

# Oxbow

## Recreation and Wildlife Area Management Plan

Draft Management Plan



**Ehrenberg-Cibola Special Recreation Management Area  
Yuma Field Office  
Bureau of Land Management  
United States Department of the Interior  
August 2004**



The Bureau of Land Management is responsible for the balanced management of the public lands and resources and their various values so that they are considered in a combination that will best serve the needs of the American people. Management is based upon the principles of multiple use and sustained yield; a combination of uses that take into account the long-term needs of future generations for renewable and nonrenewable resources. These resources include recreation; range; timber; minerals; watershed; fish and wildlife; wilderness; and natural scenic, scientific and cultural values.

8366 (AZ-050)  
July 27, 2004  
Dear Reader:

The Bureau of Land Management (BLM), Yuma Field Office is proposing to improve the Oxbow Recreation and Wildlife Area (ORWA). The proposed action was developed in response to concerns for public health and safety, and natural and cultural resource protection. The 436-acre site is located approximately 3 miles south of Palo Verde, California, at Colorado River Mile 100.

Enclosed is a Finding of No Significant Impact (FONSI) and the supporting Environmental Assessment (EA) for the adoption and implementation of the ORWA Management Plan. The management plan, FONSI, and EA have been prepared in accordance with the Federal Land Policy and Management Act of 1976, the National Environmental Policy Act (NEPA) of 1969, and the Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 CFR Parts 1508.9 and 1508.13).

The Yuma Field Office is inviting public review and comment on our intent to find no significant impact as documented in the supporting EA in accordance with 40 CFR 1501.4(e). Comments are most useful when they address one or more of the following:

- Errors in the analysis;
- New scientific information that would have a bearing on the analysis;
- Misinformation that could affect the outcome of the analysis;
- Requests for clarification;
- A substantial new alternative that differs from any of the existing alternatives.

To be considered in making a final FONSI determination and whether to approve the ORWA Management Plan, comments must be in writing and postmarked, emailed, or faxed on or before November 5, 2004. We appreciate all comments and views. Please address written comments to: Aaron Curtis, Outdoor Recreation Planner, BLM Yuma Field Office, 2555 East Gila Ridge Road, Yuma, Arizona 85365. Emailed comments should be submitted to [AZ\\_YM\\_OXBOW@blm.gov](mailto:AZ_YM_OXBOW@blm.gov), and faxed comments to (928) 317-3250.

Comments, including names and street addresses of respondents, will be available for public review at the Bureau of Land Management Yuma Field Office, 2555 East Gila Ridge Road, Yuma, Arizona 85365, during regular business hours (7:45 a.m. to 4:30 p.m.), Monday through Friday, except holidays. Individual respondents may request confidentiality. If you wish to withhold your name or street address from public review or from disclosure under the Freedom of Information Act, please state this prominently at the beginning of your comments. Such requests will be honored to the extent allowed by law. All comments from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for public inspection in their entirety.

Sincerely,  
Thomas F. Zale  
Acting Field Manager



Enclosures (3):

1. FONSI for EA AZ-050-2004-0054
2. PROPOSED ORWA Management Plan
3. EA AZ-050-2004-0054: ORWA Management Plan Implementation

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**Finding of No  
Significant Impact  
for  
Oxbow Recreation and Wildlife Area  
Management Plan Implementation  
Environmental Assessment  
(EA AZ-050-2004-0054)**

**Introduction**

The Bureau of Land Management (BLM), Yuma Field Office has analyzed a proposal for improvements at the Oxbow Recreation and Wildlife Area (ORWA). This plan is meant to provide management direction and guidance for ORWA over the next ten years. The 436-acre site is located approximately 3 miles south of Palo Verde, California, at Colorado River Mile 100.

The proposed management actions and alternatives, including the projected future conditions, are described and analyzed in the attached Environmental Assessment (EA) No. AZ-050-2004-0054.

**Related Environmental Documents  
and Environmental Impact Statements  
(EISs)**

- Final Yuma District Resource Management Plan and EIS, as amended (May 1986, February 1987)
- Final Ehrenberg-Cibola Recreation Area Management Plan, as amended (January 1994)
- The BLM's Priorities for Recreation and Visitor Services, BLM Workplan Fiscal Years 2003-2007 (May 2003)
- Statewide Plan Amendment of Land Use Plans in Arizona for Implementation of Arizona Standards for Rangeland Health and Guidelines for Grazing Administration EA (December 1996)
- Arizona Statewide Land Use Plan

Amendment for Fire, Fuels and Air Quality Management (September 2003)

- Oxbow Lake Outlet Maintenance and Oxbow Recreation Site Parking Lot Expansion, Environmental Assessment AZ-050-2004-0030 (May 2004)
- Oxbow Campground Fire Management Activities, Categorical Exclusion AZ-050-2004-0029 (June 2004)
- Biological Evaluation for the BLM Yuma Field Office, Categorical Exclusion AZ-050-2004-0029 (June 2004)

**Reasons for Finding No Significant  
Impact**

- Both beneficial and adverse effects of the proposed action and no action alternative have been considered (please see the "Environmental Impacts" section of the EA). The potential adverse effects would be limited to acceptable levels by standard Best Management Practices and site-specific stipulations designed into the proposed action. Therefore, the beneficial effects would far outweigh the potential adverse effects from implementing the proposed action.
- The proposed recreational improvement and fire management actions would greatly improve the overall safety of the public throughout the planning area. Proposed fire management actions would also improve access for fire suppression activities, which would improve fire fighter safety.
- Proposed habitat restoration and fire management actions and day-use only designations would restore, protect, and encourage native vegetation within the planning area. As desired future conditions are achieved, an increased amount of higher quality native wildlife habitat would improve

ecosystem health within the planning area.

- There is no substantial controversy over the effects of this proposal. No controversy or significant concerns were identified during public comment or agency reviews, and therefore none were disclosed in the EA (please see the “Consultation and Coordination” section of the EA).
- The BLM has considerable experience with these types of projects and actions, and their effects are not uncertain; therefore a unique or unknown risk is not being taken by implementing the proposed action. Recent projects have exhibited the need for improvements to recreational access and facilities, fire management, and wildlife habitat. These past projects have benefited both recreation and wildlife; and the implementation of this proposed action is expected to provide the public with a safer, healthier, and more diverse ecosystem to recreate in.
- The management plan is a response to, and is consistent with, recent Congressional legislation and current federal and BLM recreation management policies, and therefore is not a precedent setting or unique action.
- Cumulative effects from the proposed action were analyzed in conjunction with the anticipated activities by other Federal, state, and county agencies on adjacent lands. The EA discloses that the proposed action would improve environmental conditions, particularly when compared to continuing current recreational management under the “no action alternative.” The EA discloses that the proposed action would result in significant improvements in fire management capabilities, wildlife habitat, recreation, soil and water quality, and the visual resources of the planning area. Anticipated adverse impacts to water and air quality and

visual resources would be short term and not significant. Based on the effects disclosed in the EA, and additional documentation in the supporting project planning record, implementation of the proposed action would not result in any significant adverse cumulative impacts (please see the “Cumulative Impacts” section of the EA).

- No impacts to paleontological and cultural resources or historic properties would occur from the implementation of the proposed action.
- Consultation with the U.S. Fish and Wildlife Service, the Arizona Game & Fish Department, and the California Department of Fish and Game would occur prior to the implementation of the proposed action. Consultation with these agencies would ensure that threatened, endangered, state-listed, and special status species habitats are not negatively impacted.

### **Determination**

On the basis of the information contained in the attached Environmental Assessment, public involvement throughout the development of the EA level analysis process, and all other information available to me as summarized above, it is my determination that the proposed action is not a major Federal Action and will not have a significant effect on the quality of the human environment. Therefore an EIS or a supplement to an existing EIS is unnecessary and will not be prepared.

Thomas F. Zale \_\_\_\_\_  
Acting Field Manager

Date \_\_\_\_\_

# United States Department of the Interior



## **BUREAU OF LAND MANAGEMENT**

Yuma Field Office  
2555 East Gila Ridge Road  
Yuma, AZ 85365  
AZ\_YM\_OXBOW@blm.gov



## **PROPOSED Oxbow Recreation and Wildlife Area Management Plan**

Ehrenberg-Cibola Special Recreation Management Area  
Yuma Field Office  
Bureau of Land Management  
United States Department of the Interior  
August 2004

# I. Introduction

It is the mission of the Bureau of Land Management (BLM) to sustain the health, diversity, and productivity of public lands for the use and enjoyment of present and future generations. In accordance with this mission, the Yuma Field Office (YFO) has prepared this plan to provide for the direction and management of the Oxbow Recreation and Wildlife Area (ORWA) over the next ten years.

## A. Goals of the ORWA Management Plan

1. Provide camping improvements to enhance recreation values and protect natural and cultural resources;
2. Designate day-use areas to accommodate local visitors who do not stay overnight and to manage visitor use so it is compatible with priority wildlife habitat;
3. Establish a watchable wildlife viewing area and interpretive trail to diversify recreational opportunities and provide a focus area for environmental education;
4. Establish habitat restoration areas where there will be an emphasis on creating a sustainable native riparian ecosystem to provide for improved wildlife health and diversity;
5. Implement a local fire management plan to protect visitors, wildlife habitat, and infrastructures from wildfires.

## B. Purpose and Need

The purpose of this management plan is to provide a safer and healthier environment for the public, while simultaneously restoring and preserving the native riparian ecosystem. The implementation of the plan would enable the BLM to provide the improvements needed to sustain existing visitor use in an environmentally compatible manner. Over the past ten years, a substantial increase in visitor use has occurred at ORWA. The existing facilities are not sufficient to support the current number

of visitors. The lack of appropriate facilities is affecting the area's natural resources and human health and safety. In response to this situation, the YFO proposes to improve the camping facilities at ORWA and restore and protect the area's natural resources.

The recreational improvements proposed in this plan would provide the existing number of visitors with the facilities needed to protect the area's natural resources and scenic values, and would improve public safety and health. This plan proposes to improve overnight camping and parking areas, and provide for the installation of vault toilets, garbage dumpsters, recycling bins, and pay telephones. A watchable wildlife viewing area and interpretive trail would also be established.

Approximately 130 acres of ORWA would be managed primarily for habitat restoration purposes. Habitat Restoration Areas would increase the amount of native vegetation and limit the proliferation of non-native invasive species within ORWA's riparian ecosystem.

The fire management actions proposed in this plan would decrease the threat of wildfires harming visitors, firefighters, wildlife habitat, and infrastructures within ORWA.

## C. Conformance with Existing Plans, BLM Priorities, and Laws

The proposed action was developed to conform to several existing documents. Please see the bibliography for a list of all relevant documents and laws that provided direction for this management plan. The following five documents provided a majority of the planning guidance for the development of the proposed action:

1. Final Yuma District Resource Management Plan and Environmental Impact Statement, as amended (May 1986, February 1987)

- a. States that “all of the riparian areas administered by the BLM along the Colorado, Bill Williams, and Gila Rivers would be managed as priority wildlife areas” (page 15).
  - b. States that “BLM-administered lands within or adjacent to the Colorado River floodplain would be managed for natural resource-based recreational use. Recreational use of these lands would be managed in a manner consistent with the federal floodplain management regulations and the Bureau of Reclamation’s needs for managing river operations. To the extent practical, given the Yuma District’s principal objective of meeting public recreation needs, these lands would also be managed for the maintenance of wildlife habitat and other resource values... Only those permanent new facilities that can be flood-proofed would be allowed in the 100-year floodplain. Examples include, but are not limited to: boat service facilities, ramadas, boat ramps, picnic tables, grills, trash cans, outdoor showers, RV sites, electric hook-ups, and mobile retail concessions” (page 22).
  - c. States that “wildlife habitat improvements will generally benefit the natural floodplain values by increasing the kind and amount of plant species along the river” (page 272).
2. Final Ehrenberg-Cibola Recreation Area Management Plan, as amended (January 1994)
    - a. States that “new facility development and existing facility redevelopment will disturb as few native plants, wildlife, and cultural sites as possible. It is BLM policy that projects produce no net loss of riparian habitat, and visual resources will not be impaired. All site development will follow the accessibility standards of the BLM... Each project will include an Environmental Assessment and will be tiered to this plan” (page 27).
    - b. States that native plants will be used when new facility development requires the establishment of re-vegetation areas, and “new facility placement will take into consideration established native plants” (page 35).
  - c. States that the Oxbow Recreation Site plan will “redevelop this camping/day-use facility to provide for public safety and resource protection. Upgrade the current facilities by reorganizing the area to improve the quality of the camping sites and the distribution of the day use. Improve the maintenance and the law enforcement presence at the site (page 1).
  - d. States that the Oxbow plan should include the following elements:
    - i. Upgrade the restroom facilities;
    - ii. Redistribute and enhance the camp sites;
    - iii. Redesign of the boat-trailer and day-use parking areas;
    - iv. Upgrade the trash facilities;
    - v. Implement a fee structure that reflects improvements and considers visitors and use (page 28).
  - e. States that a Watchable Wildlife Viewing Area (WWVA) will be located near the Oxbow in the Palo Verde Valley. The goal will be to “provide the public with a nationally recognized WWVA for enjoyable wildlife viewing that is separated from other activities.” The project plan should include the following elements:
    - i. Development of a nature trail with an observation pier looking onto the water;
    - ii. Development of an interpretive plan for the site consistent with WWVA standards (page 30).
3. The BLM’s Priorities for Recreation and Visitor Services, BLM Workplan Fiscal Years 2003-2007 (May 2003)
 

Goal 1: Improve access to appropriate recreation opportunities on Department of the Interior (DOI) managed or partnered lands and waters (pages 14-17).

Objective 1: Establish a comprehensive

approach to travel planning and management.

Milestone 2: Improve on-the-ground travel management operations and maintenance programs to sustain and enhance recreation opportunities and experiences, visitor access and safety, and resource conservation.

Milestone 3: Improve signing, mapping, and travel information and education for BLM public lands visitors.

Goal 2: Ensure a quality experience and enjoyment of natural and cultural resources on DOI managed or partnered lands and waters (pages 18-24).

Objective 1: Manage public lands and waters for enhanced recreation experiences and quality of life.

Milestone 1: Shift the management emphasis of the recreation program from an activity-based approach to one which focuses on recreation experiences and benefits.

Milestone 5: Integrate management functions to provide opportunities for the public to obtain their desired recreation experiences and quality of life.

Objective 2: Enhance and expand visitor services, including interpretation, information, and education.

Milestone 1: Connect the visitor to natural and cultural resources through enhanced interpretation, education, and information.

Milestone 2: Improve the accuracy, appearance, and consistency of visitor information.

Milestone 3: Emphasize and improve outdoor ethics and stewardship through education.

Objective 3: Ensure public health and safety, and improve the condition and accessibility of recreation sites and facilities.

Milestone 1: Provide accessible programs and facilities at developed recreation sites.

Milestone 2: Increase law enforcement presence, or establish/improve other means, to ensure public safety and secu-

rity in support of recreation visitors.

Milestone 3: Manage and maintain recreation sites and facilities to acceptable operational standards, with priority given to reducing the backlog of identified deferred maintenance projects.

Goal 3: Provide for and receive fair value in recreation (pages 24-30).

Objective 1: Provide fair value and return for recreation through fee collection and commercial services.

Milestone 2: Be responsive to public requests for recreation-related services by using the permit process to accomplish management objectives.

Milestone 3: Be accountable to the public on fee program benefits and accomplishments.

Milestone 5: Review and establish policy for clear and consistent signing and information at recreation sites and facilities where fees are charged.

Objective 2: Encourage and sustain collaborative partnerships, volunteers, and citizen-centered public service.

Milestone 2: Engage and sustain volunteer participation.

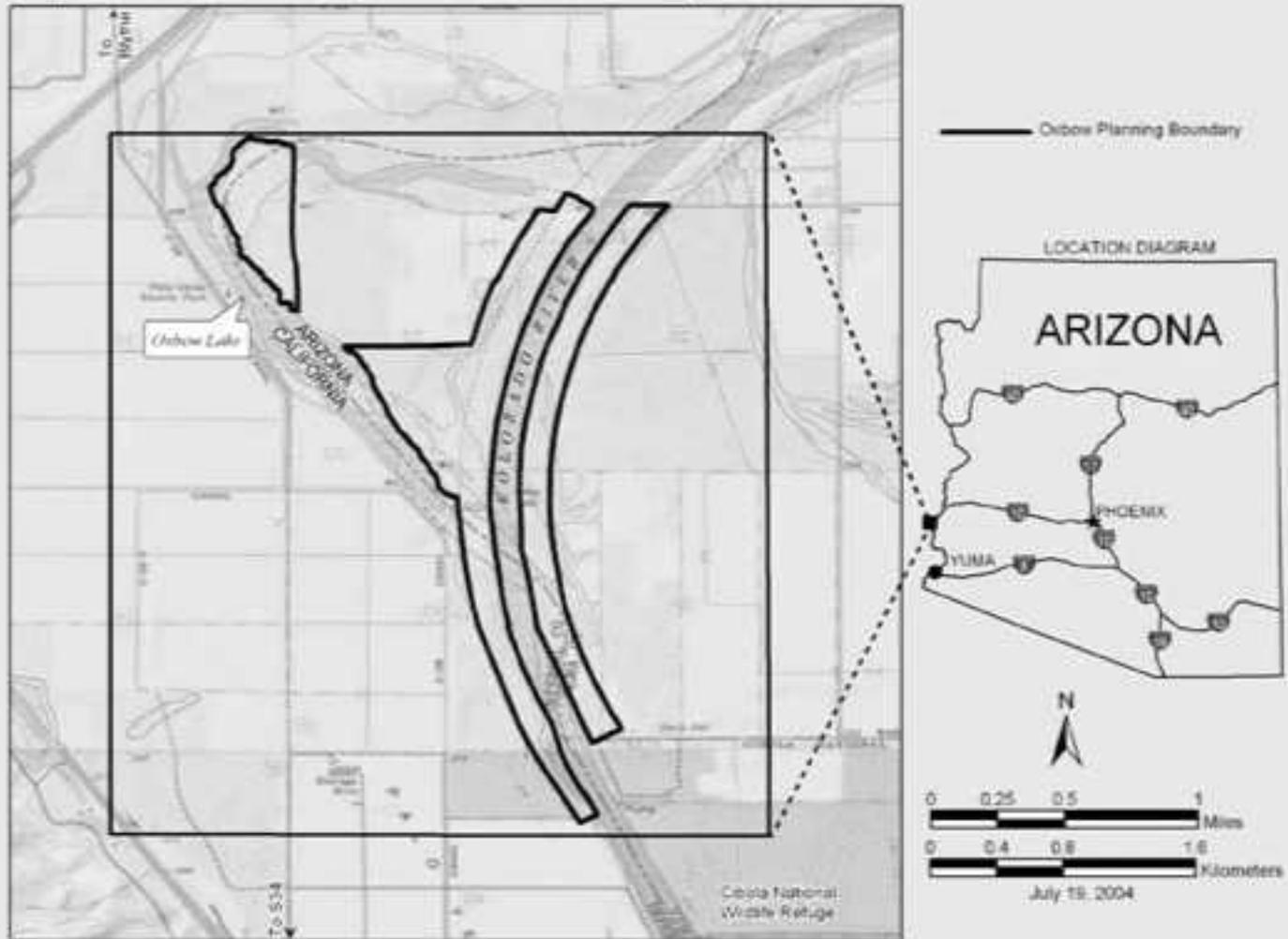
Milestone 3: Sustain and increase partnerships and collaboration in recreation and visitor services.

4. Colorado River Floodway Protection Act, Public Law 99-450 (October 8, 1986). Delegates the responsibility of determining that the uses of federal lands adjacent to the river are consistent with the operation and maintenance of the Floodway to the BLM, with technical assistance to be provided from the U.S. Bureau of Reclamation.

## C. Location and Setting

ORWA would be comprised of 436 acres within the lower Colorado River floodplain in the Palo Verde and Cibola Valleys (see Map 1, page 1). The planning area lies within the 62-mile stretch of the Ehrenberg-Cibola Recreation Area (see Map 1, page 4). The majority ORWA would be a 2.2 miles long, 0.3 mile wide section of the river channel

Map 1 - Oxbow Recreation and Wildlife Planning Area



between Colorado River Miles 98.8 and 101.0. The area commonly known as “Hippy Hole,” and depicted as “Sandy Cove” on recreation maps available through the private sector is included in this management plan. Hereafter, this plan will refer to the area as “Sandy Cove.” Additionally, all public lands between Oxbow Lake and the Colorado River would be included in the planning area. Along the river, the western and eastern boundaries would be all public lands 250 feet outside the high levee roads. The northern boundary would be the intake to Oxbow Lake. The southern boundary would be the Cibola National Wildlife Refuge. The site is adjacent to U.S. Bureau of Reclamation (BOR) withdrawn, U.S. Fish and Wildlife Service, state, and private lands. The planning area is approximately 3 miles south of Palo Verde, California, and 22 miles south of Interstate 10. The ORWA is located in sections 12, 13, 24, and 25, Township 9 South, Range 21 East, San Bernardino Meridian, Imperial County, California; and sections 23, 25, 26, 35, and 36, Township 1 North, Range 24 West, Gila and Salt River Meridian, La Paz County, Arizona.

## **D. The Public Interest at Oxbow**

ORWA was first developed in the late 1960s and has been used for recreational activity for over 40 years. The BLM began managing the site in 1978. It was included as a fee site in the BLM’s Lower Colorado Recreation Sites Fee Demonstration Project in August 1999. While a majority of visitors come to utilize the boat ramp, a variety of other recreational activities are possible at ORWA, such as camping, on-and off-shore fishing, canoeing, kayaking, and wildlife viewing.

Visitor use at ORWA has exponentially increased over the last ten years. In 1992, the BLM estimated that approximately 5,000 visitors came to ORWA per year. From April 2003 to April 2004, BLM traffic counters recorded 21,801 vehicles entering ORWA. The BLM estimates that each vehicle has an average of 2.5 visitors, so approximately

54,500 visitors came to ORWA in one year. 34,500 of these visitors came during the summer months, when water-based recreation is popular. The other 20,000 visitors came during the winter, when overnight camping, fishing, and wildlife viewing are the most common activities. The high rate of visitor use throughout the year is indicative of the diversity of recreational opportunities available at ORWA. It is important to note that these numbers are only for the existing facilities within ORWA and do not reflect the amount of people visiting the entire planning area. The Sandy Cove Campground, for example, normally receives a comparable number of visitors as the BLM-administered campgrounds. The growing populations of southwestern Arizona and southern California make it likely that natural resource-based recreation along the Lower Colorado River will continue to increase.

In response to the increased use at ORWA, the BLM has made some improvements over the past three years. A year-round volunteer host site has been established, enabling the BLM to maintain a permanent presence at ORWA. A double vault toilet, dumpster, and solar lighting have been installed; and hundreds of native riparian trees have been planted. While these upgrades have substantially improved the recreational values near the boat ramp, a majority of the planning area still lacks the facilities necessary to adequately manage existing visitor use. Managing ORWA according to this plan would enable the BLM to provide the public with a wider range of recreational opportunities in a safer, healthier, and more sustainable environment.

## **E. The Existing Environment**

This section describes the existing conditions of the environmental components that could be affected by the proposed actions if implemented. The following Critical Elements of the Human Environment are not present or would not be affected by the implementation of the ORWA Management Plan and will not

be addressed in this section: Areas of Critical Environmental Concern, Farmlands (Prime or Unique), Standards for Rangeland Health, Wild and Scenic Rivers, and Wilderness. Unless there is a significant change in the resource values of the area, or there are significant changes in the technology and/or methodology in determining the area's resource values, this section should be referenced for all subsequent project level environmental analyses tiered to this plan.

#### 1. Air Quality

The planning area is considered a non-attainment area for PM<sub>10</sub>, airborne particulate matter 10 microns or less in diameter. However, data from the Arizona Department of Environmental Quality (ADEQ) for 1991-1995 do not show PM<sub>10</sub> levels above the Arizona Ambient Air Quality Standards. The major sources of air pollution are vehicular travel on improved and unimproved surfaces and agricultural activities. Air quality is otherwise excellent except during times of high winds (U.S. Army Proving Ground, Final Range Wide Environmental Impact Statement, July 2001, page 35).

#### 2. Botanical, including Threatened and Endangered Species

Vegetation within the riparian zone is critically important because it occupies a relatively small proportion of the arid southwest landscape. The diversity of native riparian vegetation present at ORWA is severely limited due to the dominance of salt cedar (*Tamarix ramosissima/chinensis*). ORWA maintains approximately 120 acres of dense, monotypic stands of salt cedar, 100 acres of previously burned lands dominated by re-sprouting salt cedar, 38 acres of mesquite bosque mixed with salt cedar, and a minimal amount of other riparian vegetation mixed with salt cedar. There are no threatened, endangered, or special status Plant Species within or adjacent to the planning area. A list of the native vegetation detected within the planning area can be found in Appendix A.3.

#### 3. Cultural Resources

Cultural resources are abundant near YFO riparian zones because people historically lived along the rivers. Campsites, milling stations, artifact scatters, trails, petroglyphs, geoglyphs, and other cultural resource sites could potentially be found within the planning area. In some cases these cultural resources are no longer intact. Cultural resources within floodplains could have been washed away by past floods. Also, construction and maintenance of the existing river channel may have buried some cultural resource sites under dredged materials.

#### 4. Energy Policy

The ORWA Management Plan does not propose any action that would significantly affect energy supply, distribution, and/or use. A Statement of Adverse Energy Impact would therefore not be required for the implementation of any part of this plan.

#### 5. Environmental Justice

Title VI of the Civil Rights Act of 1964 and related statutes ensure that individuals are not excluded from participation in, denied the benefit of, or subjected to discrimination under any program or activity receiving federal assistance on the basis of race, color, national origin, age, sex, or disability. Executive Order 12898 on Environmental Justice directs that programs, policies, and activities not have a disproportionately high and adverse human health and environmental effect on minority and low-income populations.

#### 6. Fire Management

Wildfire is a natural disturbance in southwest riparian areas that has greatly increased in frequency. The Lower Colorado River has a fire return interval of every three years, with large fires every seven years. Salt cedar is a hazard fuel due to its density and resinous composition. Salt cedar reduction is an integral part of fire management in the Yuma Field Office due to proximity to homes and structures, a zone commonly known as wildland urban interface (WUI). Fire has been destroy-

ing the few remaining pockets of willow, cottonwood, and mesquite, the historic climax community of the Colorado River. ORWA is extremely fire prone due to the monotypic density of salt cedar and the accumulation of dead plant matter. In 2001 a wildfire burned approximately 100 acres of riparian vegetation within the planning area. The unnatural disturbance of wildfire induced by salt cedar is a vicious cycle that perpetuates itself because salt cedar rigorously re-sprouts after wildfire. The Yuma Field Office actively pursues to stabilize and rehabilitate fire-prone areas such as ORWA to cut the cycle of future catastrophic wildfires.

#### 7. Floodplain

A majority of ORWA is located within the 100-year floodplain of the Colorado River. Most of the riverbanks are lined with revetment/rip-rap, and the 100-year floodplain levees lie on the eastern and western edges of the planning area. All actions within ORWA must comply with the Colorado River Floodway Protection Act, Public Law 99-450 (October 8, 1986). The Bureau of Reclamation manages water flow in this portion of the river. The rest of the planning area lies adjacent to Oxbow Lake, one of the few remaining segments of the historical Colorado River. Culverts from the river channel carry water to and from the lake.

#### 8. Invasive Non-native Species

ORWA's ecosystem is dominated by vast monotypic stands of invasive non-native salt cedar. Salt cedar currently dominates the entire Lower Colorado River corridor and has overtaken native trees and shrubs to the detriment of wildlife and habitat quality. Oxbow Lake and the three backwaters within ORWA are highly susceptible to the introduction of the invasive non-native aquatic weed *Salvinia molesta*. Other invasive non-native vegetation found within the planning area can be found in Appendix B.

#### 9. Recreation

ORWA has been a popular recreation site for over 40 years. Visitors come primarily from southern California to gain river access via the boat ramp. ORWA maintains a volunteer host site, 21 designated campsites, a parking lot, 1 double vault toilet, 2 solar street lamps, and a boat ramp. There are no other facilities within the planning area, although the installation of two additional vault toilets was approved in 2000. The 1994 Final Ehrenberg-Cibola Recreation Area Management Plan classified ORWA as a "semi-urban" site in the BLM's Recreation Opportunity Spectrum (page 19). Semi-urban recreation sites are characterized as having opportunities to experience affiliation with individuals and groups, and having convenient locations and opportunities, which are generally more important than the natural setting. Visitor numbers at ORWA have substantially increased over the past decade and are expected to continue to increase.

#### 10. Soils

The Soil Survey of the Yuma-Wellton Area (United States Department of Agriculture Soil Conservation Service, 1980) classifies the soils within the planning area as Lagunita loamy sand, Indio silt loam, and Indio-Lagunita-Ripley complex. Lagunita loamy sand is characterized as having rapid permeability, low water capacity, slow surface run-off, and a high hazard of soil blowing (page 18). Indio silt loam is characterized as being deep and well drained, with a high water capacity, medium surface runoff, and a slight hazard of soil erosion (page 13). The Indio-Lagunita-Ripley complex maintains a variety of characteristics, dependent upon the specific soil profile, but is generally characterized as having a high total production of native plants (page 16). It is also likely that dredged sediment from river channelization projects have been deposited within the planning area.

#### 11. Standards for Rangeland Health

ORWA has long been used for recreational

activities including camping and river access. Current activities are meeting the Arizona Standards for Rangeland Health approved in April 1997. There is little erosion from the site and the Colorado River is extensively controlled by restricting flows and levees.

#### 12. Surface and Groundwater Quality

Within the planning area, surface runoff from storms is drained into the Colorado River. The river water is high in sodium and calcium, and conductivity ranges from 1,100 to 1,700 S/cm (microseimens). That water quality is somewhat constant. Groundwater in the area is typically sodium chloride or sodium fluoride (salt) rich. The groundwater near the Colorado River has high sulfate concentrations but still meets primary and secondary Federal drinking water standards, except for fluoride (U.S. Army Proving Ground, *Final Range Wide Environmental Impact Statement*, July 2001, page 43).

#### 13. Visual Resources

ORWA is within a Class II landscape management area. Class II landscape management requires that changes in the basic landscape may be evident but not overwhelming and that any changes should remain subordinate to the existing landscape (Yuma District RMP, pages 64-65).

#### 14. Wetlands/Riparian Zones

All of ORWA is within the Lower Colorado River riparian zone. Vegetation that is dependent on a high water table from a nearby aquatic ecosystem or on subsurface water is defined as riparian habitat. They are further characterized by having rich and diverse assemblages of plant and animal species in comparison to adjacent upland areas. Riparian systems not only provide critical habitat for wildlife populations and excellent recreation opportunities for man but also filter and purify water as it moves through the riparian zone, reduce sediment loads, enhance soil stability, provide flood protection, and contribute to groundwater recharge and baseflow (A Classification System for Riparian Habitats

in Arizona, Arizona Riparian Council, 1988). However, these characteristics and abilities are severely limited within ORWA due to the dominance of salt cedar and the drastic hydrological modifications made in the 1960s to accommodate flood protection and water delivery. Three backwaters and Oxbow Lake provide ORWA with some historical wetland and riparian conditions.

#### 15. Wildlife, including Threatened and Endangered Species

**Wildlife:** ORWA is located within a riparian area designated as “priority wildlife habitat” in the Yuma District RMP. The Lower Colorado River floodplain received this habitat designation in the plan due to the dense riparian vegetation and its importance to a diversity of wildlife species. According to the RMP, the riparian area where ORWA is located would be managed with priority consideration given to wildlife habitat. Common wildlife observed within ORWA is included in Appendix C.

##### **Threatened and Endangered Species:**

##### **Razorback Sucker (*Xyrauchen texanus*)**

**Habitat:** Surveys funded by the U.S. Bureau of Reclamation in the spring of 2004 found razorback suckers within all three of ORWA’s backwaters.

##### **Southwestern Willow Flycatcher**

**(*Empidonax traillii extimus*) Habitat:** The only southwestern willow flycatcher habitat within ORWA is the 120 acres of dense monotypic stands of salt cedar. These stands are located primarily north of the Cibola operating bridge, between the high and low levee roads on the western side of the river. It is unlikely that southwestern willow flycatchers would nest in this habitat because the dry, sandy soils are adjacent to the quick flowing Colorado River channel; and willow flycatchers normally nest in vegetation associated with quiet, slow-moving, swampy, or still water, and/or saturated soils (Southwestern Willow Flycatcher Recovery Plan, page D-12). Migrating willow flycatchers were found within this area by BLM specialists in 2003. The vegetative communities throughout the

rest of ORWA are not considered potential willow flycatcher habitat (Southwestern Willow Recovery Plan, page D-14).

Approximately 50 acres of restorable willow flycatcher habitat is present within ORWA.

**Yuma Clapper Rail (*Rallus longirostris yumanensis*) Habitat:** ORWA maintains a few isolated pockets of mature cattail-bulrush stands in shallow water near high

ground, the preferred habitat of the Yuma clapper rail. These pockets are all less than two acres each, making it unlikely that Yuma clapper rails would use such areas, since they normally are found in habitat areas larger than eight hectares (Yuma Clapper Rail Recovery Plan, page 7). No Yuma clapper rails were found within ORWA when surveyed by BLM specialists in 2004.

## II. Planning Issues

This section provides background information on the concerns about protection of the area's natural and cultural resources and the threats to human health and safety that are the driving force for this management plan. These issues are addressed in Section III, Management Actions and Objectives.

Issue 1: The facilities necessary to protect the area's natural and cultural resources and reduce threats to human health and safety from the current amount of recreation within the planning area are not presently sufficient.

- a. There is a need to establish an administrative boundary for this recreation area to properly manage the variety of recreation opportunities and resources.
- b. Due to inadequate campground access and facilities, overnight camping occurs throughout most of ORWA. This has caused the quality of recreational opportunities and values to decrease.
- c. Because there is only one toilet facility within ORWA, soil and water contamination from human waste is increasing. The poor soil and water quality is negatively affecting wildlife habitat, recreation, and visual resource values, and human health and safety.



- d. As a result of having only one dumpster within the planning area, litter is common throughout ORWA. This degrades the integrity of the ecosystem and reduces recreation and visual resource values.
- e. There is inadequate parking throughout ORWA. The capacity of the day-use parking area near the boat ramp is insufficient

for visitor use during weekends and holidays. Visitors are often forced to park their vehicles on the narrow high levee road. This limits driver and pedestrian visibility and compromises visitor safety. During a medical emergency in the summer of 2002, an ambulance was unable to reach an injured visitor due to the congestion on the high levee road. There are no other developed parking facilities within ORWA, and visitors' vehicles often become stuck in deep sand and require a tow to get out.

- f. There is inadequate lighting throughout the planning area, compromising visitor safety.
- g. The year-round volunteer host site has no utilities, creating extremely harsh living conditions during the Sonoran Desert summers.
- h. There are no telephone lines within ORWA, and there is no dependable cellular telephone service. This could jeopardize human safety in an emergency.

Issue 2: There is no plan in place for the routine maintenance of ORWA. This limits the BLM's ability to address site maintenance needs in a timely manner, which perpetuates environmental degradation and threats to human health and safety.

- a. It is extremely difficult to place boats in the water from the existing boat ramp. Due to the ever-fluctuating levels of the Colorado River, the boat ramp is often too short and shallow. Vehicles often fall from the edge of the boat ramp and become stuck in the natural riverbed. This has caused damage to private and government vehicles and boats and the aquatic habitat within the outlet.
- b. Sediment accumulates at the mouth of the Oxbow Lake outlet to the Colorado River. If the sediment is not removed, the outflow from the lake would no longer be able to pass into the river. This

would negatively affect Oxbow Lake's water quality and dependent wildlife. River access for boaters would also be blocked. Allowing the deterioration of river access would not be consistent with Goal 1 of the BLM's priorities for Recreation and Visitor Services (please see the "Conformance with Existing Plans, BLM Priorities, and Laws" section), which calls for improving access to appropriate recreation opportunities. Without dependable river access, county law enforcement boats would be forced to enter the river at other boat ramps, the closest of which is over 20 miles away. This would substantially decrease the number of law enforcement patrols within ORWA, compromising public safety during times of high visitor use. In addition, visitors use the shallow water around the accumulated sediment at the river outlet as a swimming area. This situation raises public safety concerns because boat and jet ski use occurs in close proximity to the swimming area.



- c. Salt cedar is continually encroaching upon developed campsites. Because the BLM has no plan in place for maintaining the existing dimensions of the campsites, overnight camping is becoming more limited. The proximity of the campgrounds to dense monotypic stands of salt cedar creates an extremely high risk for additional wildfires within ORWA.
- d. Many roads, parking areas, and boat

ramps within the planning area are not maintained and do not provide dependable access. Again, there is a need to improve appropriate recreation access in conformance with national BLM Recreation and Visitor Services priorities and the Yuma District RMP. The maintenance of access is also vital for public safety and natural and cultural resource protection.

Issue 3: Salt cedar dominates the vegetative ecosystem within the planning area, which decreases biodiversity and threatens human safety.



- a. The invasive non-native salt cedar has become prevalent throughout the western United States due to its ability to shed large amounts of leaf litter with a high salt content. By continuously adding salt to the soil, native vegetation eventually becomes incapable of growing in the area. Monotypic stands of salt cedar provide habitat for a less diverse amount of wildlife as compared to native riparian vegetation. Additionally, the accumulated leaf litter is a high fuel hazard, which increases the risk of wildfire and threatens human safety.
- b. In April 2001, a wildfire destroyed 100 acres of riparian wildlife habitat within ORWA. The contiguous density of salt cedar and accumulated dead plant matter found throughout the planning area increases the potential for future wildfires.
- c. Salt cedar out-competes native vegetation after wildfires, which proliferates the problem of limited biodiversity and



- the threat of future wildfires.
- d. The lack of access into dense areas of salt cedar decreases the ability of fire-fighters to quickly and safely suppress wildfires.
  - e. The increasingly uniform vegetation

prevents the establishment of a healthy diversity of native riparian plant and animal populations. Salt cedar is overtaking established native vegetation within the planning area, most notably 38 acres of mesquite bosques.

Issue 4: Many visitors are uninformed about the importance of riparian ecosystems in the Sonoran Desert.

- a. Waters within ORWA are susceptible to the introduction of non-native invasive aquatic weeds such as *Salvinia molesta*.
- b. There is a lack of informational and interpretative signs and literature informing visitors of their and the BLM's roles and responsibilities to conserve these lands.
- c. To prevent the proliferation of dumpsites and wildfires that are primarily human-caused, there is a need to provide materials for environmental education.

# III. Proposed Actions and their Stipulations

All proposed actions are designed to achieve the ORWA Management Plan's four main goals. The 436 acres of ORWA would be separated into Recreational Improvement, Habitat Restoration, Fire Management, and Day-use Only Areas (see Map 2). Each type of area would be managed differently, but all proposed actions would adhere to the stipulations outlined in this plan.

## A. Stipulations for All Proposed Actions

As dictated by state and federal laws and BLM policies, the following stipulations would be applied throughout all sectors within ORWA.

1. This plan is to provide management direction and guidance for ORWA over the next ten years. All proposed actions within this management plan would be required to undergo the appropriate level of National Environmental Policy Act (NEPA) analysis that would be tiered to this plan. Project implementation would be dependent upon funding and labor availability.
2. All lands within ORWA would continue to be a part of the BLM's Recreation Fee-Demonstration Program. All federal laws governing the collection of fees, camping limitations, resource use, etc. for BLM recreation fee sites would apply. The appropriate signs alerting visitors to the rules and regulations would be installed throughout ORWA as needed. These signs would be repaired, replaced, or updated as needed.
3. Only non-native invasive species, accumulated dead plant matter, and arrow weed would be removed for campground improvements, fire management, or maintenance activities. All removed vegetation would immediately be chipped and left on-site. No mature native vegetation (please see Appendix A) would be entirely removed to achieve management objectives. Agency personnel would survey the area and flag these species to minimize disturbance during project implementations. If necessary and possible, immature native vegetation would be transplanted. Native vegetation would be trimmed for site maintenance and hazardous fuels reduction purposes during the appropriate periods to limit potential impacts to special status species. No net loss of riparian habitat would occur from the actions in this plan.
4. Only native riparian vegetation would be planted as part of any habitat restoration actions. After planting, vegetation would be protected as needed. If necessary, all planted vegetation would be irrigated by a variety of means until it becomes self-sufficient.
5. Integrated pest management (IPM) practices, such as the use of herbicides, hand tools, heavy machinery, and biological control agents may be used to control the non-native invasive vegetation within ORWA. An approved Pesticide Use Proposal would be required and obtained prior to any herbicide application, and a certified applicator would complete this work. Herbicides would be applied and disposed of following labeled instructions. A Spill Contingency Plan would be included to address actions in the event of an accidental chemical spill. Water quality would be monitored following herbicide application to ensure that it is not affected. Herbicide applications would not generate any hazardous wastes.
6. All project implementations potentially impacting aquatic habitat would take into account the native fish populations' breeding seasons.
7. Department of the Interior specialists have surveyed ORWA for the presence of threatened and endangered species. No

actions negatively affecting threatened and endangered species or their habitat would be carried out as a part of this plan. The U.S. Fish and Wildlife Service, the Arizona Game and Fish Department, and the California Department of Fish and Game would be consulted as necessary.

8. No cultural or historical resources would be disturbed as a part of this plan. No proposed actions in California would be implemented until the California State Historic Preservation Office concurs with a finding of "No Historic Properties Affected." All contractors and workers would be briefed before entering the work site and would be required to follow the cultural resource stipulations in the contract. Should cultural and/or paleontological resources be encountered during project ground-disturbing activities, work would cease in the area of the discovery and the BLM would be notified immediately. Work may not resume until written authorization to proceed is issued by BLM.
9. Precautions would be taken by BLM employees and contractors to reduce the chance of equipment introducing additional non-native invasive species into ORWA. This would include the high pressure cleaning of all moving equipment to ensure they are free of soil and plant parts.
10. All proposed restroom facilities would be universally accessible. Solar lighting would be installed inside and outside of all restroom facilities to provide for visitor safety.
11. Gravel would be used for all proposed parking area improvements and recreational access maintenance.
12. Off-highway vehicle use would be limited to existing routes and trails.
13. Designated campgrounds would be the only places overnight camping is permitted. All other lands within ORWA would be limited to day-use only. Barriers and signs may be used as tools to meet management objectives.
14. The BLM YFO would be responsible for the monitoring and maintenance of all

proposed project implementations within ORWA.

## **B. Area-specific Management Actions**

The following four area-specific management guidelines outline how the BLM YFO proposes to achieve the five goals of the ORWA Management Plan and address Section II, Planning Issues.

### **1. Recreational Improvement**

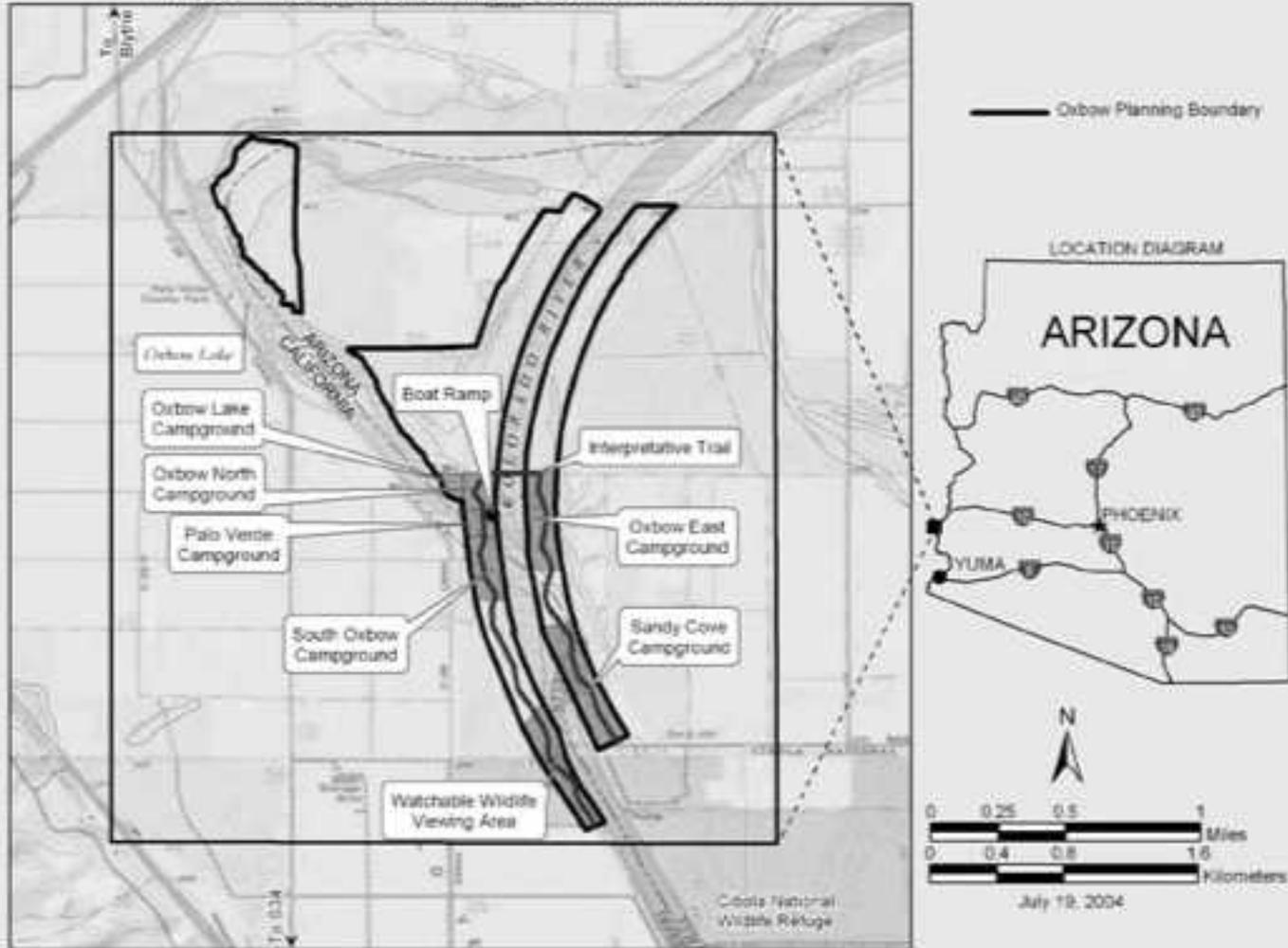
**Areas** Within these areas the BLM proposes to improve campground and day-use facilities and access to address public health and safety and natural resource protection concerns at ORWA (see Map 2). The following actions and objectives would be priorities within Recreational Improvement Areas:

- a. Oxbow Lake Outlet Maintenance
  - i. The two bottom concrete slabs of the boat ramp would be removed and replaced. Additional reinforced concrete slabs would be placed on the riverbed to extend the length of the boat ramp.
  - ii. The accumulated sediment surrounding the Oxbow Lake culvert and at the outlet's mouth would be excavated with mechanical means as necessary to maintain recreational boating access and the flow of water from Oxbow Lake into the Colorado River.
  - iii. Since the accumulated sediment is used as a beach, a swimming area would be designated at the southwest corner of the outlet. The area would be marked with ropes and buoys to provide for public safety.
  - iv. Solar-powered lighting would be installed at the bottom of the boat ramp to provide for visitor safety.
  - v. Signs alerting boaters to the possibility of introducing non-native invasive aquatic species, especially

*Salvinia molesta* would be installed. A high pressure water hose would be installed at the top of the boat ramp for visitors to wash their boats prior to and after going into the Colorado River.

Rationale: The proposed maintenance of the Oxbow Lake outlet would work toward achieving Goals 1, 2, and 3 of the BLM's Priorities for Recreation and Visitor Services, ORWA Management Plan Goal 2, and would address Planning Issues 1f, 2a, 2b, 2d, 4a, and 4b.

Map 2 - Recreational Improvement Areas



b. Parking Improvements

- i. The day-use parking area for the Boat Ramp would be improved directly south of the existing vault toilets by approximately 150 by 50 yards.
- ii. A parking area would be designated and improved at Sandy Cove Campground.
- iii. All parking areas would be graded and maintained as needed.
- iv. The periphery of the parking improvement areas would be re-vegetated.
- v. Solar-powered lighting would be installed as needed throughout the improved parking area to provide for visitor safety.

Rationale: The proposed parking area improvements would work toward achieving Goals 1 and 3 of the BLM's Priorities for Recreation and Visitor Services, ORWA Management Plan Goal 2, and would address Planning Issues 1e, 1f, and 2d.

c. Volunteer Host Site Improvements

- i. The host site would be provided with a sewage vault and electrical power from a solar-powered generator. Protective enclosures would be installed for these facilities as needed. These utilities would improve volunteer safety and assist with the recruitment and retention of campground hosts.
- ii. A kiosk with guides, brochures, and interpretive materials would be installed near the volunteer host site for visitors.

Rationale: The proposed volunteer host site improvements would work toward achieving Goals 1 and 3 of the BLM's Priorities of Recreation and Visitor Services, ORWA Management Plan Goals 1 and 2, and would address Planning Issues 1g, 4a, 4b, and 4c.

d. Palo Verde Campground Improvements

- i. The campground adjacent to the boat ramp would be known as the Palo Verde Campground (please see Map

2, Recreational Improvement Areas).

- ii. Recycling bins would be installed near the existing garbage dumpster.
- iii. If the dependability of cellular telephone service does not improve, one pay or emergency telephone would be installed near the existing vault toilet.
- iv. Salt cedar and arrow weed encroaching into campsites would be annually controlled by hand to maintain camping access and reduce hazardous fuels.
- v. Campground access roads would be graded and maintained as needed.

Rationale: The proposed Palo Verde Campground improvements would work toward achieving Goals 1, 2, and 3 of the BLM's Priorities for Recreation and Visitor Services, ORWA Management Plan Goals 1, 2, and 5, and would address Planning Issues 1a, 1b, 1d, 1h, 2c, 2d, 3a, 3b, and 3e.

e. Oxbow Lake Campground Improvements

- i. The campground west of the western high levee road, adjacent to Oxbow Lake, would be known as the Oxbow Lake Campground (please see Map 2, Recreational Improvement Areas).
- ii. Approximately two acres of salt cedar and arrow weed would be removed by hand in order to improve camping access and reduce hazardous fuels. Campground dimensions would be maintained by annually controlling encroaching salt cedar and arrow weed by hand.
- iii. One double vault toilet would be installed at the Oxbow Lake Campground.
- iv. The unpaved boat launch would be manually maintained to ensure access to Oxbow Lake for small watercraft.
- v. Signs alerting boaters to the possibility of introducing non-native invasive aquatic vegetation would be installed.
- vi. Campground access roads would be graded and maintained as needed.

Rationale: The proposed Oxbow Lake

Campground improvements would work toward achieving Goals 1, 2, and 3 of the BLM's Priorities for Recreation and Visitor Services, ORWA Management Plan Goals 1 and 5, and would address Planning Issues 1a, 1b, 1c, 1f, 2c, 2d, 3a, 3b, 3e, 4a, and 4b.

f. Oxbow North Campground

Improvements

- i. The 8.5 acres between the Oxbow Lake outlet and the Cibola operating bridge would be known as the Oxbow North Campground (please see Map 2, Recreational Improvement Areas).
- ii. Within these 8.5 acres, approximately 3 acres of salt cedar and arrow weed would be removed by hand to improve camping access and reduce hazardous fuels. Campground dimensions would be maintained by annually controlling encroaching salt cedar and arrow weed by hand.
- iii. Native vegetation would be planted throughout Oxbow North Campground.
- iv. One double vault toilet would be installed at Oxbow North Campground.
- v. Campsites would be supplied with anchored picnic tables, standing grills, and/or metal fire rings.
- vi. Campground access roads would be graded and maintained as needed.

Rationale: The proposed Oxbow North Campground improvements would work toward achieving Goals 1, 2, and 3 of the BLM's Priorities for Recreation and Visitor Services, ORWA Management Plan Goals 1 and 5, and would address Planning Issues 1a, 1b, 1c, 1f, 2c, 2d, 3a, 3b, 3e, 4a, and 4b.

g. Oxbow South Campground

Improvements

- i. The 15 acres south of the existing volunteer host site would be known as the Oxbow South Campground (please see Map 2, Recreational Improvement Areas).
- ii. Within these 15 acres, approxi-

mately 6 acres of salt cedar and arrow weed would be removed by hand to improve camping access and reduce hazardous fuels. Campground dimensions would be maintained by annually controlling encroaching salt cedar and arrow weed by hand.

- iii. Native vegetation would be planted throughout Oxbow South Campground.
- iv. Two double vault toilets would be installed at Oxbow South Campground.
- v. Campsites would be supplied with anchored picnic tables, standing grills, and/or metal fire rings.
- vi. Campground access roads would be graded and maintained as needed.

Rationale: The proposed Oxbow South Campground improvements would work toward achieving Goals 1, 2, and 3 of the BLM's Priorities for Recreation and Visitor Services, ORWA Management Plan Goals 1 and 5, and would address Planning Issues 1a, 1b, 1c, 1f, 2c, 2d, 3a, 3b, 3e, 4a, and 4b.



h. Oxbow East Campground Improvements

- i. The 14 acres on the eastern side of the river, directly south of the Cibola operating bridge, would be known as the Oxbow East Campground (please see Map 2, Recreational Improvement Areas).
- ii. Because this area was burned in a 2001 wildfire, the salt cedar re-sprouts would be initially removed with heavy equipment.

- iii. Campground dimensions would be maintained by annually controlling encroaching salt cedar and arrow weed by hand.
- iv. Native vegetation would be planted throughout Oxbow East Campground.
- v. Approximately twenty-five 50-foot by 15-foot by 1-foot concrete slabs would be installed into the ground at Oxbow East for recreational vehicles (RV) camping.
- vi. Two double vault toilets would be installed at Oxbow East.
- vii. Campsites would be supplied with anchored picnic tables, standing grills, and/or metal fire rings.
- viii. Campground access roads would be graded and maintained as needed.

Rationale: The proposed Oxbow East Campground improvements would work toward achieving Goals 1, 2, and 3 of the BLM's Priorities for Recreation and Visitor Services, ORWA Management Plan Goals 1 and 5, and would address Planning Issues 1a, 1b, 1c, 1f, 2c, 2d, 3a, 3b, 3c, 3e, 4a, and 4b.

- i. Sandy Cove Campground Improvements
  - i. Prior to the implementation of any proposed actions at the Sandy Cove Campground, the location of the administrative boundaries must first be located by the BLM Arizona State Cadastral Survey Office. The proposed actions for the Sandy Cove Campground would be modified as needed once the location of the administrative boundaries have been

- determined.
- ii. The 29 acres on the eastern side of the river, directly north of the Cibola National Wildlife Refuge would be known as the Sandy Cove Campground (please see Map 2, Recreational Improvement Areas).
- iii. Within these 29 acres, approximately 7 acres of salt cedar and arrow weed would be removed with a variety of means to improve camping access and reduce hazardous fuels. Campground dimensions would be maintained by annually controlling encroaching salt cedar and arrow weed by hand.
- iv. Native vegetation would be planted throughout Sandy Cove Campground.
- v. Two double vault toilets would be installed at Sandy Cove Campground.
- vi. A parking area would be designated at Sandy Cove Campground.
- vii. A garbage dumpster and recycling bins would be installed at Sandy Cove Campground.
- viii. If the dependability of cellular telephone service does not improve, one payphone would be installed at Sandy Cove.
- ix. Modifications to the backwater in the Sandy Cove Campground would be made to remediate water quality issues threatening public health.
- x. One BLM volunteer host site would be established at the Sandy Cove Campground. The host site would be provided with a sewage vault and electrical power from a solar-pow-



ered generator. Protective enclosures would be installed for these facilities as needed. These utilities would improve volunteer safety and assist with the recruitment and retention of campground hosts.

- xi. One BLM Recreation Fee-Demonstration Project collection pipe would be installed at the Sandy Cove Campground.
- xii. Campsites would be supplied with anchored picnic tables, standing grills, and/or metal fire rings.
- xiii. Campground access roads would be graded and maintained as needed.

Rationale: The proposed Sandy Cove Campground improvements would work toward achieving Goals 1, 2, and 3 of the BLM's Priorities for Recreation and Visitor Services, ORWA Management Plan Goals 1, 2, and 5, and would address Planning Issues 1a, 1b, 1c, 1d, 1e, 1f, 1g, 1h, 2c, 2d, 3a, 3b, 3e, 4a, 4b, and 4c.

- j. Watchable Wildlife Viewing Area and Interpretative Trail
  - i. A Watchable Wildlife Viewing Area (WWVA) would be established on the western side of the river within the southernmost 22 acres of ORWA (please see Map 2, Recreational Improvement Areas).
  - ii. Non-native invasive species within the WWVA would be annually removed by hand.
  - iii. Native vegetation would be planted throughout the WWVA.
  - iv. The 20-acre backwater found within the WWVA would be modified to improve the quality of the aquatic habitat.
  - v. A universally accessible viewing platform or floating dock would be installed on the backwater.
  - vi. A universally accessible ten-foot-wide interpretative trail would be installed from the Oxbow Boat Ramp Site to the WWVA backwater. The trail would be installed with mechanical

means in locations causing the least amount vegetation and soil disturbance. The trail would be extended as funding becomes available.

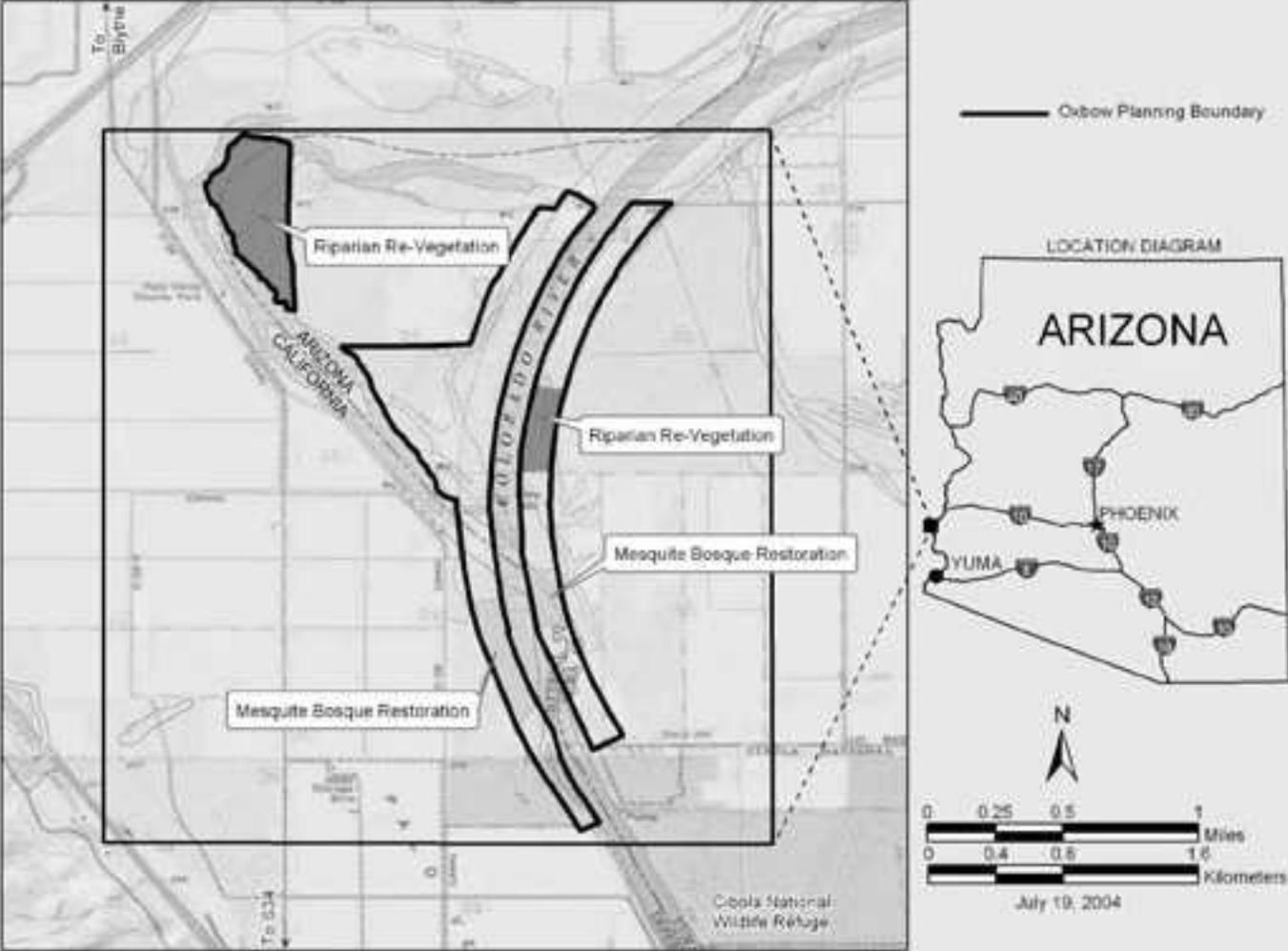
- vii. The trail would be kept clear of vegetation and graded as needed to ensure continued universal accessibility.
- viii. Interpretive signs would be installed throughout the trail and WWVA. Interpretive signs would focus on native vegetation and animals found in the area, the natural history of the area, and the BLM and public roles in conserving the area's natural resources. The interpretive signs would be developed in coordination with staff from the Cibola National Wildlife Refuge. The National Fish and Wildlife Service has expressed an interest in forming a partnership with the BLM to provide environmental education.

Rationale: The establishment of a WWVA and interpretive trail within ORWA would work toward achieving Goals 1, 2, and 3 of the BLM's Priorities for Recreation and Visitor Services, ORWA Management Plan Goals 3, 4, and 5, and would address Planning Issues 1a, 3a, 3b, 3e, 4a, 4b, and 4c.

## 2. Habitat Restoration Areas

Within these areas the BLM proposes to re-introduce and encourage native vegetation to restore the natural resource values of the historical ecosystem. There would be two types of Habitat Restoration Areas within ORWA, Riparian Re-vegetation Areas and Mesquite Bosque Restoration Areas. These areas would consist of approximately 130 acres, or 30% of the planning area. Sustainability would be the first priority of Habitat Restoration Areas. All Habitat Restoration Areas would be limited to day-use only. The following actions and objectives would be priorities within Habitat Restoration Areas:

Map 3 - Habitat Restoration Areas



- a. Riparian Re-vegetation
  - i. One Riparian Re-vegetation Area would be the 68 acres on Oxbow Lake's eastern shore. The other area would be the 25 acres directly north of the Cibola operating bridge on the eastern side of the river (please see Map 3, Habitat Restoration Areas). The administrative boundaries of these areas may be modified as funding, additional water rights, or cooperative projects become available.
  - ii. Salt cedar would be root-plowed 12 to 18 inches below the soil surface, which would limit their re-invasion.
  - iii. Soils would be analyzed for nutrient content and salinity.
  - iv. Depending upon the results of the soil analysis, soils may be mulched with organic compounds that would increase the soil's fertility and water-carrying capacity. Mulch brought in from outside of ORWA would be sterilized to prevent the inadvertent introduction of non-native invasive vegetation.
  - v. Depending upon the results of the soil analysis, the areas may be chemically treated to decrease salinity levels and improve the success rate of planted vegetation.
  - vi. If necessary, dredged river sediment contained within these areas may be mechanically mixed into the natural soils or may be moved to other parts of the ORWA.
  - vii. Water rights would be procured and the appropriate type of irrigation system would be installed prior to vegetation planting.
  - viii. Depth-to-ground water ratios would be the determining factor for which riparian species are selected for each area. Vegetation unable to become self-sufficient would not be planted.
  - ix. Native riparian poles and potted plants would be planted within these areas and protected as needed. Native riparian seeds would also be broad-

cast throughout these areas.

- x. These areas would be irrigated with a variety of means as necessary until they become self-sufficient.
- xi. These areas would be monitored and maintained to prevent the return of salt cedar and other non-native invasive vegetation. If possible, all non-native invasive vegetation would be removed by hand. If removal by hand is not possible, herbicide would be applied by hand on an annual basis for no more than four years.

Rationale: Establishment of the riparian re-vegetation areas would work toward achieving Goals 2 and 3 of the BLM's Priorities for Recreation and Visitor Services, ORWA Management Plan Goals 2, 4, and 5, and would address Planning Issues 1a, 1b, 1c, 1d, 3a, 3b, 3c, and 3e.

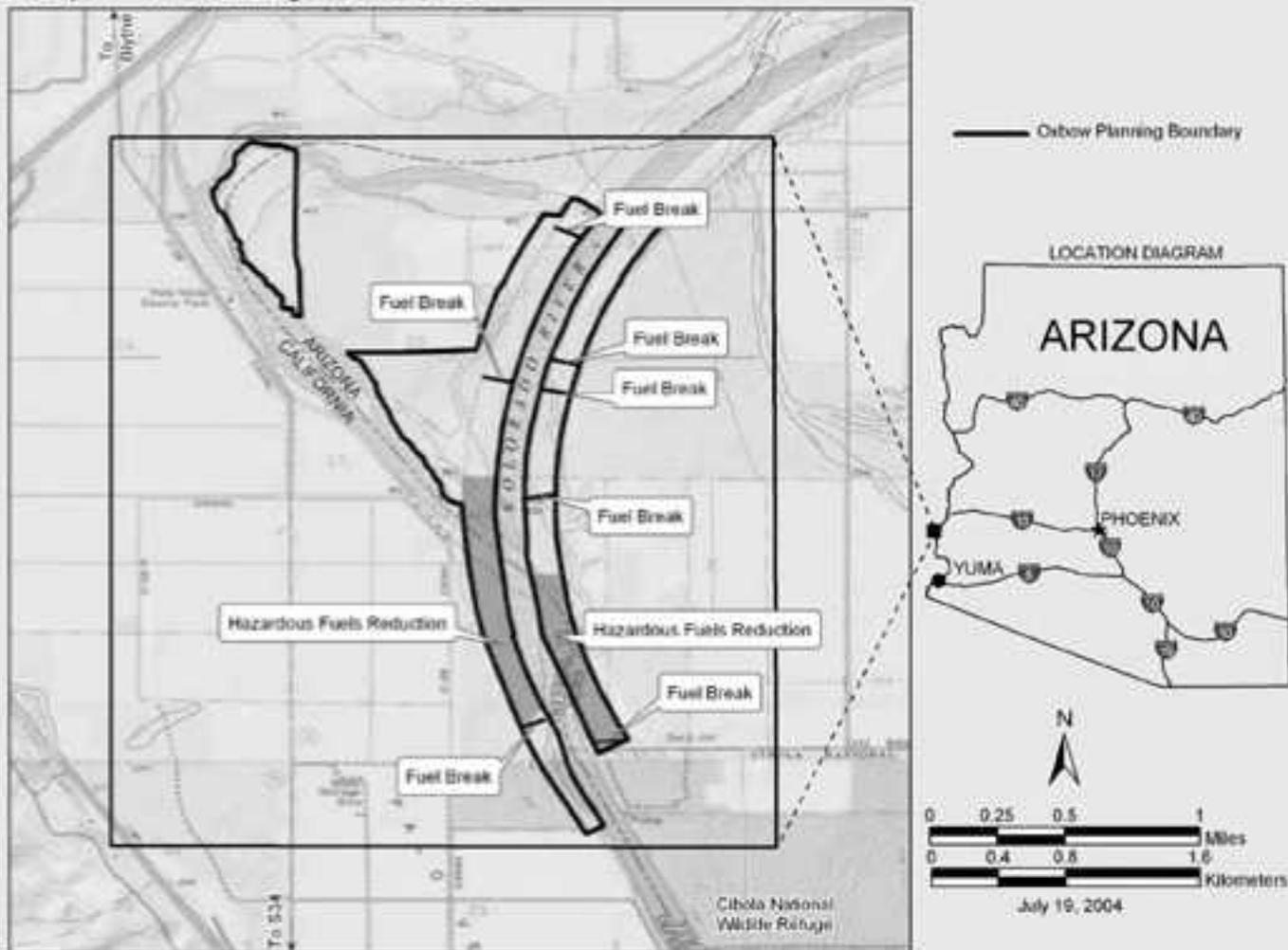
#### b. Mesquite Bosque Restoration

The objective of the two Mesquite Bosque Restoration Areas is to stabilize 38 acres of native riparian vegetation that is in danger of being overtaken by salt cedar (please see Map 3, Habitat Restoration Areas). The mesquite bosque on the western side of the river is 25 acres, and the bosque on the eastern side of the river is 13 acres. The removal of the salt cedar within the mesquite bosques would also reduce hazardous fuels within ORWA, which would improve public safety and protect priority wildlife habitat. The actions and objectives for the Mesquite Bosque Restoration Areas can be found in the "Fire Management Areas" section, under "Hazardous Fuels Removal."

### 3. Fire Management Areas

Within these areas the BLM proposes to establish wildfire fuel breaks and reduce hazardous fuels to protect visitors, wildlife, and infrastructures. These actions would occur on approximately 100 acres throughout ORWA (see Map 4, Fire Management Areas). The following actions and objectives would be priorities within Fire Management Areas:

Map 4 - Fire Management Areas





a. Fuel Breaks

- i. Seven wildfire fuel breaks would be installed throughout ORWA at the access roads connecting the high and low levee roads (please see Map 4, Fire Management Areas). The fuel breaks would be approximately 30 feet wide on either side of the access roads. Installing fuel breaks at these roads would provide fire crews with ample access and space for fire suppression activities, which would substantially improve firefighter safety.
- ii. Only areas dominated by salt cedar and arrow weed would be considered as a potential fuel break location. If necessary and possible, immature native species would be transplanted within ORWA.
- iii. All salt cedar would be mechanically removed. The soil would be root-plowed 12 to 18 inches below the soil surface in order to limit salt cedar re-sprouts.
- iv. Fuel breaks would be monitored and maintained. Vegetation within the fuel breaks would be manually or mechanically removed on an annual basis. If the mechanical removal of salt cedar is not feasible, an herbicide would be manually applied to the re-sprouts on an annual basis for no more than four years.
- v. Fuel breaks would be considered day-use only and no overnight camping would be permitted. Fuel breaks may be used for multiple purposes, such as parking, picnicking, and athletics.

Rationale: The installation of fuel breaks would work toward achieving Goals 1 and 2 of the BLM's Priorities for Recreation and Visitor Services, ORWA Management Plan Goal 5, and would address Planning Issues 3a, 3b, 3c, 3d, and 3e.

b. Hazardous Fuels Reduction Areas

- i. Hazardous fuels reduction actions would occur throughout 90 acres of ORWA (please see Map 4, Fire Management Areas). These lands are also classified as Campground Improvement or Mesquite Bosque Restoration Areas. Within these 90 acres, approximately 40 acres of salt cedar would be selectively thinned by hand.
- ii. Salt cedar would be annually controlled with hand tools. Mechanical means may be used when hand tools are not feasible and wildlife and native vegetation would not be disturbed.
- iii. Herbicide would be manually applied to salt cedar stumps immediately after cutting and on an annual basis for no more than four years. Maintenance in this manner would decrease the native vegetation's competition from the salt cedar while simultaneously reducing ORWA's fuel load.
- iv. Salt cedar leaf piles, arrow weed, and any other large piles of dead and detached vegetation would be removed from the ground by hand on an annual basis.
- v. All vegetation removed for hazardous fuels reduction purposes would be chipped and left on-site.

Rationale: The proposed hazardous fuels reduction actions would work toward achieving Goals 2 and 3 of the BLM's Priorities for Recreation and Visitor Services, ORWA Management Plan Goals 4 and 5, and would address Planning Issues 2c, 3a, 3b, 3c, 3d, and 3e.

#### 4. Day-use Only Areas

The BLM proposes to designate approximately 370 acres, or 85% of ORWA, as day-use only (please see Map 5, Day-use Only Areas). This would confine the adverse environmental impacts associated with overnight recreation to designated campgrounds, where the facilities to mitigate these impacts would exist. By confining overnight recreation to specific areas, instead of continuing to allow it to occur throughout the 436 acres of ORWA, there would be an overall net decrease of priority wildlife habitat disruption. The following actions and objectives would be priorities within Day-use Only Areas:

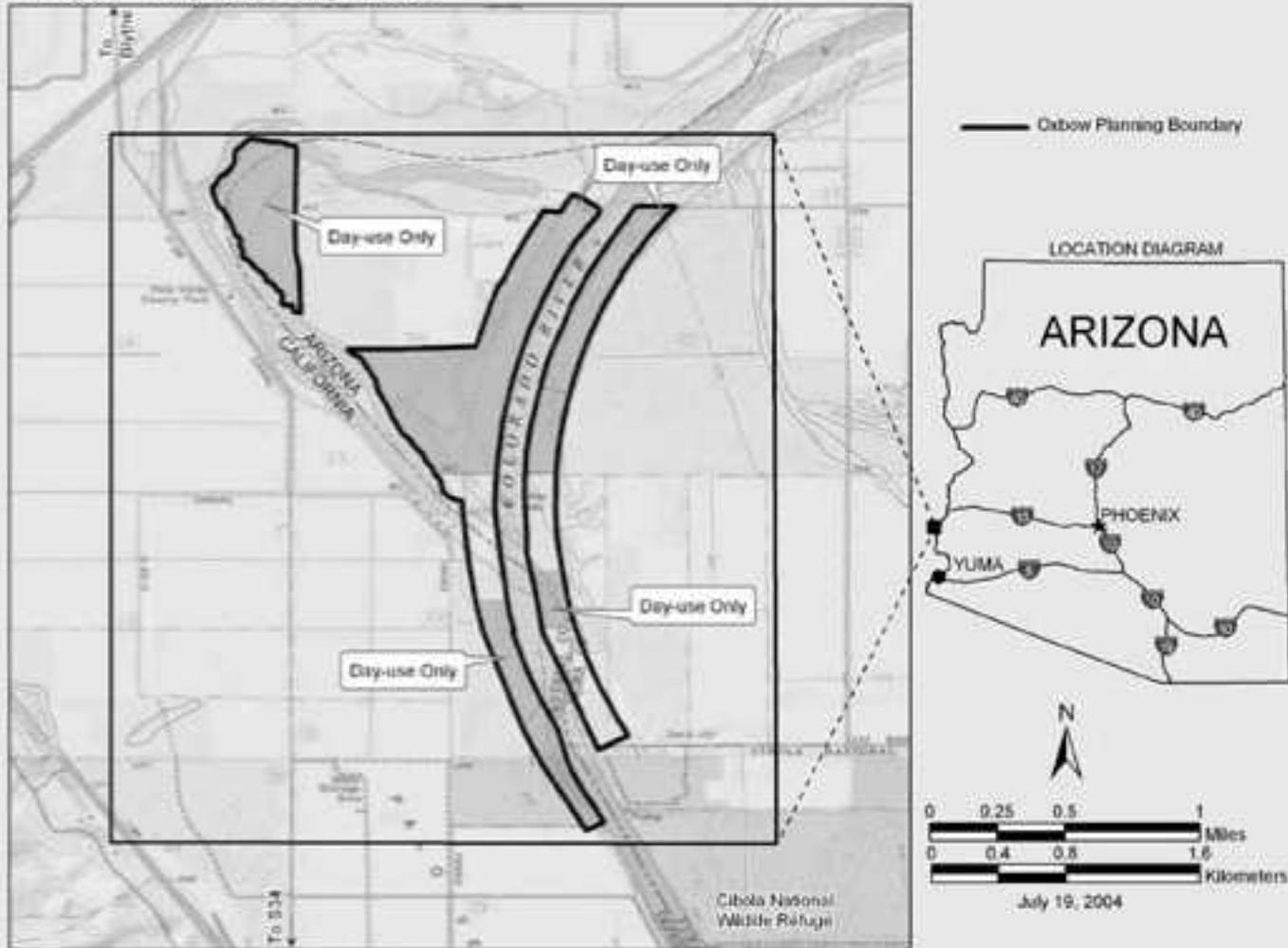
- a. Designated campgrounds would be the only areas within ORWA that overnight camping is permitted. Overnight camping would not be permitted in the habitat restoration, fire management, and watchable wildlife viewing areas. Night fishing would continue to be allowed within

Day-use Only Areas.

- b. Except for the watchable wildlife viewing area and interpretive trail, no other recreational facilities would be installed within Day-use Only Areas.
- c. BLM staff would patrol these areas as deemed necessary to ensure compliance.
- d. If overnight camping continues to occur within day-use only areas, locked gates would be installed across access roads to ensure compliance. These gates would comply with federal floodplain management regulations and provide for the U.S. Bureau of Reclamation's access needs for managing river operations.

Rationale: The proposed designation of Day-use Only Areas would work toward achieving Goal 1, 2, and 3 of the BLM's Priorities for Recreation and Visitor Services, ORWA Management Plan Goal 2, and would address Planning Issues 1a, 1b, 1c, and 1d.

Map 5 - Day-use Only Areas



# IV. Scope of the ORWA Management Plan

## A. List of Preparers

The ORWA Management Plan was prepared by a team of BLM Yuma Field Office specialists. This plan has been thoroughly reviewed to ensure that all proposed actions would conform to all applicable federal, state, and county laws. The members of the ORWA interdisciplinary team is as follows:

Bill Alexander .....Park Ranger  
Sandra Arnold..... Archaeologist  
Mike Behrens ..... Fuels Specialist  
Barbara Bowles ..... GIS Specialist  
Aaron Curtis..... Outdoor Recreation Planner  
Caitlin Elam ..... Botanist  
Jennifer Green... Natural Resource Specialist  
Candy Holzer .....Land Law Examiner  
Mark Lowans .....  
Lead Outdoor Recreation Planner  
Ron Morfin.....  
Team Lead for Recreation and Wilderness  
Roger Oyler.....  
Rangeland Management Specialist  
Karen Reichhardt ..... Team Lead, Resources

David Repass ..... Fire Biologist  
Fred Wong ..... Wildlife Biologist  
Jeff Young ..... Wildlife Biologist

## B. Applicable Regulatory Coordination

The following agencies would be consulted as required by state and federal law and BLM policy:

Arizona Department of Environmental Quality  
Arizona Game and Fish Department  
BLM Arizona State Cadastral Survey Office  
California Department of Fish and Game  
California State Historic Preservation Office  
California Water Quality Control Board  
Cibola National Wildlife Refuge  
U.S. Army Corps of Engineers  
U.S. Bureau of Reclamation  
U.S. Fish and Wildlife Service

# United States Department of the Interior



## **BUREAU OF LAND MANAGEMENT**

Yuma Field Office  
2555 East Gila Ridge Road  
Yuma, AZ 85365  
AZ\_YM\_OXBOW@blm.gov



## **Environmental Assessment AZ 050-2004-0054**

Oxbow Recreation and Wildlife Area  
Management Plan Implementation

Prepared by: Aaron Curtis  
Date: August 20, 2004

# INTRODUCTION

## Purpose and Need for the Proposed Action

The Bureau of Land Management (BLM) Yuma Field Office has prepared a management plan for the Oxbow Recreation and Wildlife Area (ORWA). The plan has been written in accordance with the Ehrenberg-Cibola Recreation Area Management Plan (January 1994), which mandated that an activity level management plan would be written for ORWA. This plan is meant to provide management direction and guidance for ORWA over the next ten years. The proposed action was developed to achieve the following five goals:

1. Provide camping improvements to enhance recreation values and protect natural and cultural resources;
2. Designate day-use areas to accommodate local visitors who do not stay overnight and to manage visitor use so it is compatible with priority wildlife habitat;
3. Establish a watchable wildlife viewing area and interpretive trail to diversify recreational opportunities and provide a focus area for environmental education;
4. Establish habitat restoration areas where there will be an emphasis on creating a sustainable native riparian ecosystem to provide for improved wildlife health and diversity;
5. Implement a local fire management plan to protect visitors, wildlife habitat, and infrastructures from wildfires.

Since 1994 visitor use within ORWA has exponentially increased, which has raised concerns about the protection of the area's natural resources and threats to human health and safety. For more detailed information on the issues that are the driving force for the proposed action, please see the "Planning Issues" section of the ORWA Management Plan. The four main issues addressed within the management plan are listed below.

1. The facilities necessary to protect the area's natural and cultural resources and reduce threats to human health and safety from the current amount of recreation within ORWA are not presently sufficient.
2. There is no plan in place for the routine maintenance of ORWA. This limits the BLM's ability to address maintenance needs in a timely manner, which perpetuates environmental degradation and threats to human health and safety.
3. Salt cedar (*Tamarix ramosissima/chinensis*) dominates the vegetative ecosystem within the planning area, which decreases biodiversity and increases the threat of wildfires.
4. Many visitors are uninformed about the importance of riparian ecosystems in the Sonoran Desert.

## Conformance with the Land Use Plan

The ORWA Management Plan would be in conformance with the 1987 Final Yuma District Resource Management Plan, along with various other documents. For more detailed information concerning the conformance with these documents, please see the "Conformance with Existing Plans, BLM Priorities, and Laws" section of the ORWA Management Plan. Please see the bibliography for a complete list of documents that provided planning guidance for the development of this management plan.

# PROPOSED ACTION AND ALTERNATIVES

## Proposed Action

The proposed action is the adoption and implementation of the Oxbow Recreation and Wildlife Area Management Plan of 2004. Details on the following actions and their stipulations are detailed on pages 18 to 33 of the enclosed ORWA Management Plan:

1. Recreational improvement actions throughout 66 acres;
2. Habitat restoration actions throughout 130 acres;
3. Fire management actions throughout 100 acres;
4. Day-use only designations throughout 370 acres.

**No Action Alternative**

Under the no action alternative the ORWA Management Plan would not be adopted and implemented, and the concerns about natural resource protection and threats to human health and safety would not be addressed through existing management guidance.

**AFFECTED ENVIRONMENT**

**General Setting**

ORWA is comprised of 436 acres of priority wildlife habitat in the Palo Verde and Cibola Valleys at Colorado River Mile 100. The planning area is located in sections 12, 13, 24, and 25, Township 9 South, Range 21 East, San Bernardino Meridian, Imperial County, California; and sections 23, 25, 26, 35, and 36, Township 1 North, Range 24 West, Gila and Salt River Meridian, La Paz County, Arizona. For more detailed information concerning the location of planning area, please see the “Location and Setting” section and Map 1, ORWA Planning Area, of the management plan.

**Affected Resources**

The following list of resources within the planning area is discussed in detail in the “Existing Environment” section of the ORWA Management Plan:

1. Air Quality
2. Botanical, including Threatened and Endangered Species
3. Cultural Resources
4. Energy Policy

5. Environmental Justice
6. Fire Management
7. Floodplain
8. Invasive Non-native Species
9. Recreation
10. Soils
11. Standards for Rangeland Health
12. Surface and Groundwater Quality
13. Visual Resources
14. Wetlands/Riparian Zones
15. Wildlife, including Threatened and Endangered Species

**ENVIRONMENTAL IMPACTS**

This section will provide analysis of impacts as a result of the implementation of the proposed action and no action alternative. The following Critical Elements of the Human Environment are not present within the planning area:

1. Areas of Critical Environmental Concern
2. Farmlands (Prime or Unique)
3. Wild and Scenic Rivers
4. Wilderness

**Impacts of the Proposed Action and No Action Alternative**

**1. Air Quality**

**Impacts of the Proposed Action:**

Air quality may be temporarily impacted during construction phases of the proposed action. Some fugitive dust would be anticipated as a result of construction activities. The use of standard Best Management Practices during construction would minimize this impact. Practices such as water application would significantly reduce fugitive dust. Implementation of the proposed action would not adversely affect existing air quality. Fugitive dust from recreational activities would also be minimized through improvements such as gravel placement in high use areas.

### **Impacts of the No Action Alternative:**

Air quality would be negatively impacted under the no action alternative. Improvements and management to recreational access would not be implemented, and dust from recreational traffic may increase due to actions not being implemented. Under the no action alternative, wildfires are likely to occur with greater frequency and intensity, and air quality would also be negatively impacted from smoke.

### **2. Botanical, including Threatened and Endangered Species**

#### **Impacts of the Proposed Action:**

Implementation of the proposed action would reduce non-native invasive vegetation and establish habitat restoration areas. Fire management actions would protect native vegetation from wildfires within ORWA. These actions would have significant beneficial impacts to vegetation.

#### **Impacts of the No Action Alternative:**

Implementation of the no action alternative would allow the growth of high-density salt cedar stands to continue at the existing rate. This would inhibit the establishment of native riparian plant communities, increase the risk of wildfire, and have negative impacts to vegetation within ORWA.

### **3. Cultural Resources**

#### **Impacts of the Proposed Action:**

All lands within ORWA that would be disturbed from the implementation of the proposed action would be surveyed by authorized specialists for the presence of historic properties. The proposed action would comply with all federal, Arizona, and California historic preservation laws and regulations. Therefore, the proposed action would not adversely affect significant cultural resources.

#### **Impacts of the No Action Alternative:**

Implementation of the no action alternative would not impact cultural resources.

### **4. Energy Policy**

#### **Impacts of the Proposed Action:**

The ORWA Management Plan does not propose any action that would significantly affect energy supply, distribution, and/or use. A Statement of Adverse Energy Impact would therefore not be required for the implementation of the proposed action.

#### **Impacts of the No Action Alternative:**

The no action alternative would not impact energy supply, distribution, and/or use.

### **5. Environmental Justice**

#### **Impacts of the Proposed Action:**

Implementation of the proposed action would not disproportionately affect any minority and low-income populations near ORWA. Implementing the proposed action would provide a wider range of natural resource-based recreational opportunities within ORWA, such as wildlife viewing, a swimming area, and an interpretive trail. These improvements would provide visitors with affordable recreational alternatives that are currently not present, and would have beneficial impacts to environmental justice within ORWA.

#### **Impacts of the No Action Alternative:**

Implementation of the no action alternative would impact environmental justice by allowing the continued degradation of affordable recreation opportunities and by not addressing public health and safety concerns.

### **6. Fire Management**

#### **Impacts of the Proposed Action:**

Implementation of the proposed action would decrease the hazardous fuel load and improve access for fire suppression activities within ORWA. These actions would improve public and firefighter safety, and protect priority wildlife habitat. The pro-

posed action would have significant beneficial impacts to fire management within ORWA.

### **Impacts of the No Action**

#### **Alternative:**

Implementation of the no action alternative would allow the growth of high-density salt cedar stands to continue at the existing rate, further increasing the hazardous fuel load within ORWA. Access for fire suppression activities would continue to be limited, compromising fire fighter safety. Priority wildlife habitat, the recreating public, and infrastructures within ORWA would continue to be at risk from wildfires. There would be negative impacts to fire management under the no action alternative.

## **7. Floodplain**

### **Impacts of the Proposed Action:**

Implementation of the proposed action would not impact the integrity of the Colorado River floodplain or the U.S. Bureau of Reclamation's management of the river's flow. The proposed action would comply with Section 7 of the Colorado River Floodway Protection Act, Public Law 99-450 (October 8, 1986), which allows for public roads, fish and wildlife enhancement projects, public recreational developments, and a minimal amount of permanent facilities within the floodway.

### **Impacts of the No Action**

#### **Alternative:**

Implementation of the no action alternative would not impact the Colorado River floodplain or the U.S. Bureau of Reclamation's management of the river's flow. The no action alternative would comply with Colorado River Floodway Protection Act, Public Law 99-450.

## **8. Invasive Non-native Species**

### **Impacts of the Proposed Action:**

Implementation of the proposed action would reduce the amount of salt cedar and other invasive non-native species within

ORWA as mandated by Executive Order 13112 on Invasive Species (February 3, 1999). These actions would have significant beneficial impacts by restoring, protecting, and encouraging native vegetation, and reducing the hazardous fuel load within ORWA.

### **Impacts of the No Action**

#### **Alternative:**

Implementation of the no action alternative would allow the growth of high-density salt cedar stands to continue at the existing rate. This would not conform to Executive Order 13112 on Invasive Species and would have negative impacts on native vegetation within ORWA.

## **9. Native American Religious Concerns**

### **Impacts of the Proposed Action:**

Implementation of the proposed action would not occur until consultation with the appropriate Native American tribal agencies has determined that there would be no negative impacts to Native American religious concerns.

### **Impacts of the No Action**

#### **Alternative:**

Implementation of the no action alternative would not impact Native American religious concerns.

## **10. Recreation**

### **Impacts of the Proposed Action:**

The proposed recreational improvement actions would improve the quality of natural resource-based recreation and decrease threats to human health and safety. Maintenance and improvements to camping and river access would provide the existing number of visitors with safer and more dependable access to historically used areas within ORWA. Implementation of the proposed action would maintain or decrease access to previously undisturbed areas that would be primarily managed for improved wildlife habitat. The designation of day-use only areas would also concen-

trate overnight camping to areas with the facilities able to mitigate environmental impacts from recreation. Implementation of the proposed action would not affect ORWA's classification as a "semi-urban" site in the BLM's Recreation Opportunity Spectrum. There would be significant beneficial impacts to recreation within ORWA under the proposed action.

**Impacts of the No Action Alternative:**

Implementation of the no action alternative would not address public health and safety or natural resource protection concerns at ORWA. Access to historically used areas within ORWA would continue to be inadequate for the current number of visitors, which would result in continued negative impacts to natural resources. The lack of overnight camping facilities would allow the continuation of negative impacts to natural and visual resources from litter and human waste. Implementation of the no action alternative would not affect ORWA's classification as a "semi-urban" site in the BLM's Recreation Opportunity Spectrum. There would be negative impacts to recreation under the no action alternative.

**11. Soils**

**Impacts of the Proposed Action:**

Impacts to soils would be minimal. Some actions such as clearing and leveling would impact soils, however these impacts would be minimal because the area is a mixture of natural soils and dredged materials from the Colorado River channel. Soil stability would be improved through gravel application and leveling in high traffic areas. Salt cedar removal and planting native vegetation would improve soil salinity problems over the long term. Erosion would not be an issue due to the current levee system in place at ORWA.

**Impacts of the No Action Alternative:**

Under the no action alternative, soil degradation within the planning area would con-

tinue from the lack of restroom and garbage facilities. Habitat restoration actions and campground access improvements would not occur, so no soil stabilization would occur. There would be negative impacts to soils under the no action alternative.

**12. Standards for Rangeland Health Impacts of the Proposed Action:**

There would be no adverse impacts to the Arizona Standards for Rangeland Health under the proposed action. Implementation of habitat restoration actions and the establishment of the watchable wildlife viewing area would enhance Standard 2 for Riparian-Wetland Sites and Standard 3 for Desired Resource Conditions through the removal of non-native invasive vegetation and the planting of native riparian vegetation.

**Impacts of the No Action Alternative:**

The Arizona Standards for Rangeland Health would continue to be met, but would not be enhanced, under the no action alternative.

**13. Surface and Groundwater Quality**

**Impacts of the Proposed Action:**

Implementation of the proposed action would require actions such as clearing vegetation, grading, excavating, and dredging, which could result in localized soil erosion and associated sedimentation of the Colorado River. These impacts would be less than significant because standard Best Management Practices would be incorporated into all implementation phases. The Colorado River levee system would naturally prevent substantial soil erosion from occurring. Proposed campground improvements, such as the installation of restrooms and garbage dumpsters, would mitigate the current negative impacts to surface and groundwater quality from recreation within ORWA.

**Impacts of the No Action**

**Alternative:**

Implementation of the no action alternative would allow the growth of high-density salt cedar stands to continue at the existing rate. Increased amounts of salt cedar would decrease groundwater availability and increase soil and water salinity levels. The continued absence of restroom and garbage facilities would allow the continuation of human waste and litter entering the soils and water. Under the no action alternative there would be negative impacts to surface water quality and no impact to groundwater quality.

**14. Visual Resources**

**Impacts of the Proposed Action:**

Proposed construction and maintenance activities would temporarily cause less than significant impacts to the visual appearance of ORWA. Implementation of the proposed action would not affect ORWA's classification as a Class II Visual Resource Management area (BLM Visual Contrast Rating Worksheet, Form 8400-4, ORWA Management Plan). The reduction of non-native invasive vegetation, human waste, and litter, and the planting of native vegetation would cause long-term beneficial impacts to the visual resources of ORWA.

**Impacts of the No Action**

**Alternative:**

Implementation of the no action alternative would not affect ORWA's classification as a Class II Visual Resource Management area. The no action alternative would allow non-native invasive vegetation, human waste, and litter to continue to negatively impact the visual resources of ORWA.

**15. Wetlands/Riparian Zones**

**Impacts of the Proposed Action:**

Proposed construction and maintenance activities involving the modification of backwaters for habitat restoration and river access purposes may temporarily cause less than significant impacts to wetlands and riparian zones within ORWA. The planting

of native vegetation and the reduction of non-native invasive vegetation would result in significant long-term benefits to the wetland and riparian zones with ORWA.

**Impacts of the No Action**

**Alternative:**

Implementation of the no action alternative would allow the growth of high-density salt cedar stands to continue at the present rate. Salt cedar would eventually overtake most native riparian vegetation within ORWA, severely limiting biodiversity. The three backwaters within ORWA would not be enhanced for habitat restoration, river access, and water quality remediation purposes. Under the no action alternative there would be negative impacts to ORWA's wetland and riparian zones.

**16. Wildlife, including Threatened and Endangered Species**

**Impacts of the Proposed Action:**

Proposed construction and maintenance activities may cause temporary and intermittent disturbances to wildlife in the local area. Standard Best Management Practices and stipulations for the proposed action would substantially mitigate any negative impacts to wildlife. The establishment of Habitat Restoration Areas and the designation of Day-use Only Areas would increase the amount of land being managed primarily as priority wildlife habitat, as mandated by the Yuma District RMP. The reduction non-native invasive vegetation would improve the quality of priority wildlife habitat within ORWA. Implementation of the proposed action would result in beneficial long-term impacts to wildlife.

**Impacts to Threatened and Endangered Species from the Proposed Action:**

**Impacts to the Razorback Sucker:**

Proposed modifications of ORWA's three backwaters for habitat restoration, water quality remediation, and river access purposes would affect razorback sucker habitat. No proposed modifications would ren-

der these backwaters as unsuitable razorback sucker habitat (Razorback Sucker Recovery Goals, Appendix A-8). It is possible that heavy equipment being used to modify the backwaters would harass razorback suckers. Harassment would be unlikely, however, because land-based equipment would only enter the habitat at times of low water levels when little or no water would be present within the backwaters. It would not be possible for razorback suckers to survive in the backwaters under these conditions. Nets would be placed around the project areas to prevent harassment if aquatic-based equipment is to be used. As desired future conditions are achieved, proposed backwater modifications would improve the quality of razorback habitat, which is Management Action A-3 of the Razorback Sucker Recovery Goals (page 43). Allowing natural resource-based recreation to continue within ORWA's three backwaters is not likely to negatively affect the species, because "overutilization of razorback suckers for commercial, recreational, scientific, or educational purposes is not considered a threat to the species, either presently or historically" (Razorback Sucker Recovery Goals, page 25). Implementation of the proposed action may affect, is not likely to adversely affect the razorback sucker.

#### **Impacts to the Southwestern Willow Flycatcher:**

No proposed action would occur within the 120 acres of migratory Southwestern willow flycatcher habitat north of the Cibola operating bridge, except for the installation of two fuel breaks. While the fuel breaks would remove less than two acres of migratory Southwestern willow flycatcher habitat, there would be retentions of habitat from the resulting localizations of wildfires. Campground improvement and hazardous fuels reduction actions within the 66 acres of historically used areas may negatively impact low quality migratory Southwestern willow flycatcher habitat through recreational harassment. This

would be a net decrease of recreational harassment to the Southwestern willow flycatcher within ORWA since overnight recreation now occurs throughout the 436-acre planning area. Riparian Re-vegetation Areas would increase the quality and amount of Southwestern willow flycatcher habitat within ORWA. Implementation of the proposed action may affect, is not likely to adversely affect the Southwestern willow flycatcher.

#### **Impacts to the Yuma Clapper Rail:**

Maintenance of the Oxbow Lake outlet would require the removal of less than one-half acre of cattails. It is unlikely that this would affect the species because the area is considered too small to be suitable habitat and no Yuma clapper rails were found during surveys. Implementation of the proposed action may affect, is not likely to adversely affect the Yuma clapper rail.

#### **Impacts of the No Action Alternative:**

Implementation of the no action alternative would not establish Habitat Restoration Areas or designate Day-use Only Areas. Priority wildlife habitat disruption from overnight recreation would continue throughout ORWA, instead of in designated campgrounds equipped with the facilities to mitigate these impacts. The absence of fire management activities would not decrease the high risk of wildfire destroying all priority wildlife habitat within ORWA. Under the no action alternative wildlife would be negatively impacted.

#### **Impacts to Threatened and Endangered Species from the No Action Alternative:**

#### **Impacts to the Razorback Sucker:**

Under the no action alternative ORWA's three backwaters would not be modified for habitat restoration, water quality remediation, or river access purposes, and there would be no improvements to any

razorback sucker habitat. The allowance of continued water quality degradation and sediment accumulation within the backwaters would degrade the quality of ORWA's razorback sucker habitat. Implementation of the no action alternative may affect, is not likely to adversely affect the razorback sucker.

**Impacts to the Southwestern Willow Flycatcher:**

Implementation of the no action alternative would allow the continued absence of a local fire management plan. This would increase the likelihood of a wild-fire destroying all potential migratory Southwestern willow flycatcher habitat within ORWA. The absence of designated campgrounds would allow recreational harassment to the Southwestern willow flycatcher to continue throughout the 436 acres of ORWA. Implementation of the no action alternative may affect, is not likely to adversely affect the Southwestern willow flycatcher.

**Impacts to the Yuma Clapper Rail:**

Under the no action alternative no potential Yuma clapper rail habitat would be affected. Implementation of the no action alternative may affect, is not likely to adversely affect the Yuma clapper rail.

## CUMULATIVE IMPACTS

Cumulative impacts include the impacts on the environment which result from the incremental impacts of the proposed action when added to other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from individually minor, but collectively significant actions taking place over time.

North of ORWA, there is no significant development until the city of Blythe, California. Due to river channelization, the 20 Colorado River miles between the planning area and Blythe maintain similar envi-

ronmental conditions as ORWA. There are no plans to develop any lands within this area in the foreseeable future. Directly south of ORWA is the Cibola National Wildlife Refuge, whose primary responsibility is to restore and protect 17,267 acres of historic habitat and wintering grounds for migratory birds and other wildlife. Additionally, over 40,000 acres of dense salt cedar exists within 140 miles from ORWA. No significant adverse cumulative impacts are anticipated from implementation of the proposed action, or from adding the proposed action to the existing actions of other agencies.

## MITIGATION OF THE PROPOSED ACTION

Recreational improvement and fire management proposals would require actions that may temporarily cause less than significant impacts to soil and air quality, visual resources, and wildlife habitat. Impacts from these actions would be minimized either by stipulations designed into the proposed action or standard Best Management Practices. Additional mitigation for these actions should not be necessary for the reasons listed below.

1. Overnight camping currently occurs throughout the 436 acres within ORWA's administrative boundaries. Recreational improvement actions and day-use only designations would concentrate overnight camping to 66 acres of ORWA. These actions would provide the existing number of visitors with the facilities capable of mitigating impacts to priority wildlife habitat from overnight camping. Camping would not be permitted within the remaining 370 acres of ORWA, causing an overall net decrease in lands that are currently impacted from overnight recreation.

2. The selective thinning of salt cedar for recreational improvement and fire management purposes throughout 90 acres would decrease the amount of low quality, non-native wildlife habitat within ORWA. Habitat restoration actions throughout 130 acres

would increase the amount of high quality native wildlife habitat. The selective thinning of salt cedar throughout the 90 acres would substantially decrease the hazardous fuel load within ORWA, thereby reducing the risk of wildfire throughout the entire 436 acres of the planning area.

3. Recreational improvement and fire management actions would provide the public and firefighters with safer access to historically used areas within ORWA. Providing dependable and more controlled access to these areas would better protect the natural resources currently being impacted due to insufficient management. Access to habitat restoration and previously undisturbed areas within ORWA would not increase or would decrease as a result of implementing the proposed action.

Additional mitigation measures would be implemented as a part of the proposed action as required by the U.S. Fish and Wildlife Service and the U.S. Army Corps of Engineers.

## **CONSULTATION AND COORDINATION**

BLM field personnel and volunteers regularly consult with visiting members of the public at ORWA. Input from the public was also received through letters and telephone calls. Informal consultation with various other county, state, and federal agencies has also occurred. For more detailed information concerning parties of the planning effort, please see the “Applicable Regulatory Coordination” section of the ORWA Management Plan.

# V. Appendices

## Appendix A: Native Vegetation within ORWA

<i>Aster subulatus</i> var. <i>subulatus</i> (salt marsh aster)	<i>Pluchea odorata</i> (salt marsh fleabane)
<i>Atriplex lentiformis</i> (quailbush)	<i>Pluchea sericea</i> (arrowweed)
<i>Atriplex polycarpa</i> (saltbush)	<i>Polygonum hydropiperoides</i> (waterpepper)
<i>Baccharis salicifolia</i> (seep willow)	<i>Populus fremontii</i> (Fremont cottonwood)
<i>Salix exigua</i> (coyote willow)	<i>Prosopis pubescens</i> (screw bean mesquite)
<i>Eleocharis geniculata</i> (spikerush)	<i>Prosopis glandulosa</i> var. <i>torreyana</i> (honey mesquite)
<i>Eustoma exaulatum</i> (catchfly gentian)	<i>Salix gooddingii</i> (Goodding's black willow)
<i>Hydrocotyle verticillata</i> (whorled marsh pennywort)	<i>Scirpis americanus/alifornicus</i> (bullrush)
<i>Petunia parviflora</i> <i>Typha domingensis</i> (cattail)	<i>Typha domingensis</i> (cattail)
<i>Phragmites communis</i> (phragmites)	

## Appendix B: Non-native Invasive Vegetation within ORWA

<i>Arundo donax</i> L. (giant reed)	<i>Cynodon dactylon</i> (Bermuda grass)
<i>Brassica tournefortii</i> Gouan (Sahara mustard)	<i>Saccharum ravennae</i> (ravenna grass)
<i>Myriophyllum spicatum</i> (Eurasian watermilfoil)	<i>Salvinia molesta</i> (giant salvinia)
<i>Myriophyllum aquaticum</i> (parrot feather)	<i>Tamarix ramosissima/chinensis</i> (salt cedar)

## Appendix C: Wildlife within ORWA

Birds		
<i>Aeronautess axatalis</i> (white-winged dove)	<i>Falco peregrinus</i> (Peregrine falcon)	<i>Pandion haliaetus</i> (osprey)
<i>Agelaius phoeniceus</i> (red-winged blackbird)	<i>Fulica americana</i> (American coot)	<i>Phalacrocorax auritas</i> (double-crested cormorant)
<i>Archilocus alexandri</i> (black-chinned hummingbird)	<i>Geococcyx californianus</i> (greater roadrunner)	<i>Pipilo abertii</i> (Abert's towhee)
<i>Auriparus flaviceps</i> (verdin)	<i>Guiraca caerulea</i> (blue grosbeak)	<i>Piranga rubra</i> (summer tanager)
<i>Butorides striatus</i> (green-backed heron)	<i>Haliaeetus leucocephalus</i> (bald eagle) (T)	<i>Picoides scalaris</i> (ladder-backed woodpecker)
<i>Calypte anna</i> (Anna's hummingbird)	<i>Hirundo pyrrhonota</i> (cliff swallow)	<i>Polioptila melanura</i> (black-tailed gnatcatcher)
<i>Charadrius vociferous</i> (killdeer)	<i>Lanius ludovicianus</i> (loggerhead shrike) (S)	<i>Quiscalus mexicanus</i> (great-tailed grackle)
<i>Cistothorus palustris</i> (marsh wren)	<i>Melanerpes uropygialis</i> (Gila woodpecker)	<i>Tyrannus verticalis</i> (Western kingbird)
<i>Dendroica petechia</i> (yellow warbler)	<i>Melospiza melodia</i> (song sparrow)	<i>Vireo bellii</i> (Bell's vireo)
<i>Egretta thula</i> (snowy egret)	<i>Micrathene whitneyi</i> (elf owl)	<i>Zenaida macroura</i> (mourning dove)
<i>Empidonax difficilis</i> (Pacific-slope flycatcher)	<i>Molothrus ater</i> (brown-headed cowbird)	
<i>Empidonax traillii</i> (Southwestern willow flycatcher) (E)	<i>Myiarchus cinerascens</i> (ash-throated flycatcher)	

Mammals		
<i>Ammospermophilus harrisi</i> (Yuma antelope squirrel)	<i>Erethizon dorastum</i> (porcupine)	<i>Thomomys bottae</i> (valley pocket gopher)
<i>Bassariscus astutus</i> (ringtail)	<i>Mephitis mephitis</i> (striped skunk)	<i>Urocyon cinereoargenteus</i> (gray fox)
<i>Canis latrans</i> (coyote)	<i>Odocoileus hemionus</i> (mule deer)	<i>Vulpes macrotis</i> (kit fox)
<i>Castor canadensis</i> (beaver)	<i>Procyon lator</i> (raccoon)	20 rat and mouse species
<i>Citellus</i> (Spermophilus) <i>tereticaudus</i> (roundtail ground squirrel)	<i>Silogale putorius</i> (spotted skunk)	
<i>Citellus</i> (Spermophilus) <i>variegates</i> (rock squirrel)	<i>Sylvilagus auduboni</i> (desert cottontail)	

Fish		
<i>Ameiurus natalis</i> (yellow bullhead)	<i>Ictalurus punctatus</i> (channel catfish)	<i>Pimephales promelas</i> (fathead minnow)
<i>Carassius auratus</i> (goldfish)	<i>Lepomis cyanellus</i> (green sunfish)	<i>Pomoxis nigromaculatus</i> (black crappie)
<i>Chaenobryttus gulosus</i> (warmouth)	<i>Lepomis macrochirus</i> (bluegill)	<i>Pylodictis olivaris</i> (flathead catfish)
<i>Cyprinella lutrensis</i> (red shiner)	<i>Lepomis microlophus</i> (reardear sunfish)	<i>Oreochromis aurea</i> (blue tilapia)
<i>Cyprinus carpio</i> (carp)	<i>Micropterus dolomieu</i> (smallmouth bass)	<i>Oreochromis mossambica</i> (Mossambique mouthbrooder)
<i>Dorosoma petenense</i> (threadfin shad)	<i>Micropterus salmoides</i> (largemouth bass)	<i>Tilapia zilli</i> (red-breasted tilapia)
<i>Gambusia affinis</i> (Eastern mosquitofish)	<i>Morone saxatilis</i> (striped bass)	<i>Xyrauchen texanus</i> (razorback sucker) (E)
Reptiles and Amphibians: Over 60 Species		
Invertebrates: Over 300 Species		
T= threatened      S= sensitive      E= endangered      C= candidate		

## Appendix D: Bibliography

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