

# **Army Corps of Engineers Project 1135**



# City of Las Cruces<sup>®</sup>

PEOPLE HELPING PEOPLE

## INTER-DEPARTMENTAL MEMORANDUM

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**TO:** Brian Denmark, Assistant City Manager/Chief Operating Officer

**FROM:** Louis Grijalva, P.E., Project Development Administrator

**SUBJECT:** March 12, 2012 City Council Work Session  
Army Corps of Engineers Section 1135 project

**FILE NO.** PW-12-90

**DATE:** March 2, 2012

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The City of Las Cruces and the Department of the Army entered into project partnership agreement in September 2011 for the Section 1135 Las Cruces Dam Environmental Restoration project. The project has completed the feasibility phase and is moving forward with the design and the construction phases.

The Army Corp of Engineer's will present an update to City Council regarding the project. The presentation will consist of the following.

- Project Authority, Goals, Objectives & Phases
- Study Accomplishments
- Description of Recommended Plan
- Project Schedule
- Project Costs
- Action Items & Next Steps

If you have questions, need additional information or clarification, please call me at x3479 or email: [LHG@las-cruces.org](mailto:LHG@las-cruces.org).

cc: Dan Soriano, PE, Interim Public Works Director



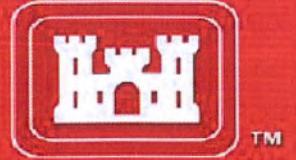
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# Las Cruces Dam Restoration Study, Section 1135

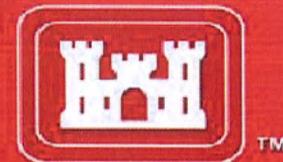
City Council Work Session,

March 12, 2012



## Agenda

- Project Authority, Goals , Objectives & Phases
- Study Accomplishments
- Description of Recommended Plan
- Project Schedule
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# What is the federal authority?

## Section 1135 of Water Resources Development Act 1986 (as amended)

Modifications of Corps structures or operation of the structure to improve the quality of the environment to benefit Fish and Wildlife.

Aquatic or Riparian Restoration



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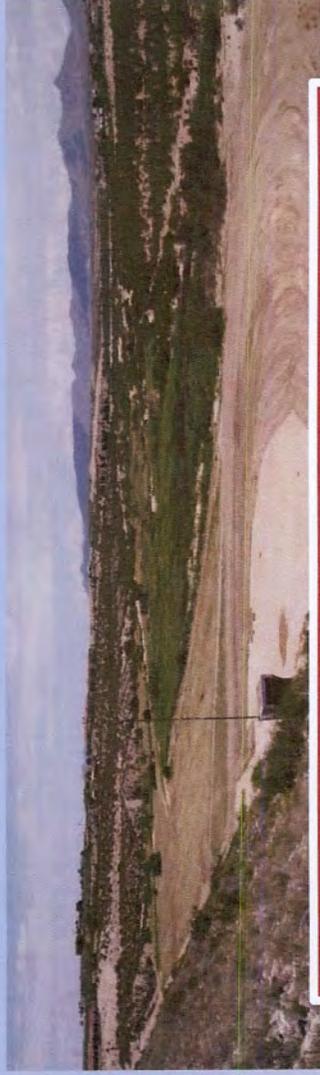


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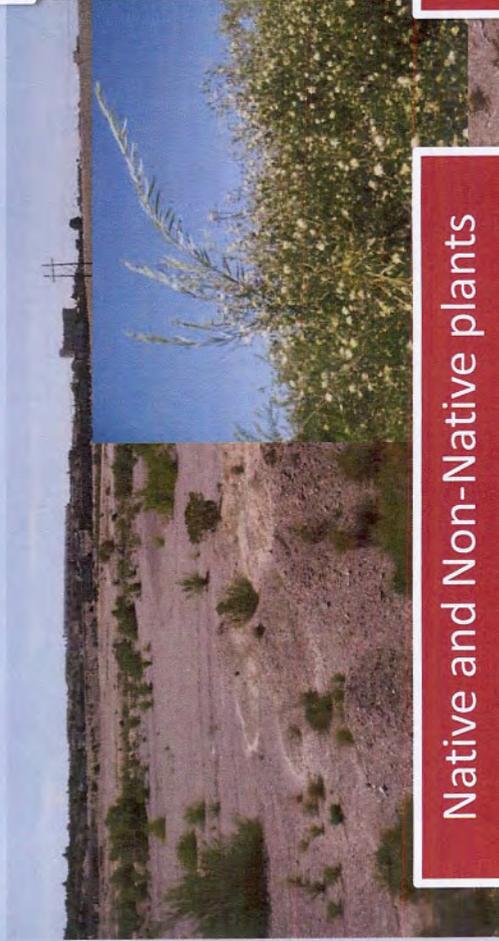
## Existing Conditions



Dam Building left disturbed footprint



Dam building disconnected hydrology and riparian corridors



Native and Non-Native plants re-establish in area



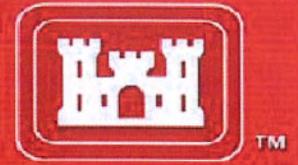
Other development, encroachment, informal recreation impacted watershed





## Project Goals and Objectives

- Increase the quality and quantity of Chihuahuan riparian and wetland habitat.
- Increase the amount and diversity of native vegetation .
- Increase or restore habitat connectivity (arroyos)
- Increase recreation opportunities (inc. environmental /cultural/historical education)
- Maintain Dam functionality

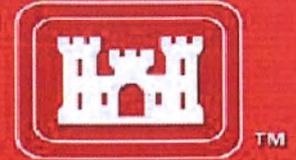


# Project Phases & Timeline

Preliminary Restoration Plan, 2005

Feasibility Study Phase, 2006- 2011

Design & Implementation Phase, 2012-2013



## What have we accomplished?

- Completed analysis – existing/future w/o project conditions
- Identified multiple alternatives that meet study objectives
- Selected a recommended plan (“tentatively selected plan”)

See “Final Detailed Project Report with Environmental Assessment”  
Las Cruces Dam, Environmental Restoration Project, August 2011

<http://www.spa.usace.army.mil/fonsi/>



## Recommended Plan

### Restoration Features:

Feature	Area (Acres)
Created Permanent Wetland	2.19
Cottonwood Planting	6.35
Arroyo Riparian Planting	71.99
Playa Plantings	3.6

### Recreation Features:

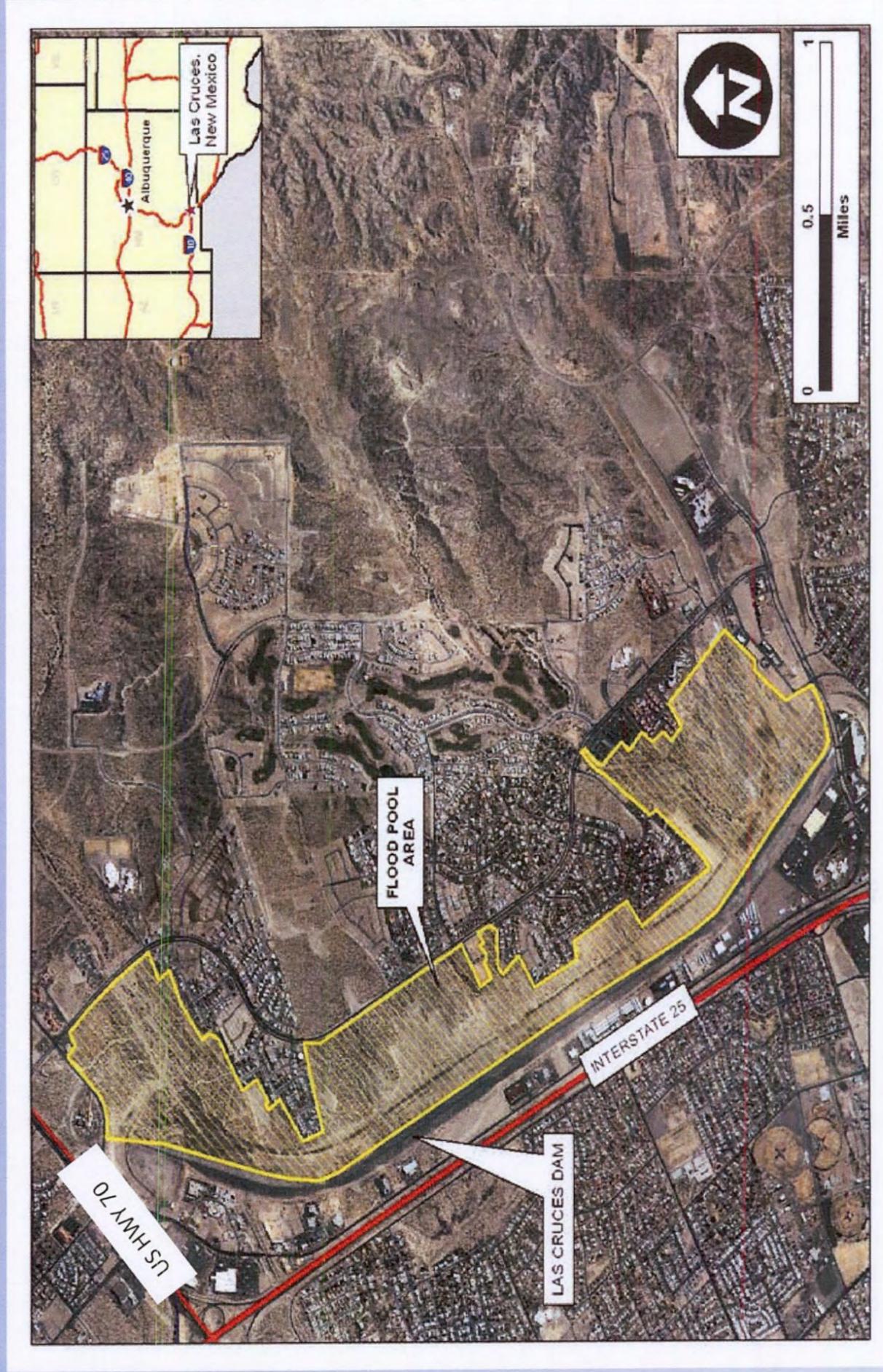
Feature
Formalized Trail
Educational Signage, Kiosk, & Shade Structure
Conveyance Channel Crossing
Wildlife Blinds



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# Project Location

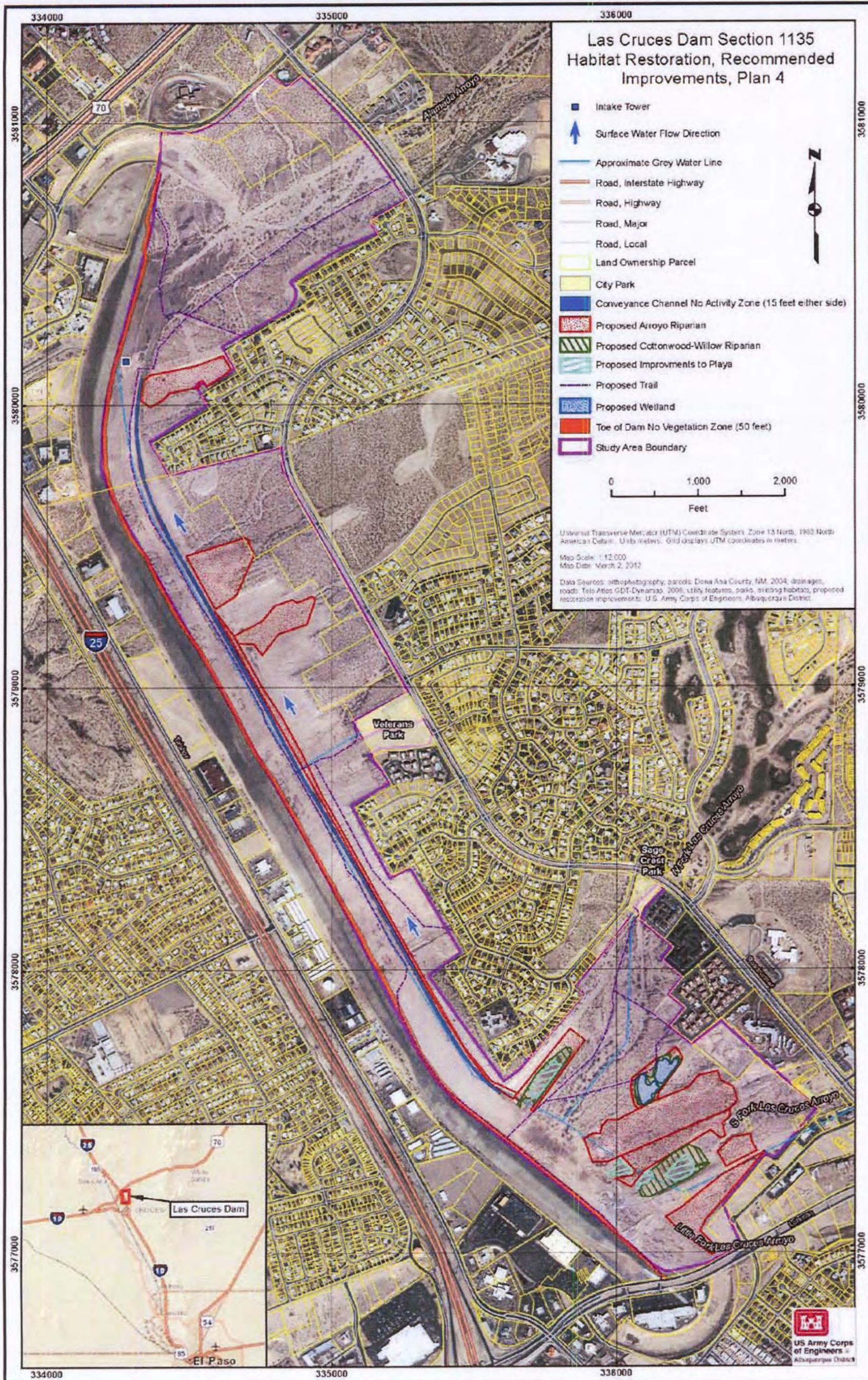


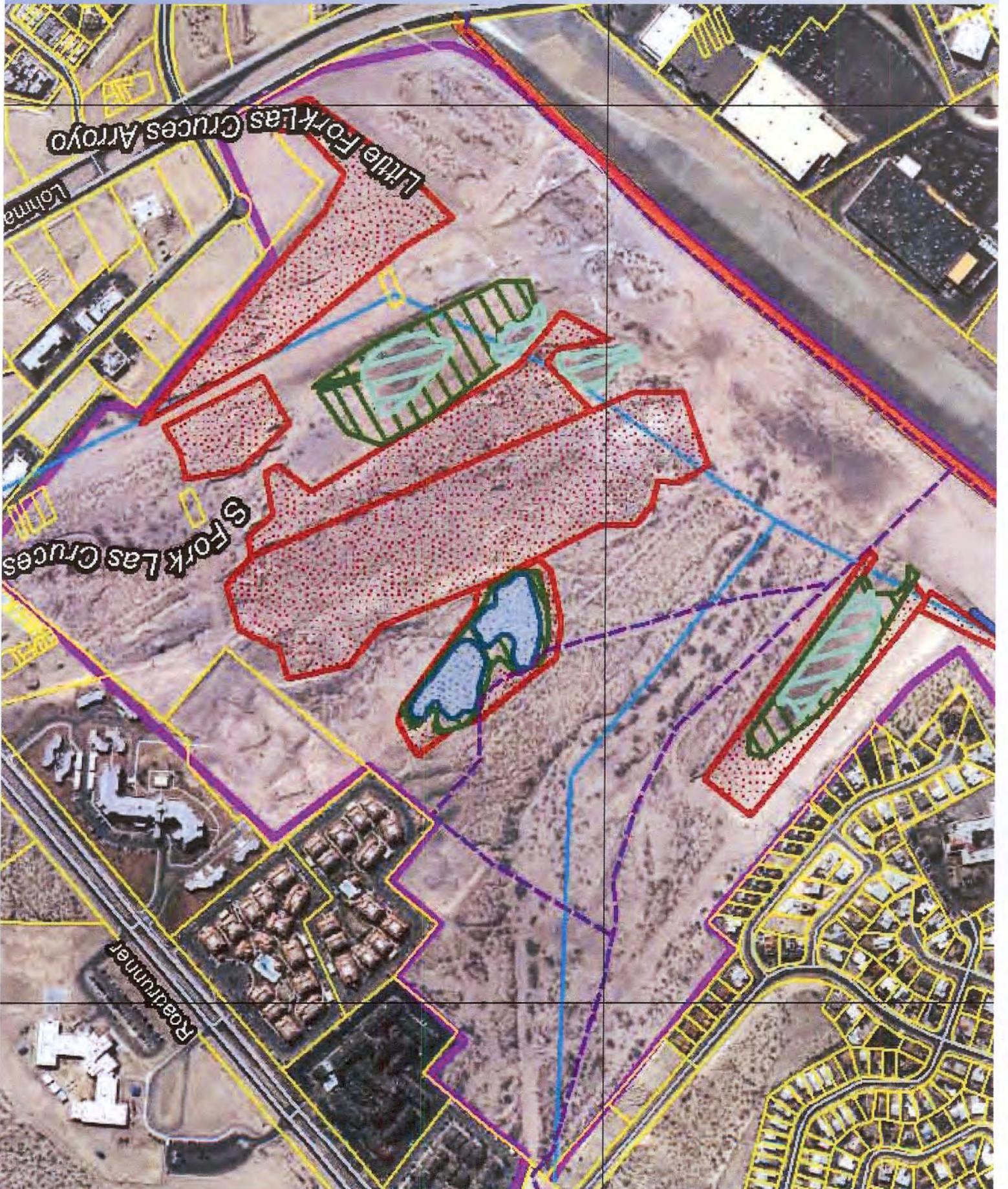


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# Chihuahuan Desert Arroyo Riparian Areas

Restoration Area = 72 acres in 10 patches

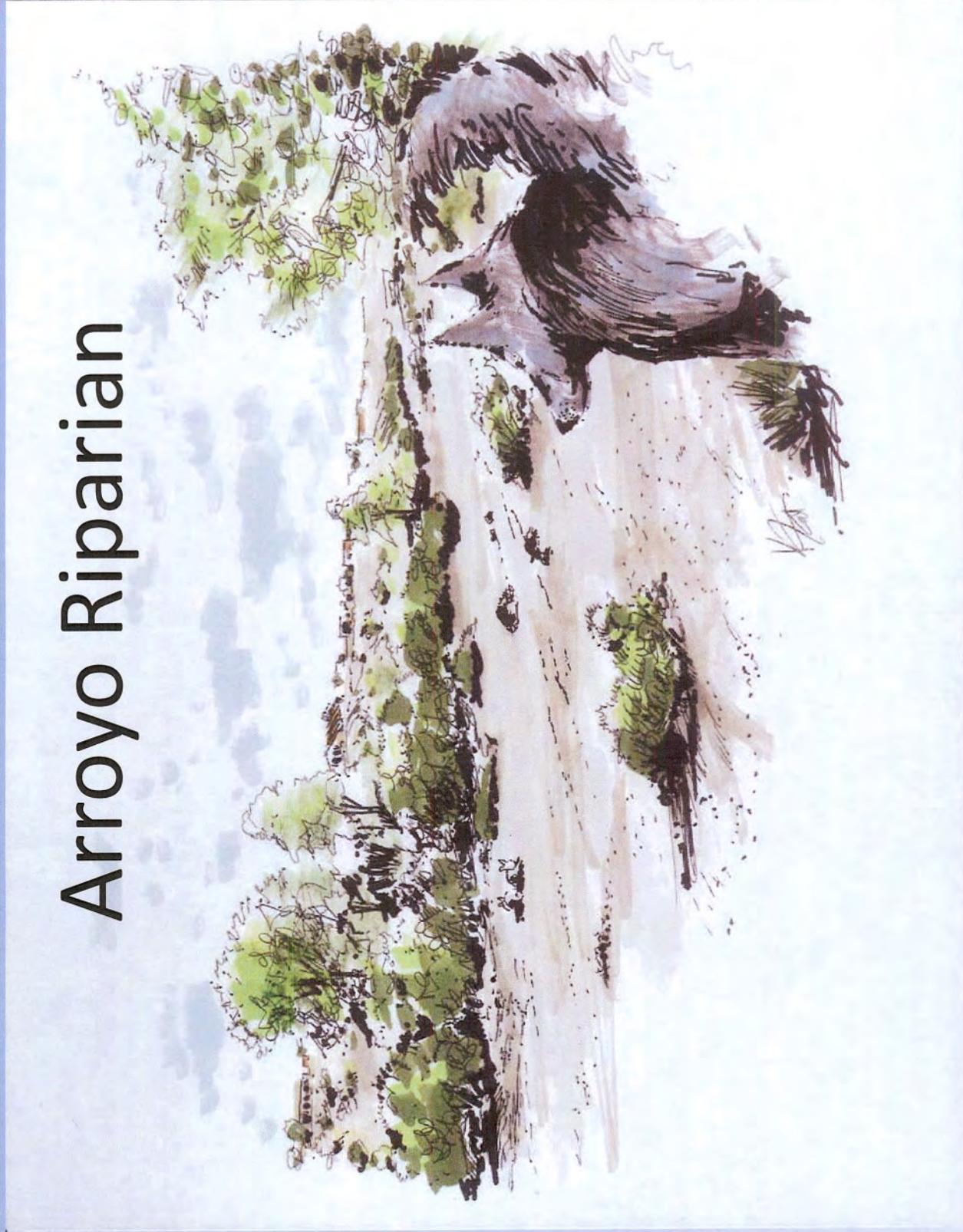
Typical Species: Restoration areas would be planted with arroyos species, including desert willow, four-wing saltbush, apache plume, honey mesquite, burrobrush, little-leaf sumac and cutleaf brickellbush. Other appropriate species would be added to increase diversity.



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# Arroyo Riparian

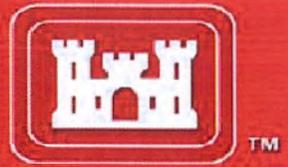




## Cottonwood-Willow Riparian Habitat

Proposed Restoration Area = 6.35 acres in 3 areas  
(around playas and wetlands)

Typical Species: Cottonwood, Gooding's willow, and Coyote willow. Other riparian shrubs may be added for diversity, such as seepwillow, Torrey's wolfberry, or arrow-weed. Vegetation would provide wildlife cover and protection and stability to the wetland.



## Playa Habitat

Restoration Area = 3.6 acres (in and around 4 existing playa basins)

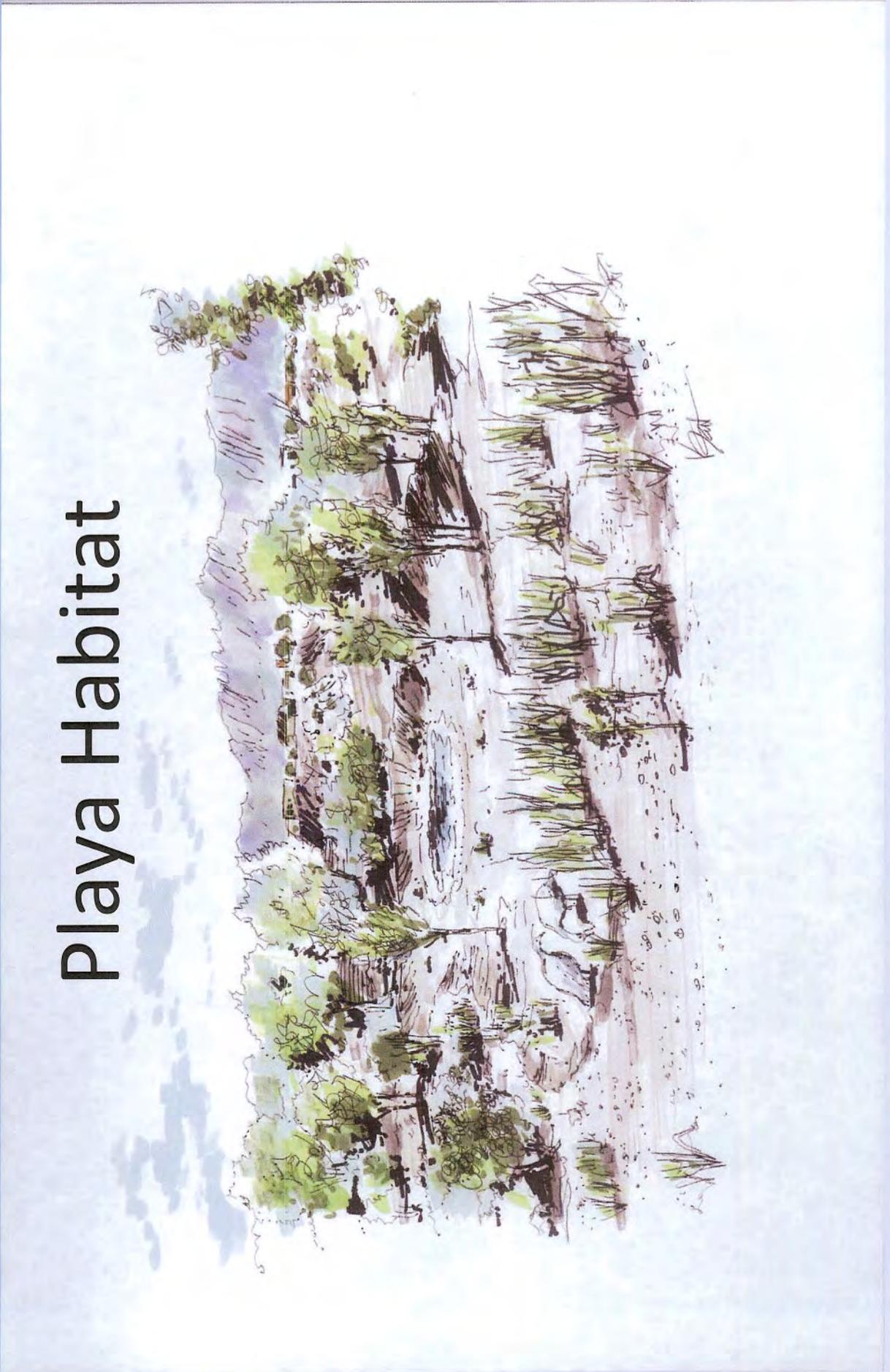
Typical Species: Sedges or rushes in the deeper areas and grasses that tolerate periodic inundation in shallower areas and margins. Spikerushes and Baltic rush would grow in shallow water at the edges of playas. Nutsedge would grow in the moist-soil margins. Grasses would include vine-mesquite, tobosa, alkali sacaton, saltgrass, and scratchgrass.



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# Playa Habitat





## Permanent Wetland

Proposed Restoration Area = Two 1-acre cells

Upper cell open water with vegetated fringe.

Lower cell moist soil, grass meadow.

Typical Species: A variety of sedges, rushes and grasses, similar to the playas but including taller bulrushes that need permanent water.

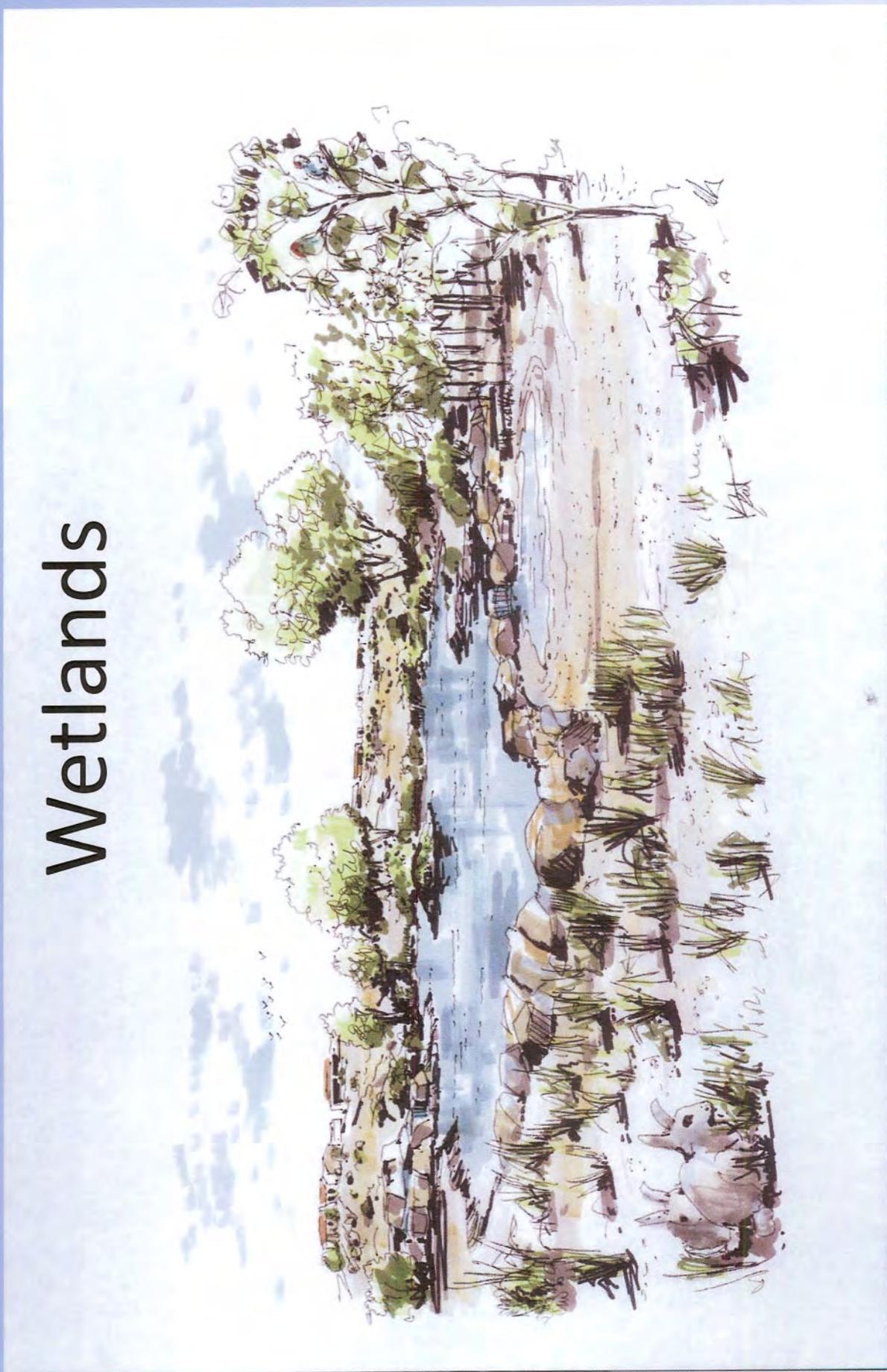


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# Wetlands





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# One other Component to Consider: Recreation



# Recreation Master Plan



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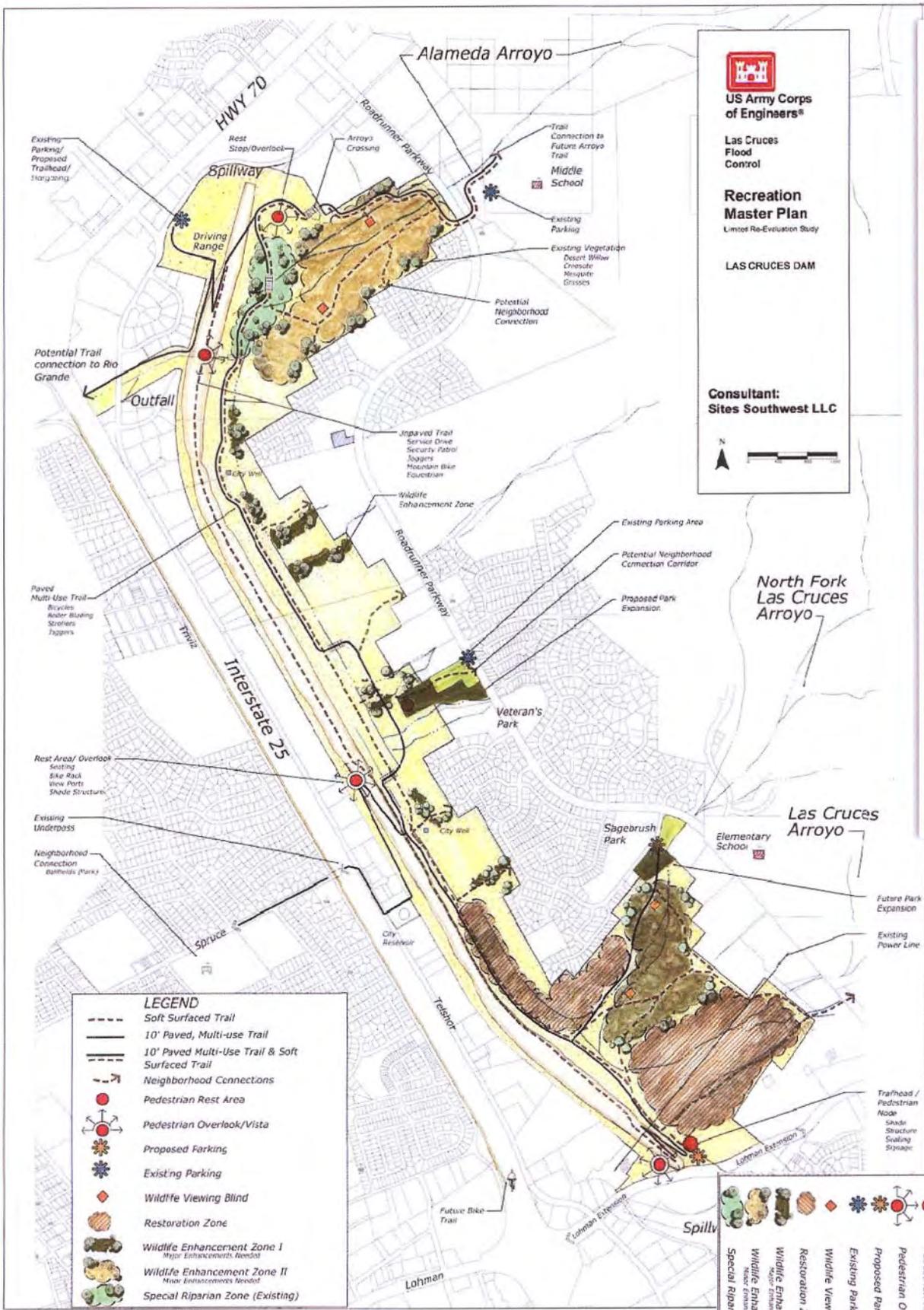
**Las Cruces Flood Control**

**Recreation Master Plan**

Limitz Re-Evaluation Study

**LAS CRUCES DAM**

**Consultant:**  
Sites Southwest LLC



**LEGEND**

- Soft Surfaced Trail
- 10' Paved, Multi-use Trail
- 10' Paved Multi-Use Trail & Soft Surfaced Trail
- Neighborhood Connections
- Pedestrian Rest Area
- Pedestrian Overlook/Vista
- Proposed Parking
- Existing Parking
- Wildlife Viewing Blind
- Restoration Zone
- Wildlife Enhancement Zone I  
Major Enhancements Needed
- Wildlife Enhancement Zone II  
Minor Enhancements Needed
- Special Riparian Zone (Existing)

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## Proposed Recreation Plan





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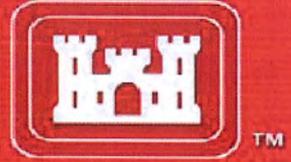
# Artist Rendition of Recommended Plan





## The Look Ahead

- 95% Design, May 2012
- Design ITR (City and Corps), VE Study, June 2012
- 100% Design & Specifications, July 2012
- RFP, August 2012
- Award, September 2012
- Begin Construction, November 2012
- Monitoring & Adaptive Management, 2013-2023\*

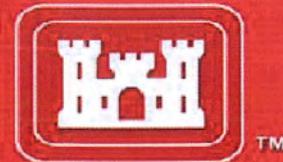


## Project Costs\*

Total Federal Cost: \$2,854,000  
Total Non-Federal Cost: \$1,066,000  
Total Project Cost: \$3,920,000

Restoration: \$3,577,000  
Recreation: \$343,000

\*Based on feasibility level analysis



## Action Items/Next Steps

- Coordinate design with comprehensive maintenance plan
- Complete topographical surveys and site visits
- Develop recreation plan with public input
- Begin design layout



## Thank you!- Q&A's



Image s courtesy of Patrick Alexander

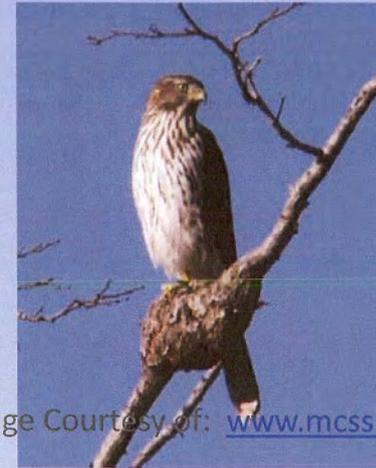


Image Courtesy of: [www.mcspb.com/photos/birds.htm](http://www.mcspb.com/photos/birds.htm)



Image Courtesy of: [hollycatherine.wordpress.com/](http://hollycatherine.wordpress.com/)



Western New Mexico University  
Department of Natural Sciences and the  
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