	Miles	$ 0.41	$ 246.00
Revegetation Planting Design/Construction Documents for 49.6 Acre Revegetation Site				
Outside Services:				
Principal	40	Hours	$ 85.00	$ 3,400.00
Restortaion Ecologist, MS	100	Hours	$ 75.00	$ 7,500.00
Arc View/Cadd Operator	100	Hours	$ 60.00	$ 6,000.00
Other Direct Costs:				
Printing /Materials				
	Color Copies			
Color Copies 11x17"	90	each	$ 2.00	$ 180.00
Color Copies 8.5X11"	50	each	$ 1.00	$ 50.00
B&W Copies 8.5"X11"	100	each	$ 0.10	$ 10.00
24"x36" Color Plots	60	square feet	$ 5.00	$ 300.00
Travel Estimated	6	Days	$ 96.00	$ 576.00
Mileage	1400	Miles	$ 0.41	$ 574.00
Monitoring Plan				
Outside Services:				
Principal Biologist , MS	20	Hours	$ 75.00	$ 1,500.00
Arc View/Cadd Operator	20	Hours	$ 60.00	$ 1,200.00
Other Direct Costs:				
Color Copies 11x17"	10	each	$ 2.00	$ 20.00
Color Copies 8.5X11"	8	each	$ 1.00	$ 8.00
B&W Copies 8.5"X11"	100	each	$ 0.10	$ 10.00
Subtotal				$ 63,501.00
Administration: (5%)				$ 3,175.05
Total for Task #3				**$ 66,676.05**

Item	AWPF Funding Request			
	Item/Hours	Unit	Rate	Total
Task #4 Implement Site Clearing and Herbicide Spraying (match shown in matching funds breakdown)				
Outside Services:				
Bobcat with Hydro Axe Mulcher	20	Days	$ 500.00	$ 10,000.00
D6 H LGP Dozer	100	Hours	$ 165.00	$ 16,500.00
Licensed Herbicide Applicator	120	hours	$ 40.00	$ 4,800.00
Supervision / Service (contractor)	20	Hours	$ 75.00	$ 1,500.00
Construction Oversight (consultant)	30	Hours	$ 85.00	$ 2,550.00
Other Direct Costs				
2 portable toilets with weekly service @ $70 ea per mo.	2	months	$ 120.00	$ 240.00
Dump Fees:	10	Loads	$ 65.00	$ 650.00
Herbicide (glysophate) 300 Gallons at $100/gal	1	Lump	$ 3,000.00	$ 3,000.00
Oversight Travel Estimated	5	Days	$ 96.00	$ 480.00
Oversight Mileage	1200	Miles	$ 0.41	$ 492.00
Survey Equipment Rental	4	days	$ 120.00	$ 480.00
Subtotal				$ 40,692.00
Administration: (5%)				$ 2,034.60
Total for Task #4				**$ 42,726.60**
Task #5: Implement Site Land Leveling, Excavation and Water Control Structures				
Outside Services:				
Mobilize and Prep Work				
Survey In Boundaries and Control Elevations	49.6	Acres	$ 50.00	$ 2,480.00
Equipment Mobilization/De-mobilization	1	Lump Sum	$ 5,000.00	$ 5,000.00
Channel Excavation				
350 L Excavator	160	Hours	$ 190.00	$ 30,400.00
2- A25 C Trucks	160	Hours	$ 250.00	$ 40,000.00
Grade Checker	160	Hours	$ 45.00	$ 7,200.00
1165 Case Angle Dozer	160	Hours	$ 135.00	$ 21,600.00
1/2 Blade	160	Hours	$ 62.50	$ 10,000.00
Earthwork and Laser Leveling 45.9 Acres		Hours		
D6 H LGP Dozer	160	Hours	$ 165.00	$ 26,400.00
350 L Excavator	160	Hours	$ 190.00	$ 30,400.00
2- A25 C Trucks	160	Hours	$ 250.00	$ 40,000.00
Blade	160	Hours	$ 140.00	$ 22,400.00
Grade Checker	40	Hours	$ 45.00	$ 1,800.00
Laser Equipment	160	Hours	$ 15.00	$ 2,400.00
623 Scraper	160	Hours	$ 190.00	$ 30,400.00
Dust Control	160	Hours	$ 135.00	$ 21,600.00
Equipment Service	160	Hours	$ 45.00	$ 7,200.00
Contract Foreman	75	Hours	$ 75.00	$ 5,625.00
Construction oversight of channel construction Principal	60	Hours	$ 85.00	$ 5,100.00
Other Direct Costs:				
Construction of 48" Stop Log Water Control Structures				
Pump Inlet/Outlet 48" Structure	1	EA	$ 30,000.00	$ 30,000.00
(200' of heavy duty HDPE pipe, road grading. Flapgates, concrete anchors, rip rap, erosion fabric)				
Construction Oversite Travel	5	Days	$ 96.00	$ 480.00
Construction Oversite Mileage	1200	Miles	$ 0.45	$ 534.00
Subtotal				$ 338,539.00
Administration: (5%)				$ 16,926.95
Total for Task #5				**$ 355,465.95**

Item	AWPF Funding Request			
	Item/Hours	Unit	Rate	Total
Task #6: Revegetate 49.2 Acres of Native Habitat				
Construction Oversight of 49.2 Acre Revegetation				
Outside Services:				
Principal	20	Hours	$ 85.00	$ 1,700.00
Restoration Ecologist, ms	75	Hours	$ 75.00	$ 5,625.00
Other Direct Costs:				
Travel Estimated	5	Days	$ 96.00	$ 480.00
Mileage	600	Miles	$ 0.41	$ 246.00
Channel Bank/Bankline Revegetation (2.1 acres)				
Outside Services:				
Planting Labor	Lump		$ 4,960.00	$ 4,960.00
(5 laborers x 4 days x 40hrs/wk x $22/hr) (Foreman 4 days x 40hrs/wk x $45/hr)				
Capital Outlay:				
7 Foot poles for Bankline Pole Planting and vertical bundles	2000	Poles	$ 1.00	$ 2,000.00
Inland Salt Grass Plugs	3000	Plugs	$ 1.00	$ -
Glue, Gloves and Shovels	1		$ 100.00	$ 100.00
Other Direct Costs:				
Travel Mileage	200	Miles	$ 0.41	$ 82.00
Per Diem	2	Days	$ 96.00	$ 192.00
ATV Rental	4	Days	$ 50.00	$ 200.00
Truck Rental	1	Weeks	$ 250.00	$ 250.00
Trailer rental	4	Days	$ 50.00	$ 200.00
Mini-excavator rental (for planting trenches on bankline)	1	Days	$ 550.00	$ 550.00
Wetland/Marsh Revegetation of 6.8 Acres				
Outside Services:				
Planting Labor	Lump		$ 31,000.00	$ 31,000.00
(5 laborers x 5 wks x 40hrs/wk x $22/hr) (Foreman 5 wks x 40hrs/wk x $45/hr)				
Capital Outlay:				
Three Square, Giant Bulrush Plugs	11848	Plugs	$ 1.00	$ 11,848.00
Riparian Revegetation of 40.3 Acres				
Outside Services:				
Planting Labor	Lump		$ 21,080.00	$ 21,080.00
(5 laborers x 17 days x x $22/hr) (Foreman 17 days x $45/hr)				
Install Irrigation System Labor	Lump		$ 18,600.00	$ 18,600.00
(5 laborers x 15 daysx$25/hr)(foreman 15 days x$25hrx15 days)				
Capital Outlay:				
1 gallon cottonwood, mesquite, willows, 4-winged, wolfberry, sacaton	8003	1 gallon	$ 3.00	$ 24,009.00
Inland Salt Grass Plugs	9196	Plugs	$ 1.00	$ 9,196.00
Seed Mix	100	LBS	$ 50.00	$ 5,000.00
Diesel Irrigation Pump for drip irrigation of Mesquite Area	1	Each	$ 25,000.00	$ 25,000.00
(BERKELY 150 GPM PUMP WITH 3 CYL ISUZU ENGINE/200 GAL FUEL TANK/3X2 NETAFIM FILTER/PRIMER CONTROLLER/FENCE ENCLOSURE AND FUEL SPILL TARP)				
Drip Irrigation System (PVC/Valves/Emitters/Controller/Stakes, etc.)	1000	acre	$ 21,000.00	$ 21,000.00
Fuel for Water Delivery (Two Years)	3,420.0	Gallons (delivered)	$ 3.70	$ 12,654.00
Other Direct Costs:				
Misc (Hog wire, twine, field equip, cages for cottonwoods and willow)	38.4	Acre	$ 50.00	$ 1,920.00
Tubex	1,049.0	per tube	$ 1.40	$ 1,468.60
Bobcat Rental (to auger 6,31 holes for 1 gallon pots and willow clusters)	20	Days	$ 500.00	$ 10,000.00
Trailer Rental	15	Days	$ 50.00	$ 750.00
Hydraulic Auger (for pole plantings)	30	Days	$ 70.00	$ 2,100.00
ATV Rental	30	Days	$ 50.00	$ 1,500.00
Truck Rental (1 trucks x $250/wk)	11	Weeks	$ 250.00	$ 2,750.00
Travel Estimated	0	Days	$ 96.00	$ -
Travel Mileage	300	Miles	$ 0.45	$ 133.50
Two Year Site Weed Maintanance/Discing/Irrigation/Month (10 months years)	20.0	Months	$ 4,800.00	$ 96,000.00
One month includes two maintenance people 20 hrs wkx4 wks/$22/hr				
(Foreman 8 hrs/month @ $45/hr) (Truck use $125/week*4weeks=$500)				
(garlon herbicide 1 gal/$100 gal/month ($420/month grant)				
Subtotal				$ 312,594.10
Administration: (5%)				$ 15,629.71
Total for Task #6				**$ 328,223.81**

Item	AWPF Funding Request			
	Item/Hours	Unit	Rate	Total
Task #7: Two-Year Post Revegetation Monitoring				
Year One Plant Monitoring (bi-monthly 2 sessions 1.5 days session)				
Outside Services:				
Ecologist MS	40	Hours	$ 75.00	$ 3,000.00
Laborer	40	Hours	$ 22.00	$ 880.00
Plant Monitoring Report, FPC Ecologist MS	30	Hours	$ 70.00	$ 2,100.00
Other Direct Costs:				
ATV Rental	7	Days	$ 50.00	$ 350.00
Year Two Plant Monitoring (2 sessions In May and October)				
Outside Services:				
Ecologist MS	40	Hours	$ 75.00	$ 3,000.00
Laborer	40	Hours	$ 22.00	$ 880.00
Plant Monitoring Report, FPC Ecologist MS	30	Hours	$ 75.00	$ 2,250.00
Other Direct Costs:				
ATV Rental	5	Days	$ 70.00	$ 350.00
Printing and Photomonitoring (for both years of reporting year one and two 10 copies of report each year)				
Fence Posts and Orange Fencing for Transects and Photo Points	22	Each	$ 5.00	$ 110.00
Fed EX	6	Each	$ 20.00	$ 120.00
Color Copies 11x17"	160	Each	$ 2.00	$ 320.00
Color Copies 8.5X11"	340	Each	$ 1.00	$ 340.00
B&W Copies 8.5"X11"	340	Each	$ 0.10	$ 34.00
Coil Binding	20	Each	$ 5.25	$ 105.00
24"x36" Color Plots	90	Square Feet	$ 5.00	$ 450.00
Subtotal				$ 14,289.00
Administration: (5%)				$ 714.45
Total for Task #7				**$ 15,003.45**
Task #8 Overall Project Coordination				
Outside Services:				
Principal	300	Hours	$ 85.00	$ 25,500.00
Subtotal				$ 25,500.00
Administration: (5%)				$ 1,275.00
Total for Task #8				**$ 26,775.00**
Task #9 Final Report				
Outside Services:				
Principal	16	Hours	$ 85.00	$ 1,360.00
Ecologist MS	85	Hours	$ 75.00	$ 6,375.00
Principal Biologist, MS	40	Hours	$ 75.00	$ 3,000.00
Editor	54	Hours	$ 50.00	$ 2,700.00
Other Direct Costs:				
Printing Materials Postage (4 copies of final report)				
Fed EX	4	Each	$ 20.00	$ 80.00
Color Copies 11x17"	55	Each	$ 2.00	$ 110.00
Color Copies 8.5X11"	115	Each	$ 1.00	$ 115.00
B&W Copies 8.5"X11"	333	Each	$ 0.10	$ 33.30
Coil Binding	8	Each	$ 5.25	$ 42.00
24"x36" Color Plots	24	Square Feet	$ 5.00	$ 120.00
Subtotal				$ 13,935.30
Administration: (5%)				$ 696.77
Total for Task #9				**$ 14,632.07**
Total Grant Request				**$ 889,842.35**

DETAILED SPENT/MATCHING FUNDS BREAKDOWN
City of Yuma (Matching funds paid by BLM)
Paradise Cove Riparian Restoration Project

	Yuma Crossing National Heritage Area			
Item	**Item/Hours**	**Unit**	**Rate**	**Total**
NON MATCHING FUNDS (ALREADY SPENT)				
Task #2: Depth to Water and Soil Salinity Analyses and Concept Design (field work and design) (NON MATCHING)				
Outside Services:				
Principal	40	Hours	$ 100.00	$ 4,000.00
Restoration Designer	60	Hours	$ 100.00	$ 6,000.00
Restoration Ecolgist, MS	60	Hours	$ 100.00	$ 6,000.00
Autocadd Operator	80	Hours	$ 100.00	$ 8,000.00
Field Technician	40	Hours	$ 75.00	$ 3,000.00
Other Direct Costs:				
Per Diem	10	Days	$ 100.00	$ 1,000.00
Mileage	1500	miles	$ 0.41	$ 615.00
Printing	1	lump	$ 300.00	$ 300.00
Survey Rental	5	Days	$ 100.00	$ 500.00
Soil Samples	1	Lump	$ 585.00	$ 585.00
Total for Task #2				**$ 30,000.00**
Task #4 Implement Site Clearing and Herbicide Spraying (match shown in matching funds breakdown)(NON MATCHING)				
Outside Services:				
Bobcat with Hydro Axe Mulcher	40	Days	$ 500.00	$ 20,000.00
D6 H LGP Dozer	100	Hours	$ 165.00	$ 16,500.00
Licensed Herbicide Applicator	120	hours	$ 40.00	$ 4,800.00
Supervision / Service (contractor)	20	Hours	$ 75.00	$ 1,500.00
Construction Oversight (consultant)	29	Hours	$ 85.00	$ 2,465.00
Other Direct Costs				
2 portable toilets with weekly service @ $70 ea per mo.	2	months	$ 120.00	$ 240.00
Herbicide	1	Lump	$ 3,000.00	$ 3,000.00
Oversight Travel Estimated	5	Days	$ 96.00	$ 480.00
Oversight Mileage	1305	Miles	$ 0.41	$ 535.00
Survey Equipment Rental	4	days	$ 120.00	$ 480.00
Subtotal				$ 50,000.00
TOTAL FUNDS SPENT TO DATE (NON MATCAHING)				$ 80,000.00

MATCHING FUNDS (WILL BE EXPENDED DURING GRANT PERIOD)				
Task #4 Implement Site Clearing and Herbicide Spraying (match shown in matching funds breakdown)				
Outside Services:				
Bobcat with Hydro Axe Mulcher	15	Days	$ 500.00	$ 7,500.00
D6 H LGP Dozer	80	Hours	$ 165.00	$ 13,200.00
Licensed Herbicide Applicator	60	hours	$ 40.00	$ 2,400.00
Supervision / Service (contractor)	20	Hours	$ 75.00	$ 1,500.00
Construction Oversight (consultant)	15	Hours	$ 85.00	$ 1,275.00
Other Direct Costs				
2 portable toilets with weekly service @ $70 ea per mo.	2	months	$ 120.00	$ 240.00
Herbicide	1	Lump	$ 2,390.00	$ 2,390.00
Oversight Travel Estimated	5	Days	$ 96.00	$ 480.00
Oversight Mileage	1305	Miles	$ 0.41	$ 535.00
Survey Equipment Rental	4	days	$ 120.00	$ 480.00
Subtotal				$ 30,000.00
TOTAL FUNDS SPENT TO DATE				$ 30,000.00

STATE HISTORIC PRESERVATION OFFICE
Review Form

In accordance with the State Historic Preservation Act (SHPO), A.R.S. 41-861 *et seq*, effective July 24, 1982, each State agency must consider the potential of activities or projects to impact significant cultural resources. Also, each State agency is required to consult with the State Historic Preservation Officer with regard to those activities or projects that may impact cultural resources. Therefore, it is understood that **recipients of state funds are required to comply with this law** throughout the project period. All projects that affect the ground-surface that are funded by AWPF require SHPO clearance, **including those on private and federal lands.**

The State Historic Preservation Office (SHPO) must review each grant application recommended for funding in order to determine the effect, if any, a proposed project may have on archaeological or cultural resources. To assist the SHPO in this review, the following information MUST be submitted with each application for funding assistance:

- A completed copy of this form, and
- A United States Geological Survey (USGS) 7.5 minute map
- A copy of the cultural resources survey report if a survey of the property has been conducted, and
- A copy of any comments of the land managing agency/landowner (i.e., state, federal, county, municipal) on potential impacts of the project on historic properties.
  NOTE: If a federal agency is involved, the agency must consult with SHPO pursuant to the National Historic Preservation Act (NHPA); a state agency must consult with SHPO pursuant to the State Historic Preservation Act (SHPA),
  OR
- A copy of SHPO comments if the survey report has already been reviewed by SHPO.

Please answer the following questions:

1. Grant Program: Arizona Water Protection Fund Capital Project

2. Project Title: Paradise Cove Wetland and Riparian Restoration

3. Applicant Name and Address: City of Yuma 180 West First Street, Suite E, Yuma, Arizona 85364

4. Current Land Owner/Manager(s): BLM

5. Project Location, including Township, Range, Section: T 16S, R 22E, Section 28 & 29

6. Total Project Area in Acres (or total miles if trail): 50.4

7. Does the proposed project have the potential to disturb the surface and/or subsurface of the ground? ☒ YES ☐ NO

8. Please provide a brief description of the proposed project and specifically identify any surface or subsurface impacts that are expected: This project would restore a total 50.4 acres of riparian, wetland and upland habitat along the lower Colorado River. The current site surface will be cleared of all non-native vegetation by removing woody

material with a dozer and excavating invasive root mass in low-lying areas. The woody material will be burned or mulched. Revegetation will include excavation of the existing and proposed channels and open water areas, using stop-log gates to control water levels and supply flood irrigation from treated effluent, bioengineering and containerized stock planting of native wetland and riparian species, and maintenance and monitoring activities to insure project success. This habitat restoration project is not anticipated to impact any subsurface archaeological deposits, since these deposits (should there be any) would be of sufficient depth to be avoided by project activities.

9. Describe the condition of the current ground surface within the entire project boundary area (for example, is the ground in a natural undisturbed condition, or has it been bladed, paved, graded, etc.). Estimate horizontal and vertical extent of existing disturbance. Also, attach photographs of project area to document condition: The current ground surface has been disturbed by previous restoration work and work related to the clearing of non-native vegetation. This disturbance extends across the entire project area and is up to 30-40 centimeters deep in some places depending on the type of vegetation and the amount of silt and sand buildup. It should be noted that the site area is within the Colorado River Floodplain and has been subjected to periodic flooding.

10. Are there any known prehistoric and/or historic archaeological sites in or near the project area? ☐ YES ☒ NO

11. Has the project area been previously surveyed for cultural resources by a qualified archaeologist? ☒ YES ☐ NO ☐ UNKOWN

    If YES, submit a copy of the survey report. Please attach any comments on the survey report made by the managing agency and/or SHPO

12. Are there any buildings or structures (including mines, bridges, dams, canals, etc.), which are 50-years or older in or adjacent to the project area? ☐ YES ☒ NO

    If YES, complete an Arizona Historic Property Inventory Form for each building or structure, attach it to this form and submit it with your application.

13. Is your project area within or near a historic district? ☐ YES ☒ NO

    If YES, name of the district:

Please sign on the line below certifying all information provided for this application is accurate to the best of your knowledge.

Tina Clark , 8-31-10 Tina CLARK

Applicant Signature /Date Applicant Printed Name

FOR SHPO USE ONLY

SHPO Finding:
☐ Funding this project will not affect historic properties. ☐ Survey necessary – further GRANTS/SHPO consultation required (*grant funds will not be released until consultation has been completed*) ☐ Cultural resources present – further GRANTS/SHPO consultation required (*grant funds will not be released until consultation has been completed*)
SHPO Comments
For State Historic Preservation Office: Date:

STATE OF ARIZONA
HISTORIC PROPERTY INVENTORY FORM

Please type or print clearly. Fill out each applicable space accurately and with as much information as is known about the property.

PROPERTY IDENTIFICATION

For properties identified through survey: Site No. _____ Survey Area: _____

Historic Names (*enter the name(s), if any that best reflect the property's historic importance*):
_____

Address: _____

City or Town: _____ ☐ Vicinity County: _____ Tax Parcel No.: _____

Township: _____ Range: _____ Section: _____ Quarters: _____ Acreage: _____

Block: _____ Lot(s): _____ Plat (Addition): _____ Year of plat (addition): _____

UTM Reference – Zone: _____ Easting: _____ Northing: _____

USGS 7.5' quadrangle map: _____

ARCHITECT: _____ ☐ not determined ☐ known Source: _____

BUILDER: _____ ☐ not determined ☐ known Source: _____

CONSTRUCTION DATE: _____ ☐ known ☐ estimated Source: _____

STRUCTURAL CONDITION

☐ Good (*well maintained; no serious problems apparent*)
☐ Fair (*some problems apparent*) Describe: _____
☐ Poor (*major problems; imminent threat*) Describe: _____
☐ Ruin/Uninhabitable

USES/FUNCTIONS

Describe how the property has been used over time, beginning with the original use:
_____

Sources: _____

PHOTO INFORMATION

Date of photo: _____
View Direction (looking towards): _____

Attach a recent photograph of property in this space.
Additional photographs may be appended.

SIGNIFICANCE
To be eligible for the National Register, a property must represent an important part of the history or architecture of an area. The significance of a property is evaluated within its historic context, which are those patterns, themes, or trends in history by which a property occurred or gained importance. Describe the historic and architectural contexts of the property that may make it worthy of preservation.

A. HISTORIC EVENTS/TRENDS – *Describe any historic events/trends associated with the property:* _____

B. PERSONS – *List and describe persons with an important association with the building:* _____

C. ARCHITECTURE – Style: _____ ☐ no style

Stories: _____ ☐ Basement Roof Form: _____

Describe other character-defining features of its massing, size and scale: _____

INTEGRITY
To be eligible for the National Register, a property must have integrity (i.e. it must be able to visually convey its importance). The outline below lists some important aspects of integrity. Fill in the blanks with as detailed a description of the property as possible.

Location - ☐ Original Site ☐ Moved: Date: _____ Original Site: _____

DESIGN
Describe alterations from the original design, including dates: _____

MATERIALS
Describe the materials used in the following elements of the property:

Walls (structure): _____

Walls (sheathing): _____

Windows: _____

Roof: _____

Foundation: _____

SETTING
Describe the natural and/or built environment around the property: _____

How has the environment changed since the property was constructed? _____

WORKMANSHIP
Describe the distinctive elements, if any, of craftsmanship or method of construction: _____

NATIONAL REGISTER STATUS (*if listed, check the appropriate box*)

☐ Individually Listed; ☐ Contributor; ☐ Non-contributor to _____ Historic District

Date Listed: _____ ☐ Determined eligible by Keeper of National Register (date: _____)

RECOMMENDATIONS ON NATIONAL REGISTER ELIGIBILITY (opinion of SHPO staff or survey consultant)

Property ☐ is ☐ is not eligible individually.

Property ☐ is ☐ is not eligible as a contributor to a listed or potential historic district.

☐ More information needed to evaluate.

If not considered eligible, state reason: _____

Form AZ-8110-5
(January 2000)

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
ARIZONA STATE OFFICE

CULTURAL RESOURCE COMPLIANCE DOCUMENTATION RECORD

Project No: BLM-AZ-320-2006-051 **Project Name**: Transient Restoration Phase 2 & 3

EA, Job or Case File No.: DNA-AZ-320-2006-032 (NEPA No.)

Institution: BLM-Yuma Field Office **Cultural Resource Use Permit No:** NA

Inventory Method: __XX__ Existing Data Review __XX__ Class II _____ Class III

Eligibility Recommendation (for sites located):

Not-eligible sites (list site numbers): None.

Eligible sites (list site numbers): None.

Effect Recommendation (only on eligible sites from above):

__XX__ No Historic Properties Affected _____ Adverse Effect

_____ No Adverse Effect

Treatment Recommendations: (check and attach full description and map(s) as needed):

____ Avoidance (by project redesign/cancellation, etc.)

____ Physical or administrative protection measures

_XX_ Standard stipulations

_____ Special stipulations

____ Data recovery (collection, excavation, detailed recording, etc.)

Consultation:

__XX__ Covered under PA, no further consultation required with SHPO or ACHP

Consultation required: _____ SHPO _____ Advisory Council _____ Native Americans

Comments

Proposed undertaking: The Bureau of Land Management (BLM) Yuma Field Office proposes to restore native riparian habitat adjacent to the Colorado River. The transient restoration project is broken into three phases. The first phase was completed in the winter of 2005/2006 and was evaluated for an 8-acre restoration area under CX/DNA-AZ-050-2004-0071 and BLM Cultural Resource Project Record BLM-AZ-050-2004-054. This new proposed action for phases 2 and 3 of the project would include the restoration of 4.2 acres and 45.5 acres respectively.

Project location: Township 16 South, Range 22 East, Section 28 lots 1, 2, 5, and 6, Section 29 lots 22 and 23, Gila and Salt River Meridian, Yuma County, Arizona (Yuma West USGS 7.5-minute topographic quadrangle).

Literature search: Previously recorded cultural resource sites within a one-mile radius of the proposed project area include several linear historic features, such as the Valley Levee [AZ X:6:15 (ASM)], the Yuma Valley Railroad [AZ X:6:43 (ASM)], the West Main Canal [AZ X:6:63 (ASM)], and the Thacker Lateral Canal [AZ X:6:87 (ASM)]. No prehistoric cultural resources are known to occur inside the project area; however, it is assumed that prehistoric sites are buried beneath the Colorado River floodplain. It is also important to note that the Colorado River itself is considered to be of traditional importance to Native Americans.

Site visit: Because of dense impenetrable vegetation, the project's Area of Potential Effects (APE) could not be inventoried for cultural resources. A field visit on August 23, 2006, evaluated any open areas in the vegetation for cultural resources, and none were identified. In addition, the Transient Restoration Phase 1 area was examined for any evidence of subsurface archaeological deposits that might have churned up during previous restoration activities. No cultural resources were found within the footprint of the existing 8-acre restoration area.

Government-to-Government Consultation: Tribal consultation was not conducted specifically for this project. It has been documented during previous consultations for similar projects that Indian tribes and groups affiliated with the Yuma Field Office planning area have no issues or concerns with projects that restore native habitat along the lower Colorado River, as long as those projects avoid adverse effects to prehistoric archaeological sites.

Required stipulations: A qualified BLM employee will notify workers of cultural resource laws and regulations, and monitor compliance. Should cultural and/or paleontological resources be encountered during project ground-disturbing activities, work will cease in the area of the discovery and the BLM Yuma Field Office will be notified immediately. Work may not resume until written authorization to proceed is issued by BLM.

Findings: The proposed action activities would not impact the adjacent linear historic features identified during the Class I literature search, since these features are located outside of the restoration areas. In addition, this habitat restoration project is not anticipated to impact any subsurface archaeological deposits, since these features would be of sufficient depth to be avoided by project activities. Pursuant to Section 106 of the National Historic Preservation Act and the regulations set forth in 36 CFR § 800, BLM has determined that this undertaking would have no effect on historic properties, as defined in 36 CFR § 800.16(1)(1), and has fulfilled its obligations under Section 106.

Attachments: Project overview photos, project map.

Signed (by archaeologist): /s/: Sandra Arnold Date: 10 / 05 / 2006

Sandra Arnold

Project Photos for BLM Cultural Resource Project Record BLM-AZ-320-2006-051

Example of dense vegetation at western end of Phase 3 area, facing east.

Overview of Phase 3 area, facing east.

Example of dense vegetation within Phase 2 lower bench, facing west.

Typical open area within Phase 2 upper bench where cultural survey was possible, facing west.

Key Personnel

The following pages include the resumes of the Yuma Crossing National Heritage Area Project Coordinator, and the two main contractors that will perform a majority of the work specified in this grant application. The project team has over 50 years combined experience in riparian revegetation, land grading and large scale excavation, grant and construction project management and ecological monitoring on the Lower Colorado River. Currently this same project team is implementing, maintaining and managing over 250 acres of restoration within the YEW project.

CHARLES W. FLYNN
180 West 1st Street, Suite E
Yuma, AZ 85364

PROFESSIONAL EXPERIENCE

Executive Director **1999 – Present**
Riverfront Development & Yuma Crossing National Heritage Area
Yuma, Arizona
Manages and coordinates projected $100 million Riverfront Development Project, including new park development, Wetlands Restoration and commercial revitalization. Coordinates with private sector development partner for planning and implementation of a 22-acre commercial development opportunity on the Riverfront. Coordinates planning and implementation of Yuma Crossing National Heritage Area with multiple partners, including two (2) Indian Nations. (See yumaheritage.com)

Executive Director **1994 - 1999**
Wheeling National Heritage Area Corporation
Wheeling, West Virginia
Responsible for planning and implementation of a $25 million redevelopment project in downtown Wheeling, WV, an Ohio River Valley industrial city of 35,000. Projects included:

- *Wheeling Artisan Center* - Managed the reconstruction of an 1860's industrial building, now a multi-use facility with private micro-brewery/restaurant, retail craft center, and exhibition space.
- *Wheeling Intermodal Center* - Coordinated a multi-agency effort to construct a transit facility with parking for 850 cars and visitor center, with other private tenants including Greyhound.
- *Heritage Port* - Managed the demolition of a dilapidated parking structure and the construction of a new Riverfront Park and Port.

President and CEO **1981 - 1993**
Conneaut Lake Park
Conneaut Lake, Pennsylvania
Responsible for planning, development, marketing and operations of a 150-acre summer family resort with annual revenues of $4 million. Facility expansion included hotel and nightclub renovation, campground development and installation of new water park. Aggressive marketing increased revenues by 50% from 1982 - 1988.

Deputy Commissioner, Finance, and Administration **1979-1981**
New York City Department of General Services
New York, New York

Responsible for overall financial management, personnel, and administration of $300 million agency. Duties included crafting and implementing 10% cost reduction plan with the agency during fiscal crisis.

PROFESSIONAL EXPERIENCE (Continued)

Department of Housing Preservation and Development **1978-1979**
City of New York
New York, New York
Initially involved in the Mayoral transition for Honorable Edward Koch. Tasked to the department to assist in development of program manage "In Rem" tax-foreclosed residential and commercial property.

Legislative Assistant **1974 - 1977**
Congressman Edward Koch
Responsibilities included constituent services, legislative drafting, speech writing, and concentration on appropriations committee matters.

EDUCATION

Stanford University
B.A., M.A. History
1974

Three (3) week seminar for Senior Executives in State and Local Government

Harvard University, Kennedy School of Government
1980

PERSONAL

Married to Ann Walker, Attorney
Two Children: Brendan, 23; Adam, 20

Councilmember
City of Meadville, Pennsylvania
1984 - 1994

KEVIN EATHERLY
180 West 1st Street Suite E
Yuma, AZ 85364

PROFESSIONAL EXPERIENCE (City of Yuma)

CIP Project Manager **1999 – Present**
Riverfront Development & Yuma Crossing National Heritage Area
Yuma, Arizona

Has been the principal project manager for the City of Yuma for all Capital Improvement Projects (CIP) in the north end of the City of Yuma and specifically along the Colorado River. Also serves as the project manager for the Yuma Crossing National Heritage Area, a 22 square mile area designated by the US Congress along the Lower Colorado River. The following is a list of projects managed to date:

1999

- Maiden Lane 30" water line construction and street reconstruction from 1st Street to 5th Street ($70,000).
- 1st Street 30" water line and street reconstruction from Madison Avenue to 4th Avenue ($900,000).

2000

- Madison Avenue reconstruction and gateway enhancements, 1st Street to Jones Street ($450,000).
- West Wetlands master Plan ($45,000) with U.S. Bureau of Reclamation (USBR).
- Multi-Use Pathway from the Colorado River Levee to 8th Street ($375,000) in cooperation and with funding with USBR and Arizona State Trails Program.
- Other planning and design work.

2001

- Settling Tank Hill Demolition, removal of 682,000 cubic yard material removal adjacent to the escarpment of the Colorado River ($154,000).
- Redondo interchange construction on Interstate 8 under Federal Highways permit ($1,200,000).

2002

- City of Yuma Municipal Complex; 150,000 square foot infill development requiring the acquisition of 13 properties, reconstruction of four (4) city blocks, installation of two (2) supplemental parking lots, construction of all applicable adjacent utilities joint parking agreements and facilities with private and public entities ($32,000,000).
- Yuma West Wetlands Park - Phase One; Project funded through USBR, State of Arizona (SLIF, LRSP and State Trails), Arizona Game and Fish, EPA and the City of Yuma. Conversion of 35 acres of a 110-acre former city landfill to a recreational park.
- Yuma West Wetlands Riparian Revegetation and Wetland Restoration Project; 35 acres of restored riparian habitat and wetlands adjacent to the Colorado River ($1,000,000).

PROFESSIONAL EXPERIENCE (City of Yuma - Continued)

2003

- TEA-21 Transportation Enhancement Project - Managing, concurrently, eight (8) separate TEA-21 grants valued at ($5,700,000).
- Yuma East Wetland Pilot Project; 33 acres of riparian habitat restoration, construction of 2 waterlines, construction of a decant waterline ($1,412,000) funded by USBR, Sonoran Joint Venture (USF&W Service), National Fish and Wildlife Foundation, Yuma Crossing National Heritage Area and City of Yuma.
- 1st and 5th Street waterline construction ($375,000).
- West Wetland Lake and Wetland Flood Irrigation Detention Facility ($350,000) USBR and City of Yuma.
- Water Treatment Sludge Drying Bed Relocation.

2004-2006

- Managed additional 200 acres of riparian restoration in Yuma East Wetlands, including excavation and replanting of the 1.5 mile long South Channel.
- Managed design and construction of Main Street Reconstruction ($4 million).
- Managed design and construction of Gateway Park ($4.4 million).
- Managing design and restoration of Hotel Del Sol Multi-Modal Transit Center.
- Managing design of Arizona Welcome Center.
- Managed mitigation for West Wetlands Park development.

EDUCATION

Northern Arizona University
Bachelor of Arts Degree
Recreational Management

PROJECT DESIGN AND CONSTRUCTION CONSULTANTS

Fred Phillips Consulting, LLC

Fred Phillips Consulting, LLC (FPC) is a Landscape Architecture/Ecosystem Restoration based small business in Flagstaff, Arizona. Fred Phillips established Phillips Consulting in 1998, and now has over 14 years experience in landscape architecture, ecosystem restoration, natural resources planning, restoration ecology, GIS Mapping, site analysis and soil surveying. Our projects include multidisciplinary wetland/aquatic/riparian restoration, commercial and residential landscape design, natural resource planning, and fundraising/eco-business development projects for Native American Tribes, non-profit organizations, federal and state agencies, and private individuals. We strive to accomplish the wise planning, restoration and development of the natural landscapes and ecosystems of the western United States and beyond. FPC also teams with a diverse group of highly qualified engineers and other specialists giving us the ability to implement any type of project.

Project Experience

WETLAND RESTORATION & NATIVE PLANT REVEGETATION

Yuma East Wetlands Restoration Project
Quechan Indian Tribe & City of Yuma, AZ

- Developed restoration plan for 1,400 acre Yuma East Wetlands riparian and wetland restoration, habitat enhancement and agricultural conversion, including restoration detail designs.
- Conducted design, site analysis, engineering, biological monitoring and construction management of over 250 acres of restoration projects.
- Conducted wetland delineation, endangered species surveys, and project construction management; applied for and obtained environmental compliance permits.
- Conducted design, site analysis, engineering, biological monitoring and construction management of over 250 acres of restoration projects.
- Excavated a mile long backwater channel and restored topography of native wetlands.

'Ahakhav Tribal Preserve
Colorado River Indian Tribes, Parker, AZ

- Designed and implemented 5 acres of park facilities, 300 acres of native riparian plant restoration, 500 acres of aquatic/ wetland restoration and protection, ecological monitoring, 3.5 mile trail system and an environmental education program.
- Administrated all construction and restoration operations, personnel management and an annual budget of over $1.5 million for 5 years.
- Designed, obtained funding for, and established 'Ahakhav native plant nursery that currently grows and sells over 40,000 native plants annually.

Yuma West Wetlands Revegetation Project
City of Yuma, AZ

- Contracted to perform site analysis, design, construction management and monitoring of 50 acre native riparian revegetation project along the Colorado River.

- Fabricated and implemented mitigation plans and compliance for USCOE violations on riverfront project.

Las Vegas Wash Master Revegetation Project
City of Las Vegas/Clark County/Southern Nevada Water Authority

- Developed 200 acre 'Revegetation Master Plan for Las Vegas Wash'.
- Developed revegetation construction documents for three riparian and wetland restoration projects, including over 90 acres of the Las Vegas Wash Revegetation Project.

Glen Canyon Riparian Restoration Project
Glen Canyon National Recreation Area, AZ

- Completed revegetation design, implemented construction and biological monitoring for a 16-acre riparian restoration project at Lees Ferry, AZ in partnership with Grand Canyon Wildlands Council.
- Developed a revegetation master plan for the entire Colorado River corridor within the Glen Canyon National Recreation Area, a 15-mile reach from Glen Canyon Dam to Lees Ferry, in coordination with Grand Canyon Wildlands Council.

The Limitrophe Restoration Plan
Environmental Defense

- Developed restoration master plan for 25 miles of Colorado River corridor in the Limitrophe District, including existing data research, stakeholder consensus building, and grant writing for the pilot project

Multi-Species Conservation Plan Conservation Opportunity Area Plans
Bureau of Reclamation

- Served as Tribal liaison between federal agencies and other stakeholders in relation to the Multi-Species Conservation Plan.
- Developed riparian restoration plans for the Quechan, Hualapai, Cocopah, Chemehuevi, Quechan and Ft Mojave Indian Tribes.

Open Water In the Channel From The Effluent Outfall. Looking North.

Low Lying Areas On the Edge Of The Channel With Fluctuating Water Levels Provide Potential For Wetland/Marsh Habitat. Looking West.

Existing Willows on West Side Of The Project To Remain. Looking North.

Effluent Outfall In The Middle of the South Boundary, Supplying Water to the Project. Looking North.

Revegetation and Monitoring Plans

The following are the sampling, revegetation, monitoring and photo point plans for the 50.4 acre Paradise Cove channel excavation, grading and revegetation project.

EXOTIC SPECIES CLEARING

Since portions of the site were cleared in July 2010 using a hydro-axe mulcher and bulldozer, continued clearing will be necessary to clear re-colonizing vegetation prior to planting. Invasive salt cedar and phragmites will be controlled by herbicide spraying re-colonizing invasive vegetation and mulching the standing deadwood. Phragmites will also be controlled by excavating invasive root mass in wet areas, and burning the excavated woody material. Re-colonizing invasive tamarisk and phragmites will be sprayed with Garlon 4 using a backpack sprayer. Care will be taken to prevent over-spraying into other areas and will not be sprayed on windy days. The entire 50.4 acre site will be treated with this technique. All mulched material will be left on site or burned.

CHANNEL EXCAVATION AND HABITAT GRADING AND LEVELING

After the site is cleared of invasive vegetation, the existing pond and channels will be excavated using an amphibious excavator, a hydraulic dredge, a low-track bulldozer, and land-grading equipment. The channel will be dredged until they attain an average width of 20-30 feet and an average depth of 4-7 feet. The channel banks will be contoured on a 3:1 slope to accommodate small flows. The 6.8 acre wetland areas will be graded and leveled to just above the water table and the 21.4 acre cottonwood and willow riparian areas will be graded so that they can be planted deep enough to reach moist soils where possible. Both these areas will be flood irrigated by the fluctuations of the channel. The remaining 21 acres of mesquite bosque habitat will retain the current topography. Valuable existing native habitat (cattail/bulrush, cottonwood/willow, and mesquite) will be avoided during excavation. This new topographic configuration will diversify habitats for terrestrial and aquatic wildlife.

The contractor selected for the channel excavation work will be provided a schematic design of the excavated channel and lowered wetland and riparian areas by the grantee. The contractor will work with the grantee to finalize a "not to exceed cost" for the excavation of the channel and grading of wetland habitats as described in the grant. During construction the contractor will work with the grantee to make design revisions as needed in the field, any changes in design will be submitted to the AWPF for comment and approval. When channel construction is completed the grantee will provide the AWPF with an as built map of the created, channel and wetland cells.

Spoils Placement

The excavated material will generally be surrounded by containment berms. Water flowing from these berms will be directed onto the adjacent riparian habitat, where it can increase soil moisture and promote the natural regeneration of cottonwood and willow trees. This design largely eliminates turbid inflow from the bermed areas to the channels and open water. Berm construction may be limited or impossible in areas where bulldozer access to spoil piles is limited by wet soils, deep water, or high organic content.

The excavated spoils will be placed in areas with low wildlife habitat value, using methods that minimize disturbance to the few existing cottonwood, willow, or mesquite trees. Excavated material can be successfully revegetated if soil type, depth to groundwater levels, and soil salinity are suitable. The numbers and species of plants used for revegetation will be determined after dredging operations have been completed. Whenever possible, cottonwood and willow will be planted on the lower terraces and mesquite will be planted on higher areas.

DEPTH TO WATER AND SOIL SALINITY ANALYSES

Depth to Water and Soil Salinity Analyses were completed for the project during the design of the conceptual restoration plan. This task was accomplished at the 50.4 acre Paradise Cove site using the following equipment:

- A Trimble Geo XT survey unit
- A hand to collect samples

Soil samples were collected at 36 data points along 5 transects. At each point soil samples were collected at the surface and 5-foot depths. At each sampling point, the Trimble survey unit identified the location. Soil samples were sent to Utah State (a licensed soil lab) for analysis. The depth to water was measured at 34 sampling points that coincide with the soil sample. Maps displaying the depth-to-water and soil salinity at the surface and 5 foot depth were prepared and will be used for the revegetation planting design. These maps will specify the percent of area suitable for the various riparian species (cottonwood, willow, and mesquite).

These analyses will be used to complete the planting, irrigation, and monitoring designs for the site. The planting design will specify the species to be planted, along with planting locations, monitoring transects, and a detailed irrigation design.

IRRIGATION DESIGN AND SET-UP

Vegetation planted along the open water channel will not be irrigated since the propagules will be planted directly into the water table or saturated soil along the site. The created 6.8 acre lowered wetland habitat and 21.4 acre riparian habitat will be flood irrigated by placing the stop logs in the culverts and raising the water level in the channel allowing the effluent water to fill the channel and lowered areas. The remaining 21 acres of mesquite bosque habitat will be watered with drip irrigation. A gas powered pump will draw water from the Colorado River for the irrigation infrastructure. Irrigation will occur 20 days a month for 6 months (April-Sept) and 5 days a month (Oct-March) until the end of the first growing season. The second growing season the trees will be irrigated for 4 additional months 10 days a month (April-July).

49.2 ACRE REVEGETATION PROJECT PLAN

The restored area will feature native riparian species, open water channel aquatic habitat, wetland and upland habitats—a much greater diversity of habitat than currently exists at this site. The result will be wetlands and riparian habitats that will be more functional and attractive to birds and wildlife.

Revegetation Construction Activities

This project will involve a total of 49.2 acres of native plant revegetation and 1.2 acres of open water habitat enhancement, including 6.8 acre created lowered wetland habitat; 21.4 acres of cottonwood and willow riparian habitat; and 21 acres of mesquite bosque upland habitat. The lowered wetland habitat will be planted with poles, plugs, and seeds of native wetland species, and will be irrigated using flood irrigation from the channel. The riparian/upland habitat will be planted with propagules of native riparian species, including cottonwood, willow, and mesquite. The mesquite bosque upland revegetation will be drip irrigated using pumps drawing water from the Colorado River. The final revegetation design will be completed based on the excavation and the results from the soil and depth to water analyses.

Planting

The following native plant species will be used in the revegetation project

- Fremont cottonwood (*Populus fremontii*)
- Goodding willow (*Salix gooddingii*)
- Sandbar willow (*Salix exigua*)
- Honey mesquite (*Prosopis glandulosa*)
- Olney three-square bulrush (*Schoenoplectus americanus*)
- California bulrush (*Schoenoplectus californicus*)
- Inland saltgrass (*Distichulus Spicata*)
- Alkali sacaton (*Sporobolus airoides*)
- Yerba mansa (*Anemopsis californica*)
- Western sea purslane (*Sesuvium verrucosum*)
- Wild heliotrope (*Heliotropium curassavicum*)
- Other suitable native riparian and wetland species

The final planting design will determine the density and location of these species within the site, which will be based on the results of the soil and depth-to-water analyses and other site conditions. Wetland species will primarily be planted by seed and plugs from local native stock and purchased from a nursery local to the region. The planting density of the wetland species will be determined in the final planting design. In the riparian area, approximately 200 to 500 trees (cottonwood, Goodding willow, and sandbar willow) per acre will be planted at 10-15 ft. spacing, depending on site suitability. A 3-foot hog-wire fence will be installed around each 1 gallon cottonwood and willow propogules to prevent browsing by beaver or other herbivores, the poles, plugs and seeds will not be

fenced. The area will be hand-weeded during native vegetation establishment to limit the encroachment of tamarisk and giant cane, thereby enhancing the natural recruitment of native grasses and forbs. Planting activities also include hand-broadcasting seeds of alkali sacaton (*Sporabolus airoides*), salt heliotrope (*Heliotropium curassavicum*), yerba mansa (*Anemopsis californica*), and other native under-story species to promote under-story development in the revegetation area.

Weeding

When planting is complete the grantee will conduct regular maintenance of the revegetation site for two years. Maintenance activities will be conducted during the growing season and will include: maintaining the irrigation system, removing exotic weeds, and re-planting vegetation in the case of mortality. By the end of the first growing season, the plantings should be well established for long-term self-sustainability.

MONITORING STRATEGY AND SUCCESS CRITERIA

In addition to providing information about the success of this project, this monitoring plan will help test the methods proposed for the remaining actions.

Vegetation Monitoring

The primary purpose of monitoring vegetation is to determine if vegetation is establishing and thriving, if conditions are suitable for the vegetation planted, document the success of the project, and help guide future revegetation efforts. Vegetation sampling will target about 3 percent of the population. Monitoring will occur two times during the first two growing seasons (May through October). Both quantitative and qualitative techniques will be used to monitor vegetation growth at the site. Transects will be established at the site to measure quantitative growth parameters for tree, shrub, and herbaceous vegetation species. Transects will include all tree/shrub species that are present on the site and will be selected randomly using the following method:

1. A computer will be used to generate one random number within each acre of the site. The random number will correspond to a planting hole on the overall planting design for the area.
2. Vegetation transects will be assigned to random planting holes. These transects will include the randomly selected planting hole plus the consecutive holes that correspond to each plant species until all species planted on site are accounted for.

For tree and shrub species, including cottonwood, willow, and mesquite, the following parameters will be measured:

- Tree height (ft) – From base of the trunk to the top of the tallest up-stretched leaf.
- Tree condition – Dead- healthy
- Factors affecting growth (i.e. insect/mammal browsing, high salinities, etc.)
- Percent survival rate – Dead verses alive.

Qualitative data-collection methods for vegetation will include photo point monitoring. The Design Team will establish four such locations on the revegetation site. Photo monitoring will be conducted using AWPF methods and guidelines.

Success Criteria

Productive native habitat development is the primary criterion that measures project success. The following table specifies success criteria for vegetation, criteria that the Design Team will use to assess the success of this revegetation project in relation to pre-treatment conditions.

Success Criteria for Native Vegetation Species in the Revegetation Project

	5-year goal		**10-year Goal**	
Species	**Percent Survival**	**Height (inches)**	**Percent Survival**	**Height (inches)**
Fremont Cottonwood	80-100	200-300	60-90	240-360
Gooding Willow	80-100	200-265	60-75	220-300
Sandbar Willow	75-80	135-265	60-80	140-280
Mesquite (Screwbean, Honey)	75-80	135-265	60-80	140-280
Four-Wing Saltbush	60-80	24-60	50-80	24-72

Certain site features may influence vegetation health, including: insect damage, browsing, soil erosion and drift, and "edge effects," including vandalism. These conditions will be noted through the monitoring period. Baseline conditions for vegetation at Paradise Cove were documented in the Paradise Cove's biological evaluation from the results of preliminary site analysis. This data provides information that is required to assess whether the project objectives are being met. The Design Team can use it to compare survival and growth rates to soil salinity, depth-to-water, and plant health. Plant health is a function of growth rate, survival, extent of insect damage or browsing, weed encroachment, and regeneration.

Existing Plans/Reports/Information

The Bureau of Land Management Yuma Field Office has started to restore native riparian habitat adjacent to the Colorado River by implementing this three phase project. The current proposal is Phase 3 of the restoration plan, and encompasses the largest area of the three phases. Phases 1 and 2 have been completed, totaling 18 acres of restored native riparian habitat. The existing plans and reports are included below.

1. Original NEPA for phases 1, 2, and 3
2. Depth to Water and Soil Analysis
3. Initial Site Clearing Report

\

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Yuma Field Office
2555 East Gila Ridge Road
Yuma, AZ 85365
www.az.blm.gov

DETERMINATION OF NEPA ADEQUACY (DNA) FORM

DNA-AZ-320-2006-32
PROJECT NAME: Transient Restoration Phase 2 & 3
TECHNICAL REVIEW:

Case/Project No.: N/A

(X)	Program	Reviewer	Signature	Date
X	Air Quality	Jennifer Green	Roger A Tyler	10/05/06
	Areas of Critical Environmental Concern			
X	Botanical, including T & E Species	Fred Wong	Fred Wong	3 OCT 06
	Communications (Dispatch)			
X	Cultural Resources	Sandra Arnold	Sandra Arnold	10/5/06
	Energy Policy			
X	Environmental Justice	Karen Reichhardt	Karen Reichhardt	4 Oct 06
X	Farm Lands (Prime or Unique)	Jennifer Green	Roger A Tyler for	10/04/06
X	Fire Management	David Repass		
X	Floodplain	Karen Reichhardt	Karen Reichhardt	4 Oct 06
X	Hazardous Material	Stephen Fusilier		
	Lands/Realty			
X	Land Law Examiner	Candy Holzer	Candy Holzer	10/4/06
	Law Enforcement			
	Minerals			
X	Native American Religious Concerns	Sandra Arnold	Sandra Arnold	10/5/06
X	Non-Native Invasive Species	Jennifer Green	Roger A Tyler for	10/04/06
	Operations			
X	Recreation	Ron Morfin	Ron Morfin	10/4/06
	Soils			
X	Socioeconomic	Karen Reichhardt	Karen Reichhardt	4 Oct 06
	Standards for Rangeland Health			
	Surface Protection			
X	Visual Resources	Ron Morfin	Ron Morfin	10/4/06
	Wastes, Hazardous or Solid			
	Water Rights			
X	Water Quality, Drinking or Ground	Jennifer Green	Roger A Tyler	10/04/06
X	Wetlands/Riparian Zones	Karen Reichhardt	Karen Reichhardt	4 Oct 06
	Wild & Scenic Rivers			
	Wilderness			
	Wild Horses and Burros			
X	Wildlife including T & E Species	Fred Wong	Fred Wong	3 OCT 06

Prepared by: Bethany Hontz — Date: 10/3/06
Bethany Hontz, Natural Resources, Intern

Reviewed by: Dave Daniels — Date: 10-5-06
Dave Daniels, Acting Planning & Environmental Coordinator

Reviewed by: Bruce H Rittenhouse — Date: 10/10/06
Bruce Rittenhouse, Assistant Field Manager, Resources, Lands and Minerals

Worksheet
Interim Documentation of Land Use Plan Conformance and NEPA Adequacy (DNA)
U.S. Department of the Interior, Bureau of Land Management

Note: This Worksheet is to be completed consistent with the policies stated in the Instruction Memorandum entitled, "A Documentation of Land Use Plan Conformance and National Environmental Policy Act (NEPA) Adequacy transmitting this Worksheet", and the "Guidelines for using the DNA Worksheet", located at the end of the worksheet.

Project Location:
Phase 2 and 3 of the project encompasses Federal lands within lots 1, 2, 5, and 6, section 28; and within lots 22 and 23, section 29, T. 16 S., R. 22 E., San Bernardino Meridian, Arizona.

The project area is in the riparian corridor bordering the lower Colorado River (LCR) just outside of the Yuma city limits. It lies to the west of Paradise Cove RV Park.

See attached maps.

A. Describe the Proposed Action

The proposed action would restore a total of 49.7 acres (4.2 acres for Phase 2 and 45.5 acres for Phase 3) native riparian habitat to native cottonwood, willow, and mesquite habitat adjacent to the Colorado River. With the completion of the Transient restoration project, 33 contiguous acres along the Colorado River would be improved for wildlife. When viewed in conjunction with the nearby Yuma Wetlands (East and West) projects, a substantial riparian corridor (1563 acres) would be reestablished.

The Transient restoration project is broken into three phases. The first phase, which this DNA does not address, was completed in the winter of 2005/2006. The second phase of clearing and planting would take place between September 2006 and February 2007. The third phase would be the following winter, between September 2007 and February 2008.

Revegetation plan:

Vegetation Clearing. First, the appropriate amount and type of existing vegetation would be removed. The lower bench is bordered by the river and will be cleared completely with the exception of pre-existing cottonwoods and willows. An 11,000 pound skid-loader with rubber wheels would be used to clear vegetation. The upper bench is a larger, drier area, and will be partially cleared, avoiding native trees.

Site preparation. After the sites have been cleared, five foot square areas would be tilled using a roto-tiller to decrease the proliferation rate of the cleared vegetation. One foot square holes would be dug to the appropriate depths with varying types of equipment in the center of these tilled areas. Five-foot square weed cloth sheets would be placed around each planted tree to deter regrowth of the less desirable vegetation in close proximity to the planting. No permanent ground disturbance would occur in order for the equipment to gain access to the site. An auger would be attached to the skid-loader in order to dig the holes. In areas where the use of the skid loader is not feasible, hand tools would be used to clear vegetation and a gas-powered hand auger would be used to dig the holes. The potted trees or poles would be planted and fenced with T-posts and metal caging.

Protection and monitoring. Metal caging would be installed to prevent wildlife and recreating visitors from damaging the trees. The caging materials would be re-used as many times as possible. Three nine-foot deep by six inch wide water-monitoring wells would be installed on site.

Irrigation. The trees would be irrigated using a drip-irrigation system powered by three, 5-horse power water pumps. Trees will be irrigated twice every week within the first month of planting, and the trees will be irrigated at most once every week thereafter. Irrigation will be year-round.

Maintenance. Until the trees have reached an adequate height to compete for sunlight, workers will use 11,000 pound skid loaders, brushsaws, or hand tools to cut back undesirable vegetation that competes with desired plantings. The reintroduction of heavy equipment would be restricted during migratory bird season.

B. Land Use Plan (LUP) Conformance

1. Yuma District Resource Management Plan and Environmental Impact Statement (pp. 7, 8, 14, 15).

2. The Final Environmental Impact Statement Vegetation Treatment on BLM Lands in Thirteen Western States (pp. 1.5,1.17, 3.7 - 3.94).

The proposed action is in conformance with the applicable LUPs because it is specifically provided for in the following LUP decisions:

The proposed action is in conformance with the LUP, even though it is not specifically provided for, because it is clearly consistent with the following LUP decisions (objectives, terms, and conditions)

The RMP states that approximately 18,000 acres of riparian areas within the YFO should be managed as priority wildlife habitat. "Allowable uses on priority wildlife habitat areas would include compatible activities or those uses whose impacts could be mitigated to preserve or enhance wildlife values. Improvements would be restricted to those that are compatible with wildlife habitat or cultural resources..." (page 15).

C. Identify applicable NEPA documents and other related documents that cover the proposed action.

- EA-AZ-050-2004-0035 Native Vegetation Planting within Yuma Field Office Riparian Zones.
- The *Interagency Fire Management Plan* identifies the project area as a hazardous fuel priority. It further calls on consideration of fuels modification to prevent destruction of endangered species habitat and maintain riparian habitat values and conditions (USDI, BLM 1998).
- The U.S. Fish and Wildlife Service's *Draft Southwestern Willow Flycatcher Recovery Plan* seeks in part to protect, reestablish, mimic, and/or mitigate for the loss of the natural processes that establish, maintain, and recycle riparian ecosystems. Additionally, this plan advocates management of exotic plant species and continuing research to refine management practices and knowledge of ecology (USDI, USFWS 2001).

D. NEPA Adequacy Criteria

1. Is the current proposed action substantially the same action (or is a part of that action) as previously analyzed? Is the current proposed action located at a site specifically analyzed in an existing document?

YES, this action was the intent of the programmatic environmental assessment EA-AZ-050-2004-0035 and a portion of the action area was analyzed in EA-AZ-050-2002-0021. Although well installation and rototilling were not addressed in EA-AZ-050-2004-0035, the impacts are similar to the impacts of the actions described in EA-AZ-050-2004-0035.

2. Is the range of alternatives analyzed in the existing NEPA document(s) appropriate with respect to the current proposed action, given current environmental concerns, interests, and resource values?

YES, nothing has changed.

3. Is the existing analysis valid in light of any new information or circumstances?

No new information or circumstances have arisen that would render the previous analyses inadequate.

4. Do the methodology and analytical approach used in the existing NEPA document(s) continue to be appropriate for the current proposed action?

YES, the process is the same.

The project area is not in a wetland or below the ordinary high water mark; therefore notificatiion to the Corps of Engineers under Section 404 of the Clean Water Act and Section 10 of the River and Harbors Act is not needed. A wetland delineation performed for EA-050-2002-021 by Mike Behrens on March 20, 2003 at the project site determined the project is not in a wetland because hydrology and soils criteria are lacking. The project area is six feet above the water table. The ordinary high water mark is visible at the outside edge of the planting area where water levels have created a distinct shelf.

5. Are the direct and indirect impacts of the current proposed action substantially unchanged from those identified in the existing NEPA document(s)? Does the existing NEPA document analyze site-specific impacts related to the current proposed action?

YES, the direct and indirect impacts of the proposed action have not changed substantially from those analyzed in the NEPA documents cited above. The previous NEPA analyses address the same site-specific impacts for the proposed action.

6. Are the cumulative impacts that would result from implementation of the current proposed action substantially unchanged from those analyzed in the existing NEPA document(s)?

YES, no new cumulative impacts would result beyond those previously addressed in the NEPA documents cited above.

7. Are the public involvement and interagency review associated with existing NEPA document(s) adequate for the current proposed action?

YES, the public involvement and review process for the NEPA documents cited above is adequate for the proposed action. An informal consultation with U.S. Fish and Wildlife Service will be conducted.

E. Interdisciplinary Analysis: Identify those team members conducting or participating in the NEPA analysis and preparation of this worksheet.

Name	Title
Sandra Arnold	Archeologist
Fred Wong	Wildlife Biologist
Ron Morfin	Recreation and Wilderness Specialist
Karen Reichhardt	Team Leader, Resources
Candy Holzer	Land Law Examiner
Stephen Fusilier	Team Lead Lands and Minerals
Bethany Hontz	Natural Resources, Intern

Conclusion

Based on the review documented above, I conclude that this proposal conforms to the applicable land use plan, and that the cited NEPA documentation fully covers the proposed action and constitutes BLM's compliance with the requirements of NEPA.

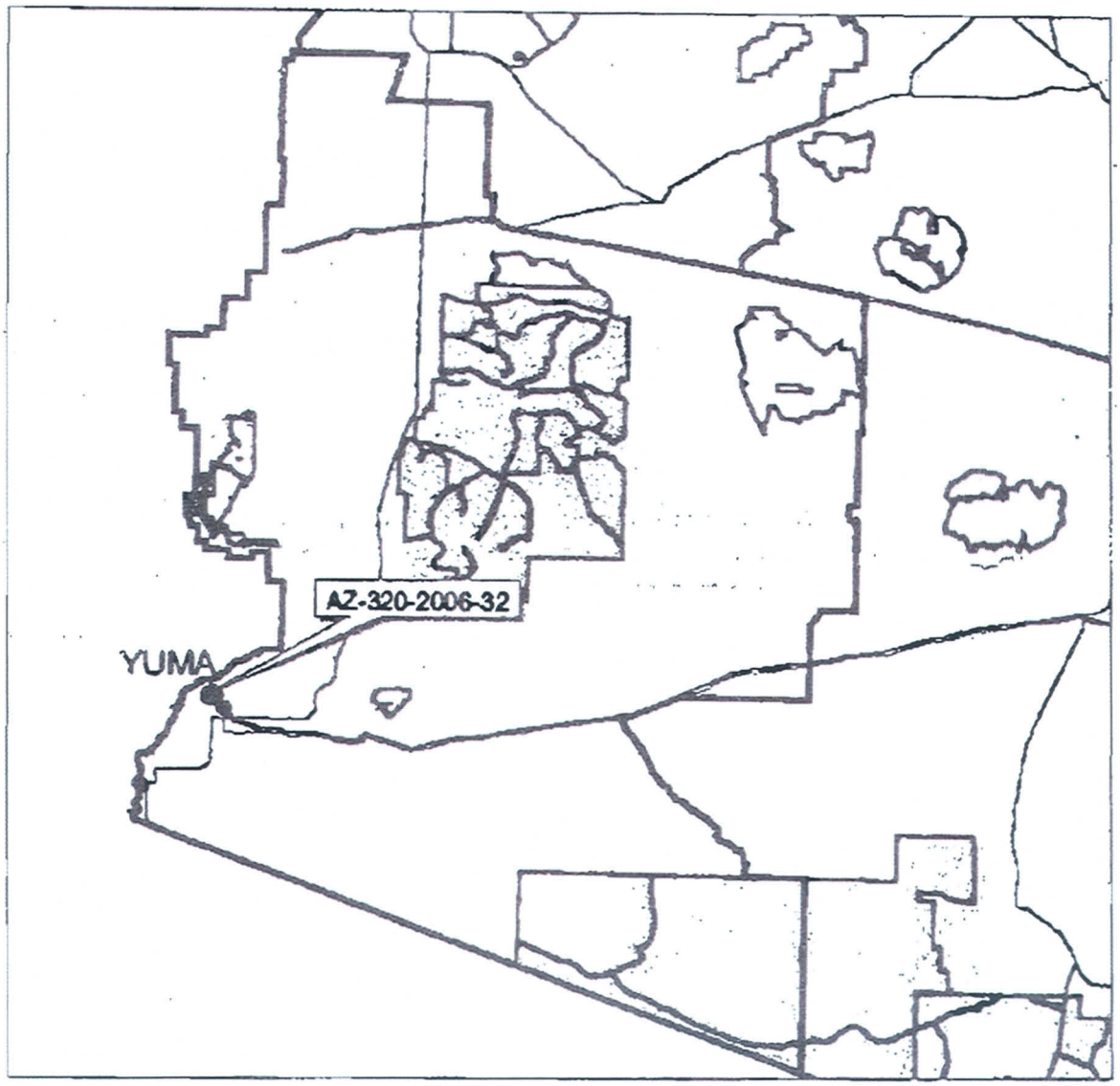
Note: The signed Conclusion on this Worksheet is part of an interim step in the BLM's internal decision process and does not constitute an appealable decision. The Proposed Action will have no effect on the President's Energy Policy and a Statement of Adverse Energy Impact is not required.

Approved by: Rebecca Heick Date: 10-10-06
Rebecca Heick
Yuma Field Manager

Categorical Exclusion Review

Department of the Interior Departmental Manual 516 2.3.A (3) provides for a review of the following categorical exclusion criteria to determine if exceptions apply to this project. The following exceptions apply to individual actions within categorical exclusions (CX). Environmental documents must be prepared for actions which may (see next page):

Transient Restoration Phase 2 & 3



UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
ARIZONA STATE OFFICE

5 0 5 10 Miles

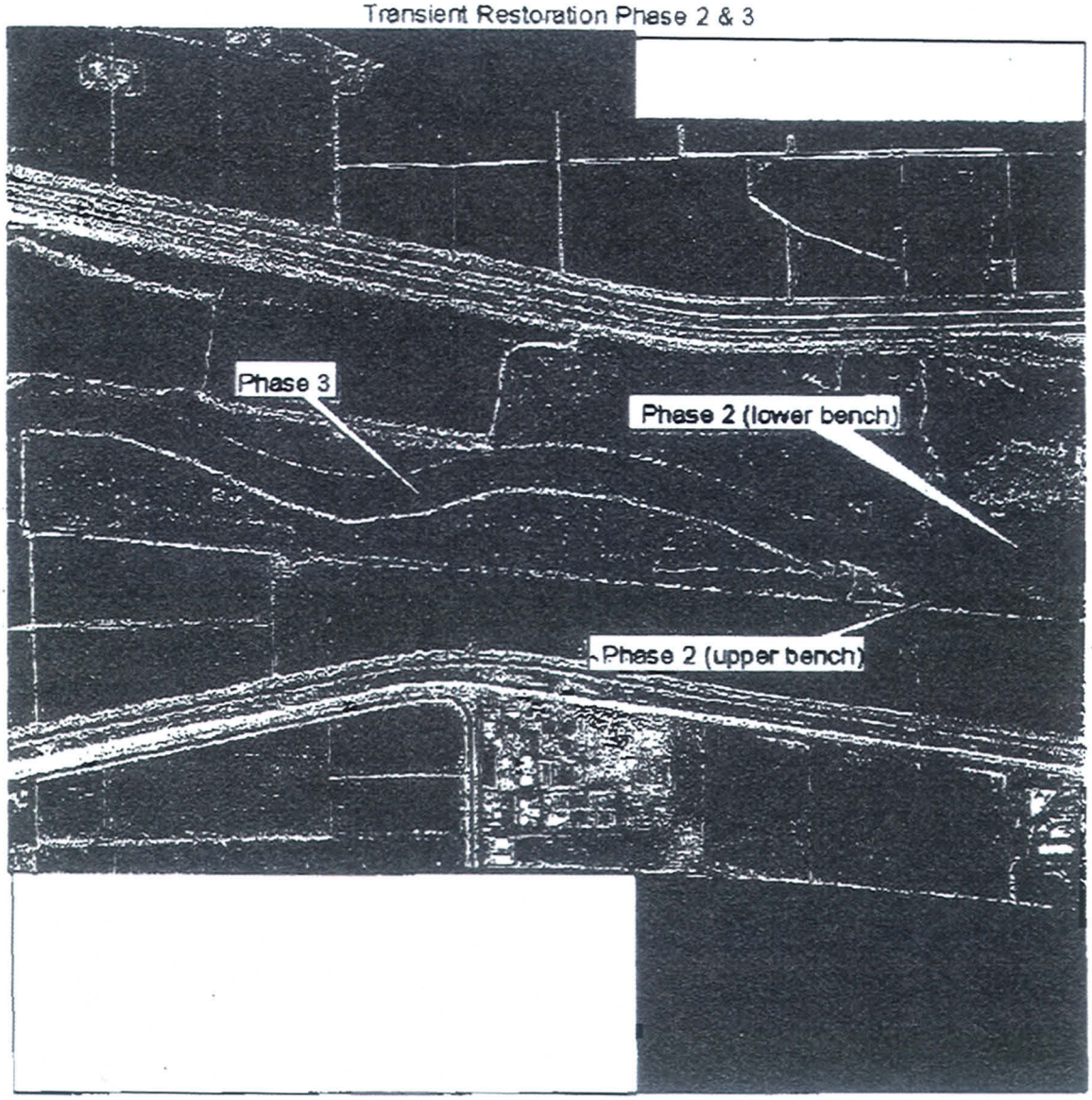
LAND STATUS LEGEND

- Private
- State
- BLM
- USFS
- Indian Lands
- Military
- NPS
- FWS
- BOR
- City, County & State Park
- State Wildlife Area
- County Lands
- BLM National Monuments
- National Conservation Areas
- Wilderness

LOCATION MAP

The Bureau of Land Management makes no warranties, implied or expressed, with the respect to information shown of ths map.

Transient Restoration Phase 2 & 3



UNITED STATES DEPARTMENT OF INTERIOR
BUREAU OF LAND MANAGEMENT
YUMA FIELD OFFICE
Map printed on 14 Jul 2006

Location Map

0.2 0 0.2 0.4 Kilometers

Form AZ-8110-5
(January 2000)

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
ARIZONA STATE OFFICE

CULTURAL RESOURCE COMPLIANCE DOCUMENTATION RECORD

Project No: BLM-AZ-320-2006-051 **Project Name:** Transient Restoration Phase 2 & 3

EA, Job or Case File No.: DNA-AZ-320-2006-032 (NEPA No.)

Institution: BLM-Yuma Field Office **Cultural Resource Use Permit No:** NA

Inventory Method: XX Existing Data Review XX Class II _____ Class III

Eligibility Recommendation (for sites located):

Not-eligible sites (list site numbers): None.

Eligible sites (list site numbers): None.

Effect Recommendation (only on eligible sites from above):

XX No Historic Properties Affected _____ Adverse Effect

_____ No Adverse Effect

Treatment Recommendations: (check and attach full description and map(s) as needed):

____ Avoidance (by project redesign/cancellation, etc.)

____ Physical or administrative protection measures

XX Standard stipulations

____ Special stipulations

____ Data recovery (collection, excavation, detailed recording, etc.)

Consultation:

XX Covered under PA, no further consultation required with SHPO or ACHP

Consultation required: _____ SHPO _____ Advisory Council _____ Native Americans

Comments

Proposed undertaking: The Bureau of Land Management (BLM) Yuma Field Office proposes to restore native riparian habitat adjacent to the Colorado River. The transient restoration project is broken into three phases. The first phase was completed in the winter of 2005/2006 and was evaluated for an 8-acre restoration area under CX/DNA-AZ-050-2004-0071 and BLM Cultural Resource Project Record BLM-AZ-050-2004-054. This new proposed action for phases 2 and 3 of the project would include the restoration of 4.2 acres and 45.5 acres respectively.

Project location: Township 16 South, Range 22 East, Section 28 lots 1, 2, 5, and 6, Section 29 lots 22 and 23, Gila and Salt River Meridian, Yuma County, Arizona (Yuma West USGS 7.5-minute topographic quadrangle).

Literature search: Previously recorded cultural resource sites within a one-mile radius of the proposed project area include several linear historic features, such as the Valley Levee [AZ X:6:15 (ASM)], the Yuma Valley Railroad [AZ X:6:43 (ASM)], the West Main Canal [AZ X:6:63 (ASM)], and the Thacker Lateral Canal [AZ X:6:87 (ASM)]. No prehistoric cultural resources are known to occur inside the project area; however, it is assumed that prehistoric sites are buried beneath the Colorado River floodplain. It is also important to note that the Colorado River itself is considered to be of traditional importance to Native Americans.

Site visit: Because of dense impenetrable vegetation, the project's Area of Potential Effects (APE) could not be inventoried for cultural resources. A field visit on August 23, 2006, evaluated any open areas in the vegetation for cultural resources, and none were identified. In addition, the Transient Restoration Phase 1 area was examined for any evidence of subsurface archaeological deposits that might have churned up during previous restoration activities. No cultural resources were found within the footprint of the existing 8-acre restoration area.

Government-to-Government Consultation: Tribal consultation was not conducted specifically for this project. It has been documented during previous consultations for similar projects that Indian tribes and groups affiliated with the Yuma Field Office planning area have no issues or concerns with projects that restore native habitat along the lower Colorado River, as long as those projects avoid adverse effects to prehistoric archaeological sites.

Required stipulations: A qualified BLM employee will notify workers of cultural resource laws and regulations, and monitor compliance. Should cultural and/or paleontological resources be encountered during project ground-disturbing activities, work will cease in the area of the discovery and the BLM Yuma Field Office will be notified immediately. Work may not resume until written authorization to proceed is issued by BLM.

Findings: The proposed action activities would not impact the adjacent linear historic features identified during the Class I literature search, since these features are located outside of the restoration areas. In addition, this habitat restoration project is not anticipated to impact any subsurface archaeological deposits, since these features would be of sufficient depth to be avoided by project activities. Pursuant to Section 106 of the National Historic Preservation Act and the regulations set forth in 36 CFR § 800, BLM has determined that this undertaking would have no effect on historic properties, as defined in 36 CFR § 800.16(1)(1), and has fulfilled its obligations under Section 106.

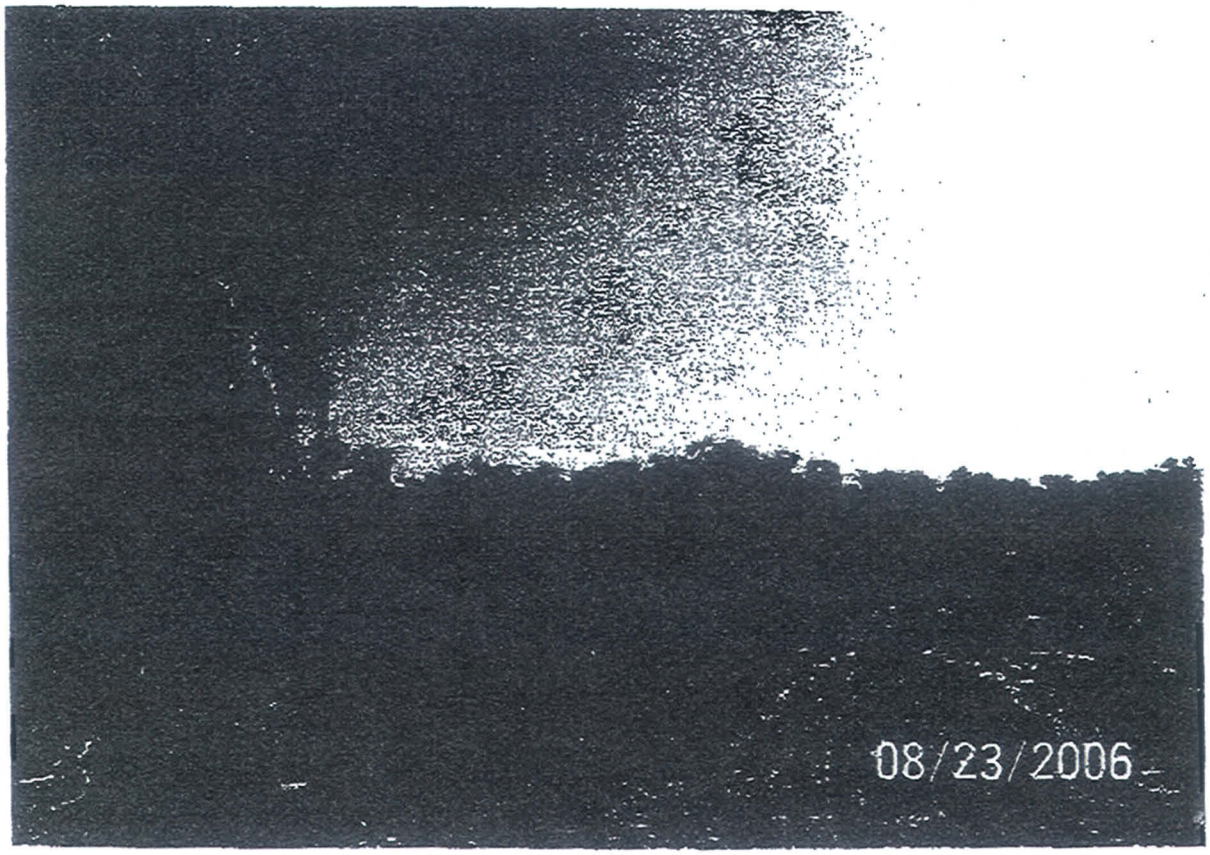
Attachments: Project overview photos, project map.

Signed (by archaeologist): _____ Date: 10 / 05 / 2006

Sandra Arnold

Project Photos for BLM Cultural Resource Project Record BLM-AZ-320-2006-051

Example of dense vegetation at western end of Phase 3 area, facing east.



Example of dense vegetation within Phase 2 lower bench, facing west.

Typical open area within Phase 2 upper bench where cultural survey was possible, facing west.

Transient Restoration Phases 2 & 3
BLM Cultural Resource Project Record BLM-AZ-320-2006-051
Base map is Yuma West USGS 7.5' topographic quadrangle.

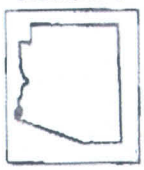
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
ARIZONA STATE OFFICE

Map printed on October 6, 2006
Map produced by the BLM, Arizona State Office

LAND STATUS LEGEND

- Private
- State
- BLM
- USFS
- Indian Lands
- Military
- NPS
- FWS
- BOR
- City, County, & State Park
- State Wildlife Area
- County Lands
- BLM National Monuments
- National Conservation Areas
- Wilderness

LOCATION MAP



Scale 38317.2

1 0 1 Miles

1 0 1 Kilometers

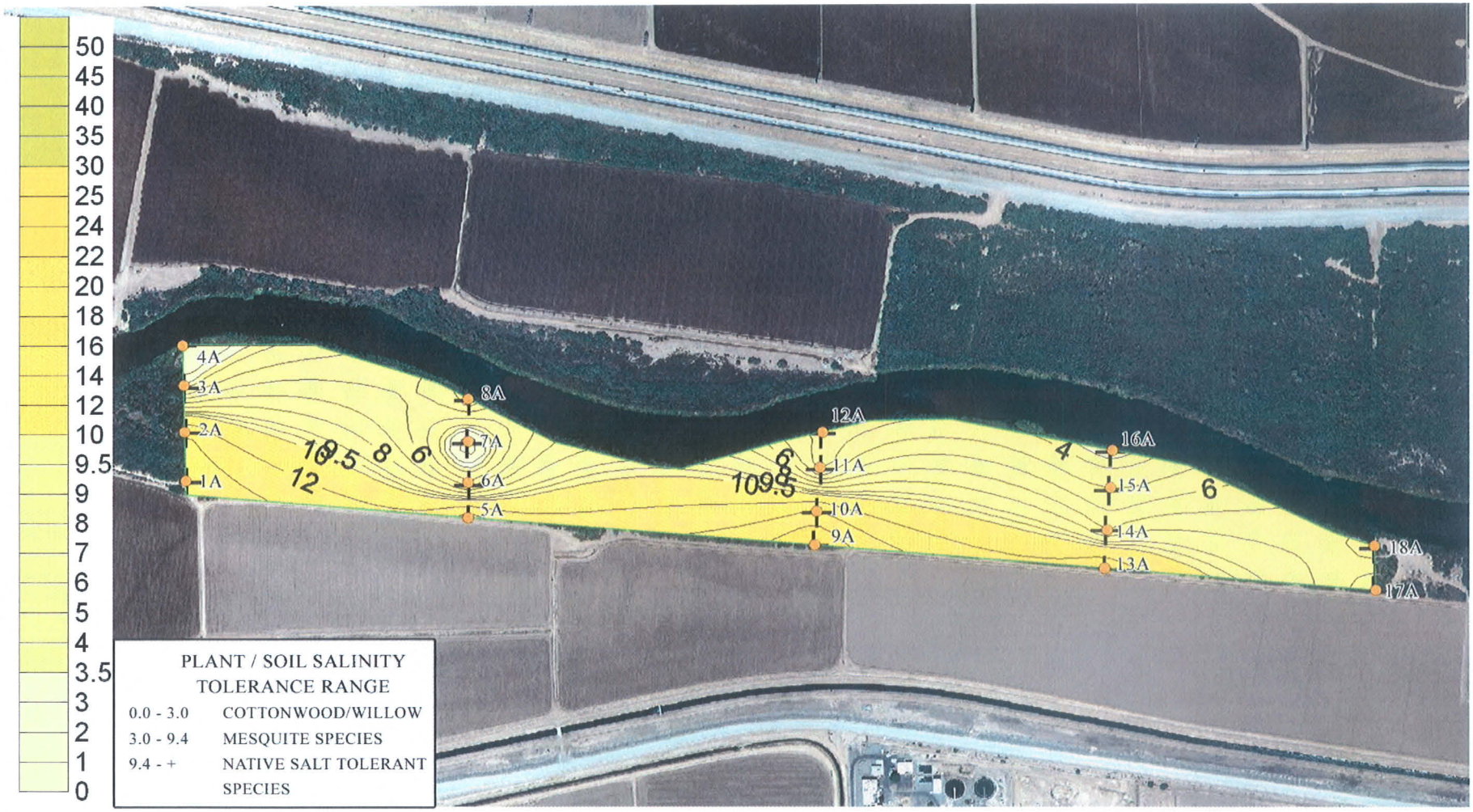
Prepared By:
Fred Phillips Consulting, LLC
401 S. Leroux Street
Flagstaff, AZ 86001
928-773-1530

BLM Paradise Cove
Revegetation Project

Map Information:
NAD 83, UTM Zone 11N Meters

1 in = 402 ft
0 270 540 1,080 1,620 2,160 Feet

May 4, 2009
Site & Soil Analysis Map
FIGURE 1



PREPARED BY:
FRED PHILLIPS CONSULTING
401 SOUTH LEROUX STREET
FLAGSTAFF, AZ 86001

BLM CONFLUENCE
REVEGETATION PROJECT

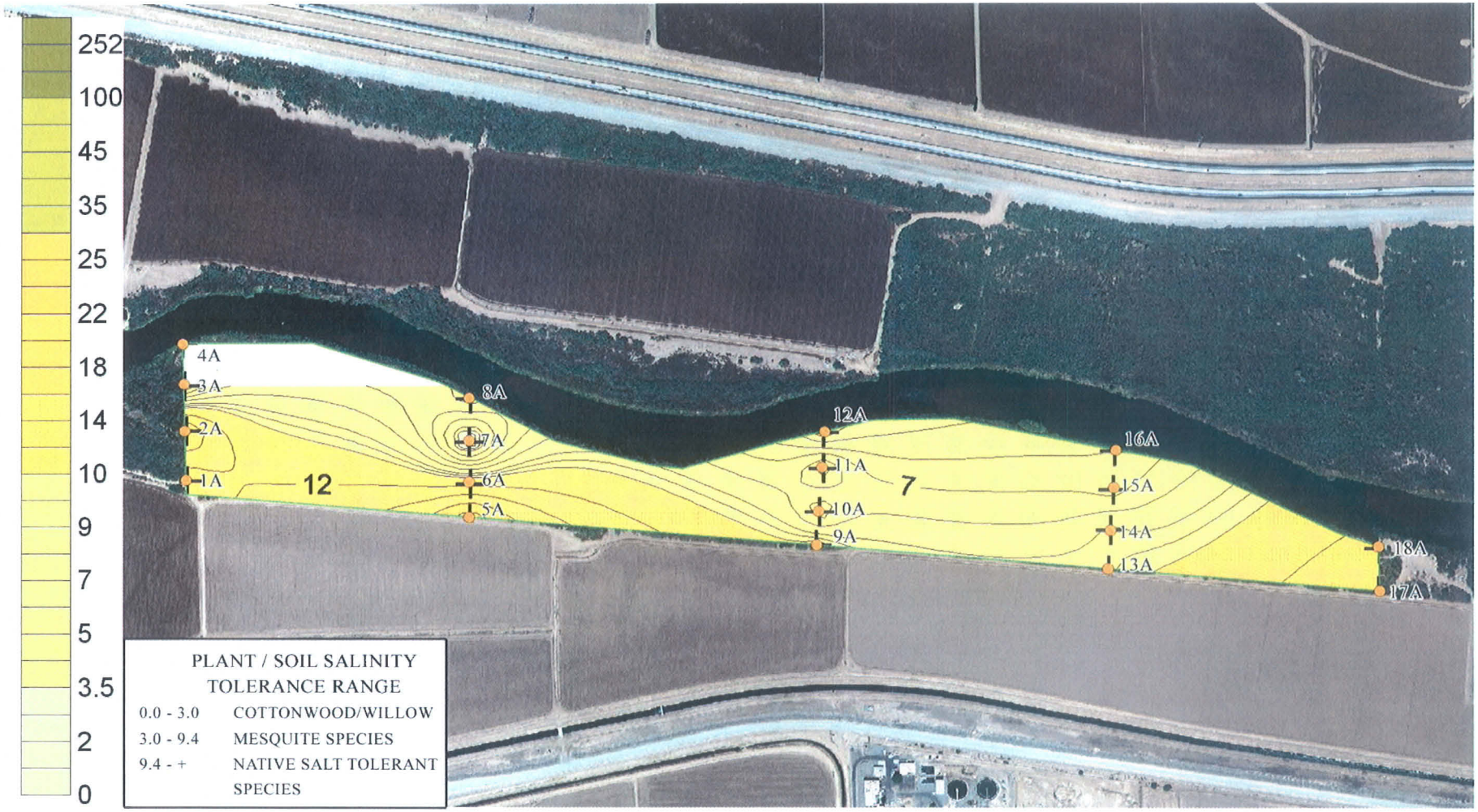
Map Information:
NAD 83, UTM Zone 11N Meters

1 in = 400 ft
0 260 520 1,040 1,560 2,080 Feet

SOIL SALINITY LEVELS AT
1 FOOT DEPTH

JULY 9, 2009

FIGURE 1



PREPARED BY:
FRED PHILLIPS CONSULTING
401 SOUTH LEROUX STREET
FLAGSTAFF, AZ 86001

BLM CONFLUENCE
REVEGETATION PROJECT

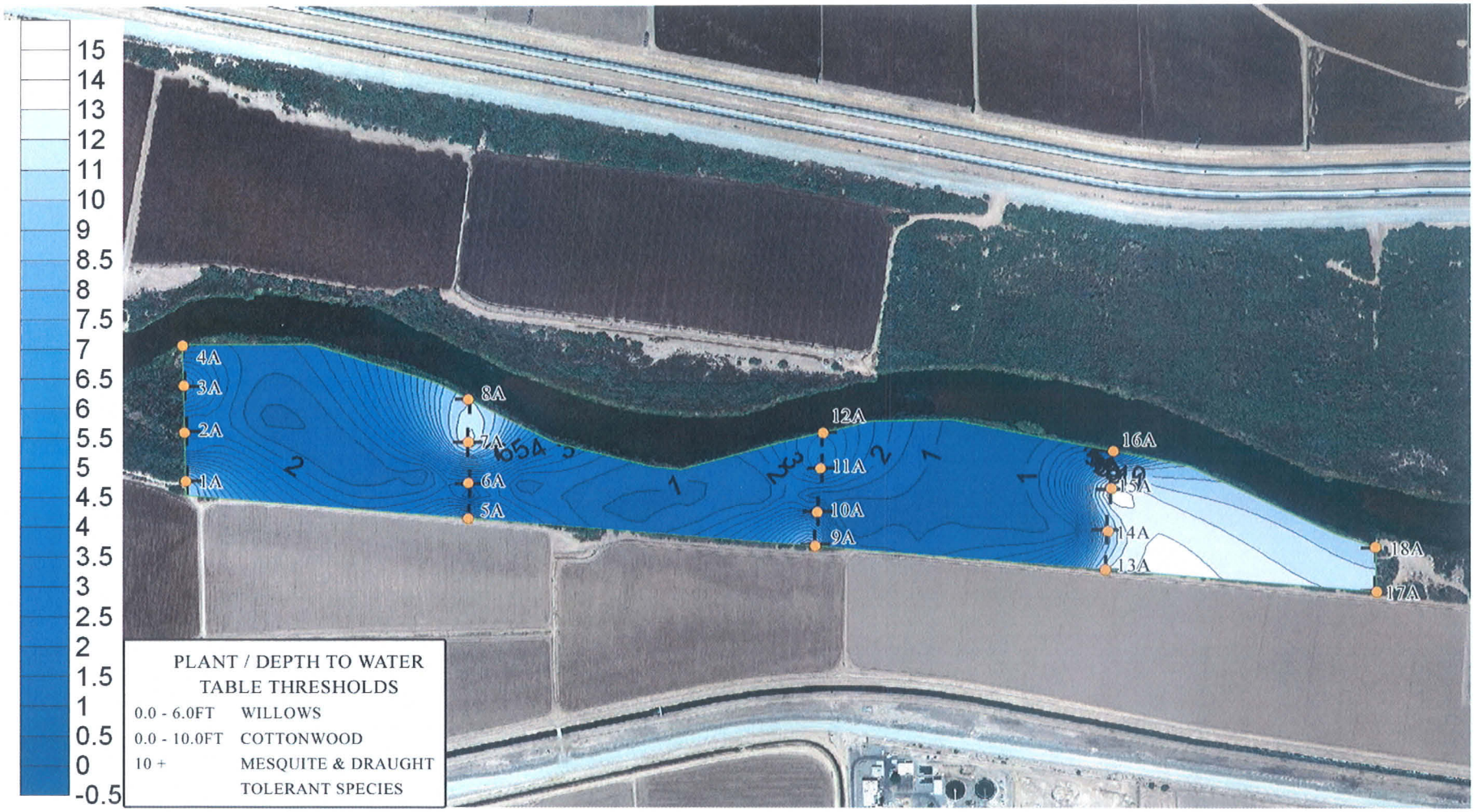
Map Information:
NAD 83, UTM Zone 11N Meters

1 in = 400 ft
0 260 520 1,040 1,560 2,080 Feet

SOIL SALINITY LEVELS AT
5 FOOT DEPTH

JULY 9, 2009

FIGURE 2



PREPARED BY:
FRED PHILLIPS CONSULTING
401 SOUTH LEROUX STREET
FLAGSTAFF, AZ 86001

BLM CONFLUENCE
REVEGETATION PROJECT

Map Information:
NAD 83, UTM Zone 11N Meters

1 in = 400 ft
0 260 520 1,040 1,560 2,080 Feet

JULY 9, 2009

DEPTH TO WATER
TABLE LEVELS

FIGURE 3

YUMA CROSSING NATIONAL HERITAGE AREA IN PARTNERSHIP WITH THE BUREAU OF LAND MANAGEMENT

PARADISE COVE RIPARIAN AND WETLAND RESTORATION PROJECT

SITE CLEARING REPORT

AUGUST 2010

Prepared For:
Yuma Crossing National Heritage Area

Prepared by:
Fred Phillips Consulting, LLC
401 S. Leroux St.
Flagstaff, AZ 86001
(928) 773-1530
fphillips@commspeed.net

Table of Contents

INTRODUCTION

In an effort to restore the native riparian, wetland, and aquatic habitats of Arizona, the City of Yuma and Bureau of Land Management (BLM) along with federal, state and non-profit partners, including Yuma Crossing National Heritage Area, Arizona Game and Fish Department, Bureau of Reclamation, and U.S. Fish and Wildlife Service are proposing to restore 50.4 acres of native riparian, wetland, and upland habitat at Paradise Cove along the lower Colorado River.

Momentum to restore Paradise Cove has been initiated. Some environmental and archeological permits have been acquired, a restoration conceptual design was completed and the initial invasive species clearing was conducted by Riverside Environmental.

CLEARING ACTIVITIES

At the Paradise Cove Restoration Site, Riverside Environmental cleared a total of 39.1 acres of invasive tamarisk (*Tamarix pentandra*) and common reed (*Phragmites* sp.). Utilizing an excavator with a hyrdo-axe mulcher attachment, the exotic weeds were mowed down to ground level. All tamarisk was treated with herbicide within an hour of removal employing a "stump-cut" method in which the herbicide is directly applied to the fresh stump to ensure maximum effectiveness of the application. Exotic species were cleared up to the ordinary high water mark of the Colorado River and around the existing wetland created by the treated effluent water provided by the City of Yuma's Figueroa Avenue Water Pollution Control Facility (WPCF). All clearing occurred outside of moist soils.

Excavator with hyrdo-axe mulcher attachment.

Clearing with hyrdo-axe mulcher.

Clearing around existing native vegetation.

Clearing up to moist soils around effluent channel.

Clearing on the bankline.

Equiptment used for herbicide spraying.

Native mesquites left on the project.

Paradise Cove Photomonitoring

Paradise Cove Photomonitoring Point #1. 3 pics no zoom. July
N 32⁰ 43'57.84" W 114⁰ 39'29.59"

August

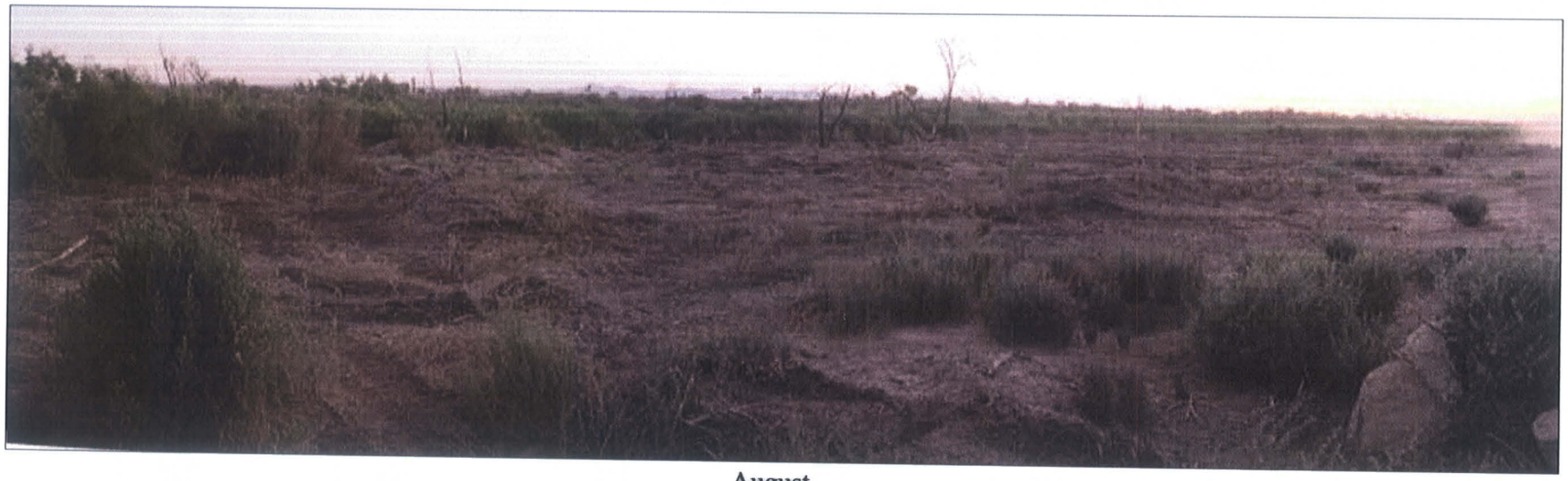
Paradise Cove Photomonitoring Point #2. Three pics no zoom. July
N 32⁰ 44'00.56" W 114⁰ 39'37.32"

August

Paradise Cove Photomonitoring Point #3. Four pics no zoom. July
N 32⁰ 44'00.80" W 114⁰ 40'05.99"

August

Paradise Cove Photomonitoring Point #4. Three pics no zoom. July
N 32⁰ 44'02.44" W 114⁰ 40'25.53"



August

DESIGN LEGEND

Photomonitoring Point

Cleared Area - 39.1 AC

Fred Phillips Consulting, LLC
401 SOUTH LEROUX STREET
FLAGSTAFF, AZ
86001
TEL 928 773 1530
FAX 928 774 4166
Ecosystem Restoration Land Planning

DESIGNED FOR:
BUREAU OF LAND MANAGEMENT
& THE CITY OF YUMA

REV.	COMMENT	DATE

PARADISE COVE RIPARIAN AND WETLAND RESTORATION

BLM

YUMA, ARIZONA

SHEET TITLE :
Completed Clearing

Scale: 1" = 600'

0' 600' NORTH

DATE: AUGUST 27, 2010
JOB NO.: 09002
DRAWN BY: DB
DESIGNED BY: FOP/DB
CHECKED BY: FOP

SHEET NO.:
FIGURE 8

Community Support

The following pages are resolutions and letters of support for the 50.4 acre Paradise Cove Riparian and Wetland Restoration.

1. Letter of support from the Bureau of Land Management
2. City of Yuma Resolution Letter
3. Letter of support from the Bureau of Reclamation
4. Letter of support from the State of Arizona Game and Fish Department
5. Letter of support from the Yuma Crossing National Heritage Area

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Yuma Field Office
2555 East Gila Ridge Road
Yuma, AZ 85365
www.blm.gov/az/

In Reply Refer To:
1737 (C020)

August 27, 2010

Mr. Kevin Eatherly
CIP Project Manager
Yuma Crossing National Heritage Area
180 W. 1st Street, Suite E
Yuma, Arizona 85364

Dear Mr. Eatherly:

I wanted to follow up on our discussions concerning the potential for wetlands habitat restoration at Paradise Cove. The Bureau of Land Management (BLM) has already provided $30,000 in grant funding to the Heritage Area to complete a restoration concept plan and $50,000 for clearing and herbicide application for Paradise Cove. There is an additional $30,000 of BLM funding for continuing weed suppression that will be reserved for use in 2011 as direct match to the grant.

We understand that the City of Yuma is interested in fostering wetlands restoration as it considers updating and implementing its master plan and permitting for the Figueroa Wastewater Treatment Plant. Consistent with its stated conservation goals, BLM supports the Arizona Water Protection Fund (AWPF) grant application for the Paradise Cove Riparian and Wetland Restoration Project.

The BLM has management and control of the land at Paradise Cove involved with this AWPF grant application. BLM supports this application and this project. To that end, BLM is willing to provide the land to the City for the purposes of restoration for a period of no less than 20 years, as per the AWPF requirements. BLM will explore the various legal options that meet federal requirements while also providing the City with the assurance that its investment in restoration, permitting, and effluent discharge will be protected in the long run. We are committed to executing an agreement with the City to assure that the City undertakes 20 years of maintenance on this project, as per AWPF requirements.

We look forward to working with you on this project.

Sincerely,

James T. Shoaff
Field Manager

RESOLUTION NO. R2010-51

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF YUMA, ARIZONA, AUTHORIZING THE SUBMISSION OF AN APPLICATION AND EXECUTION OF AN AGREEMENT FOR AN ARIZONA WATER PROTECTION FUND GRANT FOR WETLANDS RESTORATION AT PARADISE COVE

WHEREAS, since 2003, the Yuma community has successfully secured and expended over $3,000,000.00 in Arizona Water Protection Fund (AWPF) grants for the restoration of the Yuma East Wetlands; and,

WHEREAS, the City of Yuma is interested in applying for AWPF grant funding in the amount of $889,842.00 for the clearing, excavation, planting and irrigation of approximately 50-acre wetland restoration project in the riverfront area commonly referred to as "Paradise Cove", located adjacent to the Figueroa Wastewater Treatment Plant ; and,

WHEREAS, the Paradise Cove project will advance the City's goals of wetlands restoration and will promote the optimal functioning of the Figueroa Wastewater Treatment Plant; and,

WHEREAS, the Bureau of Land Management, which has operational responsibility for the federal land encompassing Paradise Cove, has offered to make the land available on a long-term basis to the City for the purposes of wetlands restoration; and,

WHEREAS, the Bureau of Reclamation has expressed its strong support for the Paradise Cove project; and,

WHEREAS, the City of Yuma will provide the water necessary for the Paradise Cove wetlands restoration project through the use of the treated effluent from the Figueroa Wastewater Treatment plant; and,

WHEREAS, procedures established by the Arizona Water Protection Fund require the applicant to certify by Resolution the application, signature, authorization of matching funds being provided by the Bureau of Land Management, and authorization to sign a participant agreement.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Yuma as follows:

SECTION 1: That the filing of an application for Arizona Water Protection Funds is hereby approved;

SECTION 2: That the City of Yuma agrees to comply with all appropriate procedures, guidelines, and requirements established by the Arizona Water Protection Fund as part of the application process, including a commitment of 20 years of maintenance of the wetlands;

SECTION 3: That the City of Yuma certifies that it will comply with all appropriate state and Federal regulations, policies, guidelines, and requirements as they relate to the application;

United States Department of the Interior

BUREAU OF RECLAMATION
Yuma Area Office
7301 Calle Agua Salada
Yuma, Arizona 85364

TAKE PRIDE' IN AMERICA

IN REPLY REFER TO

YAO - 7210
ENV - 4.00

AUG 0 9 2010

Mr. Kevin Eatherly
City of Yuma
180 West 1st Street, Suite E
Yuma, AZ 85364

Subject: Proposed Paradise Cove Riparian and Wetland Restoration Project (Project)
Lower Colorado River – Yuma Arizona

Dear Mr. Eatherly,

The Bureau of Reclamation has reviewed the draft subject Project and we are excited to support the City of Yuma (City) and Bureau of Land Management (BLM) to further restore the wetland and Riparian habitats along this stretch of the lower Colorado River. Reclamation will be working closely with both BLM and the City during the National Environmental Policy Act process to ensure that Reclamation interests (e.g. river facilities and water rights) within the Project are protected and secured.

We feel this is an essential project that will not only improve habitat quality for wildlife populations living in and around the river, but will strengthen native habitat connectivity between the Yuma West and East Wetlands projects resulting in the sustained ecological integrity of the entire system. If you have any questions please contact Ms. Jill S. Dale, Environmental Planning and Compliance Group Manager at telephone No. 928-343-8127.

Sincerely,

Jennifer McCloskey

Jennifer McCloskey
Area Manager

cc: Mr. David Blanchard
Fred Phillips Consulting, LLC
401 South Leroux Street
Flagstaff, AZ 86001

THE STATE OF ARIZONA
GAME AND FISH DEPARTMENT
5000 W. CAREFREE HIGHWAY
PHOENIX, AZ 85086-5000
(602) 942-3000 • WWW.AZGFD.GOV
REGION IV, 9140 E. 28TH ST., YUMA, AZ 85365

August 10, 2010

Kevin Eatherly
City of Yuma
180 West 1st Street Suite E
Yuma, AZ 85364

RE: Draft Paradise Cove Riparian and Wetland Restoration Project

To Mr. Eatherly:

The Arizona Game and Fish Department (Department) has reviewed the Draft Paradise Cove Riparian and Wetland Restoration Project (Project) for enhancing wildlife habitat and recreational opportunities along the lower Colorado River.

The Department supports this proposed Project and similar efforts at the Yuma East and West Wetlands. We are excited to partner with the City of Yuma and Bureau of Land Management to help enhance aquatic, wetland, and riparian habitats for the benefit Arizona's wildlife and its citizens, while also facilitating improved public safety along the lower Colorado River. We feel this is project will not only improve habitat quality for wildlife populations utilizing the river corridor, but will strengthen native habitat connectivity between the Yuma West and East Wetlands, helping to improve the river corridor's ecological integrity.

We appreciate the opportunity to be involved in the early development of this proposed Project, and we look forward to working cooperatively with you and other partners as this project progresses.

Sincerely,

Troy G. Smith
Habitat Program Manager
Region IV, Yuma

cc: Pat Barber, Supervisor, Region IV
David Blanchard, Fred Phillips Consulting, LLC
Laura Canaca, PEP Supervisor, Habitat Branch

AGFD #M10-08090001

August 13, 2010

Kevin Eatherly
CIP Project Manager
City of Yuma
One City Plaza
P.O. Box 13014
Yuma, Arizona 85366-3014

Dear Mr. Eatherly:

Since 2001, the Yuma Crossing National Heritage Area has worked in partnership with the City of Yuma and the Quechan Indian Tribe to restore over 350 acres in the Yuma East Wetlands.

The Paradise Cove Wetlands and Riparian Restoration project is an important new initiative that will restore another 50 acres, and presents a unique partnership opportunity. The Bureau of Land Management (BLM), who controls and manages the federal land, is willing to make the land available on a long-term basis for restoration. BM has also provided funding for a conceptual plan and for clearing of non-native vegetation. The City of Yuma is committing to the source of water for restoration from its wastewater treatment plant. It is adjacent to the West Wetlands and will continue to improve Yuma's riverfront corridor.

The Heritage Area strongly supports this restoration effort, and urges the Arizona Water Protection Fund to give the grant application its positive consideration.

Sincerely,

Charles W. Flynn
Executive Director

Yuma Crossing National Heritage Area Corporation
180 W. First Street, Suite E, Yuma, Arizona 85364-1407 • Phone: (928) 373-5198 • FAX (928) 373-5191

Evidence of Control and Tenure of Land

The applicant must have legal and physical access and authority to manage the area where grant tasks are to be performed and the area to be benefited by the grant. Cooperative agreements with all parties having such access and authority, or letters of support with a plan to obtain cooperative agreements prior to grant award shall meet this requirement.

- **If you do not own or manage the land on which the proposed project is located**, attach documentation verifying ownership (as noted above) and attach a copy of the permit, agreement or letter of intent that allows you access to the site.

(See Attached Letter)

1. Email correspondence from the Bureau of Land Management Land Law Examiner

From: Dave_Daniels@blm.gov
To: dblanchard@commspeed.net
Subject: Fw: Legal Description for the Grant Request - Transient Fire/Paradise Cove Revegetation Project
Date: Monday, August 23, 2010 1:56:39 PM

----- Forwarded by Dave Daniels/YFO/AZ/BLM/DOI on 08/23/2010 01:56 PM -----

Candy Holzer/YFO/AZ/BLM/DOI

08/19/2010 07:01 PM

To Dave Daniels/YFO/AZ/BLM/DOI@BLM

cc Karen Reichhardt/YFO/AZ/BLM/DOI@BLM, Arturo Lopez/YFO/AZ/BLM/DOI@BLM

Subject Legal Description for the Grant Request - Transient Fire/Paradise Cove Revegetation Project

Hi Dave! According to our Master Title Plat for Township 16 South Range 22 East of the San Bernardino Meridian, Yuma County, Arizona, the project lands lie:

section 28, within lots 1, 2, 5, and 6;
section 29, within lots 22 and 23.

This surveyed land is in the State of Arizona, it is south of the Colorado River and therefore, south of the Arizona - California State Boundary as presented in the "Interstate Compact Defining the Boundary Between the States of Arizona and California" executed March 12, 1963, and ratified by the State of Arizona on April 2, 1963, ratified by the State of California on June 11, 1963, and approved by Congress under Public Law 89-531, August 11, 1966, An Act To consent to the interstate compact defining the boundary between the States of Arizona and California (80 Stat. 340-344).

In the folder I left for you, I have provided copies of the MTP, selected pages of the Interstate Compact dealing with the area of the project, and a copy of the Public Law (referenced above). If you need anything else immediately, please call me at home tomorrow or on my cell phone - 726-6356 (home) or 304-1712 (cell). I will come in do what I can. I took some time earlier this afternoon and spoke with Karen R. re the selected pages from the Interstate Compact, and I also spoke with Arturo re the information, so between all of your brains, I bet you will do fine. I will have a copy of the same stuff at home if you do have any questions.

Thank you!

Candice L. Holzer
Land Law Examiner
Yuma Field Office, BLM
2555 E. Gila Ridge Road
Yuma, AZ 85365
Telephone: (928) 317-3253
Candy_Holzer@blm.gov

Evidence of Physical and Legal Availability of Water Flows

If water will be used in the project the water must be physically and legally available to the applicant for the proposed purpose. Provide a projection of the total number of acre-feet per year necessary for the project. The City of Yuma currently supports this proposed project and is providing their water allocation to irrigate this project.

- **If the proposed project will use effluent**, attach documentation demonstrating the source of the effluent and your authority to use it.

(See Attached Letter)

1. Water commitment letter from the City of Yuma

City of YUMA

Utilities Department
155 West 14th Street
Yuma, AZ 85364

Phone: (928) 373-4500
(928) 373-4502
Fax: (928) 373-4501
(928) 373-4503

July 28, 2010

Arizona Water Protection Fund Commission
Arizona Department of Water Resources
3550 North Central Avenue
Phoenix, Arizona 85016

Arizona Water Protection Fund Commission:

This letter is to confirm the fact that the City of Yuma has a contract with the Secretary of the Interior dated the twelfth day of November, 1959, providing for the City to have an allocation of 50,000 acre feet of Colorado River water annually. The contract number is 14-06-W-106. Colorado River water is the source water used to produce drinking water for the City of Yuma.

Used drinking water is discharged to the City's collection system as wastewater. Wastewater received at the City's Figueroa Avenue Water Pollution Control Facility is treated according to the requirements listed in the Clean Water Act (CWA) and discharged back to the Colorado under an Arizona Discharge Elimination System (AZPDES) permit #AZ0020443 and Aquifer Protection Permit (APP) P-100799. Biosolids treatment conforms to the requirements of 40 CFR Part 503 which includes disposal via land application to approved agricultural sites in Yuma County. The City is in compliance with the requirements of its discharge permit and the 40 CFR Part 503 regulations which govern treatment and disposal of biosolids. In addition, the CWA and AZPDES program require the City to operate an approved Pretreatment Program to control the impact of any industrial pollutants. The City complies with this requirement having operated a federally approved pretreatment program since 1983.

Once treated, comparatively high quality effluent from the Figueroa Avenue WPCF is released back into the Colorado River within the Paradise Cove project area where it is counted as a Return Flow Credit for the City. The current flow into the project site ranges from 6.5 to 8 million gallons per day (mgd) or approximately 7,281 acre feet

per year, which is a sufficient amount of water flow to sustain the proposed restoration.

Should you have any questions, please do not hesitate to contact me at (928) 373-4507 or Kathleen Carroll at (928) 373-4556 .

Sincerely,

John (Jay) Simonton
City of Yuma
Utilities Director

cc: file
Kathleen Carroll
Susanna Hitchcock
Jeremy McCall