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U.S. Department of the Interior
Bureau of Land Management
Arizona State Office

Lower Gila Resource Area

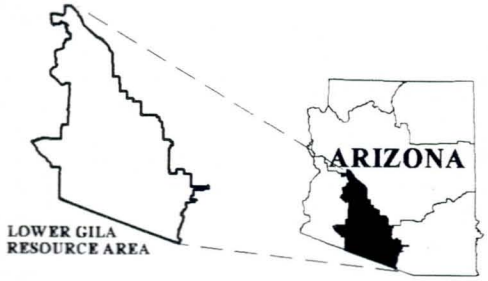
November 1994

DRAFT
Lower Gila Resource Area Amendment/Environmental Assessment to the Lower Gila North Management Framework Plan and the Lower Gila South Resource Management Plan

1199.011

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 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.

BLM/AZ/PL-95/001 + 1610



PLANNING UPDATE

Amendment and Environmental Assessment to the Lower Gila North and South Management Plans

Lower Gila Resource Area, Bureau of Land Management, U.S. Department of the Interior November 1994

Draft Amendment is Available, Open Houses to be Held

The draft amendment and environmental assessment is now available for your review and comments. On the back of this update is a summary of the main actions being proposed. The complete proposal is in chapter 2 of the draft amendment document.

Please note that chapter 2 starts with the "No Action" alternative. This is the existing management. The proposed changes are "Alternative 2." This is the Bureau of Land Management's (BLM) preferred alternative.

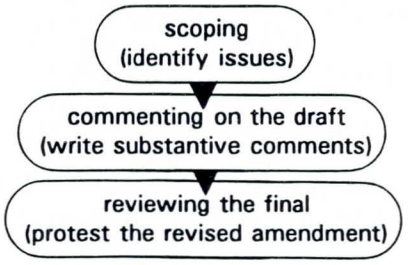
You can discuss each action in the proposal at open houses. These are opportunities to meet casually with the resource specialists and talk with them individually. There is no formal program so you can stop in any time during the open house. The locations and times are:

Wickenburg	Dec. 7, 7-9 p.m. Wickenburg Community Center, 160 N. Valentine St.
Buckeye	Dec. 8, 7-9 p.m. Buckeye Community Center, 201 Centre Ave.
Gila Bend	Dec. 13, 7-9 p.m. Gila Bend Community Center, 202 Euclid Ave.
Phoenix	Dec. 15, 7-9 p.m. BLM Phoenix District Office, 2015 W. Deer Valley Rd.
Tucson	Jan. 9, 7-9 p.m. Room A1, El Rio Neighborhood Center, 1390 W. Speedway
Why	Jan. 10, 1-4 p.m. Why Community Center, Highway 85
Ajo	Jan. 10, 7-9 p.m. Ajo Community Center, 290 5th St.

For further information please call Carol Laver, the planning team leader, at (602) 780-8090. The BLM office is open from 7:30 a.m. to 4:15 p.m. Monday through Friday.

Be a Part of the Planning Process

The diagram below shows the major steps for public participation in planning. We are currently at the middle step.



The formal comment period for the draft is sixty days and it ends on January 23, 1995. Written comments received during this period will be published in the final amendment. Substantive comments which identify realistic alternatives, additional resource information, or the need for additional analysis will be used to develop the final revised amendment.

The final amendment will have a formal protest period of thirty days. The protest is the last opportunity for public input. In order to protest the final, you must have participated in one of the first two steps. The protest is restricted to concerns you have documented in previously written comments.

Following the protest period, the unprotested parts of the final amendment will be signed by the BLM state director and become a decision.

After the final amendment becomes a decision, detailed actions to implement the amendment will be planned. You are invited to participate in this planning too.

Reserve a Copy of the Final Amendment

If you would like to receive the final amendment, please send in the form below or a post card with the same information.

Send to: Carol Laver, Bureau of Land Management, 2015 W. Deer Valley Rd., Phoenix, AZ 85027.

Please send me the final amendment to the Lower Gila Resource Area management plans.

Print: Name _____

Address _____

_____

Summary of Major Proposed Actions

Land Tenure Adjustment

Identifying approximately 45,260 acres of public land for disposal

Identifying five management areas in which private lands with public and resource values may be acquired on a willing seller - willing buyer basis

Desert Tortoise Habitat Management

Managing habitat to assure that populations of the desert tortoise do not become threatened or endangered through Bureau of Land Management actions

Addressing at the activity planning level specific and quantifiable objectives for categorized habitat

Addressing in environmental decision documents mitigation measures to offset loss of category I and II tortoise habitats

Granting new land use authorizations in category I and II habitats only if no reasonable alternative exists, and evaluating mitigation, including compensation, to meet the no net loss goal

Prohibiting new off-highway vehicle competitive courses in category I and II habitats, and evaluating proposals for new off-highway vehicle competitive courses in category III habitat and mitigating the impacts

Considering the forage needs of desert tortoise in relation to livestock use and determining and prioritizing efforts to resolve conflicts

Allowing only those range improvements for livestock that will not conflict with category I and II habitats or populations

Allowing only those desert bighorn sheep augmentations and reestablishments that do not create conflicts with desert tortoise habitat or populations

Restricting sales of ornamental boulders to areas that will result in no net loss of habitat

Desert Bighorn Sheep Augmentation and Reestablishment

Considering augmentations and reestablishments of desert bighorn sheep on a case-by-case basis with the appropriate National Environmental Policy Act consideration of conflicts and requirement for public participation

Wild Horse and Burro Management

Managing the Alamo Herd Management Area, Harquahala and Painted Rock herd areas, and the Little Harquahala herd area in the Yuma Resource Area, as self-sustaining populations which contain the optimum number of wild burros in a thriving natural ecological balance with other ecosystem components

Recreation Management

Designating all public lands described in the Lower Gila North and South planning documents as "limited", which will limit off-highway vehicle use to existing and/or designated roads, trails, and traditional or historically used vehicle routes (wildernesses will remain closed); this includes those lands transferred to the Phoenix, Havasu, and Yuma Resource Areas

Changing the off-highway vehicle designation in the Vekol Valley Grassland Area of Critical Environmental Concern and the Coffeepot Botanical Area of Critical Environmental Concern from "closed" to "limited to designated routes only"

Planning and developing off-highway vehicle management plans

Permitting ultralight and hang glider launches and landings in designated areas

Establishing long-term, extended, and short-term camping areas, and maintaining the existing 14-day camping stay limit for lands outside of established camping areas and wildernesses

Planning and developing special use areas (rockhounding, climbing, shooting, etc.) through interdisciplinary planning

Establishing and planning the Vulture Mountains, Gila Trail, Saddle Mountain, and Ajo Special Recreation Management Areas, and revising plans for two special recreation management areas on the Barry M. Goldwater Air Force Range; and developing in these areas and the remaining extensive management area, where appropriate, the activities mentioned above plus activities such as hiking, horseback riding, mountain biking, and scenic, cultural, and wildlife viewing

Oil and Gas Development

Permitting an estimated twenty oil and gas leases and the drilling of up to ten wells subject to the standard lease and special stipulations to mitigate resource impacts

United States Department of the Interior

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Phoenix District Office
2015 West Deer Valley Road
Phoenix, Arizona 85027

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IN REPLY REFER TO:
1610(026)

November 14, 1994

Dear Reader:

Presented for your review is this draft amendment/environmental assessment for the Lower Gila North Management Framework Plan and the Lower Gila South Resource Management Plan. It proposes to resolve six land management issues identified during the early stages of the planning process.

We welcome and encourage your comments on this draft. Those comments addressing the adequacy of this draft amendment/environmental assessment will be responded to in the final. Written specific comments will be most helpful. In order to be considered in the final amendment/environmental assessment, your comments must be received by January 23, 1995. This is 60 or more days from the Federal Register notice of availability of this draft. Comments received after this date may be considered in preparing the final, but will not be referred to specifically.

During this comment period, open houses will be held in Wickenburg, Phoenix, Buckeye, Gila Bend, Ajo, and Tucson. Open houses or get-togethers in other places will be held as requested.

Please send your comments to the amendment team leader:

CAROL LAVER
BUREAU OF LAND MANAGEMENT
PHOENIX DISTRICT OFFICE
2015 W DEER VALLEY RD
PHOENIX AZ 85027

(602) 780-8090

Thank you for participating in the management of public lands.

Sincerely,

John R. Christensen

John R. Christensen
Area Manager
Lower Gila Resource Area

DRAFT
Lower Gila Resource Area Amendment/ Environmental Assessment to the Lower Gila North Management Framework Plan and the Lower Gila South Resource Management Plan

November 1994

U.S Department of the Interior
Bureau of Land Management

Lower Gila Resource Area
Phoenix District Office, Arizona

EA AZ-026-95-08

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Chapter 1 -- Introduction and Planning Process

Introduction

This document complies with the regulations for implementing the National Environmental Policy Act issued by the Council on Environmental Quality (40 CFR 1500) and sections 202 and 210 of the Federal Land Policy and Management Act (43 CFR 1600). It also complies with the BLM Planning Manual (1600 series) and Environmental Handbook (H-1790-1), the Arizona State Director Guidance for Resource Management Planning (H-1600-1) and the Arizona Environmental Handbook (H-1790-1).

The process for preparing a resource management plan amendment is described in the Planning Regulations (43 CFR 1600). This process incorporates the environmental analysis requirements of the National Environmental Policy Act and emphasizes public involvement and consistency with plans of state and other federal agencies.

An environmental assessment may be completed on a major planning amendment (43 CFR 1610.5-5) to identify any significant impacts resulting from the proposed management changes. If significant impacts are identified, an environmental impact statement will be required for the amendment. Based on all professional studies and judgment, an environmental impact statement is not needed at this time. An environmental assessment is incorporated into the Lower Gila plan amendment to show if further National Environmental Policy Act analysis is needed.

In this document, the environmental impacts of implementing two alternatives are examined. One of these is the proposed BLM action and the other is the no action alternative, or continuation of current management guidelines. A 60-day review and comment period will provide the opportunity for public input regarding the alternatives before the final amendment is developed.

Purpose and Need for the Action

The purpose of this action is to amend the Lower Gila North Management Framework Plan and the Lower Gila South Resource Management Plan through one amendment -- and associated environmental assessment -- to enhance BLM management capabilities and resolve pertinent issues and conflicts (see Appendix A). The purpose is consistent with the scope and nature of the Federal Land Policy and Management Act.

The need for this action has two parts: 1) expanded recreation management capabilities and improved resource protection and 2) implementation, through the land use plan, of internal directives and policy changes.

The Lower Gila Resource Area experiences heavy long-term visitor use through the winter months. The growth of Phoenix and surrounding communities also contributes to increased recreational use on the public lands. The BLM needs to expand management capability beyond dispersed recreation to facilitate long-term visitor and local recreation use and to provide for additional resource protection through consistent off-highway vehicle designations. Needed management changes include development of camping facilities and stay limits, designation of off-highway-vehicle limits in nondesignated areas, identification of special recreation management areas and provisions for special uses. Expanded recreation management is the focus of this amendment.

The second part is implementation of BLM directives and policy changes through the land use planning process which provides for public involvement in compliance with the National Environmental Policy Act. This internal housekeeping is necessary to keep the land use plans current and in conformance with national priorities.

Arizona BLM has identified the need for all existing land use plans to be consistent with current BLM policy. Where necessary, both newer resource management plans and older management framework plans are being amended as the opportunity arises.

Both of the Lower Gila Resource Area land use plans need to be made current regarding the listed aspects of the following programs.

-- Wild horse and burro management: Replace zero population prescriptions or set herd numbers if not based on monitoring.
-- Desert tortoise habitat management: Formalize habitat categories and adopt the national and statewide strategy plans.
-- Desert bighorn sheep augmentation and reestablishment: Establish objectives and anticipated distribution through the land use plan.
-- Oil and gas development: Analyze a reasonably foreseeable development scenario through the land use plan.

In addition, national BLM priorities are now focused on the maintenance of integral resource components such as critical desert tortoise habitat, wildlife corridors, riparian habitat and cultural resources. The lands program provides the mechanism for retention or acquisition of these key resources and habitats. Where these resource components exist on lands currently identified for disposal, the BLM needs to evaluate this designation and determine if these lands should be retained.

Conformance with Land Use Plans

The current planning effort and proposed changes were developed in conformance with the Federal Land Policy and Management Act, BLM planning regulations and the National Environmental Policy Act. A plan amendment and environmental assessment are required because much of the proposed guidance is not in conformance with existing plan decisions.

The draft amendment proposes to change the existing land use guidance for several activities. If implemented, the proposed guidance will replace or modify decisions in the management framework plan and the resource management plan, as amended, for these activities. Appendix A compares the existing decisions with the proposed changes. The remaining decisions in the resource area land use plans continue unchanged.

Relationship to Statutes, Regulations and other Plans

The BLM will comply with the Endangered Species Act through Section 7 consultation with the U.S. Fish and Wildlife Service on both alternatives. The results of the consultation, including any terms and conditions contained in the biological opinion, will be incorporated into the final document.

Native American communities residing near an area of potential effect, or who have made their interest in an area known, will be specifically consulted on a number of occasions. Consultation will occur during the plan implementation to identify resource concerns such as access to native plants for traditional uses. Traditional leaders and others will be consulted to identify specific locations or sensitive areas where properties of traditional cultural or religious importance may require special protection and access.

Specific consultation will also occur as appropriate for compliance with the National Historic Preservation Act of 1966, as amended, the Archaeological Resources Protection Act of 1979 and the Native American Graves Protection and Repatriation Act. The Native American Coordination and Consultation manual (BLM Manual 8160) will be used for guidance on consultation.

The Kingman Resource Management Plan identified goals, objectives and management prescriptions for the Three Rivers Area of Critical Environmental Concern. Public lands within the area of critical environmental concern along the Santa Maria River are administered by the Lower Gila Resource Area.

Several other tribal, agency and local plans are being developed concurrently with the amendment. None of these plans are final at this time.

Scoping

Through media such as public meetings, news advisories and direct mailings, the public was invited to provide the BLM with information about their

concerns. Ten scoping meetings were held in eight cities in the Lower Gila Resource Area between late February and early April. Recreation management was the major concern raised by the public. Chapter 5 provides details of the meetings and the written comments from the scoping period.

Other BLM concerns included land disposals and acquisitions, wild horse and burro management, desert tortoise habitat and oil and gas development.

An additional concern was identified by the Arizona Game and Fish Department after the formal scoping process. The Department wants to continue desert bighorn sheep reintroductions and maintenance throughout the resource area. This concern has been included in the current planning effort.

Description of the Planning Area

The Lower Gila Resource Area encompasses approximately two million acres of public lands in Maricopa, Yavapai, Pima, Pinal, La Paz and Yuma counties. An additional 1.1 million acres on the Barry M. Goldwater Air Force Range (hereafter referred to as the Goldwater Range) is also included in the planning area (see Map 1). Nearly four million acres of federal mineral estate are administered by the resource area. The boundaries of the area are the Santa Maria River to the north, west to the Eagletail Mountains, the Mexico border in the south and the eastern boundary of the Papago Indian Reservation.

The communities of Buckeye, Wickenburg, Gila Bend and Ajo form the population centers within the resource area. Metropolitan Phoenix and the surrounding communities are just east of the resource area boundary. The metropolitan area represents the largest concentration of public land users in the region.

Some of the lands covered by the existing land use plans are now outside the resource area boundaries. In 1991, the boundaries of the Phoenix, Safford and Yuma BLM districts were administratively changed to promote more efficient resource management. Several areas previously administered by the Lower Gila Resource Area were transferred to the Phoenix, Havasu and Yuma resource areas. Responsibility for implementation of land use decisions in the existing plans also transferred to these resource areas.

Planning Issues

The BLM planning regulations (43 CFR 1600) equate land use planning with problem solving and issue resolution. An issue is defined as an opportunity, conflict or problem regarding the use or management of public lands and resources.

The BLM planning team used internal discussions and the scoping process to identify issues. A total of six internal (BLM-generated) and external (public input) issues were identified. A BLM interdisciplinary team from the Lower Gila Resource Area, the Phoenix District and the Arizona State Office raised developed recreation management as a primary issue. The team also elevated three program areas which required updates to conform to national BLM policy. Review of the lands program to facilitate retention of key resource components currently identified for disposal was the final planning issue from this team.

External issues were developed during scoping. The BLM planning team analyzed public comments and identified two planning issues. Recreation management to provide for long-term camping and off-highway vehicle use was the major external issue. The need for further desert bighorn sheep augmentation and reestablishment was raised by the Arizona Game and Fish Department as the second issue. Proposed augmentation and reestablishment objectives and anticipated distribution need to be identified in the land use plan in accordance with 1992 guidance in BLM Manual 1745 (1992)4.

The following describes each issue identified for resolution.

Issue 1: Lands -- Do public lands, currently identified for disposal, contain key resource components including critical desert tortoise habitat, wildlife corridors, riparian habitat and cultural resources? If so, should these lands be retained for the public good?

Issue 2: Desert tortoise habitat -- What quantity and quality of desert tortoise habitat currently exist? Do these areas require special management provisions for protection to assure that the species does not become listed under the Threatened and Endangered Species Act? If so, will these provisions restrict or modify certain activities on the public lands?

Issue 3: Desert bighorn sheep augmentation and reestablishment -- What is the objective of the program and the anticipated distribution to be achieved by the augmentation and reestablishment activities? Where does the Arizona Game and Fish Department anticipate augmentation or reestablishment activities to take place over the next 10 years?

Issue 4: Wild horse and burro management -- What areas currently have zero population prescriptions or herd numbers set without benefit of habitat monitoring data? Will revised management prescriptions restrict or modify certain uses of public lands?

Issue 5: Recreation management -- What areas should be designated as open, closed or limited (see Glossary) for off-highway vehicle use? Which public lands should be designated special recreation management areas and be managed to maintain and enhance their characteristic outdoor recreation opportunities and the natural settings on which these opportunities are based? What recreational settings should be maintained for the identified recreational opportunities occurring within the extensive recreation management areas? What management prescriptions for developed recreation, including camping facilities and stay limits, are needed to provide for resource protection, long-term visitors and local use? What management prescriptions are needed to provide for special recreation uses in response to public demand?

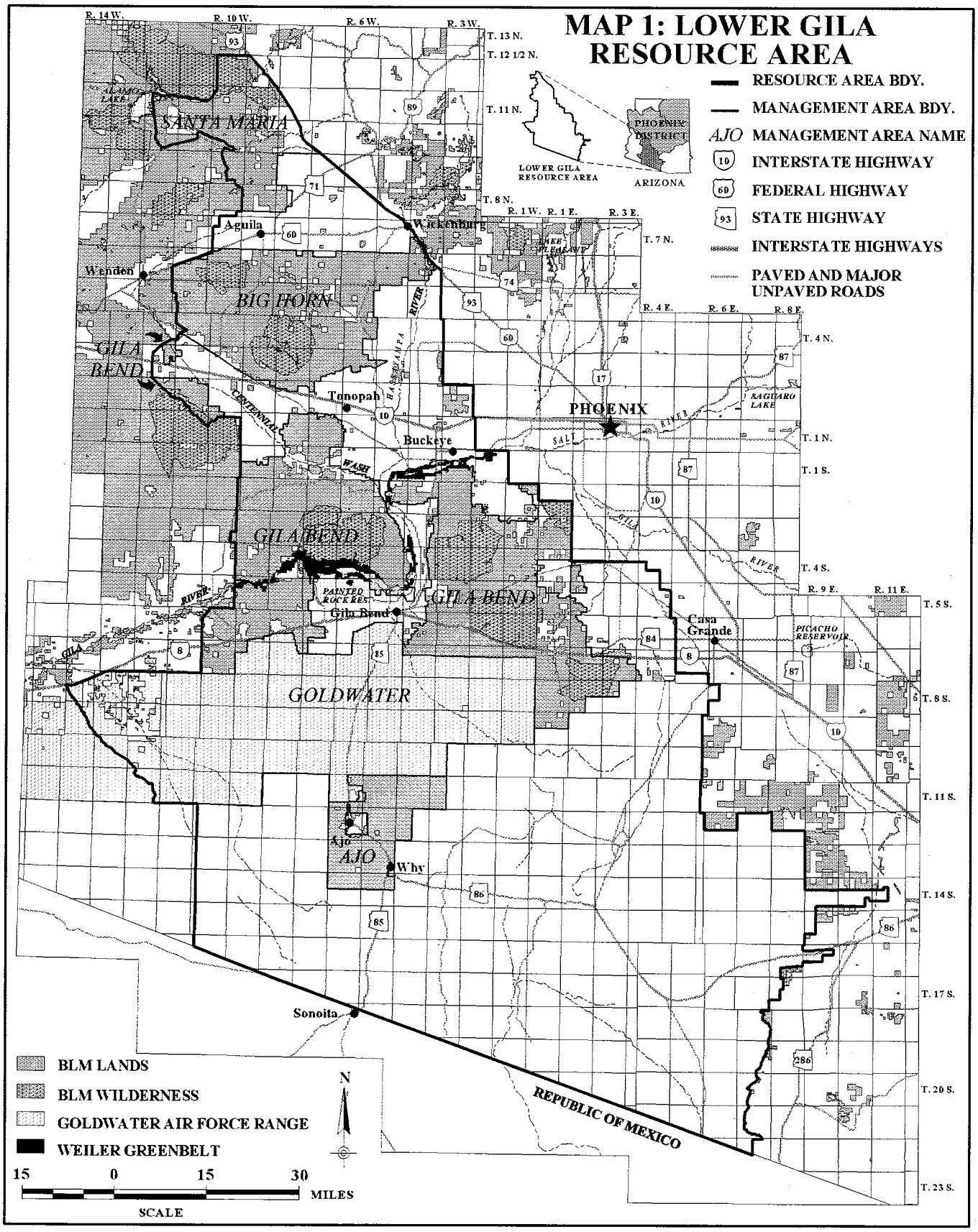
Issue 6: Oil and Gas Development -- What level of exploration and development is anticipated in the resource area over the next 10 years?

Planning Criteria

Planning criteria are the standards, rules and measures used to guide data collection and alternative formulation. These criteria guide final plan selection. Planning criteria are taken from laws and regulations, BLM manuals and directives and concerns expressed in meetings and in consultations with the public, tribes and other agencies.

In addition to the basic criteria listed in Section 202 of the Federal Land Policy and Management Act, changes in current resource management practices were considered for any of the following conditions.

-- Management of one resource significantly constrains or curtails use of another resource.
-- Existing land use allocations conflict with agency resource management policies or guidance.
-- Existing resource management practices conflict with management plans, policies and guidance of another federal or state surface management agency or tribe.
-- Documented public controversy regarding management of a specific resource value.


MAP 1: LOWER GILA RESOURCE AREA
RESOURCE AREA BDY.
MANAGEMENT AREA BDY.
AJO MANAGEMENT AREA NAME
INTERSTATE HIGHWAY
FEDERAL HIGHWAY
STATE HIGHWAY
INTERSTATE HIGHWAYS
PAVED AND MAJOR UNPAVED ROADS
LOWER GILA RESOURCE AREA
PHOENIX DISTRICT
ARIZONA
SANTA MARIA
BIG HORN
GILA BEND
GILA BEND
GILA BEND
GOLDWATER
AJO
Aguila
Wickenburg
Wenden
Tonopah
Buckeye
PHOENIX
Gila Bend
Casa Grande
Why
Sonoita
REPUBLIC OF MEXICO
BLM LANDS
BLM WILDERNESS
GOLDWATER AIR FORCE RANGE
WEILER GREENBELT
N
15 0 15 30
MILES
SCALE

Chapter 2 -- Proposed Action and Alternatives

No Action -- Current Guidance

Land Tenure Adjustments

All disposal and acquisition decisions identified in the Lower Gila North Management Framework Plan and the Lower Gila South Resource Management Plan are brought forward in this alternative. All lands not previously identified for disposal shall be retained in public ownership. These lands would continue to be managed under the principles of multiple use management and, in certain areas, under the wilderness management regulations.

The existing land use plans identify approximately 62,260 acres for disposal (see Map 2) and 10,735 acres of state land for acquisition, all within the Lower Gila Resource Area. Only the Lower Gila South plan identified lands for acquisition. They were selected because of their potential for containing high natural resource values such as wildlife habitat and riparian habitat. Lands recommended for disposal will be retained if significant resource values are located during the environmental assessment process.

Disposals must meet the criteria in sections 203 and 206 of the Federal Land Policy and Management Act as amended by the Federal Land Exchange Facilitation Act for sales and exchanges. As in the proposed action, exchange will be the preferred method of disposal. Other forms of disposal such as the Recreation and Public Purpose Act would also be considered for retention lands on a case-by-case basis. Under this act, the BLM has the authority to lease or convey, at less than fair market value, public lands to governmental and nonprofit entities for public purposes such as recreation sites, building sites, schools, prisons and other facilities.

All exchanges are voluntary transactions between the BLM and the non-federal party and are discretionary. They also must be in the public interest, of equal fair market value and consistent with the Federal Land Policy and Management Act.

Desert Tortoise Habitat Management

BLM Manual 6840.06(c) requires that habitats of federal candidate species be managed and conserved to ensure that BLM actions do not contribute to the need to list those species as threatened or endangered.

The Lower Gila North Management Framework Plan requires: "As allotment management plans are written for allotments containing crucial desert tortoise habitat, the recommendation to rest tortoise habitat from livestock use between February and July will be incorporated into the grazing systems." The Lower Gila South Resource Management Plan requires: "New livestock waters to be located within two miles from crucial tortoise habitat and/or crucial desert bighorn sheep habitat will be analyzed on a case-by-case basis to determine potential impacts. Significant impacts will be mitigated with appropriate stipulations or site relocation."

In addition to the land use decisions, the BLM has developed national and state-wide guidance on management of desert tortoise habitat. This guidance is found in *Desert Tortoise Habitat Management on Public Lands: A Rangewide Plan* (BLM 1988) and *Strategy For Desert Tortoise Habitat Management On Public Lands In Arizona* (BLM 1990).

Desert Bighorn Sheep Augmentation and Reestablishment

The Lower Gila North Management Framework Plan proposed desert bighorn sheep reintroduction into the Black and Weaver mountains. Decisions for the rest of the Lower Gila Resource Area on augmentation and reestablishment are made on a case-by-case basis with no specific direction from the existing land use plans.

Wild Horse and Burro Management

The Wild and Free-Roaming Horse and Burro Act of 1971 and 43 CFR 4710.4 provide that the management of wild horses and burros be undertaken with the objective of limiting the animals' distribution to herd areas. A herd area is the geographic area identified as having been used by a herd as its habitat in 1971 (see Map 3). A herd management area is a herd area or any portion thereof identified for maintenance and management of wild horses or burros through decisions resulting from the land use planning process, including public involvement.

Only the Alamo Herd Management Area was established by Lower Gila land use plans. The Lower Gila North Management Framework Plan calls for:

-- maintaining a herd of 200 burros,
-- managing the population for color diversity,
-- maintaining free access to livestock watering facilities,
-- maintaining wild burro access to Alamo Lake,
-- identifying a burro viewing area with interpretive signs and
-- limiting or modifying structures which would inhibit burro movement.

Planning documents prescribe zero population management or total removal of wild and free-roaming burros from the Harquahala, Painted Rock and Little Harquahala herd areas. The Goldwater Amendment to the Lower Gila South Resource Management Plan states that the burro population on the Goldwater Range will be inventoried to determine herd size and ownership. Unclaimed wild and free-roaming burros will be captured and processed through the BLM Wild Horse and Burro Adoption Program. Feral or stray domestic burros will be removed in accordance with federal grazing regulations and state estray laws.

Recreation Management

The 14-day camping stay limit will remain in force for all lands within the Lower Gila Resource Area. Visitors will be allowed to camp for up to 14 days at any given location not closed to camping by the authorized officer. Camping closures may be instituted for resource protection/rehabilitation and to reduce conflicts with other uses.

The resource area will retain current off-highway vehicle designations. Lower Gila North will remain undesignated except for wilderness closures; Lower Gila South will remain designated as limited to existing roads, trails and vehicle routes (see Map 4).

Off-highway vehicle racing in the Lower Gila Resource Area will be permitted on a case-by-case basis. Race courses will be developed by the promoter/permittee using existing roads and trails.

The resource area will not develop new recreation facilities. Existing facilities will be managed by contract, recreation and public purposes lease/patent or third party agreement.

Oil and Gas Development

Mineral exploration and development are generally encouraged on public lands in keeping with the BLM's Mineral Resources Policy of May 29, 1984, the Mining and Minerals Policy Act of 1970 and the Federal Land Policy and Management Act. All operators shall comply with applicable federal and state pollution control standards.

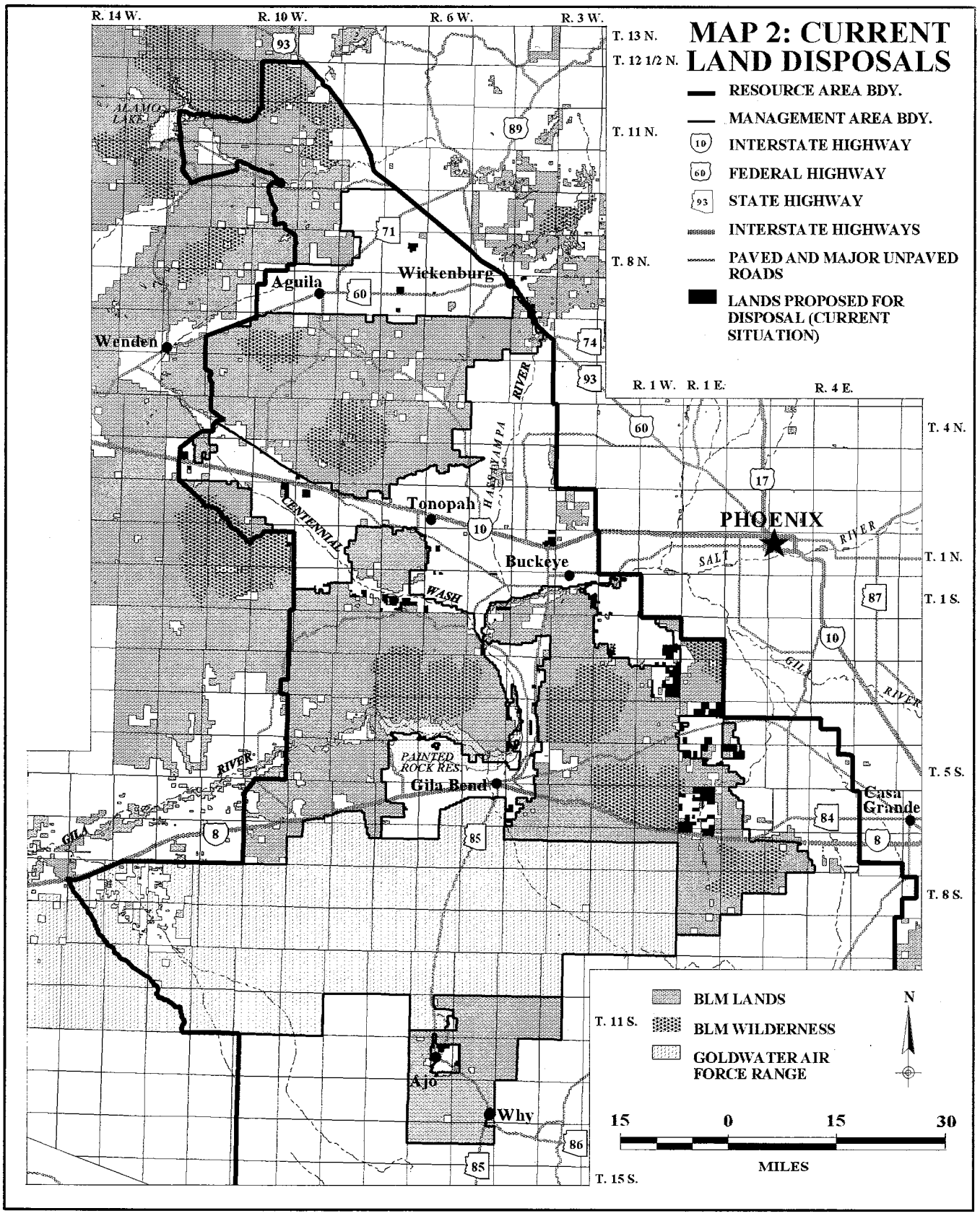
The Mineral Leasing Act of 1920 and 43 CFR 3100 provide the regulatory framework for issuing oil and gas leases. The Supplemental Program Guidance for Energy and Mineral Resources (BLM Manual 1624) provides additional guidance for resource management planning. These regulations apply where public interest exists for exploration and development of oil and gas resources.

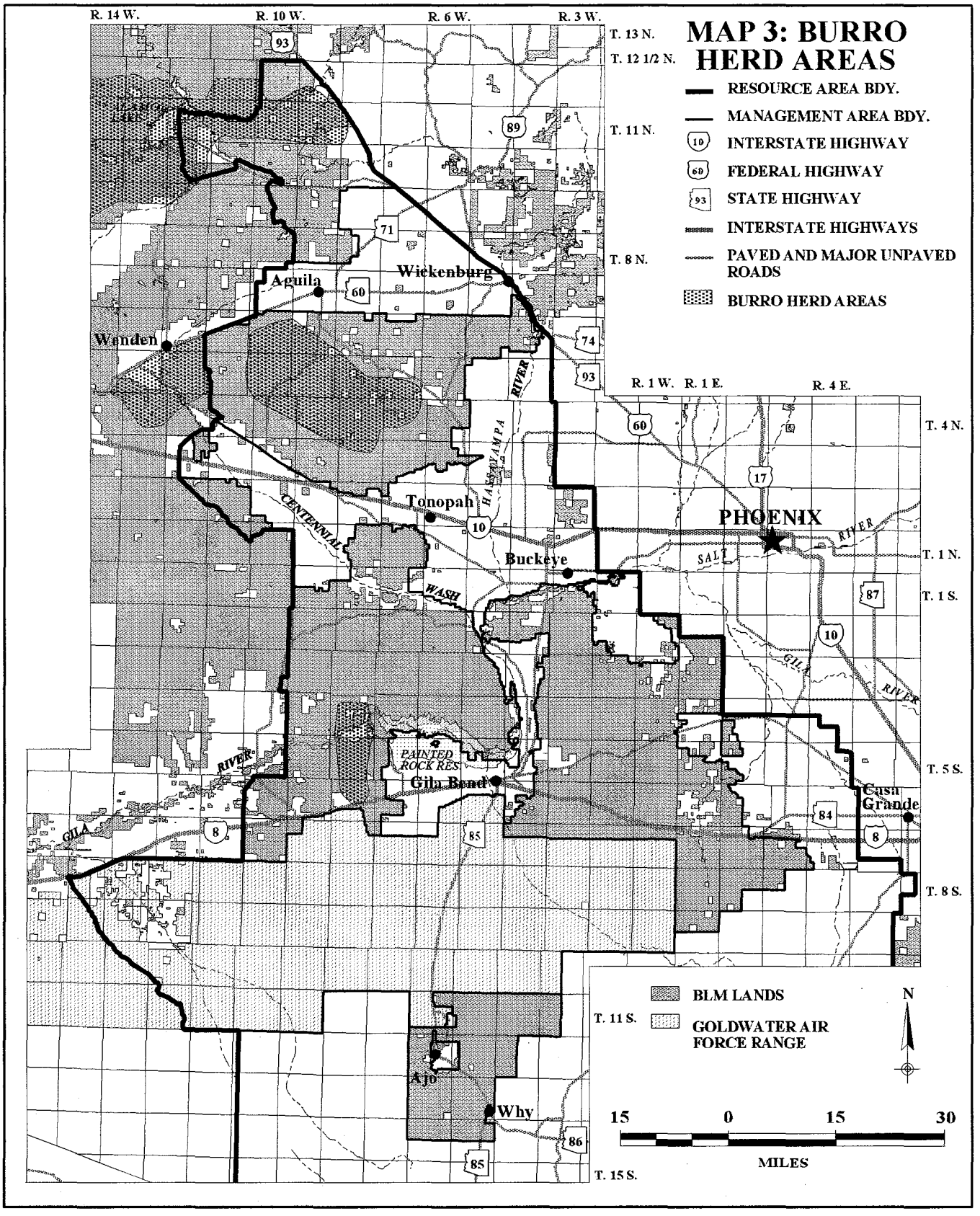
Under this alternative, public requests for oil and gas exploration or development leases would be handled on a case-by-case basis and require a plan amendment for each request.

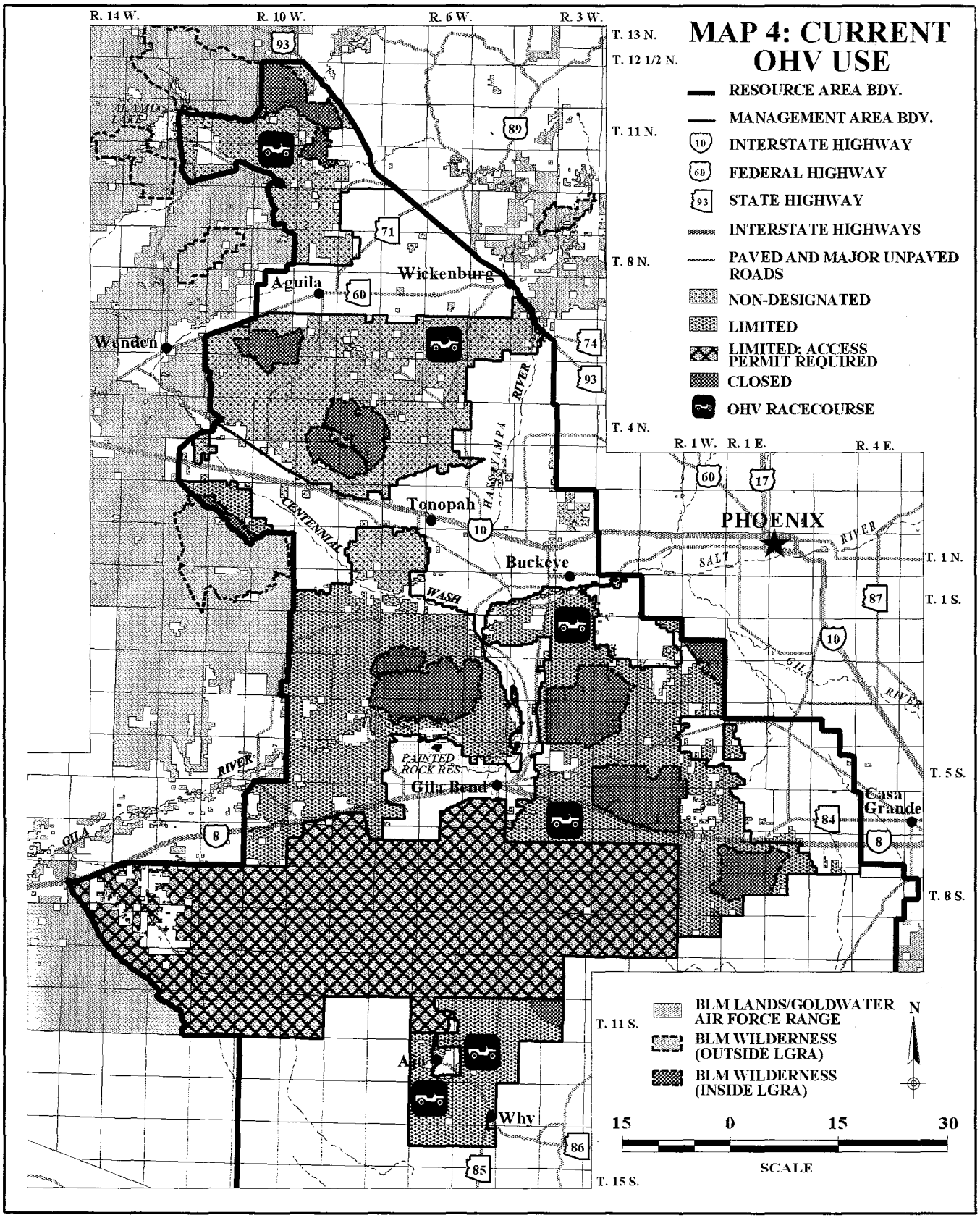
Approximately 375,000 acres of federal minerals in wildernesses are closed to oil and gas leasing. The Goldwater Range, Painted Rock Reservoir and Alamo Lake are withdrawn from mineral entry. The remaining approximately 1.6 million acres of federal minerals in the planning area are open to oil and gas leasing.

Alternative 2 -- Proposed Action

BLM staff have identified six distinct units of well-blocked public lands in the resource area, each


MAP 2: CURRENT LAND DISPOSALS
RESOURCE AREA BDY.
MANAGEMENT AREA BDY.
INTERSTATE HIGHWAY
FEDERAL HIGHWAY
STATE HIGHWAY
INTERSTATE HIGHWAYS
PAVED AND MAJOR UNPAVED ROADS
LANDS PROPOSED FOR DISPOSAL (CURRENT SITUATION)
BLM LANDS
BLM WILDERNESS
GOLDWATER AIR FORCE RANGE
N
15 0 15 30
MILES
R. 14 W.
R. 10 W.
R. 6 W.
R. 3 W.
R. 1 W.
R. 1 E.
R. 4 E.
T. 13 N.
T. 12 1/2 N.
T. 11 N.
T. 8 N.
T. 4 N.
T. 1 N.
T. 1 S.
T. 5 S.
T. 8 S.
T. 11 S.
T. 15 S.
ALAMO LAKE
Wenden
Aguila
Wickenburg
Tonopah
Buckeye
PHOENIX
Gila Bend
Casa Grande
Ajo
Why
PAINTED ROCK RES.
HASSAYAMPA RIVER
CENTENNIAL WASH
SALT RIVER
GILA RIVER
93
89
71
60
74
17
10
87
84
8
85
86


MAP 3: BURRO HERD AREAS
RESOURCE AREA BDY.
MANAGEMENT AREA BDY.
INTERSTATE HIGHWAY
FEDERAL HIGHWAY
STATE HIGHWAY
INTERSTATE HIGHWAYS
PAVED AND MAJOR UNPAVED ROADS
BURRO HERD AREAS
BLM LANDS
GOLDWATER AIR FORCE RANGE
N
15 0 15 30
MILES
R. 14 W.
R. 10 W.
R. 6 W.
R. 3 W.
R. 1 W.
R. 1 E.
R. 4 E.
T. 13 N.
T. 12 1/2 N.
T. 11 N.
T. 8 N.
T. 4 N.
T. 1 N.
T. 1 S.
T. 5 S.
T. 8 S.
T. 11 S.
T. 15 S.
Aguila
Wickenburg
Wenden
Tonopah
Buckeye
PHOENIX
Gila Bend
Casa Grande
Ajo
Why
PAINTED ROCK RES.
CENTENNIAL WASH
HASSAYAMPA RIVER
SALT RIVER
GILA RIVER
LAKE MOHAVE


MAP 4: CURRENT OHV USE
RESOURCE AREA BDY.
MANAGEMENT AREA BDY.
INTERSTATE HIGHWAY
FEDERAL HIGHWAY
STATE HIGHWAY
INTERSTATE HIGHWAYS
PAVED AND MAJOR UNPAVED ROADS
NON-DESIGNATED
LIMITED
LIMITED; ACCESS PERMIT REQUIRED
CLOSED
OHV RACECOURSE
BLM LANDS/GOLDWATER AIR FORCE RANGE
BLM WILDERNESS (OUTSIDE LGRA)
BLM WILDERNESS (INSIDE LGRA)
N
15 0 15 30
SCALE
R. 14 W.
R. 10 W.
R. 6 W.
R. 3 W.
R. 1 W.
R. 1 E.
R. 4 E.
T. 13 N.
T. 12 1/2 N.
T. 11 N.
T. 8 N.
T. 4 N.
T. 1 N.
T. 1 S.
T. 5 S.
T. 8 S.
T. 11 S.
T. 15 S.
ALAMO LAKE
Wickenburg
Aguila
Wenden
Tonopah
Buckeye
PHOENIX
SALT RIVER
HASSAYAMPA RIVER
CENTENNIAL WASH
GILA RIVER
PAINTED ROCK RES.
Gila Bend
Casa Grande
Ajo
Why
93
89
71
60
74
93
60
17
10
87
10
8
84
8
86
85

having unique resource issues and opportunities. From north to south, the Santa Maria, Big Horn, Gila Bend, Goldwater Range and Ajo management areas are named for unique features or local population centers. The remaining public lands are interspersed with private or state lands and form the sixth distinct unit (see Map 1).

Land Tenure Adjustments

Disposals (Sale or Exchange)

Approximately 45,260 acres of public lands within the Lower Gila Resource Area have been identified for disposal (see Appendix B and maps 5 north, central and south). Most of these lands are isolated parcels outside the boundaries of the management areas. Some of these parcels are well suited for agriculture, community expansion or management by private or state entities. All disposals meet the criteria for sales and exchanges set forth in sections 203 and 206 of the Federal Land Policy and Management Act as amended by the Federal Land Exchange Facilitation Act.

Lands identified for disposal may be retained if significant resource values are found during evaluation. These determinations would be made during preparation of the site-specific environmental assessments required for every disposal action. Environmental documentation must be in compliance with the National Environmental Policy Act prior to the approval of any lands action.

All lands in Appendix B meet two of the three criteria identified in the Federal Land Policy and Management Act for sale. The two criteria met are:

-- *" . . . such tract because of its location or other characteristics is difficult and uneconomic to manage as part of the public lands, and is not suitable for management by another Federal department or agency"* or
-- *"disposal of such tract will serve important public objectives, including but not limited to, expansion of communities and economic development, which cannot be achieved prudently or feasibly on land other than public land and which outweigh other public objectives and values, including but not limited to, recreation and scenic values, which would be served by maintaining such tract in Federal ownership."*

Although these lands qualify for sale, the preferred method of disposal according to Arizona BLM policy is exchange or through the Recreation and Public Purposes Act. Lands needed for recreation or public purposes may be leased or conveyed to local governments or nonprofit organizations under the Act. Lands not listed in the appendix will be retained in public ownership unless they are needed for recreation or public purposes under the Act. Such disposal proposals on lands not identified for disposal will be considered on a case-by-case basis.

All exchanges and sales will be based on fair market value as determined by procedures consistent with 43 CFR 2200 and 2700. All exchanges are voluntary transactions between the BLM and the non-federal party and are discretionary. The BLM or an approved contract appraiser will appraise the lands and interests in the lands to be disposed of and acquired as part of sales or exchanges.

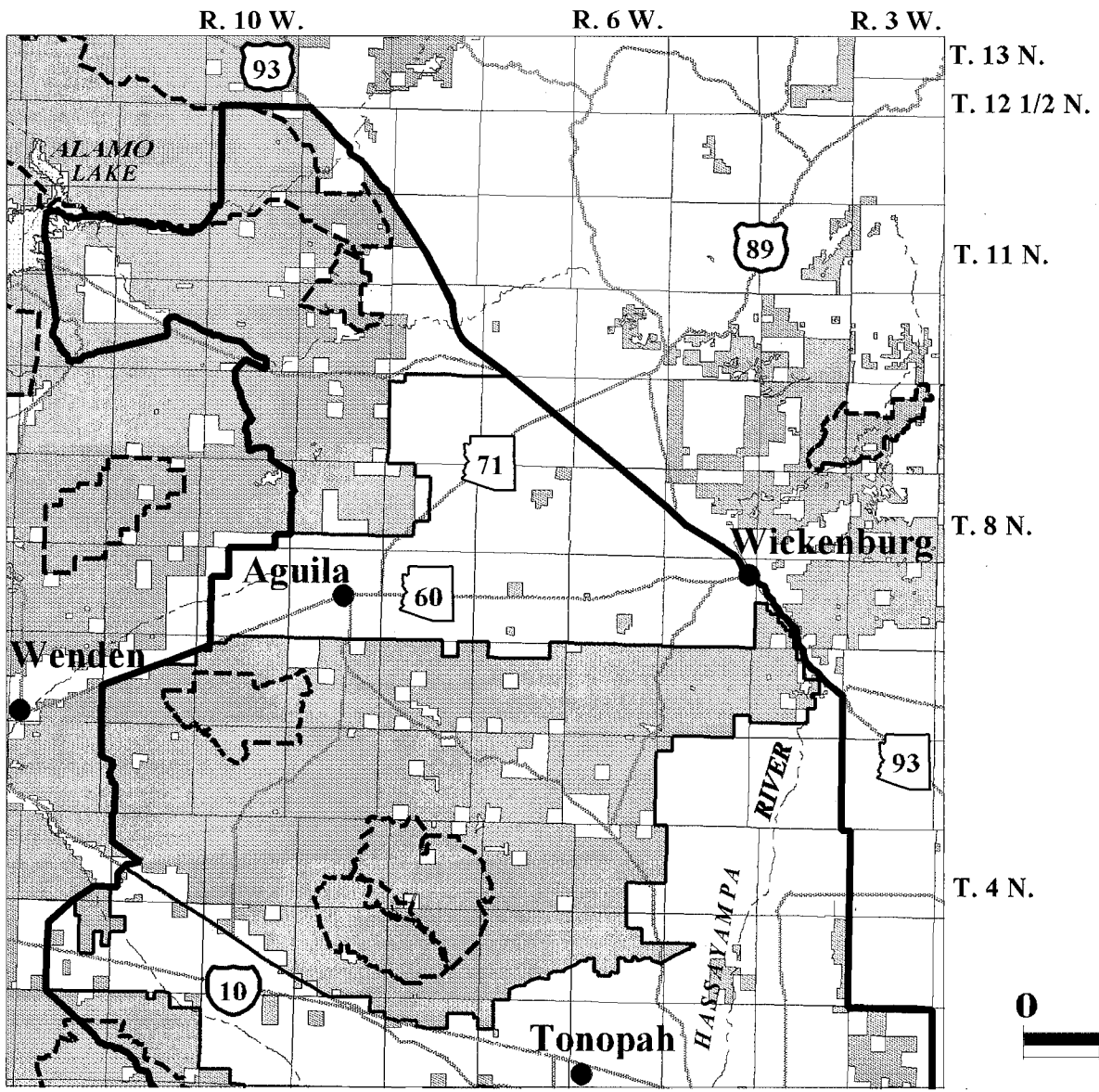
Wildernesses and the Goldwater Range lands are withdrawn from all forms of appropriation under the public lands laws and are not available for disposal.

Acquisitions

Lands to be acquired will normally have high public and natural resource values that will complement existing and proposed management programs and will consolidate ownership patterns to improve management efficiency (see maps 5 north, central and south). All nonfederal lands with high resource values within the boundaries of the management areas may be considered for acquisition in this land use plan. Acquisitions will occur primarily through the land exchange process in accordance with 43 CFR 2200 and the Federal Land Exchange Facilitation Act. Acquisition by donation and purchase using Land and Water Conservation Funds will also be considered when willing parties or available funds exist. All acquisitions will be negotiated with willing landowners only and must be in the public interest.

Desert Tortoise Habitat Management

The Lower Gila Resource Area proposes to standardize desert tortoise habitat management through the resource area. This management will be



MAP 5 NORTH: SANTA MARIA, BIG HORN. PROPOSED LAND DISPOSAL AND ACQUISITION*

Lands outside the management area are eligible for disposal; lands inside are eligible for acquisition.

*All transfers would be on a willing seller/ willing buyer basis.

RESOURCE AREA BDY.

MANAGEMENT AREA BDY.

BLM

WILDERNESS

Parcels ten acres or smaller may not appear.

N

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

SECTIONED TOWNSHIP

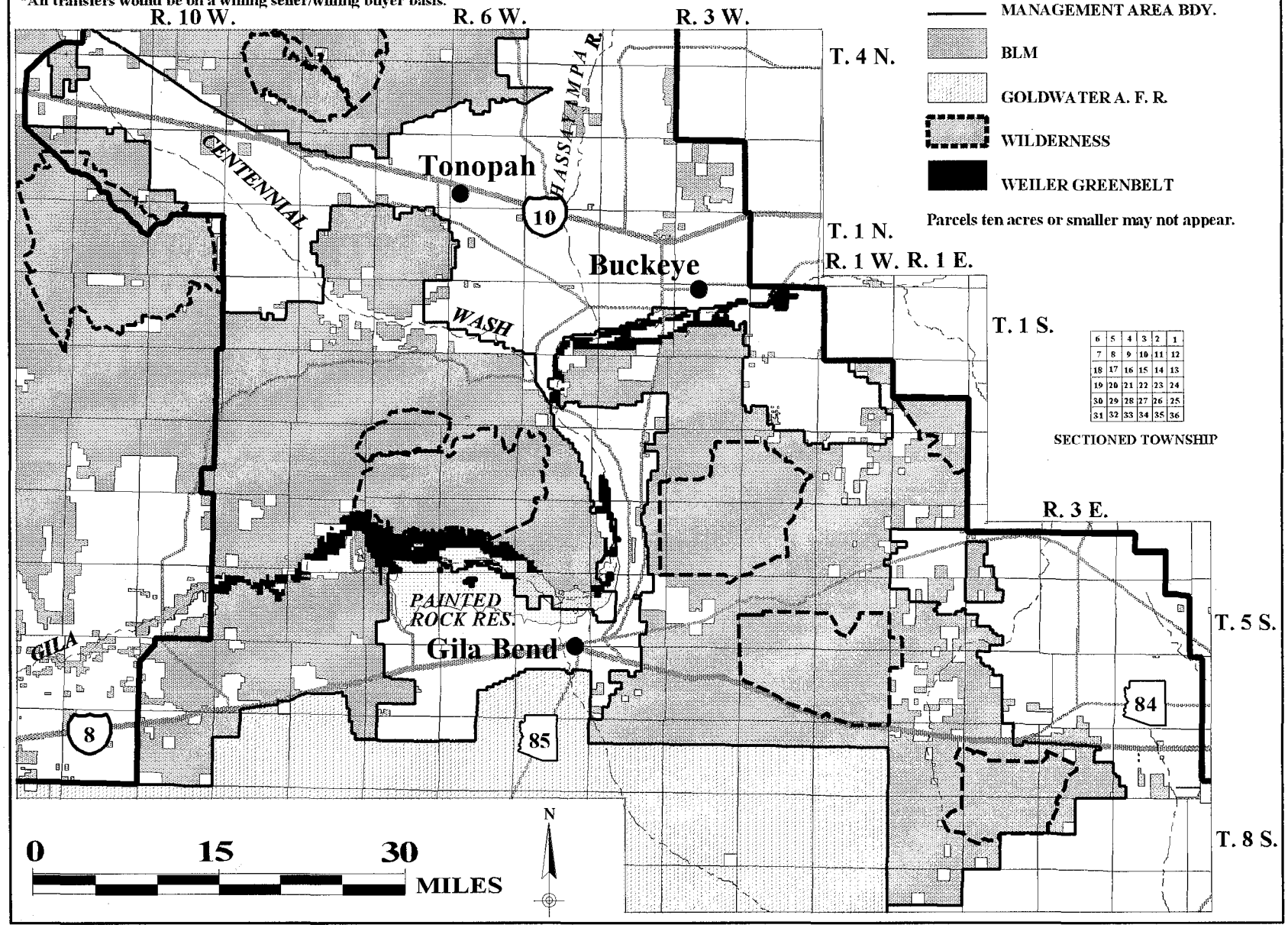
0 15 30

MILES

MAP 5 CENTRAL: GILA BEND.
PROPOSED LAND DISPOSAL AND ACQUISITION*

Lands outside the management area are eligible for disposal; lands inside are eligible for acquisition.

*All transfers would be on a willing seller/willing buyer basis.



MAP 5 SOUTH: AJO, GOLDWATER. PROPOSED LAND DISPOSAL AND ACQUISITION*

Lands outside the management area are eligible for disposal; lands inside are eligible for acquisition.

*All transfers would be on a willing seller/willing buyer basis.

BLM

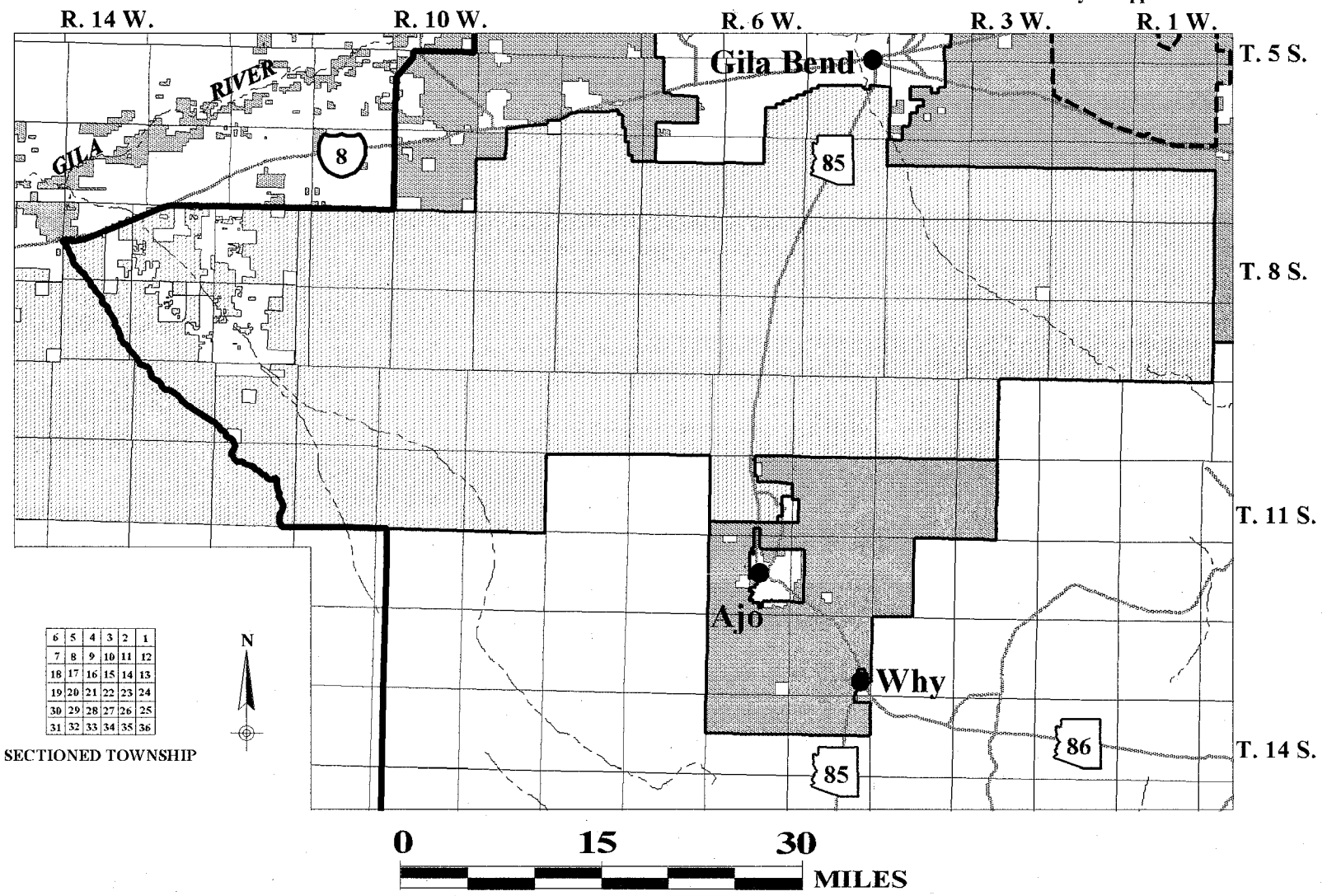
GOLDWATER A.F.R.

WILDERNESS

RESOURCE AREA BDY.

MANAGEMENT AREA BDY.

Parcels ten acres or smaller may not appear.



consistent with *Desert Tortoise Habitat Management on Public Lands: A Rangewide Plan* (BLM 1988) and *Strategy For Desert Tortoise Habitat Management On Public Lands In Arizona* (October 1990).

The objectives outlined in *Strategy For Desert Tortoise Habitat Management On Public Lands In Arizona* (BLM 1990) are tailored to Arizona's needs. Each statewide objective is listed below with the Lower Gila Resource Area management actions to accomplish the objective.

- Develop an overall public education program concerning tortoise populations and habitats.

Lower Gila personnel will participate, when asked and when appropriate, in public events such as fairs and open houses with information and displays showing the management of public lands including desert tortoise habitat. Lower Gila will develop a public brochure on desert tortoise.

- Complete and maintain a continuing inventory and monitoring program for tortoise populations and habitats to assist in making management decisions, including habitat categorization, on public lands. The BLM's desert tortoise inventory and monitoring handbook will contain the standards for inventory and monitoring in Arizona.

The Lower Gila Resource Area has been inventoried for desert tortoise habitat and habitat categories (see Appendix C) have been established (see Map 6). These boundaries may be slightly altered as new and better information becomes available on population distributions and dynamics.

There are three established one-square-mile study plots to monitor desert tortoise populations and habitat, one each in the Maricopa, Harcuvar and Harquahala mountains. Locations for additional one-square-mile plots will be considered in the Gila Bend and Ajo resource management areas. All one-square-mile plots will be re-read every five years.

The Lower Gila Resource Area will maintain a log of environmental assessments containing stipulations pertaining to the desert tortoise for the express purpose of tracking compliance and effectiveness of the stipulations.

- Develop and maintain a monitoring program specifically for land use activities that adversely affect tortoise habitats for use in analyzing and responding to the cumulative impacts of land use decisions on tortoise habitats.

The Lower Gila Resource Area will provide the Arizona State Office an annual summary of the environmental assessment log for actions in desert tortoise habitats.

- Comply fully with Section 7(a) of the Endangered Species Act of 1973, as amended, as it relates to tortoise population and habitat management on public lands.

The Lower Gila Resource Area will comply with Section 2 of the Endangered Species Act and BLM policy for managing habitat of candidate species to assure that unlisted populations of the desert tortoise do not become threatened or endangered through BLM actions.

- Coordinate and cooperate with other federal and state agencies and other publics concerning tortoise populations and habitat management.

The Lower Gila Resource Area has and will continue to work with, share information and support to the extent possible, the interests and work of other agencies and publics.

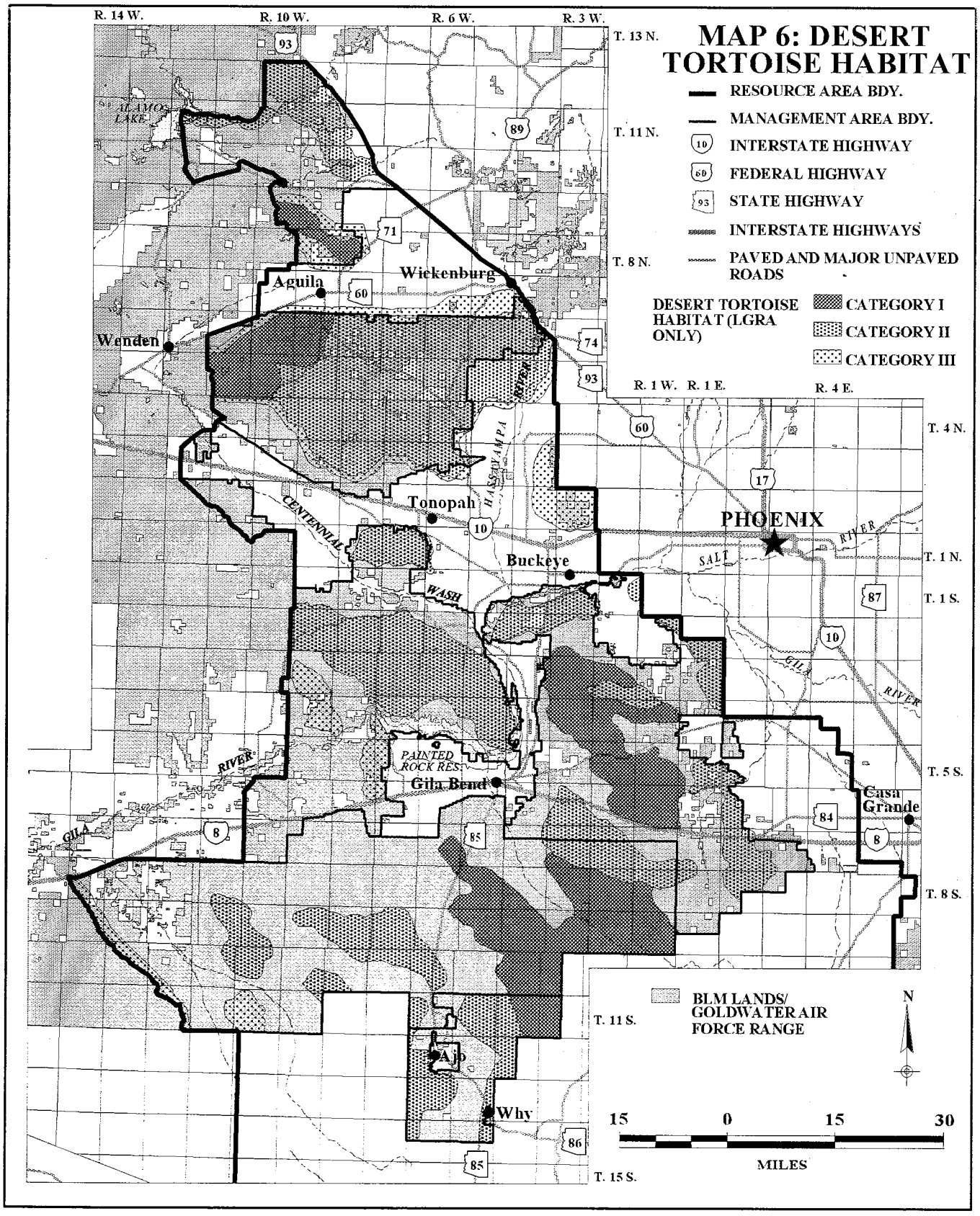
- Conduct research and studies sufficient to develop and document the knowledge and techniques needed to ensure the viability of tortoise populations and habitats in perpetuity.

The Lower Gila Resource Area will assemble an internal interdisciplinary team to evaluate what is known and what research is needed in the resource area. The team will then prepare proposals, prioritize them and forward them to the BLM Desert Tortoise Management Oversight Group.

- Manage the public lands on a continuing basis to protect the scientific, ecological and environmental quality of tortoise habitats consistent with the goals and objectives of the rangewide plan. This implies management capability to sustain a population of sufficient size and resilience to withstand the most severe environmental disturbances and with appropriate sex/age ratios and recruitment rates to maintain viable populations in perpetuity.

The Lower Gila Resource Area proposes to establish resource management areas to facilitate management, protecting existing corridors and connections and providing units for which ecosystem management principles can be applied.

The goals and objectives of Desert Tortoise Habitat Management on Public Lands: A Rangewide Plan *(BLM 1988) and* Strategy For Desert Tortoise


MAP 6: DESERT TORTOISE HABITAT
RESOURCE AREA BDY.
MANAGEMENT AREA BDY.
INTERSTATE HIGHWAY
FEDERAL HIGHWAY
STATE HIGHWAY
INTERSTATE HIGHWAYS
PAVED AND MAJOR UNPAVED ROADS
DESERT TORTOISE HABITAT (LGRA ONLY)
CATEGORY I
CATEGORY II
CATEGORY III
BLM LANDS/ GOLDWATER AIR FORCE RANGE
R. 14 W.
R. 10 W.
R. 6 W.
R. 3 W.
R. 1 W.
R. 1 E.
R. 4 E.
T. 13 N.
T. 11 N.
T. 8 N.
T. 4 N.
T. 1 N.
T. 1 S.
T. 5 S.
T. 8 S.
T. 11 S.
T. 15 S.
ALAMO LAKE
Aguila
Wickenburg
Wenden
Tonopah
PHOENIX
Buckeye
Gila Bend
Casa Grande
Ajo
Why
PAINTED ROCK RES.
CENTENNIAL WASH
HASSAYAMPA RIVER
SALT RIVER
GILA RIVER
N
15 0 15 30
MILES

Habitat Management On Public Lands In Arizona *(BLM 1990) will be addressed and incorporated into land management planning through this section of the Lower Gila Resource Management Plan Amendment. Specific and quantifiable desert tortoise management objectives for categorized habitat will be included at the activity planning level.*

Lower Gila Resource Area environmental decision documents for all actions occurring in desert tortoise habitat will address and include mitigation measures sufficient to offset, to the extent possible, any loss of tortoise habitat quantity or quality in category I and II habitats.

- When the need is identified through the BLM planning system, acquire and/or consolidate, under BLM administration, management units with high tortoise habitat values. When public land tortoise habitat values will be affected by the issuance of a lease, permit, right-of-way or other land use authorization, mitigate to minimize loss of those values.

All category I and II desert tortoise habitat in the resource area is contained within the proposed resource management areas. The Lower Gila Resource Area proposes to retain public lands within the resource management areas and to also consolidate lands on a willing seller-willing buyer basis within them.

Grant new land use authorizations in category I and II tortoise habitats only if no reasonable alternative exists. If no alternative exists, mitigation, including compensation, will be evaluated to meet the no net loss goal.

- Ensure that off-highway vehicle use in desert tortoise habitats is consistent with the category goals, objectives and management actions of the rangewide plan and the Arizona Implementation Strategy.

As part of the proposed action for recreation, off-highway vehicle travel will be designated "limited" throughout the resource area with no "open" designations planned.

Existing off-highway vehicle competitive courses that have been run in recent years have been evaluated through the National Environmental Policy Act process and tortoise mitigation has been stipulated. Any new competitive course proposals will be prohibited in category I and II desert tortoise habitat. Any new off-highway vehicle competitive course proposed in Category III desert tortoise habitat will be evaluated and impacts will be mitigated.

- Ensure that livestock use is consistent with the category goals, objectives and management actions of the rangewide plan and the strategy plan. This may include limiting, precluding or deferring livestock use as documented in activity plans or other site-specific plans.

The Lower Gila Resource Area internal interdisciplinary tortoise team will review categorized desert tortoise habitat in relation to ongoing livestock use on public lands in the resource area. The team will consider the forage needs of desert tortoise and the ecological site potential in determining and prioritizing efforts to resolve conflicts.

The current Phoenix District and Arizona State Office ephemeral grazing policies are consistent with the Arizona Strategy Plan.

In category I and II desert tortoise habitat, the Lower Gila Resource Area will allow only those range improvements for livestock that will not conflict with desert tortoise habitats or populations.

- Manage wild horse and burros in a manner consistent with the category goals, objectives and management action of the rangewide plan and the Arizona Implementation Strategy. This may include limiting or precluding wild horse and/or burro use.

The Lower Gila Resource Area proposes to manage wild burros in a thriving ecological balance. This would preclude burro management that would adversely impact desert tortoise habitat or populations.

- Manage other wildlife on public lands consistent with the goals, objectives and management actions of the rangewide plan and the Arizona Strategy Plan.

The Lower Gila Resource Area proposes to allow, on a case-by-case basis, transplants and augmentation of desert bighorn sheep. These actions will not be permitted if they create conflicts with desert tortoise populations or habitat.

The Lower Gila Resource Area will allow only those new wildlife improvements, in category I and II desert tortoise habitats, that do not conflict with desert tortoise populations or habitat.

- Cooperate as necessary with Arizona Game and Fish Department and APHIS-ADC to control predators of desert tortoise. This will be considered

only where predation is interfering with attaining the goals and objectives of the rangewide plan or the Arizona Strategy Plan.

Predation is not considered to be a significant problem in the Lower Gila Resource Area; however, information on predation will be collected as opportunities arise.

The Lower Gila Resource Area will evaluate BLM actions in tortoise habitats to assure that they do not encourage the proliferation or range expansion of predator populations.

- Manage the BLM's energy and minerals program in a manner consistent with the goals and objectives of the rangewide plan and the Arizona Implementation Strategy.

The Lower Gila Resource Area will use the BLM's discretionary authorities relating to leasable and salable minerals to meet the category goals and objectives. Due to the habitat needs of the Sonoran desert tortoise, mineral material sales of ornamental boulders have the potential to cause loss of desert tortoise habitat. Boulder sale requests will be carefully considered and permits restricted to areas that will result in no net loss of tortoise habitat.

Desert Bighorn Sheep Reestablishment and Augmentation

BLM Manual 1745 -- Introduction, Transplants, Augmentations and Reestablishment of Fish, Wildlife, and Plants -- updated March 26, 1992 describes the process under which these actions can take place. The manual section indicates that decisions for making introductions, transplants or reestablishment should be made as part of the land use planning process. Decisions should clearly identify desired population targets or objectives and anticipated distribution of the proposed species. The manual also requires public participation with all potentially affected parties prior to the decision.

Historically, desert bighorn sheep occurred on all of the mountain ranges in the Lower Gila Resource Area. Desert bighorn sheep populations in some of these mountain ranges are depressed and sheep may be extirpated in a few ranges. The Arizona Game and Fish Department in cooperation with the resource area will use reintroduction and augmentation to establish and bolster sheep populations to assist the species in reaching its natural potential. This will be done in areas where conflicts with other uses and resources do not occur and where conflicts can be resolved.

Final decisions on reintroduction and augmentation proposals will be considered on a case-by-case basis within the appropriate level of National Environmental Policy Act documentation that addresses conflicts and meets the requirement for public participation.

Wild Horse and Burro Management

The Harquahala and Painted Rock herd areas are within the Lower Gila Resource Area. The Alamo Herd Management Area contains portions of the Lower Gila and Kingman resource areas and lands administered by the Havasu Resource Area, Yuma District. The Little Harquahala Herd Area is entirely within the Yuma Resource Area, Yuma District.

It is proposed that burros in the Harquahala, Little Harquahala and Painted Rock herd areas and the Alamo Herd Management Area be managed as self-sustaining populations which contain the optimum number of wild burros in a thriving natural ecological balance with other system components. Interdisciplinary habitat monitoring shall be initiated to establish what constitutes a thriving ecological balance. That portion of the wild burro population that exceeds this balance shall be identified as excess, humanely captured and removed from public lands.

Within herd areas or herd management areas, wild burros shall be considered comparable with other resource values when habitat requirements are determined and acceptable utilization levels established. Livestock range improvements and habitat development projects within wild burro herd areas or herd management areas shall be modified/constructed so as to not adversely affect wild burro populations.

The BLM is mandated to maintain wild burros within the confines of designated herd area boundaries. Wild burros outside of these areas will be considered excess animals and removed through a live capture program. Healthy excess wild burros shall be made available at adoption centers for private maintenance and care. The BLM shall protect wild burros from unauthorized capture, branding, harassment and destruction.

Goldwater Range -- There are no unclaimed wild and free-roaming burros on the Goldwater Range. However, domestic burros often stray from the Papago Indian Reservation onto the Goldwater Range. To help alleviate this problem, the BLM shall collaborate with the Air Force, the Tohono O'odham Nation and the Bureau of Indian Affairs to maintain the boundary fence between the Reservation and the Goldwater Range.

Recreation Management

Information from the Arizona Statewide Comprehensive Outdoor Recreation Plan states that: "The large and rapidly growing population has several implications for outdoor recreation. Local providers are hard pressed to keep up with demand for facilities and services. As private development occurs, providing and protecting open space and parkland becomes a critical issue."

To maintain consistency with this statewide recreation plan, the Lower Gila Resource Area will provide resource-based recreational opportunities ranging from facilitated recreation sites, such as campgrounds, to remote primitive areas with predominantly unconfined recreational opportunities and minimal regulation.

Primitive areas with low visitation and intensively used areas with high visitation are intermingled and dispersed throughout the resource area. This pattern will be perpetuated when considering recreation developments. Lands which are remote or primitive will be managed to retain their present conditions. The undeveloped nature of these lands will be protected as an extremely valuable and scarce resource. Road maintenance and recreation developments such as signing, brochures and information sheets may be provided to promote resource protection through public education and interpretation.

Conversely, recreation facilities and activities requiring a high degree of regulation, or with a high potential for resource impacts, will be focused on accessible, easily maintained lands, near communities and well away from remote, pristine or primitive lands. These facilities and activity areas will be promoted with information fact sheets, brochures or signs to ensure that users can easily locate the most appropriate area for their desired use. Recreational developments and facilities will be designed to eliminate competition with the private sector.

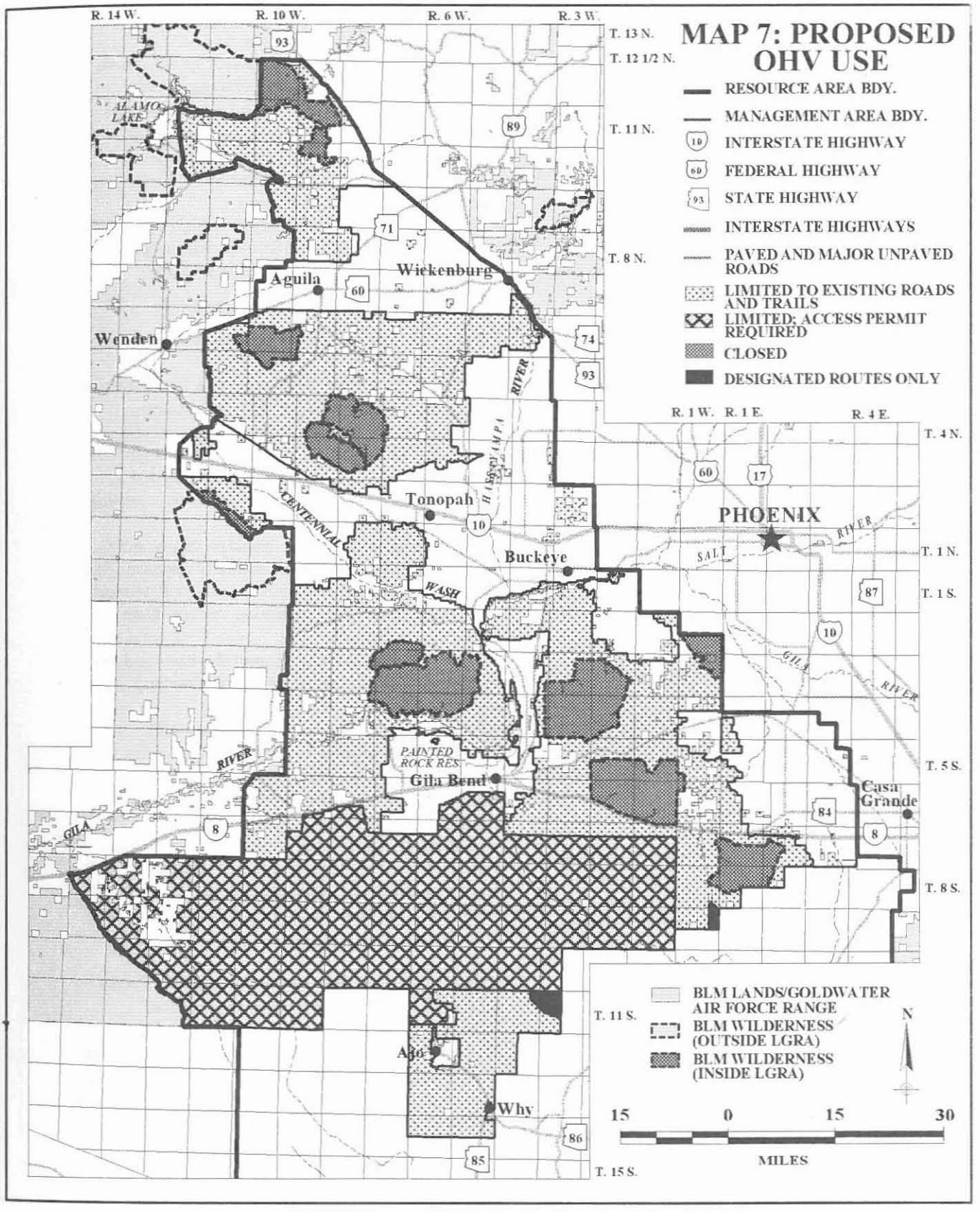
Therefore, the Lower Gila Resource Area will provide primarily services and facilities unavailable elsewhere or services and facilities required for visitor safety or resource protection.

The public lands managed by the Lower Gila Resource Area are receiving increasing visitor use and recreation conflicts. To provide the desired recreational opportunities, protect the natural resources which draw the public to these lands and retain the flexibility needed to respond to emerging recreational technologies, the Lower Gila Resource Area will address recreation management by focusing on four recreation components -- off-highway vehicle management; designation of special management areas; development, management and maintenance of recreational facilities; and management of special uses and scarce opportunities.

Component One: Off-Highway Vehicle Designation and Management

The Goldwater Range off-highway vehicle designation will remain as "limited to existing and/or designated roads, trails and vehicle routes" and will continue to require a permit for entry. All congressionally declared wildernesses will remain closed to mechanized use.

- Designate all public lands described in the Lower Gila North Management Framework Plan and the Lower Gila South Resource Management Plan, as amended, as "limited." Limit off-highway vehicle use to existing and/or designated roads, trails and traditional or historically used vehicle routes (see Map 7). This includes those lands administratively transferred to the Phoenix, Havasu and Yuma resource areas.
- Define off-highway vehicles as "mechanized equipment, designed to provide a mechanical advantage, intended for human conveyance." This will include mountain bikes, ultralights and hang gliders.
- Permit ultralight and hang glider launches and landings only in designated areas, with the exception of emergency landings.
- Designate the Vekol Valley Grassland Area of Critical Environmental Concern and Coffeepot Botanical Area of Critical Environmental Concern as "limited to designated routes only" with regard to off-highway vehicle use.


MAP 7: PROPOSED OHV USE
RESOURCE AREA BDY.
MANAGEMENT AREA BDY.
INTERSTATE HIGHWAY
FEDERAL HIGHWAY
STATE HIGHWAY
INTERSTATE HIGHWAYS
PAVED AND MAJOR UNPAVED ROADS
LIMITED TO EXISTING ROADS AND TRAILS
LIMITED; ACCESS PERMIT REQUIRED
CLOSED
DESIGNATED ROUTES ONLY
BLM LANDS/GOLDWATER AIR FORCE RANGE
BLM WILDERNESS (OUTSIDE LGRA)
BLM WILDERNESS (INSIDE LGRA)
R. 14 W.
R. 10 W.
R. 6 W.
R. 3 W.
R. 1 W.
R. 1 E.
R. 4 E.
T. 13 N.
T. 12 1/2 N.
T. 11 N.
T. 8 N.
T. 4 N.
T. 1 N.
T. 1 S.
T. 5 S.
T. 8 S.
T. 11 S.
T. 15 S.
ALAMO LAKE
Aguila
Wickenburg
Wenden
Tonopah
Buckeye
PHOENIX
SALT RIVER
GILA RIVER
HASSAYAMPA RIVER
CENTENNIAL WASH
PAINTED ROCK RES.
Gila Bend
Casa Grande
Ajo
Why
N
15 0 15 30
MILES

- Enact road or area closures where off-highway use is determined to be causing harm to the existing resources.
- Permit cross-country vehicle travel only when specifically authorized to complete a task which requires such use, and only in areas where such use will not cause unnecessary or undue resource impacts.
- Plan and develop off-highway vehicle management through interdisciplinary plans. This off-highway vehicle plan will evaluate and determine commercial and competitive off-highway vehicle racecourses and back country byways in the Lower Gila Resource Area. Evaluate decadent racecourses for upgrading and reauthorization. Interdisciplinary planning will determine routes and locations, limit of acceptable change indicators and standards, conflicts, issues and solutions to site-specific off-highway vehicle problems.
- Develop brochures, maps and information sheets and disseminate off-highway vehicle information to the public.

Component Two: Designation of Special Recreation Management Areas

The BLM differentiates recreation management areas into two classifications -- Special and Extensive. Special recreation management areas are sub-units of the resource area that require special management. Delineation is based on similar or interdependent recreation values, homogeneous or interrelated recreation uses or administrative efficiency.

Extensive recreation management areas are typically the remaining lands not identified as special recreation management areas and constitute the bulk of public lands. Extensive recreation management areas provide locales where recreation visitors have freedom of choice and minimal regulatory constraints.

Special recreation management areas are defined in recreation opportunity spectrum terms (see Appendix D). Maps containing the results of the Lower Gila Resource Area recreation opportunity spectrum inventory are available for review at the Phoenix District Office.

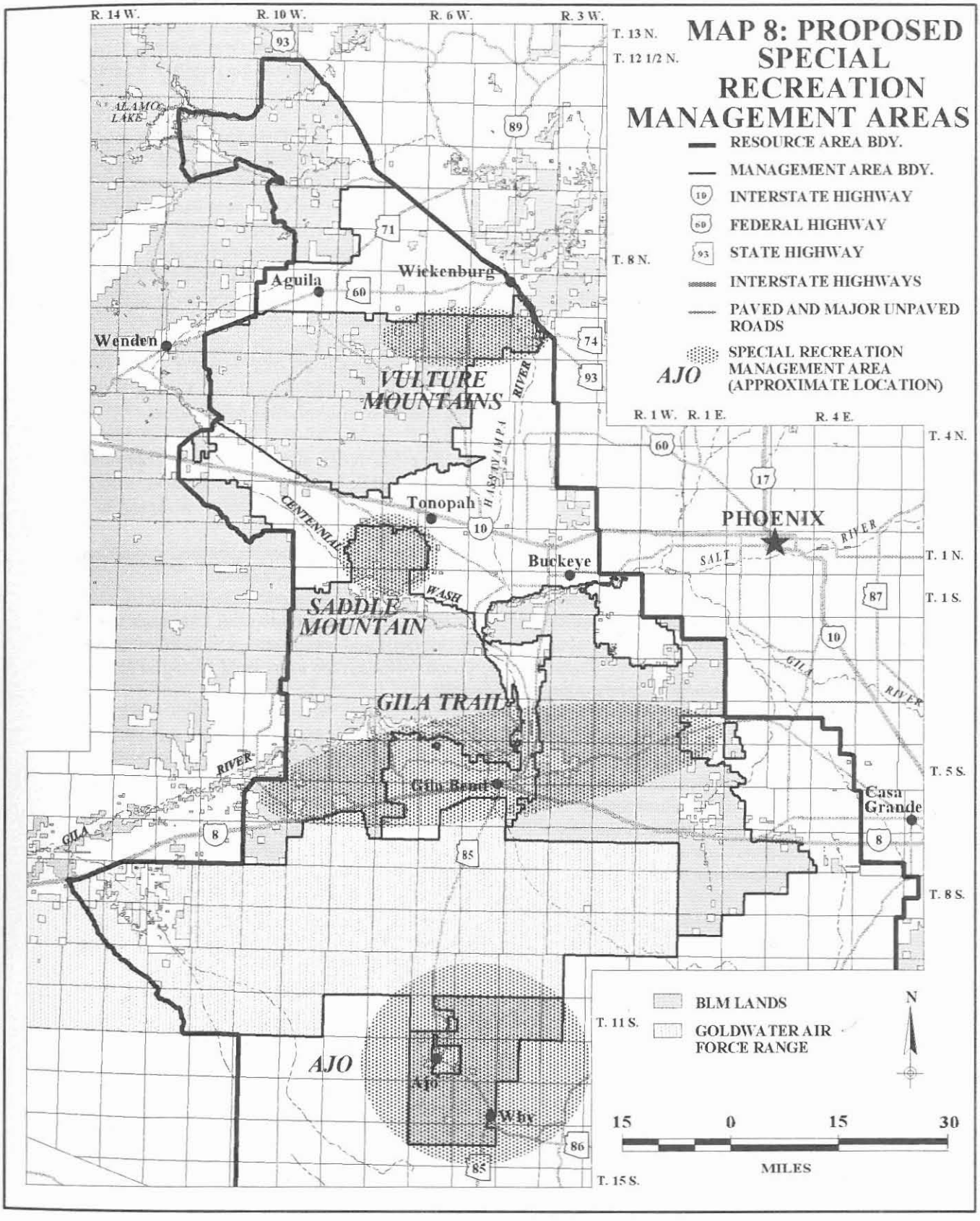
- Establish four special recreation management areas in the Lower Gila Resource Area and revise the Crater Range and Sentinel Plain Lava Flow special recreation management areas (see Map 8).
- Complete interdisciplinary planning on all special recreation management areas. Interdisciplinary planning will establish their boundaries, determine the type and level of facility development, maintain existing recreation opportunity spectrum classes, improve recreational opportunities and reduce conflicts among public land users.
- Enact "designated routes only" off-highway vehicle classification on a site-specific basis within special management areas when needed for resource protection.

Vulture Mountains Special Recreation Management Area --

- Establish the Vulture Mountains Special Recreation Management Area including lands surrounding Vulture Peak, the Vulture Mine and the Vulture Mountains. Management of the area will emphasize diverse recreational opportunities including trails, natural resource and historic interpretation, camping and off-highway vehicle use areas.
- Permit facilities to protect resource values and to improve visitor safety and recreational opportunities.
- Develop single-use and multiple-use trails to meet the demand for hiking, equestrian and mountain biking opportunities.
- Develop partnerships to connect the trails and the trail network to the community of Wickenburg, Arizona.
- Permit signing, regulations, brochures and maintenance as needed.
- Manage for multiple use and semi-primitive-motorized recreational opportunities to provide experience opportunities ranging from a predominantly unmodified natural environment to more facilitated visitor use areas. Maintain the desired physical and social settings as semi-primitive motorized. Maintain the managerial setting as semi-primitive.

Gila Trail Special Recreation Management Area --

- Establish the Gila Trail Special Recreation Management Area including lands surrounding the Gila Trail, the Butterfield Overland Stage Route, the Anza National Historic Trail, the Southern Overland Trail, the Mormon Battalion Trail, the Oatman Massacre Site, the Painted Rock Mountains and associated cultural and recreational features.


MAP 8: PROPOSED SPECIAL RECREATION MANAGEMENT AREAS
RESOURCE AREA BDY.
MANAGEMENT AREA BDY.
INTERSTATE HIGHWAY
FEDERAL HIGHWAY
STATE HIGHWAY
INTERSTATE HIGHWAYS
PAVED AND MAJOR UNPAVED ROADS
SPECIAL RECREATION MANAGEMENT AREA (APPROXIMATE LOCATION)
AJO
BLM LANDS
GOLDWATER AIR FORCE RANGE
N
15 0 15 30
MILES
R. 14 W.
R. 10 W.
R. 6 W.
R. 3 W.
R. 1 W.
R. 1 E.
R. 4 E.
T. 13 N.
T. 12 1/2 N.
T. 8 N.
T. 4 N.
T. 1 N.
T. 1 S.
T. 5 S.
T. 8 S.
T. 11 S.
T. 15 S.
ALAMO LAKE
Aguila
Wickenburg
Wenden
VULTURE MOUNTAINS
HASSAYAMPA RIVER
Tonopah
CENTENNIAL WASH
PHOENIX
SALT RIVER
Buckeye
SADDLE MOUNTAIN
GILA TRAIL
GILA RIVER
Gila Bend
Casa Grande
AJO
Why
93
89
71
60
74
93
60
17
10
87
10
8
85
8
86
85

- Permit facilities to protect resource values and to improve visitor safety and recreational opportunities in rural, roaded natural or semi-primitive motorized areas.
- Provide signing, regulations, brochures, promotion, facilities and maintenance as needed.
- Manage for multiple use and semi-primitive-motorized recreational opportunities and to provide experience opportunities ranging from a predominantly unmodified natural environment to more facilitated visitor use areas. Maintain the desired physical and social settings for this area within the existing range, from rural to semi-primitive motorized. Maintain the managerial setting as semi-primitive.

Saddle Mountain Special Recreation Management Area --

- Establish the Saddle Mountain Special Recreation Management Area encompassing the public lands containing Saddle Mountain and the Palo Verde Hills. Management of the area will emphasize providing geologic, cultural and wildlife interpretive sites, protecting the area's scenic landscapes and vistas and promoting recreational opportunities.
- Allow facilities along the northern and northeastern portions of the area to protect resource values, improve visitor safety and improve recreational opportunities.
- Provide signing, regulations, brochures, promotion, facilities and maintenance as needed.
- Manage for multiple use and semi-primitive-motorized recreational opportunities and provide experience opportunities ranging from a predominantly unmodified natural environment to more facilitated visitor use areas. Maintain the desired physical and social settings unit as semi-primitive. Maintain the managerial setting as semi-primitive.
- Maintain the southern and western portions of the area as remote and undeveloped.

Ajo Special Recreation Management Area --

- Establish the Ajo Management Unit as the Ajo Special Recreation Management Area.
- Permit facilities to protect resource values and improve visitor safety and recreational opportunities.
- Provide signing, regulations, brochures, promotion, facilities and maintenance as needed.
- Manage for multiple use and semi-primitive-motorized recreational opportunities. Maintain the desired physical and social settings for the Ajo Special Recreation Management Area as semi-primitive motorized. Maintain the managerial setting as semi-primitive.

Crater Range and Sentinel Plain Lava Flow Special Recreation Management Areas -- The Crater Range and Sentinel Plain Lava Flow special recreation management areas, on the Goldwater Range, are restricted to entry by permit only. These areas were designated in the Lower Gila South Resource Management Plan (Goldwater Amendment). Final boundaries of the special recreation management areas may be adjusted through interdisciplinary planning to respond to changing land uses. This includes State Highway 85 realignment (Crater Range) and changing recreational uses in both existing special recreation management areas.

- Existing prescriptions authorized by the Goldwater Amendment will be brought forward without change.
- Permit facilities to protect resource values and to improve visitor safety.
- Provide signing, regulations, brochures, promotion, facilities and maintenance as needed.
- Manage for multiple use and semi-primitive-motorized recreational opportunities. Maintain the desired physical and social settings as semi-primitive motorized. Maintain the managerial setting as semi-primitive.

Extensive Recreation Management Areas --

- Conduct project plan level planning for the extensive recreation management area on a case-by-case basis.
- Develop primitive facilities where needed for resource protection, visitor safety, improving the recreation experience or increasing recreational opportunities.
- Establish camping locations, camping stay limits, off-highway vehicle use and utilization of the existing natural resources.
- Evaluate long- and short-term camping areas, commercial or competitive off-highway vehicle use areas, scenic turnouts, cultural interpretive sites, hiking, equestrian or mountain bike trails, road and portal signage and road maintenance.
- Manage for multiple use and semi-primitive-motorized recreational opportunities. Maintain the desired physical and social settings as semi-primitive motorized. Maintain the managerial setting as semi-primitive.

Component Three: Development, Management and Maintenance of Camping Facilities and Stay Limits

Establish the following camping facilities and length-of-stay limits as prescribed for each of the following.

-- Long-term visitor areas
-- Extended camping areas
-- Short-term camping areas
-- Fourteen-day camping stay limit

Long-Term Visitor Areas -- These areas will provide designated roads, designated campsites and amenities to support 100 to 500 recreational vehicles as per long-term visitor area regulations. Resource factors for implementation and development and rules for development and use are described below (see Glossary for definition of long-term visitor areas).

Resource factors for long-term visitor area implementation and development include:
-- Long-term visitor area development will be permitted only in rural or roaded natural recreation opportunity spectrum classes
-- Location on rocky or resilient soils required
-- Well-maintained ingress and egress routes required
-- Location within 30 miles of local community required
-- Location outside of category I or II desert tortoise habitat required
-- Location with no cultural resource conflicts required
-- Location outside of burro herd management areas required
-- Location outside of threatened or endangered species habitats required
-- Location outside of riparian areas required
-- Location outside of areas of critical environmental concern and wild and scenic river areas required

Rules for long-term visitor area development and use include:
-- Long-term camping will be restricted to the term of the permit
-- Long-term camping will be restricted to designated sites
-- Long-term visitor areas will be defined on the ground with fences or signs
-- Services may be provided by contract or local vendor, but the costs of services will be the responsibility of each occupant (firewood, sanitation, trash, water, etc.)
-- Long-term visitor area users must comply with all state and federal laws
-- Long-term visitor area supplementary rules may be enacted as needed

Other regulations and conditions for long-term visitor area use may be identified as required during interdisciplinary project planning. If the interdisciplinary project planning team determines that modifications need to be made to the previously listed guidelines during the planning process, those modifications may be made without the need for a planning amendment. Should other regulations and conditions for use be identified as required during on-going operation of the long-term visitor area after completion of project planning, such modifications will require public notification through the environmental assessment process.

Extended Camping Areas -- Extended camping areas are a similar concept to the long-term visitor area program. The essential differences involve extended camping areas not being integrated within the long-term visitor area system and having a variable stay limit of greater than 14 days. The intent and mechanism for developing extended camping areas involves excluding specific areas from the 14-day camping stay limit. Extended camping areas will have a specific and delineated boundary determined by the available resource. Proposed resource factors and rules intended to control resource impacts are:
- Evaluate and develop extended camping areas in locations where historic use patterns equate to this type of use. Public lands east of Gila Bend, between Ajo and Why and in the Painted Rock Mountains are considered potential sites. Additionally, lands east of Lone Mountain, southwest of Wickenburg, north of Saddle Mountain and west of Casa Grande will be evaluated.
- Provide designated roads, designated campsites and amenities to support 20 to 50 recreational vehicles.
- Develop site-specific plans needed to determine the exact locations and numbers, up to six, of the extended camping areas required to meet public demand and protect the resource. The extended camping areas will each incorporate a minimum of five guest sites with a 14-day stay limit.

Resource factors for extended camping area development include:
-- Extended camping area development will be permitted only in rural, roaded natural or semi-primitive motorized recreation opportunity spectrum classes
-- Topographic or vegetative screening required
-- Moderate ingress and egress routes required
-- Location on rocky or resilient soils required
-- Location within 30 miles of local community required
-- Mitigation required if located in category II or III desert tortoise habitat
-- Location with no cultural resource conflicts required
-- Location outside of burro herd management areas required
-- Location outside of threatened or endangered plant and animal habitats required
-- Location outside of riparian areas required
-- Location outside of areas of critical environmental concern and wild and scenic river areas required

Rules for extended camping area development and use include:
-- Extended camping areas will be restricted to the term of the permit
-- Extended camping areas will be restricted to designated sites
-- Extended camping areas will be defined on the ground with fences or signs
-- Services may be provided by contract or local vendor, but the costs of services will be the responsibility of each occupant (firewood, sanitation, trash, water, etc.)
-- Extended camping area supplementary rules may be enacted as needed

Other regulations and conditions for extended camping area use may be identified as required during interdisciplinary project planning. If the interdisciplinary project planning team determines that modifications need to be made to the previously listed guidelines, those modifications shall be made.

Short-Term Camping Areas -- Short-term camping areas may be identified as needed to support resource protection measures in high use areas, to promote equitable use for visitors or to serve as overflow camping adjacent to high use areas. Other issues such as nesting, mating and fledging seasons, etc., may require camping areas to be closed during certain times or seasons. Thus, the term of use (three days, five days) or the time of use (season) may be limited based on the resource to be protected. These factors will have to be evaluated on a case-by-case basis. In all cases, short-term camping areas will be designated only where such use promotes resource protection and where all conflicts can be mitigated. The Lower Gila Resource Area short-term camping areas will have a specific and delineated boundary determined by the available resource. The following proposed resource factors and rules intended to control resource impacts are included in the amendment.

- Evaluate and develop short-term camping areas

Resource factors for short-term camping area development include:
-- Primitive ingress and egress routes required
-- Location on rocky or resilient soils required
-- Location outside of category I or II desert tortoise habitat required
-- Location with no cultural resource conflicts required
-- Location outside of burro herd management areas required
-- Location outside of threatened or endangered plant and animal habitats required
-- Location outside of wildernesses required
-- Location outside of areas of critical environmental concern and wild and scenic river areas required

Rules for short-term camping area development and use include:
-- Camping will be restricted to the terms and conditions of that campground
-- Camping will be restricted to designated sites
-- The camping area will be defined on the ground with fences or signs
-- Services may be provided by contract or local vendor, but the costs of services will be the responsibility of each occupant (firewood, sanitation, trash, water, etc.)
-- Camping area users must comply with all state and federal laws
-- Specific supplementary rules may be enacted as needed

The 14-day camping stay limit --
- Maintain the existing 14-day camping stay limit and

all associated policy for all public lands in the Lower Gila Resource Area as established by the Federal Register Notice (Vol. 54, No. 215, November 8, 1989).

Component Four: Special Uses and Scarce Opportunities

Aside from camping and off-highway vehicle use, activities that require a scarce resource or that pose a serious threat to public safety were identified by the public scoping meetings as activities that could benefit from increased management. Resource-dependent opportunities include areas for recreational gold panning, rockhounding, hang gliding launch sites, free climbing, aid climbing, watchable wildlife viewing, cultural interpretation, mountain biking, equestrian uses, hiking trails, ultralight aircraft areas and shooting areas.

- Plan and develop special use areas at the interdisciplinary project plan level as funding, public demand and resource conditions warrant

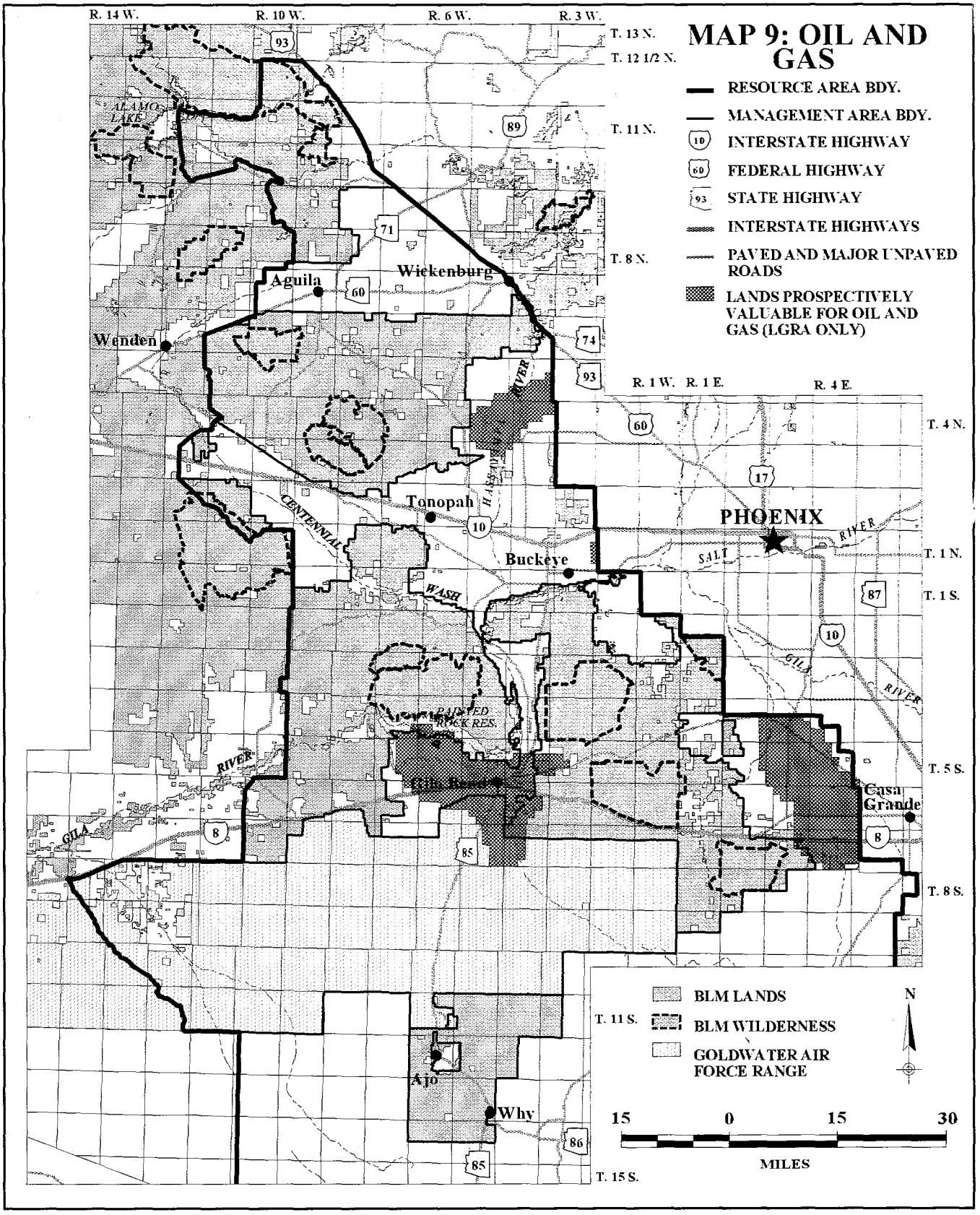
Oil and Gas Development

All lands in the planning area not withdrawn or administratively restricted would remain open to oil and gas leasing subject to terms and conditions of the standard lease form. Should exploration and/or development be pursued during the life of the amendment, special stipulations will be incorporated into the lease agreement after the results of site-specific environmental assessments. Stipulations will mitigate impacts to special status species, cultural areas and other resources susceptible to leasing-related activities.

A few areas of public land are considered to be prospectively valuable for oil and gas exploration because of accumulations of sediments more than 1,000 feet in depth (see Map 9). Due to the lack of economic development of oil or gas in wells drilled in the planning area, few lease applications are expected.

An estimated 20 leases will be permitted under this alternative during the life of the plan amendment. Of these, only one exploration well is expected; however, up to 10 wells may be drilled. The reasonable foreseeable development for one well is three acres of surface disturbance -- one acre for new roads and two acres for drill pad and support areas.

Approximately 375,000 acres of federal minerals in wildernesses are closed to oil and gas leasing. The remaining approximately 1.6 million acres of federal minerals in the planning area are open to oil and gas leasing.


MAP 9: OIL AND GAS
RESOURCE AREA BDY.
MANAGEMENT AREA BDY.
INTERSTATE HIGHWAY
FEDERAL HIGHWAY
STATE HIGHWAY
INTERSTATE HIGHWAYS
PAVED AND MAJOR UNPAVED ROADS
LANDS PROSPECTIVELY VALUABLE FOR OIL AND GAS (LGRA ONLY)
BLM LANDS
BLM WILDERNESS
GOLDWATER AIR FORCE RANGE
N
15 0 15 30
MILES
R. 14 W.
R. 10 W.
R. 6 W.
R. 3 W.
R. 1 W.
R. 1 E.
R. 4 E.
T. 13 N.
T. 12 1/2 N.
T. 11 N.
T. 8 N.
T. 4 N.
T. 1 N.
T. 1 S.
T. 5 S.
T. 8 S.
T. 11 S.
T. 15 S.
ALAMO LAKE
Aguila
Wickenburg
Wenden
Tonopah
Buckeye
PHOENIX
Casa Grande
Gila Bend
Ajo
Why
CENTENNIAL
HASSAYAMPA
RIVER
SALT
RIVER
GILA
RIVER
GILA
RIVER
PAINTED ROCK RES.
93
89
71
60
74
93
60
17
10
87
10
8
85
8
86
85

Issues

Land Tenure

The planning area, approximately 3.5 million acres including the Goldwater Range, is in Maricopa, Yuma, Pima, Pinal, Yavapai and La Paz counties (see Map 1). Maricopa County has the largest bulk of public lands within the Lower Gila Resource Area. Most of the public lands within the management areas are blocked up with scattered state and private inholdings. The most common uses for these inholdings are ranching, mining or vacant rural homesites. Isolated public land parcels exist along major highways and near communities. The major population centers are Wickenburg, Gila Bend and Ajo. Ajo, the only landlocked community, is surrounded by public lands, making community expansion difficult.

The disposal of public lands is authorized through sales and exchanges. Disposal is also accomplished through Recreation and Public Purpose Act leases and patents to local governments and nonprofit organizations. Sales, exchanges and acquisitions are authorized by the Federal Land Policy and Management Act.

Disposal tracts are generally scattered lands outside the resource management areas or lands with low resource values near communities. The Lower Gila Resource Area has leased and patented various parcels of land near communities for public purposes under the Recreation and Public Purpose Act as amended.

Wildlife and Wildlife Habitat

The Lower Gila Resource Area is composed primarily of two upland vegetation types -- creosotebush-bursage in the valley bottoms and paloverde-mixed cacti on the bajadas and slopes (Brown and Lowe 1979). Other vegetation types include mixed scrub along the washes, saltbush along the Gila River floodplain, semidesert grasslands dominated by tobosa in areas with heavy soils and small relict areas of interior chaparral on mountaintops. Riparian vegetation types along the Gila and Santa Maria rivers as well as a number of small streams include Sonoran riparian deciduous forests and woodlands, Sonoran riparian scrubland and Sonoran interior strand (Brown and Lowe 1979).

Unique Habitat

Of the six resource management areas in the Lower Gila Resource Area, five were selected in part because they represented large, contiguous blocks of public lands and are important for managing ecosystems and maintaining biodiversity. Unique habitats are those areas which contain rare vegetation, geology, soil or other features. Examples of unique habitats in the resource area include cliff faces, caves, boulder-strewn slopes, riparian vegetation types, patches of desert grassland and relict interior chaparral vegetation. These "islands" provide important habitat for rare and unique wildlife. Wildlife movement corridors existing within and between habitat types promote gene flow. This gene flow increases the health and long-term viability of populations, thus sustaining ecosystem biodiversity.

Two areas of critical environmental concern have been designated due to their unique habitats. The 9,600-acre Coffeepot Botanical Area 15 miles northeast of Ajo was designated because of its unique assemblage of rare plants, including one of the few known locations of Acuna Valley pineapple cactus and the general northern extent of organ pipe cactus. In addition, Vekol Valley, a 3,520-acre area 35 miles southeast of Gila Bend, has been designated. This patch of desert grassland contains a unique assemblage of amphibians.

Two areas of unique wildlife habitat have been identified through the BLM Fish and Wildlife 2000 National Strategy Plan Series. The Fred J. Weiler Green Belt was named and classified in 1970 primarily for upland game birds and waterfowl management, as well as public recreation. These 42,850 acres were later carried over as a Key Upland Game Bird Area in *Upland Game Bird Habitat Management "on the Rise"* (BLM 1992). Composed of scattered public land parcels along the Gila River, it includes some of the most productive white-wing and mourning dove nesting habitat in the state.

The other area, identified in *Big Game Habitat Management* (BLM 1993), is the 150,000-acre Sauceda and Sand Tank mountains key habitat area. The complex is mostly on the eastern side of the Goldwater Range and to a smaller extent on adjoining non-withdrawn public lands. It represents the southwestern extent of Coues white-tailed deer and is an area of distribution overlap for all of the Lower Gila Resource Area's big game species.

Sonoran desert tortoise habitats have been identified and classified (see Map 6). Characteristic cover sites and their abundance appear to be the best indicators of tortoise habitat. In general, Sonoran desert tortoise habitat is below 4,000 feet in elevation on boulder-strewn slopes and in washes that have cut through a caliche layer. As described in *Desert Tortoise Habitat Management on Public Lands: A Rangewide Plan* (BLM 1988), public lands in the Lower Gila Resource Area have been surveyed for tortoise habitat and in turn categorized. The criteria used to categorize tortoise habitat and the general goals for categorized habitat are included in Table 3 in Appendix C.

The Lower Gila Resource Area includes all or part of five desert bighorn sheep habitat areas, two of which are classified as Category I. The other three areas are Category II. The goal for Category I areas is to "maintain or enhance the habitat areas currently supporting viable populations of desert bighorn sheep." Likewise, the goal for Category II areas is to enhance habitat areas with remnant herds that are capable of supporting viable populations," in accordance with the *Rangewide Plan for Managing Habitat of Desert Bighorn Sheep on Public Lands* (1987).

Threatened or Endangered Species

Eight federally listed endangered species occur within the Lower Gila Resource Area (see Appendix C for additional information).

Sonoran pronghorn are found primarily on bajadas in paloverde-mixed cacti (Brown and Lowe 1979) vegetation types south and west of Ajo. The population is widely dispersed, primarily on the Organ Pipe Cactus National Monument, the Cabeza Prieta National Wildlife Refuge and the Goldwater Range. A few sightings have occurred on public lands south of Ajo and north of Interstate 8 west of Gila Bend. An international interagency core group, of which the Lower Gila Resource Area is a member, is working on recovery efforts.

Lesser long-nosed bats are migratory, nectar-feeding bats which can range as far north as Phoenix but generally remain south of Interstate 8. Although there are no known maternity colonies within the Lower Gila Resource Area, there are known colonies on the Organ Pipe Cactus National Monument, the Cabeza Prieta National Wildlife Refuge and the Papago Indian Reservation. This wide-ranging species moves between Mexico and the U.S. Recent estimates indicate as many as 150,000 bats of this species forage in southwestern Arizona on any given summer night, feeding mainly on agave and columnar cacti blooms in paloverde-mixed cacti vegetation.

Yuma clapper rails are medium-sized wading birds that forage and nest among dense vegetation along slow-moving water. They are most abundant in the salt marshes of the Colorado River delta in Mexico. In addition to the salt marshes, they occur in scattered locations in the U.S., along the Colorado River to the Havasu National Wildlife Refuge and scattered locations along the Gila River to the Phoenix area. Some of the locations along the Gila River are within the Lower Gila Resource Area.

Brown pelicans, large, fish-eating birds associated with open water, occur in the Lower Gila Resource Area in the vicinity of Painted Rocks Dam.

Bald eagles nest along the Santa Maria, Big Sandy and Bill Williams rivers near their confluence just outside the northwest boundary of the Lower Gila Resource Area. There are no known bald eagle nests within the resource area, although they traverse and possibly forage within its boundaries. Existing nests northwest of the Lower Gila Resource Area are on rock ledges along the rivers or in riparian scrubland.

Peregrine falcons are known to occur in the Lower Gila Resource Area. The birds sighted are considered to be transient and can potentially be sighted anywhere in the resource area in any vegetation type.

Gila topminnows and desert pupfish occur at only one established site in the Lower Gila Resource Area -- a spring-fed pond along the south bank of the Santa Maria River. Known as Yerba Mansa, the location is considered to be outside of the historic ranges of these two species.

In addition to the listed species, the southwestern willow flycatcher is currently proposed for listing and the Acuna Valley pineapple cactus and cactus ferruginous pygmy owl are Category I species. The southwestern willow flycatcher is a rare obligate riparian species known to occur along the Santa Maria River. Acuna Valley pineapple cactus occur within the Coffeepot Botanical Area of Critical Environmental Concern east of Ajo. The rare cactus ferruginous pygmy owl is suspected to occur in the Lower Gila Resource Area along the Gila River and on the Organ Pipe Cactus National Monument south of the resource area.

Tumamoca globeberry (*Tumamoca macdougalii*), recently downlisted to a Category III candidate species, is retained as a BLM sensitive species.

The Sonoran population of desert tortoise, a Category II species, has received considerable attention due to the listing of the Mohave desert tortoise and to petitions the U. S. Fish and Wildlife Service has received to list the Sonoran variety. In the proposed rules (Federal Register Vol. 56, No. 124, June 1991) responding to a petition to amend the List of Endangered and Threatened Wildlife and Plants to include the Sonoran desert tortoise, the U.S. Fish and Wildlife "determined that listing the Sonoran desert tortoise as threatened or endangered is not warranted at this time." As part of the rationale for this determination, the Service cited the fact that the BLM, which manages approximately 41 percent of the tortoise habitat in Arizona, has specific management policies that provide increased levels of protection for the desert tortoise. These policies are contained in *Desert Tortoise Habitat Management on Public Lands: A Range-wide Plan* and *Strategy For Desert Tortoise Habitat Management On Public Lands In Arizona* (BLM 1990).

Appendix B shows a complete list of special status species.

Big Game

Of the five big game species in the resource area, desert bighorn sheep are the most sought after and have received the most attention. Desert bighorn occur in every mountain range in the resource area with the possible exception of the Belmont and Big Horn mountains.

Desert mule deer, occurring throughout the resource area except on the roughest mountaintops, are the most common big game species in the Lower Gila Resource Area and are of the most economic importance. Second in economic importance are javelina, known to occur throughout the resource area similarly to mule deer, but in extremely low densities in the southern and western portions of the resource area.

Coues white-tailed deer, which reach their southwestern extent in the southeastern corner of the resource area, are limited to the Sauceda and Sand Tank mountains key habitat area (Unit 40A). Pronghorn antelope as a species are considered a big game species. The Sonoran subspecies -- the only antelope that occurs in the Lower Gila Resource Area -- is a federally listed endangered species and is not hunted.

Traditionally, habitat improvement for big game species in the Lower Gila Resource Area has involved the development of permanent water sources. To date, 20 high-elevation waters, primarily for desert bighorn sheep, and 90 low-elevation waters to benefit deer and javelina have been developed. Wildlife water development, including securing water rights for wildlife use, will likely continue to be a priority in the resource area. In addition to the game species for which these developments were constructed, they also provide water for a multitude of non-game species.

Wild Horses and Burros

Alamo Herd Management Area

The Alamo Burro Herd Management Area encompasses approximately 335,000 acres in Yavapai, La Paz and Mohave counties. The herd management area extends from Highway 93 north of Alamo Road along the Santa Maria River and adjacent uplands west to include Alamo Lake and the Bill Williams River to the confluence of the Bill Williams River and Centennial Wash. It includes portions of the Swansea, Rawhide, Arrastra and Aubrey Peak wildernesses. As a result of BLM district boundary changes in 1991, only the eastern portion -- about 85,000 acres -- of the herd management area is now administered by the Lower Gila Resource Area.

Riparian vegetation in the Alamo Herd Management Area is typical of the cottonwood-willow and mesquite series described by Brown and Lowe (1979). Upland vegetation is typical of the creosote-bursage and paloverde-mixed cacti series (Brown and Lowe 1979).

In 1991, the burro population of the herd management area was estimated to be approximately 300 animals, based on a Lincoln Petersen Index population census. The current population is estimated to be 500 to 600 animals, using an annual recruitment rate of 20 percent. Since 1977, more than 1,400 burros have been captured and removed from this herd management area. However, the distribution of wild burros in the region has expanded beyond the herd area boundaries defined by the relevant planning documents in the Lower Gila and Havasu resource areas.

Harquahala Herd Area

The Harquahala Burro Herd Area includes approximately 167,000 acres of Basin and Range physiographic province in western Maricopa County within the Big Horn Management Area. It contains portions of the Harquahala, Big Horn and Hummingbird Springs wildernesses. Vegetation is typical of the creosote-bursage and the paloverde-mixed cacti series described by Brown and Lowe (1979).

The herd size in the area is estimated to be 100 to 200 animals. In the early 1980s, 11 burros were captured and removed from the Harquahala Mountains. In 1989, 20 burros were trapped at the Aguila Ranch Headquarters. Recently, burros have expanded their range beyond the herd area boundary and now range south of the Big Horn and Belmont mountains to Interstate 10. Private residential and agricultural lands border the herd area on the northeast and south. Burros straying into farmfields north of Tonopah have damaged alfalfa and cotton crops. The Phoenix District BLM has received several letters and verbal requests for removal of nuisance burros in the Tonopah area.

Painted Rock Herd Area

The Painted Rock Burro Herd Area in southwest Maricopa County below the Painted Rock Dam along the Gila River contains about 10,700 acres of river bottom between the Painted Rock Dam and Oatman Mountain. Approximately 28,000 acres of the herd area are upland volcanic flow in a region known as the Sentinel Plain. Vegetation is typical of the creosote-bursage and paloverde-mixed cacti series described by Brown and Lowe (1979). This herd area is entirely within the Gila Bend Management Area.

In June 1980, specialists estimated the burro population to be 15 to 25 animals. In 1993, a herd area inspection indicated the presence of 20 to 40 animals. In 1992, five nuisance burros were removed from the herd area in response to written requests from private landowners.

Little Harquahala Herd Area

This herd area includes approximately 66,000 acres of Basin and Range physiographic province in eastern La Paz County. The vegetation is typical of the creosote-bursage and paloverde-mixed cacti series described by Brown and Lowe (1979). The herd area, administered by the Yuma District Office, BLM, includes most of the Little Harquahala Mountains and substantial private and state lease agricultural holdings along Centennial Wash.

The herd size is estimated to be between 50 and 100 animals. In 1989, the BLM, in cooperation with the Grazing Advisory Board, began removing burros from this herd area. From 1989 to 1991, approximately 75 were captured and removed. This herd area is entirely within the Yuma Resource Area, Yuma District BLM.

Goldwater Range

Burros have been observed on the Goldwater Range east of Highway 85, north and west of the Papago Indian Reservation. Vegetation is typical of the creosote-bursage and the paloverde-mixed cacti series described by Brown and Lowe (1979). Field inspections in 1992 revealed that the boundary fence between the Goldwater Range and the Reservation was down at every major drainage. Burro trails were observed in the Quiotosa, Sauceda and Midway washes leading from the Reservation to the Goldwater Range.

BLM and Air Force natural resource specialists conclude that burros occasionally found on the Goldwater Range are domestic burros from the Reservation. A representative of the Tohono O'odham Nation confirms that burros belonging to people of the Nation sometimes stray when the boundary fence is down, usually in the major drainages listed above. Other knowledgeable public comment supports the view that Reservation burros occasionally stray onto the Goldwater Range when the boundary fence has been washed out.

Recreation

Arizona is a prime tourism destination. The Arizona Statewide Comprehensive Outdoor Recreation Plan states: "The large and rapidly growing population has several implications for outdoor recreation. Local providers are hard pressed to keep up with demand for facilities and services. As private development occurs, providing and protecting open space and parkland becomes a critical issue."

The outdoor recreation plan also supplies a summary of local and statewide recreation issues which reflect the information gathered in the scoping conducted for this amendment. Identified issues

include the need for development of off-highway vehicle areas, trails and related facilities; the need for protection of cultural and natural resources; the importance of primitive camping opportunities; protection of current trails funding sources; and the need to protect our heritage resources.

Increases in visitation can be expected as residents seek to escape the city for weekend and evening recreational opportunities. Current recreation uses include long-term camping, off-highway vehicle events, jeep tours, hiking, hunting, wildlife watching and visiting historic and scenic places.

Oil and Gas Development

The planning area is within the Basin and Range physiographic province and is characterized by northwest- to southeast-trending fault-block mountain ranges separated by down-dropped sediment-filled basins. The province underwent extensive east-west crustal extension during the middle to late Tertiary period 30 million to eight million years ago. Crustal extension resulted in movement along numerous faults. Mineral resources that occur in this region include gold, silver, copper and manganese (Wilson et al., 1967; Keith et al., 1983).

No known geological structures or known geothermal resource areas are identified in the Lower Gila Resource Area. BLM Manual 3021 states that lands underlain by sedimentary rock with a thickness of 1,000 feet or more are considered to be prospectively valuable for oil and gas.

No economic occurrences of oil or gas have been encountered in wells drilled in the Lower Gila Resource Area. There are no existing leases for exploration or development for oil and gas in Lower Gila. There has been no public interest for oil and gas leasing since 1989.

The Goldwater Range is withdrawn from mineral entry and lands designated as wilderness are no longer available for mineral leasing.

Socioeconomics

The planning area includes all or part of La Paz, Maricopa, Pima, Pinal, Yavapai and Yuma counties. The Phoenix and Tucson communities, with nearly 70 percent of the state's population, are slightly east of the resource area boundaries. Other communities which may be affected include Buckeye, Casa Grande, Gila Bend, Marana, Oro Valley, Parker, Yuma, Wickenburg and Prescott. Interstate highways 8, 10 and 17 bisect the area and provide major ports of entry into and through the state. State highways 60, 85, 87, 89 and 93 are major travel routes and connect the affected communities (see Appendix F for comparison tables and additional information on socioeconomics).

Population -- County populations annually have grown on the average about five percent between 1970 and 1980, and 3.5 percent between 1980 and 1990. The city populations in total have generally followed the same growth pattern.

State projections indicate that collectively these counties will continue to average two percent annual growth between 1995 and 2020. Projections made for cities over the same period are 2.3 percent for the faster growing cities and 0.8 percent for the remaining communities.

Employment -- The distribution of employment in the planning area closely resembles the state due to the inclusion of the state's two most populated counties. Total employment, including farm and nonfarm, varies widely among counties. Approximately 99 percent of employment in the study area is from nonfarm sectors. Over the past five years, farm ownership has decreased about one percent annually, while total farm employment has remained relatively stable. Agricultural services have increased about three percent annually.

Retail, services and government sectors were the most important nonfarm employers in all the counties and in the state, providing between 62 and 71 percent of the total employment in all counties. State and local government was the main employer in all cases. These sectors grew by more than two percent annually. Transportation and public utilities, wholesale trade and agricultural services all grew about three percent or more each year.

Unemployment -- Unemployment averaged 5.5 percent each year from 1987 to 1993 in the planning area. There was substantial variation among the six counties, between five and 22 percent. The state averaged six percent annually during the same period.

Income -- Total personal income includes farm and nonfarm income, dividends, interest, rents and other payments. Farm income was approximately 18 percent of the total income in La Paz, 10 percent in Yuma and seven percent in Pinal County. The remaining three counties have less than one percent of the total income coming from agriculture.

Services, retail trade and government sectors were the major income providers in La Paz, Pima, Yavapai and Yuma counties, providing between 60 and 67 percent of the nonfarm income.

Manufacturing was in the top three sectors in Maricopa and mining and manufacturing were in the top three in Pinal County.

Chapter 4 -- Environmental Consequences

Introduction

In order to analyze the impacts of each alternative, it was necessary to make general assumptions.

-- The BLM will have the funding and work force to implement the selected alternative.
-- All management actions would comply with appropriate laws, regulations and policies.
-- Short-term impacts would occur within five years and long-term impacts would occur more than five years after the plan is implemented.
-- All impacts are long term unless otherwise noted.
-- The implementation of each alternative would involve a fully funded and staffed administrative office.
-- All disposal lands must meet the criteria for exchanges and be free of encumbrances.
-- Lands identified for disposal would go into nonfederal ownership unless otherwise noted.
-- The period of analysis for this project is 10 years. Short-term impacts are those occurring within five years of implementation.
-- Direct effects are caused by the activity and occur at the same time and place. Indirect effects are caused by the action but are later in time or further removed in distance.
-- Where data are limited, the analysis infers environmental consequences using knowledge of the area and professional expertise and judgment based on observation and analysis of conditions and responses in other areas.

No significant adverse or beneficial impacts are anticipated to air quality, water quality, prime or unique farmlands, floodplains, solid or hazardous wastes or wild and scenic rivers.

Consultation with appropriate Native American tribes and traditional leaders will be carried out to obtain comments during the planning review process as well as during later planning and environmental assessments for specific actions. This will ensure that Native American religious concerns are considered during decision making. This consultation will be done in accordance with the National Environmental Policy Act, the National Historic Preservation Act, as amended and the American Indian Religious Freedom Act of 1978. Consultation will also occur for cultural resources permitting and data recovery under the Archaeological Resources Protection Act and the Native American Graves Protection and Repatriation Act.

No Action -- Current Guidance

Land Tenure Adjustments

As needed, site-specific environmental analysis, in conformance with the National Environmental Policy Act, will be completed prior to implementation of the management actions.

Disposal -- This alternative identifies 62,260 acres of scattered isolated parcels of public lands for disposal, eliminating fragmented lands that are difficult and uneconomical to manage. Disposing of these lands into private ownership would increase the tax base of the counties involved. This disposal, by exchange, would allow for the acquisition of lands with high resource values such as riparian habitat, wilderness, wildlife habitat, cultural resources and recreational values throughout the state.

Acquisition -- This alternative identifies for acquisition approximately 10,735 acres of primarily state lands with potential for containing high natural resource values. The local tax base would not be affected by the acquisition of state lands.

Minerals

Disposal of public lands would not prevent exploration and development of minerals on these areas; however, revenue from oil and gas leasing would be lost. Revenue loss is considered nominal due to the low mineral potential and lack of oil and gas leases in the Lower Gila Resource Area.

Cultural Resources

Disposal of lands may remove some archaeological sites from public ownership. Before any National Register eligible site is removed from public ownership, appropriate mitigation measures will be developed in consultation with the State Historic Preservation Office and/or the Advisory Council on Historic Preservation and implemented prior to disposal. Acquisition of lands may bring National Register eligible cultural resources into public ownership.

Native American Religious Concerns

Disposal and acquisition of lands may or may not impact specific resources and locations utilized by Native Americans. Native Americans will be consulted to determine whether properties of traditional cultural or religious importance are present and at risk should a particular parcel of land be disposed of by the BLM. Consultation will also determine if the acquisition of particular lands will enhance utilization of these types of resources due to the added level of protection and accessibility that public ownership would bring.

Threatened or Endangered Species

No known habitat for threatened or endangered species has been identified for disposal. At this resource area-wide level of analysis, no impacts to listed species are expected.

Socioeconomics

Disposal of 62,260 acres of BLM-administered lands and acquisition of 10,735 nonfederal acres in the planning area are expected to have a negligible positive or adverse effect on the tax base of the local counties. In cases where federal lands are converted to private ownership in one county and exchanged for private lands in another county, the loss of in lieu payments would be less than two percent for any county. If federal lands are converted to valuable private lands, there may be a resulting increase in the tax base. These disposal and acquisition acres are less than one percent of the total federal acres. BLM lands represent approximately 25 percent of the total federal lands in the planning area. About two percent of the BLM acres are identified for disposal or acquisition.

Land tenure adjustment can be expected to result in more efficient management and a reduction in management costs to the BLM.

Other

No disposal lands have been identified in areas of critical environmental concern, riparian zones or wildernesses. Implementation of the no action alternative may benefit these areas if private or state inholdings are acquired.

Desert Tortoise Habitat Management

As needed, site-specific environmental analysis, in conformance with the National Environmental Policy Act, will be completed prior to implementation of the management actions.

There should be no additional negative impacts to wildlife habitat under current management. The Arizona strategy plan for desert tortoise should ensure no net loss of desert tortoise habitat. Management of tortoise habitat will constrain other public land uses in meeting the goal of no net loss of habitat.

Socioeconomics

Implementation of the no action alternative will not increase the current level of adverse impacts on livestock management in desert tortoise habitat. The potential for increased costs to the rancher will continue to occur due to changes in grazing season and/or changes in management practices. On an individual ranch basis, these monetary impacts could be severe. On a county-wide basis, these impacts are not expected to be significant.

Other

Implementation of the no action alternative would have no adverse impacts on areas of critical environmental concern, cultural resources, Native American religious concerns, wetlands, riparian areas or wildernesses.

Desert Bighorn Sheep Augmentation and Reestablishment

As needed, site-specific environmental analysis, in conformance with the National Environmental Policy Act, will be completed prior to implementation of the management actions.

Under current manual guidance and land use planning, cooperative augmentation or reestablishment of desert bighorn sheep in the resource area could only take place in the vicinity of Black Mountain. Augmentation and reestablishment could not be used as a tool to benefit other desert bighorn sheep populations in the resource area. This alternative will negatively impact the ability of desert bighorn sheep to reach their potential natural populations in the rest of the resource area.

Socioeconomics

Implementation of the no action alternative is expected to have no substantive adverse or beneficial impacts to recreation and hunting, although it would contribute to the quality of the recreation experience.

Other

Implementation of the no action alternative would have no significant adverse impacts on areas of critical environmental concern, cultural resources, Native American religious concerns, threatened or endangered species, riparian areas or wildernesses.

Wild Horse and Burro Management

Range

In the Alamo Herd Management Area, wild burros are comparable with other resource values. If habitat monitoring shows that ecological balance is threatened, appropriate changes in livestock/burro management shall be initiated. Existing or proposed range improvements shall be modified/designed to mitigate impacts on wild burros.

In the Harquahala and Painted Rock herd areas, there would be no conflicts with other resources once all burros are removed. These conflicts would likewise be eliminated within the Little Harquahala Herd Area.

Riparian

Wild burros, livestock and wildlife species often forage and water in riparian areas during the critical growing season. Habitat monitoring will indicate when ecological balance is threatened. Damage to riparian values in the Alamo Herd Management Area would be avoided by proper management of burros, livestock and wildlife. There would be no conflict in other areas.

Threatened or Endangered Species

No impacts to listed species are anticipated from current management guidelines.

Wildlife

In the Alamo Herd Management Area, wild burros are comparable with other resource values. If habitat monitoring shows that ecological balance is threatened by wildlife, the BLM may recommend appropriate wildlife management changes to the Arizona Game and Fish Department. There would be no adverse impacts in other herd areas once this alternative is fully implemented.

Wild Burros

Maintenance of viable herds in a thriving ecological balance with their habitat will benefit wild burros by protecting habitat values and avoiding overpopulation in the Alamo Herd Management Area. Wild burros would be removed from the other herd areas and made available at adoptions centers for private maintenance and care under this alternative.

Recreation

In the Santa Maria area, wild burros may reduce the quality of the recreational experience where burro droppings or noise present a nuisance to hikers or campers. However, burro watching presents an alternative form of recreation as indicated by public comment during the open house meetings for this plan amendment. The opportunity for wild burro viewing would not occur in the Harquahala, Painted Rock or Little Harquahala herd areas.

Wilderness

In the Arrastra Mountain Wilderness, some visitors may find the wilderness experience diminished by the presence of wild burros while others may find that the burros enhance the wilderness experience. Under the no action alternative, no wild burros would be present in the wildernesses in the Harquahala and Painted Rock herd areas.

Water Quality

Wild burros using riparian habitat could minimally contribute to sedimentation from trampling and elevated levels of nutrients and bacteria from animal waste in the Santa Maria River. There would be no impacts in the other herd areas.

Socioeconomics

The BLM is mandated to manage wild burros in the Alamo Herd Management Area. Costs for removal and management of burros from the remaining herd areas would be borne by the BLM. No additional beneficial or adverse impacts to local residents or communities are anticipated.

Other

Implementation of the no action alternative would have no significant adverse impacts on areas of critical environmental concern, cultural resources or Native American religious concerns.

Recreation Management

As needed, site-specific environmental analysis, in conformance with the National Environmental Policy Act, will be completed prior to implementation of the management actions.

Areas of Critical Environmental Concern

Management prescriptions for the Three Rivers Area of Critical Environmental Concern are designed to reduce adverse impacts to the area by limiting off-highway vehicle use to designated routes. The Vekol Valley Grassland and Coffeepot Botanical areas of critical environmental concern would benefit from continued closure to off-highway vehicle use.

Cultural Resources

No additional adverse impacts are anticipated from continuation of current management.

Threatened or Endangered Species

There is no indication that current extensive recreation management (the no action alternative) is impacting listed species in the resource area. There are, however, areas of concentration that are of concern. As recreational demands increase, the concerns and potential for impacts will also increase.

Wildlife

Desert tortoise would remain vulnerable to unrestricted off-highway vehicle use north of Interstate 10.

Wetlands and Riparian Zones

Adverse impacts to riparian areas are limited due to restrictions of off-highway vehicles to designated routes along the Santa Maria River and existing routes along the Gila River.

Socioeconomics

Recreation demand in the planning area is expected to increase gradually due to population changes and out-of-state visitation. Local population levels are predicted to increase two percent annually over the next 10 years. Initially, increased visitation is not anticipated to affect the business community as most of these sectors (retail, wholesale and service) are in place currently.

Implementation of the no action alternative would have additional costs to the BLM in the form of increased staff time and law enforcement to secure the 14-day stay limit and off-highway vehicle restrictions.

Other

Implementation of the no action alternative would have no significant adverse impacts on existing resources including wildernesses and Native American religious concerns.

Oil and Gas Development

As needed, site-specific environmental analysis, in conformance with the National Environmental Policy Act, will be completed prior to implementation of the management actions.

The absence of oil and gas exploration since 1989 is expected to continue. Applications for exploration wells will be analyzed and considered on a case-by-case basis. Each application will require a plan amendment before approval. Potential negative impacts are expected to be minor due to the standard mitigation guidelines for oil and gas.

Socioeconomics

Implementation of the no action alternative is expected to have no positive or negative impact on local communities. There have been no wells drilled in the past 10 years and there is a low probability that any will be drilled in the future.

Other

No direct adverse or beneficial impacts are anticipated to areas of critical environmental concern, cultural resources, Native American religious concerns, threatened or endangered species, riparian zones or wildernesses.

Cumulative Impacts

The no action alternative is the continuation of current management actions. The Lower Gila Resource Area plans would not be in conformance with current BLM policy and guidance regarding wild horses and burros, oil and gas leasing and desert tortoise habitat management. No other adverse or beneficial cumulative impacts are anticipated from the implementation of this alternative.

No significant impacts are anticipated.

Alternative 2 -- Proposed Action

No significant adverse or beneficial impacts are anticipated to air quality, water quality, prime or unique farmlands, floodplains, solid or hazardous wastes or wild and scenic rivers.

Appropriate tribes and traditional leaders will be consulted to obtain comments during the planning review process as well as during later planning and environmental assessments for specific actions. This will ensure that Native American religious concerns are considered and potential significant adverse impacts are avoided. This consultation will be done in accordance with the National Environmental Policy Act, the National Historic Preservation Act, as amended and the American Indian Religious Freedom Act of 1978. Consultation will also occur for cultural resources permitting, data recovery and inventory collections under the Archaeological Resources Protection Act and the Native American Graves Protection and Repatriation Act.

Land Tenure Adjustments

As needed, site-specific environmental analysis, in conformance with the National Environmental Policy Act, will be completed prior to implementation of the management actions.

Disposal -- The proposed action identifies 45,260 acres of scattered isolated parcels of public land for disposal. These lands are considered to be difficult and uneconomical to manage and are more suitable for development or use by private individuals or local government agencies. Disposing of these lands would result in slight increases in the county tax base for the counties in which the lands are located. Disposal of these lands by exchange would also allow for the acquisition of lands containing high resource values such as riparian habitat, wildlife habitat or recreation values throughout the state.

These lands would only be available for exchanges within the state. Disposal by exchange or sale would eliminate the fragmented public lands pattern that currently is difficult and inefficient to manage.

Acquisition -- Acquisition of private and state lands within the management areas would consolidate ownership. Lands retained and acquired would form a more manageable land pattern. Consolidation of lands would improve management efficiency and thus reduce management costs. The local tax base should not be affected by acquisition of state lands.

Minerals

Disposal of public lands would not prevent exploration and development of minerals on these

areas; however, revenue from oil and gas leasing would be lost. Revenue loss is considered nominal due to the low mineral potential and lack of oil and gas leases in the Lower Gila Resource Area.

Cultural Resources

Disposal of lands may remove some archaeological sites from public ownership. Before any National Register eligible site is removed from public ownership, appropriate mitigation measures will be developed in consultation with the State Historic Preservation Office and/or the Advisory Council on Historic Preservation and implemented prior to disposal. Acquisition of lands may bring cultural resources into public ownership.

Native American Religious Concerns

Disposal and acquisition of lands may or may not impact specific resources and locations utilized by Native Americans. Native Americans will be consulted to determine whether properties of traditional cultural or religious importance are present and at risk should a particular parcel of land be disposed of by the BLM. Consultation will also determine if the acquisition of particular lands will enhance utilization of these types of resources due to the added level of protection and accessibility that public ownership would bring.

Threatened or Endangered Species

No known habitat for threatened or endangered species has been identified for disposal. At this resource area-wide level of analysis, no impacts to listed species are expected.

Socioeconomics

Disposal of 45,260 acres of BLM-administered lands and acquisition of important nonfederal lands in the planning area are expected to have a negligible positive or adverse effect on the tax base of the local counties. In cases where federal lands are converted to private ownership in one county and exchanged for private lands in another county, it would impact the individual counties. BLM lands represent about 25 percent of the total federal lands in the planning area. Approximately two percent of the BLM acres are identified for disposal. These disposal acres are less than one percent of the total federal acres.

Land tenure adjustment can be expected to result in more efficient management and a reduction in management costs to the BLM.

Other

No disposal lands have been identified in areas of critical environmental concern, riparian zones or wildernesses. Implementation of the proposed action could have beneficial impacts due to acquisition of important resource values.

Desert Tortoise Habitat Management

As needed, site-specific environmental analysis, in conformance with the National Environmental Policy Act, will be completed prior to implementation of the management actions.

There should be few negative impacts to wildlife habitat under this alternative. The Arizona strategy plan for desert tortoise should ensure no net loss of desert tortoise habitat. In addition, the decision to restrict boulder sale applications to areas outside of tortoise habitat will further reduce negative impacts to the species. Management of tortoise habitat will constrain other public land uses, identified in the proposed action, in meeting the goal of no net loss of habitat.

Socioeconomics

Implementation of the proposed action alternative may have adverse impacts on livestock management in desert tortoise habitat. Increased costs to the rancher may occur due to changes in the grazing season and/or changes in management practices.

While these impacts are not expected to be significant to the county or study area, they could be an extreme hardship on the individual rancher. There are also increased costs to the BLM for additional monitoring and research.

Desert Bighorn Sheep Augmentation and Reestablishment

As needed, site-specific environmental analysis, in conformance with the National Environmental Policy Act, will be completed prior to implementation

of the management actions.

Under current manual guidance and land use planning, cooperative augmentation or reestablishment of desert bighorn sheep in the resource area could take place throughout the resource area following site-specific analysis on a case-by-case basis. Augmentation and reestablishment could be used as a tool to benefit other desert bighorn sheep populations in the resource area. This alternative will benefit the ability of desert bighorn sheep to reach their potential natural population levels.

Socioeconomics

Implementation of the proposed action is expected to have no substantial adverse or beneficial economic impacts to recreation or hunting. It would add to the quality of the recreation experience.

Other

Implementation of the proposed action alternative would have no significant adverse impacts on areas of critical environmental concern, cultural resources, Native American religious concerns, threatened or endangered species, riparian areas or wildernesses.

Wild Horse and Burro Management

As needed, site-specific environmental analysis, in conformance with the National Environmental Policy Act, will be completed prior to implementation of the management actions.

For impact analysis, it may be assumed that proper management of a species in thriving ecological balance with its habitat precludes habitat degradation.

Range

Wild burros are comparable with other resource values. If habitat monitoring shows that thriving ecological balance is threatened, appropriate management actions shall be initiated. Existing or proposed range improvements shall be modified/designed to mitigate impacts on wild burros in herd areas or herd management areas.

Riparian

Wild burros, livestock and wildlife often forage and water in riparian areas during the critical growing season. Habitat monitoring would indicate ecosystem health. Damage to riparian values would be avoided by proper management of wild burros, livestock and wildlife species based on the results of interdisciplinary monitoring studies.

Threatened or Endangered Species

No adverse impacts to listed species are anticipated from implementation of the proposed action.

Wildlife

Wild burros are comparable with other resource values. If habitat monitoring shows that thriving ecological balance is threatened by wildlife, the BLM may recommend wildlife management changes to the Arizona Game and Fish Department. Also, wildlife habitat developments shall be modified/designed to mitigate negative impacts on wild burro populations in herd areas and herd management areas where necessary.

Wild Burros

Maintenance of viable herds in a thriving ecological balance with their habitat will benefit wild burros by protecting habitat values and avoiding overpopulation.

Recreation

Wild burros may reduce the quality of the recreational experience where burro droppings and noise present a nuisance to hikers or campers. However, burro watching presents an alternative form of recreation as indicated by public comment during the open house meetings for this plan amendment.

Wilderness

Some visitors may find the wilderness experience diminished by the presence of wild burros while others may find that wild burros enhance the wilderness experience.

Water Quality

Wild burros using riparian habitat could contribute, minimally, to sedimentation from trampling and elevated levels of nutrients and bacteria from animal waste.

Socioeconomics

Implementation of the proposed action alternative is expected to have negligible negative or positive impacts to local residents or communities. BLM management costs for monitoring, research and inventory will replace those mentioned under the no action alternative. Management changes and modification/redesign of range and wildlife facilities could result in increased costs for these facilities.

Other

Implementation of the proposed action would have no adverse or beneficial impacts on areas of critical environmental concern, cultural resources or Native American religious concerns.

Recreation Management

As needed, site-specific environmental analysis, in conformance with the National Environmental Policy Act, will be completed prior to implementation of the management actions.

Component One: Off-Highway Vehicle Designation and Management

Air Quality -- North of Interstate 10, the limitation to existing routes may reduce dust from cross-country travel. South of Interstate 10, air quality would be unchanged due to current limitations to existing routes.

Areas of Critical Environmental Concern -- Management prescriptions for the Three Rivers Area of Critical Environmental Concern are designed to reduce adverse impacts to the area by limiting off-highway vehicle use to designated routes. No adverse impacts are expected from the limitation to designated routes in the Vekol Valley Grassland and Coffeepot Botanical areas of critical environmental concern.

Off-highway vehicle activities in or near areas of critical environmental concern could have detrimental impacts to riparian and other botanical resources. The impacts to a specific area of critical environmental concern would be dependent on the resource concerned.

Cultural Resources -- North of Interstate 10, limiting off-highway vehicle use to existing routes will make many cultural properties less vulnerable to accidental or intentional damage. South of Interstate 10, potential adverse or beneficial impacts to cultural resources would remain the same due to current limitations to existing routes.

Native American Religious Concerns -- Impacts to identified traditional properties would be similar to the impacts to cultural resources.

Threatened or Endangered Species -- North of Interstate 10, the limited designation will allow the BLM to manage off-highway vehicle use in a manner that reduces surface disturbance and concentration, diminishing the potential to impact listed species.

Wetlands and Riparian Zones -- Adverse impacts to riparian areas are limited due to restrictions of off-highway vehicles to designated routes along the Santa Maria River and existing routes along the Gila River.

Component Two: Designation of Special Recreation Management Areas

At this broad level of planning, no direct adverse impacts are anticipated to existing resources from special recreation management area designation. Beneficial impacts may result from increased management attention.

Component Three: Development, Maintenance and Management of Camping Facilities and Stay Limits

At this broad level of planning, no significant or direct adverse impacts are anticipated from implementation of the proposed action.

In general terms, critical resources should benefit from management of camping facilities and stay limits. Concentrated use and long-term stays would be limited to specific areas appropriate for these uses.

The remaining lands would benefit from enforcement of the 14-day stay limit and dispersed recreation use.

Indirect adverse impacts result from making lands available for concentrated uses. The types of impacts may be identified but not quantified as specific locations have not been selected. Air quality may be slightly decreased near access routes and facilities. Implementation of the resource factors for camping facilities will minimize adverse impacts to threatened or endangered species, riparian zones, areas of critical environmental concern and cultural resources.

No additional adverse or beneficial impacts are anticipated to wildernesses or Native American religious concerns from implementation of the proposed action.

Component Four: Special Uses and Scarce Opportunities

At this broad level of planning, no significant or direct adverse impacts are anticipated from implementing the proposed action.

In general terms, critical resources should benefit from management of special recreation uses. These activities would be limited to specific areas appropriate for these uses. Indirect adverse impacts may result from making some lands available for special activities. The types of impacts may be identified but not quantified as specific locations have not been selected.

No effects are anticipated to threatened or endangered species, cultural resources, areas of critical environmental concern, riparian zones, wildernesses or Native American religious concerns from implementation of the proposed action.

Socioeconomics -- Recreation demand in the planning area is expected to change gradually due to population changes and out-of-state visitation. Local population levels are expected to increase two percent annually over the next 10 years. Increased visitation is not anticipated to affect the business community in the short term as most of these sectors (retail, wholesale and service) are in place currently. Over the long term, some increase in income and employment can be expected from increased recreation use.

Development of long-term camping facilities can be expected to provide a continued cash flow to neighboring communities throughout the winter season. The level of income provided is dependent on the size of the facility and the length of use. Additional beneficial impacts to local communities from off-highway vehicle limits, special management area designations and authorizations for special uses are expected to be negligible on the study area; however, individual communities could be positively impacted.

Additional management costs for development of facilities, monitoring and resource protection will be borne by the BLM.

Other -- Implementation of the proposed action alternative would have no significant adverse impacts on existing resources including wildernesses and Native American religious concerns.

Oil and Gas Development

As needed, site-specific environmental analysis, in conformance with the National Environmental Policy Act, will be completed prior to implementation of the management actions.

The development of 10 exploration wells will result in 30 acres of surface disturbance under this alternative. Over the entire resource area, this is considered to be an insignificant amount.

Impacts of normal oil and gas exploration well drilling were analyzed and found to be acceptable.

The Goldwater Range is withdrawn from mineral entry and wildernesses are no longer available for mineral leasing.

Socioeconomics

The implementation of the no action alternative is expected to have no positive or negative impact on local communities. There have been no wells drilled in the past 10 years and no more than 10 are anticipated in the future.

Other

Implementation of the proposed action should have no beneficial or adverse impacts on areas of critical environmental concern, cultural resources, Native American religious concerns, threatened or endangered species or riparian zones.

Cumulative Impacts

The management changes identified in the proposed action do not represent a significant deviation from current management guidelines. The

proposed action alternative will provide the opportunity for facilitated recreation, consistent off-highway vehicle designations and improved management efficiency. It also brings the Lower Gila Resource Area planning documents into conformance with current BLM policy and guidance. Some slight beneficial impact to Arizona is expected from improved recreation and resource management. Indirectly, the additional knowledge base will also improve due to additional monitoring, research and inventory. No other adverse or beneficial cumulative impacts are anticipated.

Chapter 5 -- Consultation and Coordination

Scoping

Approximately 190 letters were sent to elected representatives, agencies, organizations and individuals announcing the start of amendment planning with a series of public meetings.

Ten scoping meetings were held in eight cities between late February and early April 1994. The meetings were held in Ajo on February 28, Gila Bend on March 1, Wickenburg and Sun City West on March 2, Buckeye on March 3, Phoenix on March 7, Why (by request) on March 18, Gila Bend on March 24, Sun City West on March 25 and Tucson (by request) on April 5. Recreation management was the major concern raised by the public. Other concerns included land tenure, wild burros and oil and gas leasing.

A total of 51 letters and phone calls were received during the formal 30-day comment period. Again, most comments and suggestions were about recreation, ranging from the development of many types of facilities to maintaining the status quo. Wild burros and land tenure adjustments received the next largest amount of comments. All comments about burros either said to maintain them or remove them. Most comments about lands said not to sell the public lands, but many were favorable to exchange or disposal.

Several letters received after the formal comment period requested that the Coffeepot Area of Critical Environmental Concern off-highway vehicle designation of "closed" be changed to "limited." About 270 preprinted postcards, sponsored by the Ajo Traditional Land Use Council, urged that:

-- vehicle access in the Coffeepot should be changed from "closed" to "limited vehicle use,"
-- the 14-day camping limit should be enforced on BLM lands surrounding Ajo,
-- wild burros on BLM lands surrounding Ajo should be closely controlled and
-- no new access restrictions be imposed in the Ajo area.

A telephone call from the chairman of the Hickiwan District of the Tohono O'odham Nation and two letters from ranch workers stated that reservation burros have wandered onto the Goldwater Range due to downed sections of fence.

Meetings were held with representatives of Region IV of the Arizona Game and Fish Department and members of the Ajo Traditional Land Use Council.

As a result of scoping, transplanting desert bighorn sheep was identified as an issue. Since reestablishment and augmentation should be made a part of the land use planning process as stated in the BLM manual, it was added to the amendment as an appropriate issue.

Due to public interest generated during scoping, off-highway vehicle designation for the Coffeepot Area of Critical Environmental Concern is addressed in this amendment rather than in a subsequent special recreation management area plan.

Agencies, Organizations and Elected Representatives Who Will Receive the Draft Amendment

Indian Nations, Tribes and Councils

Ak-Chin Indian Community
Colorado River Indian Tribes
Gila River Indian Community
Hopi Tribal Council
Salt River Pima-Maricopa Community Council
Tohono O'odham Nation
Yavapai-Prescott Tribe

Federal Agencies

Department of Agriculture
    Forest Service
    Soil Conservation Service
Department of Defense
    Air Force

Army Corps of Engineers
Department of Energy
Western Area Power Administration
Department of the Interior
Bureau of Indian Affairs
Bureau of Reclamation
Fish and Wildlife Service
National Park Service
Department of Justice
Immigration and Naturalization Service
Environmental Protection Agency

Arizona State Agencies

Arizona Commission of Agriculture and Horticulture
Arizona Commission on the Environment
Arizona Department of Agriculture
Arizona Department of Environmental Quality
Arizona Department of Mines and Mineral Resources
Arizona Department of Transportation
Arizona Department of Water Resources
Arizona Game and Fish Department
Arizona Geological Survey
Arizona State Clearinghouse
Arizona State Historic Preservation Office
Arizona State Land Department
Arizona State Mine Inspector
Arizona State Parks

Local Agencies

City of El Mirage
City of Goodyear
City of Surprise
La Paz County
Maricopa County Board of Supervisors
Maricopa County Environmental Quality and Community Services Agency
Maricopa County Flood Control District
Maricopa County Parks and Recreation Department
Maricopa County Planning and Development Department
Maricopa County Transportation Department
Phoenix Parks, Recreation and Library Department
Pinal County Board of Supervisors
Pima County Parks and Recreation Department
Town of Buckeye
Town of Gila Bend
Town of Wickenburg
Town of Youngtown
Yavapai County Board of Supervisors
Yavapai County Planning and Zoning Department
Yuma County Planning and Zoning Department

Interest Groups

Ajo District Chamber of Commerce
Ajo Solid Waste Committee
Ajo Traditional Land Use Council
American Camping Association
Arizona Archaeological Society
Arizona Cattle Growers Association
Arizona Desert Bighorn Sheep Society
Arizona Desert Racing Association
Arizona Mining Association
Arizona Mining and Prospecting Association
Arizona Mountaineering Club
Arizona Parks and Recreation Association
Arizona Public Service Company
Arizona Rifle and Pistol Association
Arizona Roamers
Arizona State Association of Four-Wheel-Drive Clubs, Inc.
Arizona Wilderness Coalition
Arizona Wool Producers Association
Blue Ribbon Coalition
Copper State 4-Wheelers
Cyprus Bagdad Copper Company
Defenders of Wildlife
Desert Donkey and Mule Club
Desert Tortoise Council
El Paso Natural Gas Company
Gila Bend Natural Resource Conservation District
Huachuca Hiking Club
International Society for the Protection of Mustangs and Burros
International Sonoran Desert Alliance c/o Sonoran Institute
Maricopa Audubon Society
Motorola 4-Wheelers
The Nature Conservancy
People for the West
Phelps Dodge Corporation
Sahuaro 4X4 Club
Salt River Project
Sierra Club
Sonoyta Camara de Commercio
Southern Arizona Hiking Club
Southwest Minerals Explorers Association
Tonopah Valley Association
Western Pima County Community Council

Why, Ajo, Lukeville Development, Inc.
Why Utility Company, Inc.
Wickenburg Natural Resource Conservation District
Wild Horse Organized Assistance
The Wildlife Society
Yavapai Cattle Growers

Elected Representatives

Federal

Senator Dennis DeConcini
Senator John McCain
Representative Sam Coppersmith
Representative Karan English
Representative Jim Kolbe
Representative Jon Kyl
Representative Ed Pastor
Representative John Rhodes III
Representative Bob Stump

State

Governor Fife Symington
Senator Janice Brewer
Senator Carol Springer
Representative Ben Benton
Representative Dave Carson
Representative Robert McLendon

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GLOSSARY

Activity Plan: A detailed, specific plan for management of a single resource program or plan element undertaken as necessary to implement the more general resource management plan decisions.

Allotment: An area of land assigned to one or more livestock operators for grazing livestock. Allotments generally consist of public lands but may also include state-owned and private lands. An allotment may include one or more separate pastures. Livestock numbers and seasons of use are specified for each allotment.

Allotment management plan: A livestock grazing management plan for a specific allotment based on multiple-use resource management objectives. It considers livestock grazing in relation to other uses of the range and in relation to renewable resources -- watershed, vegetation and wildlife. It also establishes the seasons of use, the number of livestock to be permitted on the range and the rangeland developments needed.

Alternatives: Different ways of addressing the planning issues and management activities considered in the planning process. These serve to provide the decisionmaker and the public a clear basis for choices among options.

Area of critical environmental concern: An area of public lands where special management attention is required to protect important historic, cultural or scenic values, fish and wildlife or natural systems or processes or to protect life and safety from natural hazards.

Backcountry byways: Backcountry roads and vehicle trails that the BLM has designated and promotes for their high scenic and public interest values. As part of the National Scenic Byway System, back country byways vary from single-track bike trails to narrow, low-speed, paved roads.

Bajada: A broad, gently inclined slope or outwash plane at the foot of a mountain, formed by the coalescing of alluvial fans.

Block (verb)/**blocked up** (adjective): v. To consolidate like things, such as landownership, e.g., the BLM acquires privately owned acreage in the middle of a large area of public land.

Categories I, II and III: Classification of desert tortoise habitat based upon importance of habitat, resolvability of conflicts, density of tortoises and stability of populations (see Table 3 in Appendix C).

Category 1: Species for which the Fish and Wildlife Service has sufficient (but not necessarily complete) information on vulnerability and threats to support a proposal to list them as threatened or endangered.

Category 2: Species for which the Fish and Wildlife Service has insufficient information to support a proposed rule to add the species to the threatened or endangered species list. Further biological research and field study will usually be needed to change the status of species in Category 2.

Category 3A: Species for which the Fish and Wildlife Service has persuasive evidence of extinction.

Category 3B: Species that are considered to be invalid. Such species could be reevaluated in the future on the basis of subsequent research.

Category 3C: Species that are more abundant or widespread than previously believed and/or not subject to any identifiable threat. Should further research or changes in land use indicate decline in any of these species, they may be reevaluated for possible inclusion in category 1 or 2 or listed as threatened or endangered.

Closed area: An area where off-highway vehicle use or camping is prohibited. Use of off-highway vehicles in closed areas may be allowed for certain reasons; however, such use shall be made only with the approval of the authorized officer.

Community: A group of plants and animals living together in a common area and having close interactions.

Cultural property: Any definite location of past human activity, habitation or use identified through a field inventory, historical documentation or oral

evidence. This term may include archaeological or historic sites, structures and places and sites or places of traditional cultural or religious importance to a specific group. whether or not represented by physical remains. Cultural properties are managed by the system of inventory evaluation and protection and use.

Cultural resources: A broad, general term for any cultural property (as defined above) or any traditional lifeway value. A traditional lifeway value is an abstract, nonmaterial idea important in maintaining a cultural group's traditional religious beliefs, cultural practices or social interaction. Unlike cultural properties, traditional lifeway values are not closely identified with definite locations.

Desired plant community: One that produces the kind, amount and proportions of vegetation needed to meet or exceed the resource management plan/activity plan objective established for the site. It must be within the site's capability to produce the desired vegetation through natural succession, management intervention or both.

Disposal: A transaction that leads to the transfer of title of public lands from the federal government.

Ecological site: A distinctive kind of land that differs from other kinds of lands in its ability to produce a characteristic natural plant community. A ecological site is the product of all the environmental factors responsible for its development. It is capable of supporting a native plant community typified by an association of species that differs from that of other ecological sites in the kind or proportion of species or in total production.

Economic impact: The change, positive or negative, in economic conditions (including distribution and stability of employment and income in affected local and regional economies) that directly or indirectly result from an activity, project or program.

Ecosystem: A complex, self-sustaining natural system which includes living and nonliving components of the environment and the circulation of matter and energy between organisms and their environment.

Endangered: Any species in danger of extinction throughout all or a significant portion of its range.

Environmental assessment: The procedure for analyzing the impacts of some proposed action on a given environment and the documentation of the analysis. It is similar to an environmental impact statement but is generally smaller in scope. An environmental assessment maya be preliminary to an environmental impact statement.

Environmental consequence: A change in the human environment caused by an act of man. The change should be perceptible, measurable and relatable through a change agent to a proposed action or alternative. Consequences are the same as impacts and effects. In the Council on Environmental Quality regulations, consequences are caused by a proposed action (40 CFR 1508.7; 1508.14).

Environmental impact statement: An analytical document prepared for use by decision makers to weigh the environmental consequences of a potential decision. It should accurately portray potential impacts to the environment of a particular course of action and its possible alternatives.

Ephemeral: A stream that flows only briefly after a storm or during snowmelt.

Extensive recreation management area: An area where recreation is unstructured and dispersed and where minimal recreation facilities are required. It provides recreation visitors the freedom of choice with minimal regulatory constraint.

Fair market value: The amount in cash, or in terms reasonably equivalent to cash, for which in all probability a leasable mineral deposit would be sold or leased by a knowledgeable owner willing but not obligated to sell or lease to a knowledgeable purchase who desires but is not obligated to buy or lease.

Federal Land Policy and Management Act of 1976: Public Law 94-579, which gives the BLM legal authority to establish public land policy, to establish guidelines for administering such policy and to provide for the management, protection, development and enhancement of the public lands.

Floodplain: The nearly level lowland that borders a stream or river and is subject to flooding.

Forage: Vegetation of all forms available for animal consumption.

Goal: The desired state or condition that a resource management policy or program is designed to achieve. It is usually not quantifiable and may not have a specific date by which it is to be completed. Goals are the bases from which objectives are developed.

Grazing system: The rotation of livestock through an allotment, designed to accomplish management objectives.

Habitat: A specific set of physical conditions that surround a single species, a group of species or a large community. In wildlife management, the major components of habitat are considered to be food, water, cover and living space.

Habitat management plan: A written and officially approved plan for a specific geographic area which identifies wildlife habitat and related objectives, establishes the sequence of actions for achieving objectives and outlines procedures for evaluating accomplishments.

Hazardous waste: Any substance that poses a threat to the health or safety of persons or the environment, including any material that is toxic, ignitable, corrosive or radioactive.

Herd management area plan: A plan for the management of a geographic area used by wild horses or burros. It outlines details of a burro or horse capture plan, adoption program and long-term management of populations.

Interdisciplinary: A cooperative, interactive consultation and analysis approach among individuals representing two or more disciplines. Such an approach should ensure the integrated use of the natural and social sciences and the environmental design arts in planning and in decision making [National Environmental Policy Act 102(2)(A)].

Isolated parcels: Those parcels of public lands surrounded by nonfederal lands.

Issue: See **Planning issue.**

Land and Water Conservation Fund: A federally maintained fund used for acquiring and developing federal outdoor recreation resources and for assisting states in planning, acquiring and developing land and water areas and facilities for outdoor recreation.

Leasable minerals: Minerals such as coal, oil shale, oil and gas, phosphate, potash, sodium, geothermal resources and all other minerals that may be acquired under the Mineral Leasing Act of 1920, as amended.

Limits of acceptable change: A system in which the amount of allowable change of physical and social conditions is defined; the management actions needed to prevent further change are identified and monitoring and evaluating procedures are established.

Limited area: An area restricted at certain times, in certain areas and/or to certain vehicular use. These restrictions may be of any type, but can generally be accommodated within the following type of categories: numbers of vehicles; types of vehicles; time or season of vehicle use; permitted or licensed use only; use on existing roads and trails; use on designated roads and trails; and other restrictions.

Management framework plan: A planning decision document prepared before the Federal Land Policy and Management Act of 1976 came into effect.

Mechanized travel: Travel by way of any off-highway vehicle for recreation purposes; includes mountain bikes, ultralights, hang gliders and mechanized equipment designed to provide a mechanical advantage.

Mineral entry: The location of mining claims by an individual to protect the individual's right to a valuable mineral.

Mineral estate: Mineral or subsurface ownership.

Mineral material: Includes sand, building and decorative stone, gravel, pumice, clay or petrified wood.

Mining plan of operation: A plan for mining exploration and development that an operator must submit to the BLM for approval when more than five acres a year will be disturbed or when an operator plans to work in an area of critical environmental concern, wilderness study area or wilderness. A mining plan of operation must document in detail all actions the operator plans to take from exploration

through reclamation and present all information needed for preparing a National Environmental Policy Act document.

Mitigation: The lessening of a potential adverse effect by applying appropriate protection measures, the recovery of cultural resource data or other measures.

Mitigation measures: Methods used (often included as stipulations or special conditions attached to a lease) to reduce the significance of or eliminate an anticipated environmental impact.

Monitoring: The orderly collection and analysis of date to evaluate progress in meeting resource management objectives.

Movement corridors: Lands needed for maintaining or reconnecting natural habitat islands to facilitate traditional movement, migration, genetic interchange and population expansion of native wildlife species.

Multiple-use: Management of public lands and their resources so that they are used in the combination best meeting the present and future needs of the American people. Relative resource values are considered, not necessarily the combination of uses that will give the greatest potential economic return or the greatest unit output.

National Environmental Policy Act: A federal law that establishes policy, sets goals and provides means to ensure that environmental information is available to public officials and citizens before decisions are made and actions are taken.

National Historic Preservation Act: The primary federal law providing for the protection and preservation of cultural resources. Making it a national policy to preserve cultural heritage, the National Historic Preservation Act established the National Register of Historic Places, the Advisory Council on Historic Preservation and State Historic Preservation officers.

National Register of Historic Places: A list of districts, sites, buildings, structures and objects significant in American history, architecture, archaeology and culture maintained by the Secretary of the Interior; expanded as authorized by Section 2(b) of the Historic Sites Act of 1935 (16 U.S.C. 462) and Section 101(a)(1)(A) of the National Historic Preservation Act.

Off-highway vehicle: See mechanized travel

Off-highway vehicle designations:

Open: Designated areas and trails where off-highway vehicles may be operated (subject to operating regulations and vehicle standards set forth in BLM Manual 8341 and 8343).
Limited: Designated areas and trails where the use of off-highway vehicles is subject to restrictions, such as limiting the number or type of vehicles allowed, dates and times of use (seasonal restrictions), limiting use to designated or existing roads and trails. Combinations of restrictions are possible, such as limiting use to certain types of vehicles during certain times of the year.
Closed: Designated areas, roads and trails where the use of off-highway vehicles is permanently or temporarily prohibited. Emergency use of vehicles is allowed.

Patent: A government instrument (or deed) that conveys legal title for public lands to an individual or another government entity.

Planning criteria: The standards of rules and other factors developed by the manager and interdisciplinary team for their use in forming judgments about decision making, analysis and data collection during planning.

Proper functioning condition (riparian): One which maintains a stable flow regime, can absorb and dissipate energy of floodwaters, has a stable vegetative cover of all ages of plants (representing all species appropriate for the area), filters out sediment from the water, improves water quality and provides food, water, shade and cover for wildlife.

Public participation: Part of the BLM's planning system that provides the opportunity for citizens as individuals or groups to express local, regional and national perspectives and concerns in the rule making, decision making, inventory and planning processes for public lands. This includes public meetings,

hearings or advisory boards or panels that may review resource management proposals and offer suggestions or criticisms for the various alternatives considered.

Range improvement: An authorized activity or program on or relating to rangelands which is designed to improve production of forage, change vegetation composition, control patterns of use, provide water, stabilize soil and water conditions and provide habitat for livestock, wild horses and burros and wildlife. The term includes, but is not limited to, structures, treatment projects and use of mechanical means to accomplish the desired results.

Recreation management area: An area requiring explicit recreation management to achieve the BLM's recreation objectives and to provide specific recreation opportunities. The resource management plan identifies recreation management areas and defines management objectives.

Recreation opportunity spectrum: A classification system for inventory, planning and management of recreation resources. It divides land into six classes ranging from urban to primitive.
Rehabilitation: Restoration of damaged or lost environment as nearly as possible to its original state.

Resource area: An administrative subdivision of a BLM district.

Resource management plan: A written land use plan that outlines the BLM's decisions and strategies for management of the resources in a particular area, replacing the management framework plan in the BLM's planning system.

Right-of-way: The legal right for use, occupancy or access across land or water areas for a specified purpose or purposes. Also, the lands covered by such a right.

Riparian habitat: Lands directly influenced by permanent water and having visible characteristics, e.g., vegetation, reflective of the presence of permanent water, i.e., surface and/or subsurface.

Salable minerals: Minerals such as common varieties of sand, stone, gravel, pumicite and clay that may be acquired under the Materials Act of 1947, as amended.

Scenic corridor: The area encompassing the foreground-middleground zone along roadways.

Scoping: An early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action. It may involve public meetings, field interviews with representatives of agencies and interest groups, discussions with resource specialists and managers, written comments in response to news releases, direct mailings and articles about the proposed action and scoping meetings.

Sediment: Soil or mineral material transported by water and deposited in streams or other bodies of water.

Semi-primitive motorized recreation: Those recreation opportunities available in backcountry areas with natural settings and having little or no development, where visitor use is relatively low and few visitor controls are apparent and in which travel by motorized vehicle is permitted.

Sensitive species (plants and animals): Species occurring on public lands which require special management attention to protect it and the important resources or other natural systems or processes on which it depends.

Special recreation management area: An area requiring explicit recreation management to achieve the BLM's recreation objectives and to provide specific recreation opportunities.

Special status species: Wildlife and plant species either federally listed or proposed for listing as endangered or threatened, state-listed or BLM-determined priority status.

Stipulation: A requirement, usually dealing with protection of the environment, that is made a part of a lease, grant or other authorizing document.

Threatened species: Any plant or animal species that is likely to become an endangered species within the foreseeable future throughout all or a significant part of its range.

Trail: As related to off-highway vehicle designations, a single track route designated and constructed for vehicle use. It does not include game trails, cow trails, etc.

Utilization: The proportion or degree of a current year's forage production that is consumed or destroyed by animals (including insects). It may refer to either a single plant species, a group of species or the vegetation as a whole. Utilization is synonymous with use.

Vegetation type: A plant community with distinguishable characteristics.

Watershed: All land and water within the confines of a drainage divide.

Wetlands: Lands including swamps, marshes, bogs and similar areas such as wet meadows, river overflows, mud flats and natural ponds.

Wilderness: An area officially designated as wilderness by Congress. Wildernesses will be managed to preserve wilderness characteristics and shall be devoted to the public purposes of conservation and recreational, scenic, scientific, educational and historical uses.

Wildlife: All species of mammals, birds, fish, amphibians and reptiles found in a wild state.

Withdrawn lands: Withholding an area of federal land from settlement, sale, location or entry under some or all of the general land laws in order to maintain other public values in the area or reserving the area for a particular public purpose or program; transferring jurisdiction over an area of federal lands from one department, bureau or agency to another department, bureau of agency.

Bibliography

Arizona Bureau of Economic Analysis. 1992a. Farm income and expenses. Regional Economic Information System. Phoenix.

--- 1992b. Full and part-time employees by major industry for counties and metropolitan areas. Regional Economic Information System. Phoenix.

Arizona Department of Economic Security, Research Administration. 1993. Arizona Population Projections July 1, 1993 to July 1, 2020. Population Statistics Unit. Phoenix.

--- 1994. Special Unemployment Report for January Through December, 1987 to 1993. Labor Market Information, Research and Analysis Labor Force Information. Phoenix.

Arizona Department of Revenue. 1993. Abstract of the Assessment Roll. Phoenix.

Arizona State Parks. 1994. Arizona Statewide Comprehensive Outdoor Recreation Plan -- Draft. Phoenix.

Brown, D.E., C.H. Lowe and C.P. Pase. 1979. A digitized classification system for the biotic communities of North America, with community (series) and association examples for the Southwest. J. Arizona Acad. Sci. 14 (Suppl):1-16.

Keith, S.B., D.E. Gest and E. DeWitt. 1983. Metallic Mineral Districts of Arizona. Map 18 (1:1,000,000). Arizona State Bureau of Geology and Mineral Technology. Phoenix.

Mayes, Horace M., and Thomas Archer. 1982. Arizona Cattle Ranches on Public Land. College of Agriculture, University of Arizona. Tucson.

Stipp, T.F., and R. Docker. 1987. Lands Classified Known to be Valuable and Prospectively Valuable for Oil and Gas (1:500,000 map). BLM Arizona State Office, Phoenix.

U.S. Department of Commerce, Bureau of Census. 1978a. Census of agriculture. Arizona State and County Data. Washington, D.C.

--- 1987b. Census of retail trade. Geographic Area Series, Arizona. Washington, D.C.

--- 1987c. Census of service industries. Geographic Area Series, Arizona. Washington, D.C.

--- 1987d. Census of wholesale trade. Geographic Area Series, Arizona. Washington, D.C.

--- 1987b. Census of population. Geographic Area Series, Arizona. Washington, D.C.

--- 1990. Census of population. General Population Characteristics Series, Arizona. Washington, D.C.

U.S. Dept. of the Interior, Bureau of Land Management. 1981. Planning for Recreation Resources. Manual 8320. Washington, D.C.

--- 1983. Lower Gila North Management Framework Plan. Phoenix District Office. Phoenix.

--- 1987. Rangewide Plan for Managing Habitat of Desert Bighorn Sheep on Public Lands.

--- 1988a. Desert Tortoise Habitat Management on Public Lands: A Rangewide Plan. Washington, D.C.

--- 1988b. Lower Gila South Resource Management Plan. Phoenix District Office. Phoenix.

--- 1990. Strategy for Desert Tortoise Habitat Management on Public Lands in Arizona. Arizona State Office, Phoenix.

--- 1994. Payments in Lieu of Taxes, Fiscal Year 1994. Division of Finance.

Wilson, E.D., J.B. Cunningham and G.M. Butler. 1967. Arizona Lode Gold Mines and Gold Mining. Bulletin No. 137. Arizona Bureau of Mines. Phoenix.

Appendices

Comparison of Existing Plans and Proposed Action (Alternative 2)

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Comparison of Existing Plans and Proposed (Alternative 2) Amendment

LOWER GILA NORTH

Management Framework Plan (Santa Maria, Big Horn and part of Gila Bend management areas)	Proposed (Alternative 2) Amendment to the Lower Gila North and South plans (all management areas)
LANDS	
WL-2.5 Protect bighorn sheep lambing areas and a two-mile buffer in the Harquahala and Little Harquahala mountains from disturbances created by land disposal, etc.	Brought forward. Little Harquahala Mountains transferred to Yuma District. (These lands are not identified for disposal.)
WL-3.3 Protect significant cliffs and a two-mile zone in the areas of the Big Horn and Vulture mountains from land disposal, etc.	Brought forward. (These lands are not identified for disposal.)
WL-4.3 Draft a habitat management plan protecting riparian habitat along the Bill Williams and Santa Maria river floodplains, Grapevine Springs and Peoples Canyon. Ensure that land disposals, etc., are compatible with this goal.	WL-4.3 and WL-4.8 changed. Habitat management plan for Lower Gila North must be reviewed for consistency with amendment and incorporated into future interdisciplinary planning. These lands are not identified for disposal.
WL-4.8 Draft a habitat management plan for the Bill Williams and Santa Maria rivers, Grapevine Springs and Peoples Canyon. Address land disposal, etc.	
WL-8.4 Facilitate exchange with the Arizona State Land Department of one section of land on Centennial Wash west of Gladden if the riparian habitat can be maintained.	Transferred to Yuma District.
DESERT TORTOISE	
WL-5.1 Rest tortoise habitat from livestock use between February and July on allotments with intensive management. Monitor and adjust livestock use on the other allotments. May fence out tortoise populations after contact with interested user groups.	WL-5.1 and WL-6.3 are combined and changed. Ephemeral grazing will continue to be permitted. New monitoring plots will be established if necessary. Changes in livestock operations will be made if monitoring indicates the need to protect tortoise habitat.
WL-6.3 Monitor crucial tortoise areas and adjust livestock use on the Ohaco Allotment.	

Appendix A (continued)

Comparison of Existing Plans and Proposed (Alternative 2) Amendment

Management Framework Plan (Santa Maria, Big Horn and part of Gila Bend management areas)	Proposed (Alternative 2) Amendment to the Lower Gila North and South plans (all management areas)
WILD HORSES AND BURROS	
RM-3.1 Maintain a viable and diverse population of 200 burros in the Alamo Herd Management Area. Reduce herds to zero in the remaining herd areas.	Changed. Burros in the Alamo Herd Management Area and Harquahala Herd Area will be managed as free roaming, self-sustaining populations in thriving ecological balance.
RM-3.2 Maintain access for burros to livestock-watering facilities in the Alamo Herd Area.	Brought forward.
RM-3.3 Maintain access to Alamo Lake for the wild burro herd in the Alamo Herd Management Area.	Transferred to Yuma District.
RM-3.5 Limit or modify construction of new structures within herd management areas which would restrict burro movement.	Brought forward.
WL-4.2 Monitor burro use to ensure that riparian areas on the Primrose and Alamo Lake ephemeral allotments are not overutilized.	Transferred to Yuma District.
WL-4.3 Draw up a habitat management plan protecting riparian habitat along the Bill Williams and Santa Maria river floodplains, Grapevine Springs and Peoples Canyon. Ensure that burro and livestock grazing, etc. are compatible with this goal. WL-4.8 Draft a habitat management plan for the Bill Williams and Santa Maria rivers, Grapevine Springs and Peoples Canyon. Address burro and livestock grazing, etc.	WL-4.3 and WL-4.8 changed. Bill Williams river transferred to Yuma. Objectives and planned action in the Lower Gila North Habitat Management Plan must be reviewed for consistency with amendment and incorporated into future interdisciplinary planning.
WL-2.5 Protect bighorn sheep lambing areas and a two-mile buffer in the Harquahala and Little Harquahala mountains from disturbances created by burro use, etc.	Changed. Burros will be managed in thriving ecological balance, i.e.,impacts to lambing area will be minimal. Little Harquahala Mountains transferred to Yuma District.

Appendix A (continued)

Comparison of Existing Plans and Proposed (Alternative 2) Amendment

Management Framework Plan (Santa Maria, Big Horn and part of Gila Bend management areas)	Proposed (Alternative 2) Amendment to the Lower Gila North and South plans (all management areas)
WL-2.2 Remove all burros and reduce livestock aggregations at waters in the Big Horn, Granite Wash and Harquahala mountains for big game.	WL-2.2 and WL-3.1 changed. Burros in the Harquahala herd area will be managed as free-roaming, self-sustaining populations in thriving ecological balance. Granite Wash Mountains transferred to Yuma District.
WL-3.1 Exclude burros and livestock at four tanks to enhance waterfowl and long-eared owl nesting.	
WL-3.3 Protect significant cliffs and a two-mile zone in the areas of the Big Horn and Vulture mountains from burro overuse, etc.	Changed. Protection of cliffs will be addressed in a future interdisciplinary plan.
RECREATION	
R-1.1 Designate Vulture Mine Road from Route 60 to Vulture Mine as a scenic drive with a scenic corridor 1/2 mile on either side of the road. Interpret through signing the scenery, geology and botany in one area along the Vulture Mine Road.	Changed. Interdisciplinary planning will be conducted to determine future actions.
R-2.1 Establish and mark a hiking and equestrian trail system near Wickenburg. Use public participation to help determine routes and width. Work with the Desert Caballeros to establish a trail system between Wickenburg and Wagoner.	Changed. Interdisciplinary planning will be conducted to determine future actions. Lands between Wickenburg and Wagoner transferred to Phoenix Resource Area.
R-1.4 Manage an area south of Round Mountain for scenery. Protect the history and geology of the area near the privately owned Placerita Mining Camp.	Transferred to Phoenix Resource Area.
R-3.1 Continue to protect and interpret the Harquahala Peak Observatory Site.	Brought forward.
R-4.1 Do not allow new roads in the Saddle Mountain area but designate it as a recreation and rockhound area.	Changed. Interdisciplinary planning will be conducted to determine future actions.
R-5.3 Close Peoples Canyon and Grapevine Springs (approximately 50 acres) to off-highway vehicles.	Brought forward. Peoples Canyon designated as wilderness.
R-6.1 Develop a recreation brochure for Lower Gila North. Increase public contact by using suggestion boxes at interpretive sites.	Changed. Brochures to be developed for entire resource area.

Appendix A (continued)

Comparison of Existing Plans and Proposed (Alternative 2) Amendment

Management Framework Plan (Santa Maria, Big Horn and part of Gila Bend management areas)	Proposed (Alternative 2) Amendment to the Lower Gila North and South plans (all management areas)
R-10.1 Recognize areas proposed as visual resource management classes II, III and IV. Manage visual resources using existing utility corridors.	Brought forward.
WL-3.3 Protect significant cliffs and a two-mile zone in the areas of Big Horn and Vulture mountains from intense recreational use or development, etc.	Changed. Interdisciplinary planning will be conducted to determine future actions.
WL-4.3 Draw up a habitat management plan protecting riparian habitat along the Bill Williams and Santa Maria river floodplains, Grapevine Springs and Peoples Canyon. Ensure that off-highway vehicle use is compatible with this goal.	WL-4.3 and WL-4.8 changed. Bill Williams transferred to Yuma. Objectives and planned action in the Lower Gila North Habitat Management Plan must be reviewed for consistency with amendment and incorporated into future interdisciplinary planning.
WL-4.8 Draft a habitat management plan for the Bill Williams and Santa Maria rivers, Grapevine Springs and Peoples Canyon. Address off-highway vehicle use, etc.	
WL-7.1 Restrict all uses or developments incompatible with protection of the 5,000-acre open chaparral basin and areas below it to the east in the Harquahala Mountains.	WL-7.1 and W-4.13 refer to the same 5,000-acre area. Changed. Interdisciplinary planning will be conducted to determine future actions. Part of the area designated as wilderness.
W-4.13 Restrict all uses or developments incompatible with protection of the 7,000-acre (sic) Harquahala Mountains Significant Botanical Area.	
W-4.14 Restrict all uses or developments incompatible with protection of the 650-acre Arrastra Creek Significant Botanical Area.	Transferred to Phoenix Resource Area.
W-4.15 Restrict all uses or developments incompatible with protection of the 600-acre Antelope Creek Significant Botanical Area.	Transferred to Phoenix Resource Area.
W-4.7 Limit off-highway vehicle use to existing roads and trails in the 650-acre Arrastra Creek and 600-acre Antelope Creek areas.	Transferred to Phoenix Resource Area.
W-4.8 Monitor recreation and its effects on riparian vegetation along Arrastra Creek.	Transferred to Phoenix Resource Area.

Appendix A (continued)

Comparison of Existing Plans and Proposed (Alternative 2) Amendment

Management Framework Plan (Santa Maria, Big Horn and part of Gila Bend management areas)	Proposed (Alternative 2) Amendment to the Lower Gila North and South plans (all management areas)
WL-2.5 Protect bighorn sheep lambing areas and a two-mile buffer in the Harquahala and Little Harquahala mountains from disturbances created by intense recreational use and off-highway vehicle use on other than existing roads and trails in the Little Harquahala Mountains, etc.	Changed. Interdisciplinary planning will be conducted to determine future actions. Part of area designated as wilderness. Little Harquahala Mountains transferred to Yuma District.
RM-3.4 Designate a burro viewing route in the Alamo Herd Management Area and install interpretive signs.	Brought forward. Yuma District office has the lead.
No decision.	For off-highway vehicle use, designate Lower Gila North as "limited to existing and/or designated roads, trails and vehicle routes."
OIL AND GAS	
M-1.1 Leave the area open to mineral (oil and gas) leasing.	Brought forward with standard stipulations.
DESERT BIGHORN SHEEP AUGMENTATION	
WL-2.7 Allow reintroduction of desert bighorn sheep into the Black and Weaver mountains and allocate forage for a reasonable population level.	Changed. Augmentation and reintroduction to be considered on a case-by-case basis. Weaver Mountains transferred to Phoenix Resource Area.

Appendix A (continued)

Comparison of Existing Plans and Proposed (Alternative 2) Amendment

LOWER GILA SOUTH	
Resource Management Plan (Ajo and most of Gila Bend management areas)	**Proposed (Alternative 2) Amendment to the Lower Gila North and South plans** (all management areas)
LANDS	
Make approximately 73,000 acres available for disposal. Identify approximately 37,000 acres for acquisition. Propose to acquire approximately 112,000 acres of state and private minerals underlying federal surface. Propose to dispose of approximately 23,000 acres of federal minerals underlying state and private surface.	These three decisions changed. Approximately 45,000 acres identified for disposal and 91,000 acres identified for acquisition. Some of this land transferred to Phoenix Resource Area and/or Yuma District.
DESERT TORTOISE	
Locate new livestock waters at least two miles from crucial tortoise and/or desert bighorn sheep habitat.	Desert bighorn sheep decision brought forward. Tortoise decision changed. All proposed actions in categories I, II and III desert tortoise habitat will be relocated or mitigated.
WILD HORSES AND BURROS	
Prepare a burro capture plan and remove all burros from the Painted Rock Reservoir area.	Changed. Burros in the Painted Rock herd area will be managed as free-roaming, self-sustaining populations in thriving ecological balance.

Appendix A (continued)

Comparison of Existing Plans and Proposed (Alternative 2) Amendment

Resource Management Plan (Ajo and most of Gila Bend management areas)	Proposed (Alternative 2) Amendment to the Lower Gila North and South plans (all management areas)
RECREATION	
Limit off-highway vehicle use to existing and/or designated roads, trails and vehicle routes. Permit cross-country vehicle travel when a specific authorized task requires it and only in areas where use would not cause unnecessary or undue resource damage. Off-highway vehicle closures may be made in areas where such use causes irreparable harm to resources. Other designations (closed or open) will be made through the planning process as warranted.	Brought forward.
Close the Vekol Valley Area of Critical Environmental Concern to recreational off-highway vehicle use.	Changed to "limited to designated roads, trails and vehicle routes."
Close the Coffeepot Area of Critical Environmental Concern to recreational off-highway vehicle use.	Changed to "limited to designated roads, trails and vehicle routes."
Continue to evaluate visual resources as part of activity and planning. Attach stipulations as appropriate.	Brought forward.
OIL AND GAS	
Leasable minerals will be managed under the leasing regulations.	Brought forward with standard stipulations.
DESERT BIGHORN SHEEP AUGMENTATION	
No decisions.	Augmentation and reintroduction to be considered on a case-by-case basis.

Appendix B

Lands Identified for Disposal (Proposed)

Appendix B

Lands Identified for Disposal

(parcels will be considered on a case-by-case basis)

Township/Range	Section	Subdivision	Acres
T. 1 N., R. 3 W.	3	S½SE¼SW¼;	20.00
	7	W½NE¼, E½NW¼.	160.00
T. 2 N., R. 3 W.	4	lots 1 through 4, incl., S½N½, S½;	633.44
	5	lot 1, SE¼NE¼, E½SE¼;	158.47
	8	E½E½;	160.00
	9	all;	640.00
	14	all;	640.00
	15	all;	640.00
	17	all;	640.00
	18	lots 1 through 4, incl., E½E½;	294.88
	19	lots 1 through 4, incl., E½E½;	296.08
	20	all;	640.00
	21	all;	640.00
	22	all;	640.00
	26	all;	640.00
	27	N½, N½S½, SE¼SW¼, S½SE¼;	600.00
	28	N½, N½S½, S½SW¼, SW¼SE¼;	600.00
	29	all;	640.00
	33	lots 1 through 4, incl., W½NE¼, NW¼, N½S½;	570.44
	34	lot 1, N½NE¼, NE¼NW¼;	162.05
	35	N½NE¼, W½W½W½NW¼.	100.00
T. 1 N., R. 4 W.	1	lots 1 through 4, incl., S½N½;	320.64
	11	SE¼SW¼, SE¼;	200.00
	12	all;	640.00
	13	NE¼NE¼, E½NW¼SE¼, SW¼NW¼NE¼, N½N½SE¼NW¼;	80.00
	14	N½NE¼.	80.00
T. 2 N., R. 4 W.	1	lots 1 through 4, incl., S½N½.	320.22
T. 3 N., R. 4 W.	1	S½N½, S½;	480.00
	11	E½E½E½;	80.00
	12	all;	640.00
	13	all;	640.00
	14	E½NE¼NE¼, E½NE¼SE¼;	40.00
	24	E½, N½NW¼;	400.00
	25	E½, SE¼SW¼;	360.00
	36	NE¼, E½NW¼.	240.00

APPENDIX B (continued)

Lands Identified for Disposal

Township/Range	Section	Subdivision	Acres
T. 6 N., R. 4 W.	11	SW¼SW¼;	40.00
	14	SE¼NE¼, SE¼SE¼;	80.00
	23	NW¼NE¼.	40.00
T. 1 N., R. 5 W.	27	SE¼SW¼.	40.00
T. 3 N., R. 5 W.	14	NE¼, E½SE¼;	240.00
	22	all;	640.00
	23	S½;	320.00
	25	all;	640.00
	26	W½;	320.00
	27	all;	640.00
	34	W½;	320.00
	35	W½.	320.00
T. 1 N., R. 6 W.	1	E½SW¼, W½SE¼ (air navigation withdrawal);	160.00
	17	SE¼;	160.00
	20	N½NE¼.	80.00
T. 4 N., R. 6 W.	25	NW¼NW¼.	40.00
T. 7 N., R. 6 W.	17	S½NW¼SW¼, N½SW¼SW¼;	40.00
	18	SE¼NE¼SE¼, NE¼SE¼SE¼.	20.00
T. 2 N., R. 7 W.	17	W½NW¼;	80.00
	31	lots 1 and 2, NE¼, E½NW¼.	317.89
T. 7 N., R. 7 W.	16	all (airport lease);	640.00
	33	NW¼.	160.00
T. 8 N., R. 7 W.	10	S½SE¼;	80.00
	11	S½SW¼, SW¼SE¼;	120.00
	14	NW¼NE¼, NW¼, N½SW¼;	280.00
	15	NE¼, E½SE¼.	240.00
T. 2 N., R. 8 W.	7	lots 3 and 4, SW¼SE¼SE¼;	86.69
	34	all.	640.00
T. 2 N., R. 9 W.	8	all.	640.00
T. 3 N., R. 9 W.	31	lots 1 and 2, E½NW¼;	240.00
	32	SW¼SE¼, S½SE¼SE¼.	60.00
T. 2 N., R. 10 W.	2	lots 1 through 4, incl., S½N½, S½;	639.84
	11	all.	640.00

APPENDIX B (continued)

Lands Identified for Disposal

Township/Range	Section	Subdivision	Acres
T. 3 N., R. 10 W.	8	SW¼SW¼, S½SE¼SW¼;	60.00
	25	SW¼NW¼.	40.00
T. 2 N., R. 11 W.	1	lots 1 through 4, incl., S½N½, SE¼.	480.00
T. 3 N., R. 11 W.	2	lots 3 and 4, S½N½, S½;	560.24
T. 3 N., R. 12 W.	27	W½;	320.00
	36	all.	640.00
T. 2 S., R. 1 W.	25	NW¼, SW¼;	320.00
	26	N½, SE¼;	480.00
	27	E½;	320.00
	34	NE¼;	160.00
	35	all.	640.00
T. 3 S., R. 1 W.	1	NW¼;	160.00
	3	SE¼;	160.00
	4	SE¼;	160.00
	6	lots 1 through 7, incl., S½NE¼, SE¼NW¼, E½SW¼, NE¼SE¼.	509.96
T. 1 S., R. 2 W.	30	lot 1;	39.87
	31	lots 3 and 4, E½SW¼;	159.92
	32	SW¼SW¼, SE¼;	200.00
	36	E½E½NE¼, NE¼NE¼NW¼NE¼, SW¼NE¼, SE¼.	242.50
T. 2 S., R. 2 W.	5	lots 1 and 2, SE¼NE¼;	117.29
	6	N½SE¼;	80.00
	18	lots 1 and 2, E½NW¼;	153.47
	28	NW¼NE¼NE¼, N½SW¼NE¼NE¼, S½NE¼SW¼NE¼, N½SE¼SW¼NE¼, S½SW¼SW¼NE¼, N½NE¼NE¼NW¼, NW¼NE¼NW¼, SE¼SE¼NW¼, W½W½SW¼, SW¼NE¼SW¼, NW¼SE¼SW¼, S½SE¼SW¼, N½NE¼SE¼, SW¼NE¼SE¼, S½NE¼NW¼SE¼, S½SE¼NW¼SE¼, S½NE¼SW¼SE¼, SE¼SW¼SE¼, S½SW¼SW¼SE¼;	195.00
	33	NW¼NE¼NE¼, W½NE¼, W½SE¼NE¼, S½NE¼SE¼NE¼, SE¼SE¼NE¼, N½NE¼NW¼, SE¼NE¼NW¼, SW¼NW¼NW¼, E½SE¼NW¼.	175.00
T. 3 S., R. 2 W.	1	SW¼SW¼.	80.00
T. 1 S., R. 3 W.	25	W½E½, NE¼NE¼.	200.00

APPENDIX B (continued)

Lands Identified for Disposal

Township/Range	Section	Subdivision	Acres
T. 3 S., R. 4 W.	27	NE¼.	160.00
T. 4 S., R. 4 W.	3	SE¼;	160.00
	10	E½;	320.00
	22	E½W½;	160.00
	27	E½W½.	160.00
T. 5 S., R. 4 W.	16	NE¼SW¼;	40.00
	27	SE¼SE¼.	40.00
T. 6 S., R. 4 W.	19	lots 3 and 4, E½, E½SW¼;	473.39
	31	lots 1 and 2, NE¼, E½NW¼.	313.81
T. 1 S., R. 5 W.	3	S½N½.	160.00
T. 2 S., R. 5 W.	28	W½SW¼.	80.00
T. 12 S., R. 5 W.	7	E½E½;	160.00
	18	E½E½;	160.00
	19	E½NE¼, SW¼NE¼, E½SW¼, SE¼;	360.00
	30	E½, E½W½.	480.00
T. 13 S., R. 5 W.	25	SW¼SE¼;	40.00
	35	east of Highway 85.	30.00
T. 1 S., R. 6 W.	4	SW¼NW¼, W½SE¼NW¼, SE¼SE¼NW¼;	70.00
	5	lot 3, SE¼NW¼.	81.86
T. 12 S., R. 6 W.	11	N½, SW¼, E½SE¼;	560.00
	12	NW¼.	160.00
T. 6 S., R. 7 W.	15	SW¼;	160.00
	23	NW¼SW¼, S½SW¼;	120.00
	32	W½SW¼, SE¼SW¼, SE¼.	280.00
T. 1 S., R. 9 W.	14	NE¼, S½NW¼;	240.00
	16	E½SE¼.	80.00
T. 4 S., R. 1 E.	13	NW¼NE¼;	40.00
	31	E½;	320.00
	34	E½;	320.00
	35	W½.	320.00
T. 5 S., R. 1 E.	2	lots 1 through 4, incl., S½N½, S½;	640.16
	3	lots 1 through 4, incl., S½N½, S½;	639.92
	9	W½;	320.00

APPENDIX B (continued)

Lands Identified for Disposal

Township/Range	Section	Subdivision	Acres
T. 5 S., R. 1 E. (continued)	10	all;	640.00
	11	W½;	320.00
	13	SE¼SW¼, NE¼SE¼, S½SE¼.	160.00
T. 4 S., R. 2 E.	18	lots 6 through 11, incl., 14 and 16.	255.28
T. 6 S., R. 2 E.	25	lots 7, 8, 17 through 24, incl., S½NW¼, SW¼;	637.56
	27	S½S½SW¼.	40.00
T. 7 S., R. 2 E.	12	NE¼.	160.00
T. 6 S., R. 3 E.	33	NW¼, S½.	480.00
T. 7 S., R. 3 E.	3	lots 1 through 4, incl., S½;	435.20
	4	lots 1 through 4, incl., S½;	434.20
	7	lots 1 and 2, NE¼, E½NW¼;	312.46
	8	N½;	320.00
	9	N½, N½N½S½;	400.00
	10	N½, N½N½S½;	400.00
	11	N½, N½S½.	480.00
T. 5 S., R. 4 E.	13	NW¼.	160.00
T. 7 S., R. 4 E.	10	S½NE¼, SE¼;	240.00
	15	NE¼SW¼;	40.00
	21	W½SW¼;	80.00
	27	all;	640.00
	28	W½;	320.00
	34	all;	640.00
	35	W½.	320.00
		Total	45,258.53

Appendix C

Special Status Plants and Animals and Desert Tortoise Habitat

Table 1. U.S. Fish and Wildlife Service Special Status Plants and Animals 74

Table 2. Arizona Game and Fish Department Special Status Plants and Animals 75

Table 3. Goals and Criteria for Three Categories of Desert Tortoise Habitat 75

Table 1. U.S. FISH AND WILDLIFE SERVICE SPECIAL STATUS PLANTS AND ANIMALS	
Listed Animals	
Sonoran pronghorn	*Antilocapra americana sonoriensis*
Lesser long-nosed bat	*Leptonycteris curasoae yerbabuenae*
Gila topminnow	*Poeciliopsis occidentalis*
Desert pupfish	*Cyprinodon macularius*
Yuma clapper rail	*Rallus longirostris yumanensis*
Peregrine falcon	*Falco peregrinus*
Brown pelican	*Pelecanus occidentalis*
Bald eagle	*Haliaeetus leucocephalus*
Animals Proposed for Listing	
Southwestern willow flycatcher	*Empidonax traillii extimus*
Category 1 Animals	
Cactus ferruginous pygmy owl	*Glaucidium brasilianum cactorum*
Category 2 Animals	
Desert tortoise	*Gopherus (Xerobates) agassizii*
Chuckwalla	*Sauromalus obesus*
Arizona (Gilbert's) skink	*Eumeces gilberti arizonensis*
Rosy boa	*Lichanura trivirgata*
Canyon (giant) spotted whiptail	*Cnemidophorus burti*
Mexican garter snake	*Thamnophis eques*
Narrow-headed garter snake	*Thamnophis rufipunctatus*
Lowland leopard frog	*Rana yavapaiensis*
Arizona toad	*Bufo microscaphus microscaphus*
Longfin dace	*Agosia chrysogaster*
Loggerhead shrike	*Lanius ludovicianus*
Ferruginous hawk	*Buteo regalis*
Baird's sparrow	*Ammodramus bairdii*
Mountain plover	*Charadrius montanus*
Western snowy plover	*Charadrius alexandrinus nivosus*
Large-billed Savannah sparrow	*Passerculus sandwichensis rostratus*
Yuma puma	*Felis concolor browni*
Spotted bat	*Euderma maculatum*
Greater Western mastiff bat	*Eumops perotis californicus*
Mexican long-tongued bat	*Choeronycteris mexicana*
Southwestern cave myotis	*Myotis velifer brevis*
Occult little brown bat	*Myotis lucifugus occultus*
California leaf-nosed bat	*Macrotus californicus*
Yavapai Arizona pocket mouse	*Perognathus amplus amplus*
Harquahala Southern pocket gopher	*Thomomys umbrinus subsimilis*
Category 1 Plants	
Acuna pineapple cactus	*Echinomastus erectocentrus var. acunensis*
Category 2 Plants	
Wiggins cholla	*Opuntia wigginsii*

Table 2. ARIZONA GAME AND FISH DEPARTMENT SPECIAL STATUS PLANTS AND ANIMALS	
State Threatened or Endangered Animals	
Western yellow-billed cuckoo	*Coccyzus americanus occidentalis*
Great egret	*Casmerodius albus*
Osprey	*Pandion haliaetus*
Snowy egret	*Egretta thula*
State Candidate Animals	
Common black hawk	*Buteogallus anthracinus*
Crested caracara	*Polyborus plancus*
Belted kingfisher	*Ceryle alcyon*
Northern casque-headed frog	*Pternohyla fodiens*
Great Plains narrow-mouthed frog	*Gastrophryne olivacea*
Colorado Desert fringe-toed lizard	*Uma notata*
State Plant Diversity Review	
Aravaipa wood fern	*Thelypteris puberula var. sonorensis*
California snakebush	*Colubrina californica*
Organ pipe cactus	*Stenocereus thurberi*

Table 3. GOALS AND CRITERIA FOR THREE CATEGORIES OF DESERT TORTOISE HABITAT
(Criteria are ranked by importance to the categorization process with Criterion 1 being the most important)

	Category I	*Category II*	*Category III*
Category goals	Maintain stable, viable populations and protect existing tortoise habitat values; increase populations, where possible	Maintain stable, viable populations and halt further declines in tortoise habitat values	Limit tortoise habitat and population declines to the extent possible by mitigating impacts
Criterion 1	Habitat area essential to maintenance of large viable populations	Habitat area may be essential to maintenance of viable populations	Habitat area not essential to maintenance of viable populations
Criterion 2	Conflicts resolvable	Most conflicts resolvable	Most conflicts not resolvable
Criterion 3	Medium to high density or low density contiguous with medium or high density	Medium to high density or low density contiguous with medium or high density	Low to medium density not contiguous with medium or high density
Criterion 4	Increasing, stable or decreasing population	Stable or decreasing population	Stable or decreasing population

Appendix D

Recreation Opportunity Spectrum Classes

Appendix D

Recreation Opportunity Spectrum Classes

Description of Recreation Opportunity Spectrum Classes

The enclosed chart describes each of the six ROS classes in terms of: (1) experience opportunities; (2) setting opportunities, and (3) activity opportunities (see also Glossary of Terms). These descriptors provide a general overview of the opportunities included in each class. These overview statements do not describe each class in detail, but rather provide a point of departure from which the planner or manager can develop more precise prescriptions for each class based on specific situations encountered in field operations. The listing of activity opportunities is provided for illustrative purposes. It is not an all-inclusive list of activity opportunities on the public lands.

THE RECREATION OPPORTUNITY SPECTRUM CLASS DESCRIPTIONS

Opportunity Class	Experience Opportunity	Setting Opportunity	Activity Opportunity
Primitive	Opportunity for isolation from the sights and sounds of man, to feel a part of the natural environment, to have a high degree of challenge and risk, and to use outdoor skills.	Area is characterized by essentially unmodified natural environment of fairly large size. Concentration of users is very low and evidence of other users is minimal. The area is managed to be essentially free from evidence of man-induced restrictions and controls. Only facilities essential for resource protection are used. No facilities for comfort or convenience of the user are provided. Spacing of groups is informal and dispersed to minimize contacts between groups. Motorized use within the area is not permitted.	Camping, hiking, climbing, enjoying scenery or natural features, nature study, photography, spelunking, hunting (big game, small game, upland birds, waterfowl), ski touring and snowshoeing, swimming, diving (skin and scuba), fishing, canoeing, sailing, and river running (nonmotorized craft).
Semi-Primitive Nonmotorized.	Some opportunity for isolation from the sights and sounds of man, but not as important as for primitive opportunities. Opportunity to have high degree of interaction with the natural environment, to have moderate challenge and risk, and to use outdoor skills.	Area is characterized by a predominantly unmodified natural environment of moderate to large size. Concentration of users is low, but there is often evidence of other area users. On-site controls and restrictions may be present, but are subtle. Facilities are provided for the protection of resource values and the safety of users only. Spacing of groups may be formalized to disperse use and limit contacts between groups. Motorized use is not permitted.	Camping, hiking, climbing, enjoying scenery or natural features, nature study, photography, spelunking, hunting (big game, small game, upland birds, waterfowl), ski touring and snowshoeing, swimming, diving (skin and scuba), fishing, canoeing, sailing, and river running (nonmotorized craft).

Appendix D (continued)

Recreation Opportunity Spectrum Classes

Opportunity Class	Experience Opportunity	Setting Opportunity	Activity Opportunity
Semi-Primitive Motorized.	Some opportunity for isolation from the sights and sounds of man, but not as important as for primitive opportunities. Opportunity to have high degree of interaction with the natural environment, to have moderate challenge and risk, and to use outdoor skills. Explicit opportunity to use motorized equipment while in the area.	Area is characterized by a predominantly unmodified natural environment of moderate to large size. Concentration of users is low, but there is often evidence of other area users. On-site controls and restrictions may be present, but are subtle. Facilities are provided for the protection of resource values and safety of users only. Spacing of groups may be formalized to disperse use and limit contacts between groups. Motorized use is permitted.	Same as the above, plus the following: ORV Use (4-WD, Dune Buggy, Dirt Bike, Snowmobile), Power Boating.
Roaded Natural	About equal opportunities for affiliation with other user groups and for isolation from sights and sounds of man. Opportunity to have a high degree of interaction with the natural environment. Challenge and risk opportunities are not very important except in specific challenging activities. Practice of outdoor skills may be important. Opportunities for both motorized and nonmotorized recreation are present.	Area is characterized by a generally natural environment with moderate evidence of the sights and sounds of man. Resource modification and utilization practices are evident, but harmonize with the natural environment. Concentration of users is low to moderate with facilities sometimes provided for group activity. On-site controls and restrictions offer a sense of security. Rustic facilities are provided for user convenience as well as for safety and resource protection. Conventional motorized use is provided for in construction standards and design of facilities.	All activities listed previously, plus the following: picnicking, rock collecting, wood gathering, auto touring, downhill skiing, snowplay, ice skating, water skiing and other water sports, hang gliding, interpretive use, rustic resorts and organized camps.
Rural	Opportunities to experience affiliation with individuals and groups are prevalent as is the convenience of sites and opportunities These factors are generally more important than the natural setting. Opportunities for wildland challenges, risk taking, and testing of outdoor skills are unimportant, except in those activities involving challenge and risk.	Area is characterized by substantially modified natural environment. Resource modification and utilization practices are obvious. Sights and sounds of man are readily evident, and the concentration of users is often moderate to high. A considerable number of facilities are designed for use by a large number of people. Facilities are often provided for specific activities. Developed sites, roads and trails, are designed for moderate to high use. Moderate densities are provided far away from developed sites. Facilities for intensive motorized use are available.	All activities listed previously, plus the following: competitive games, spectator sports, bicycling, jogging, outdoor concerts, and modern resorts.

Appendix D (continued)

Recreation Opportunity Spectrum Classes

Opportunity Class	Experience Opportunity	Setting Opportunity	Activity Opportunity
Modern Urban	Opportunities to experience affiliation with individuals and groups are prevalent as is the convenience of sites and opportunities. Experiencing the natural environment, and the use of outdoor skills are largely unimportant.	Area is characterized by a highly modified environment, although the background may have natural elements. Vegetation is often exotic and manicured. Soil may be protected by surfacing. Sights and sounds of man, on-site, predominate. Large numbers of users can be expected. Modern facilities are provided for the use and convenience of large numbers of people. Controls and restrictions are obvious and numerous. Facilities for high intensity motor use and parking are present with forms of mass transit often available.	All activities listed previously.

Appendix E

Three Rivers Riparian Area of Critical Environmental Concern

Appendix E

Three Rivers Riparian Area of Critical Environmental Concern

Relevance

The Big Sandy, Santa Maria and Bill Williams rivers - Alamo Lake Complex is one of the most important desert riparian ecosystems in the state of Arizona. These particular riparian habitats are extremely valuable because of their tremendous size (including surrounding watershed), availability of year-round water, high primary productivity, diversity of vegetation and crucial habitat for endangered bald eagles and suspected habitat for breeding peregrine falcons. Both of these species are federally listed as endangered.

These rivers are free-flowing and have outstanding scenic qualities including riparian vegetation, surrounding mountains and cliff features and largely undeveloped shorelines uncluttered by human activity. They provide opportunities for solitude and water-based recreation along stretches of the streams. Access is provided to some portions of each stream.

Importance

Riparian habitats throughout the Southwest historically have been severely damaged and degraded. Very few of these areas remain in public ownership. Their attendant plant and wildlife resources fall under the jurisdiction of resource management agencies such as the BLM, the U.S. Fish and Wildlife Service, the Arizona Game and Fish Department and the Arizona State Land Department. All federal agencies are charged with the conservation of habitat for endangered species such as the bald eagle and peregrine falcon.

Public input has focused concern on the plight of this particular habitat. The Big Sandy, Santa Maria and Bill Williams rivers - Alamo Lake Complex supports one of the best populations of bald eagles in Arizona. This particular area could provide an important nucleus of bald eagles capable of recolonizing the Colorado River and the Grand Canyon. Proposed improvement of the riparian habitat through proper resource management would improve the habitat for this and other riparian-dependent species.

Goals

To protect and enhance aquatic, riparian and threatened or endangered resources, emphasizing total ecosystem management.

Objectives

1. Provide nesting habitat for the southern bald eagle by establishing native cottonwood trees. Promote natural regeneration of native cottonwood-willow habitat to replace existing dead and dying old-growth native trees. Increase the present density of native trees and reduce the density of exotic plants.
2. Prohibit human activities which may cause potentially adverse disturbances to nesting birds during the breeding season.
3. Obtain minimum instream flow to support aquatic and riparian habitat values.
4. Manage for optimum riparian habitat conditions and maintain or restore the creek to proper functioning condition.
5. Minimize adverse interactions between people and sensitive natural resources.
6. Minimize surface disturbance.
7. Resolve conflicts cause by incompatible activities on private and state lands which affect management of resources on neighboring public lands.
8. Enhance public awareness of aquatic, riparian and threatened or endangered values.

Management Prescriptions

1. Propose designation of 32,043 acres of public lands as an area of critical environmental concern.
2. Limit off-highway vehicle use in riparian areas to designated roads and trails.
3. Withdraw 10,228 acres in the riparian zone from mineral entry, subject to valid existing rights.
4. Require mining plans of operation and mandatory bonding for all mineral exploration and development activities, other than casual use.
5. Allow mineral leasing in the riparian zone with no surface occupancy and in other areas, subject to appropriate stipulations designed to protect resource values.
6. Do not allow mineral material disposals in riparian zones.
7. Implement the decisions recommended in the Withdrawal and Classification section of Lands in Alternative 2 of the Kingman Resource Management Plan.
8. Acquire 14,496 acres of private and 3,655 acres of state lands (surface and subsurface) and close to mineral entry.
9. Determine need and file on water rights to obtain minimum instream flows to support aquatic and riparian habitat. Acquire data necessary to support and perfect instream flow water rights.
10. Do not allow removal of native vegetation, except for salvage.
11. Develop a systematic program for removal of salt cedar *(Tamarix gallica)*, focusing on primary drainage channels.
12. Restrict development of campgrounds to areas outside of riparian zones and the 100-year floodplain.
13. Confine new major rights-of-way to existing corridors.
14. Manage livestock, burro and big game grazing to achieve goals and objectives of the area of critical environmental concern. Develop desired plant community descriptions and incorporate these into allotment management plans and herd management area plans.
15. Continue to assist the bald eagle nest watch program.
16. Prohibit camping, hiking and off-highway vehicles within 1/4 mile of a bald eagle nest during breeding season (January 1 to June 1).
17. Prohibit helicopter flights within 1/2 mile of active aeries during the breeding season (January 1 to June 1).
18. Prohibit road development within 1/2 mile of a bald eagle aerie.
19. Continue the riparian area condition evaluation inventory and monitoring.
20. Evaluate all other land use authorizations for compatibility with goals and objectives of the area of critical environmental concern.
21. Develop an area of critical environmental concern plan, incorporating existing plans affecting the area of critical environmental concern.

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Appendix F

Socioeconomics

Introduction

The planning area is near the middle and in the lower half of the state of Arizona. The affected area is expected to include all or portions of La Paz, Maricopa, Pima, Pinal, Yavapai and Yuma counties. The Phoenix and Tucson communities, with nearly 70 percent of the state's population, are slightly east of the management areas and have easy access. Other communities which may be affected include Buckeye, Casa Grande, Gila Bend, Marana, Oro Valley, Parker, Yuma, Wickenburg and Prescott. Interstate highways 17, 10 and 8, combined with state highways 60, 85, 87, 89 and 93, connect impacted communities and are major points of entry into and through the state.

Population

County populations have grown between three and eight percent annually between 1970 and 1980 and between two and five percent between 1980 and 1990. Collectively, the counties grew a little more than five percent annually between 1970 and 1980 and slightly more than 3.5 percent annually between 1980 and 1990. The total city populations have generally followed the same growth pattern.

State projections indicated that individual counties would grow at an average annual rate of between 1.3 and 2.4 percent (about two percent collectively) between 1995 and the year 2020. Projections made for cities over the same timeframe were divided between the faster growing communities with an average annual projected growth rate of about 2.3 percent (see Table 4) and the second group which grew more slowly (about 0.8 percent annually).

The counties and cities in Table 4 were arranged in ascending order according to long-term growth rates. It should be noted that growth rates are projected to be highest in the near future and increase at a decreasing rate further into the future.

Composition

Overall, the racial distribution in the study area resembles that of the state; however, the individual county statistics vary radically (see Table 5). The percentage of Native American populations in La Paz and Pinal counties exceeds the state percentage of 5.5 percent with 17.4 and 9.3 percent, respectively, while the other counties have considerably less than the state. The percentage of Hispanic populations in Yuma and Pinal counties with 40.6 and 29.3 percent, respectively, exceeds the state with 18.7 percent while Yavapai County has considerably less, 6.4 percent. Yavapai County's population is predominantly white, non-Hispanic with 89.3 percent as compared to 62.1 percent for the state. Yuma County has the lowest number of white, non-Hispanic with 34.9 percent.

In total, the age distribution for the six-county area resembles that for the state (see Table 6). Yuma and Pinal counties appear to have more younger people while Yavapai and La Paz counties appear to have more people in the retired group, age 64 and older. The percentage of individuals in the 20 to 65 age group or at the workforce age are lowest in La Paz, Yavapai and Yuma counties.

Employment

The distribution of employment in the entire study area closely resembles that of Arizona; however, the study area also contains the two most populated counties in the state (see tables 7 and 8). Total employment includes both farm and nonfarm, including proprietorships by place of work. Within the study area, about 99 percent of employment is from nonfarm sectors; however, this varies between counties. In La Paz, Pinal and Yuma counties, between 5.7 and 11.8 percent of employment is from agriculture or agriculture-related business. In the remaining counties, this is less than 1.5 percent. Over the past five years, farm proprietorships have

decreased about one percent annually in all counties while total farm employment has remained relatively stable. Agricultural services have increased about three percent annually.

Of the nonfarm employment, the retail, services and government sectors were the most important employers in all the counties and in the state, although the individual ranking varied. They provided between 62 and 71 percent of the total nonfarm employment. State and local government was the main employer in all cases. Manufacturing was the fourth most important sector for three of the six counties, followed by the agricultural services sector for two counties and finance, insurance and real estate for the remaining county. The total for the retail, services and government -- state and local -- sectors of the study area all grew at rates exceeding two percent annually. Transportation and public utilities, wholesale trade and agricultural services all grew about three percent or more annually.

Unemployment

Over the period 1987 to 1993, unemployment averaged about six percent for the state as compared to the study area, which averaged about 5.5 percent. Within the six counties, unemployment varied widely for the same period. Yuma, La Paz and Pinal counties averaged 21.7, 9.9 and 7.0 percent, respectively, while Yavapai, Maricopa and Pima counties averaged 5.5, 5.0 and 4.6 percent, respectively.

Income

Total personal income includes: farm and nonfarm income; dividends, interest and rent; and transfer payments which have been adjusted for place of residence. Only Yuma and Pinal counties showed a negative adjustment regarding income flows to outside the county. Farm income totals 17.9 percent of the total personal income in La Paz County, 9.7 percent in Yuma County and 6.8 percent in Pinal County. The remaining counties have less than one percent of the total income attributable to agriculture (see Table 9).

Services, retail trade and government sectors were the top three providers of income in La Paz, Pima, Yavapai and Yuma counties. Manufacturing moved into the top three income-producing sectors in Maricopa County, while mining and manufacturing were in the top three in Pinal County.

Per capita income is a general indicator of economic well-being, considering total income and family size (see Table 10).

Tax Base

Table 11 summarizes the tax base for the study area. These six counties have most of the state's total cash value (more than 80 percent), primarily due to the fact that these counties also have a majority of the state's population. Cash value is synonymous with market value. Personal and real property are assigned a "legal" classification to determine assessed valuation for tax purposes (see Table 12).

In Lieu Payments

In lieu payments are designed to supplement other federal lands receipts that local governments may be receiving. They can be used for any governmental purpose (see Table 13).

Table 4. COMPARISON OF COUNTY AND CITY POPULATIONS -- 1970 to 2020						
County	*1970*	*%*	*1980*	*%*	*1990*	*%*
Pinal	68,579	3.3	90,918	2.8	116.379	2.1
La Paz	0	0	0	0	13,844	2.4
Yuma	60,827	4.9	90,554	1.8	106,895	2.6
Pima	351,667	5.1	531,443	2.6	666,880	2.5
Maricopa	971,228	5.5	1,509,262	4.1	2,122,101	2.6
Yavapai	37,008	8.4	68,145	5.8	107,714	3.0
SUBTOTAL	1,489,309	5.4	2,290,322	3.7	3,133,813	2.6
STATE TOTAL	1,775,399	5.3	2,718,424	3.5	3,665,228	2.6
Rapid Growth:						
Yuma	29,007	4.9	43,063	2.8	54,923	2.1
Prescott	13,631	4.58	19,865	3.3	26,4454	2.3
Phoenix	966,735	5.5	1,501,466	4.1	2,111,248	2.6
Wickenburg	2,698	3.1	3,535	2.78	4,515	9.6
Oro Valley	581	32.5	2,468	17.0	6,670	18.0
Buckeye	2,599	3.2	3,434	4.7	5,038	22.2
Marana	0		1,674	3.1	2,187	23.0
SUBTOTAL	1,015,251	5.5	1,575,505	4.0	2,211,026	2.7
Slow Growth:						
Tucson	262,933	2.89	338,636	2.0	405,390	1.5
South Tucson	6,220	0.5	6,554	-2.2	5,093	2.2
Gila Bend	1,795	-1.2	1,585	1.0	1,747	2.9
Casa Grande	10,536	4.2	14,971	2.8	19,082	1.6
Parker	1,948	3.1	2,542	1.4	2,897	1.1
SUBTOTAL	283,432	2.8	364,288	1.9	434,209	1.5
CITY TOTAL	1,298,683	4.9	1,939,793	3.6	2,645,235	2.5

Table 4. COMPARISON OF COUNTY AND CITY POPULATIONS -- 1970 to 2020 (continued)						
County	*2000*	*%*	*2010*	*%*	*2020*	*%*
Pinal	68,579	3.3	90,918	2.8	116.379	2.1
La Paz	0	0	0	0	13,844	2.4
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Pima	351,667	5.1	531,443	2.6	666,880	2.5
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CITY TOTAL	1,298,683	4.9	1,939,793	3.6	2,645,235	2.5

Table 5. 1990 CENSUS POPULATION COMPOSITION BY COUNTY IN PLANNING AREA AND STATE							
County	*Black*	*Hispanic*	*Native American*	*Asian*	*Other*	*White non-Hispanic*	*Total*
La Paz	118	3,139	2,402	102	887	7,196	13,844
	0.85%	22.67%	17.35%	0.74%	6.41%	51.98%	100.00%
Maricopa	74,257	345,498	38,017	36,294	174,113	1,453,922	2,122,101
	3.50%	16.28%	1.79%	1.71%	8.20%	68.51%	100.00%
Pima	20,795	163,262	20,330	11,964	88,815	361,714	666,880
	3.12%	24.48%	3.05%	1.79%	13.32%	54.24%	100.00%
Pinal	3,648	34,062	10,785	502	14,225	53,157	116,379
	3.13%	29.27%	9.27%	0.43%	12.22%	45.68%	100.00%
Yavapai	321	6,899	1,740	490	2,057	96,207	107,714
	0.30%	6.40%	1.62%	0.45%	1.91%	89.32%	100.00%
Yuma	3,056	43,388	1,429	1,393	20,315	37,314	106,895
	2.86%	40.59%	1.34%	1.30%	19.00%	34.91%	100.00%
Planning area	102,195	596,249	74,703	50,745	300,412	2,009,513	3,133,818
	3.26%	19.03%	2.38%	1.62%	9.59%	64.12%	100.00%
Arizona	110,524	686,214	203,527	55,206	332,785	2,276,972	3,665,228
	3.02%	18.72%	5.55%	1.51%	9.08%	62.12%	100.00%

Table 6. AGE DISTRIBUTION -- 1990			
County	*0 to 19*	*20 to 64*	*65 and older*
La Paz	28.8	52.09	19.11
Maricopa	29.13	58.30	12.50
Pima	28.39	57.89	13.72
Pinal	32.17	54.13	13.70
Yavapai	23.96	52.26	23.78
Yuma	32.72	53.39	13.89
Study area	29.03	57.70	13.27
State	29.84	57.04	13.89

Table 7. COMPARISON OF EMPLOYMENT AND UNEMPLOYMENT RATES, BY COUNTY, TO THE PLANNING AREA AND STATE -- 1987 to 1993							
POLITICAL DIVISION	*1993*	*1992*	*1991*	*1990*	*1989*	*1988*	*1987*
LA PAZ							
Labor force	5,136	5,271	5,211	5,481	5,889	5,642	5,185
Employment	4,411	4,547	4,771	5,105	5,484	5,180	4,700
Unemployment	725	724	440	376	405	462	485
Unemployment rate	14.1%	13.7%	8.4%	6.9%	6.9%	8.2%	9.4%
MARICOPA							
Labor force	1,120,120	1,108,722	1,098,175	1,122,340	1,062,451	1,031,475	1,001,104
Employment	1,063,098	1,038,213	1,044,607	1,073,463	1,017,028	978,837	949,032
Unemployment	57,022	70,509	53,568	48,877	45,423	52,538	52,072
Unemployment rate	5.1%	6.4%	4.9%	4.4%	4.3%	5.1%	5.2%
PIMA							
Labor force	332,369	326,156	316,402	316,272	314,452	313,793	306,624
Employment	317,926	308,666	303,328	301,706	300,405	297,741	291,122
Unemployment	14,443	17,490	13,074	14,566	14,047	16,052	15,502
Unemployment rate	4.3%	5.4%	4.1%	4.6%	4.5%	5.1%	5.1%
PINAL							
Labor force	45,458	45,366	44,583	45,800	39,891	37,408	37,581
Employment	42,481	41,486	41,657	42,920	37,116	33,912	33,413
Unemployment	2,977	3,880	2,926	2,880	2,775	3,495	4,168
Unemployment rate	6.5%	8.6%	6.6%	6.3%	7.0%	9.3%	11.1%
YAVAPAI							
Labor force	52,533	49,881	46,536	45,248	38,917	36,060	35,165
Employment	49,555	46,376	44,202	43,181	36,903	33,772	33,017
Unemployment	2,978	3,506	2,334	2,067	2,014	2,288	2,148
Unemployment rate	5.7%	7.0%	5.0%	4.6%	5.2%	6.3%	6.1%

Table 7. COMPARISON OF EMPLOYMENT AND UNEMPLOYMENT RATES, BY COUNTY, TO THE PLANNING AREA AND STATE -- 1987 to 1993 (continued)							
POLITICAL DIVISION	*1993*	*1992*	*1991*	*1990*	*1989*	*1988*	*1987*
YUMA							
Labor force	53,763	52,864	48,515	47,398	53,779	52,824	47,534
Employment	41,006	38,945	38,677	37,487	44,653	42,572	39,365
Unemployment	12,757	13,919	9,838	9,911	9,126	10,252	8,169
Unemployment rate	23.7%	26.3%	20.3%	20.9%	17.0%	19.4%	17.2%
PLANNING AREA							
Labor force	1,609,379	1,588,260	1,559,422	1,582,539	1,515,379	1,477,202	1,433,183
Employment	1,518,477	1,478,233	1,477,242	1,503,862	1,441,589	1,392,114	1,350,649
Unemployment	90,902	110,028	82,180	78,677	73,790	85,088	82,544
Unemployment rate	5.6%	6.9%	5.3%	5.0%	4.9%	5.8%	5.8%
ARIZONA							
Labor force	1,837,003	1,812,003	1,774,001	1,798,002	1,705,502	1,660,000	1,514,000
Employment	1,723,002	1,677,002	1,674,000	1,702,001	1,616,501	1,555,999	1,513,000
Unemployment	114,000	135,002	100,001	96,001	89,001	104,001	101,000
Unemployment rate	6.2%	7.5%	5.6%	5.3%	5.2%	6.3%	6.3%
LA PAZ	-8.47%	-6.81%	-3.17%	-1.89%	-2.01%	-2.43%	-3.59%
MARICOPA	0.56%	-0.71%	0.77%	1.29%	1.37%	0.55%	0.45%
PIMA	1.30%	0.29%	1.52%	1.04%	1.18%	0.53%	0.59%
PINAL	-0.90%	-2.90%	-0.91%	-0.64%	-1.31%	-3.70%	-5.44%
YAVAPAI	-0.02%	-1.38%	0.63%	1.08%	0.47%	0.70%	-0.48%
YUMA	-18.0%	-20.68%	-14.63%	-15.26%	-11.32%	-13.76%	-11.54%
ARIZONA	-0.56%	-0.57%	-0.35%	-0.36%	-0.35%	-0.51%	-0.50%

Table 8. COMPARISON OF 1992 EMPLOYMENT SECTORS BY COUNTY

	La Paz	%	*Maricopa*	%	*Pima*	%	*Pinal*	%	*Yavapai*	%	*Yuma*	%	*Total*	%	*Arizona*	%
Total employment	5,820	100	1,253,375	100	334,470	100	43,271	100	47,893	100	55,520	100	1,740,349	100	1,960,277	100
Wage, salary	4,482	77	1,055,893	84	277,384	83	36,241	84	33,776	71	48,853	88	1,456,629	84	1,636,254	83
Proprietors	1,338	23	197,482	16	57,086	17	7,030	16	14,117	29	5,667	12	283,720	16	324,023	17
Farm	127	2	2,663	0	540	0	855	2	518	1	682	1	5,385	0	8,492	0
Nonfarm	1,211	21	194,819	16	56,546	17	6,175	14	13,599	28	5,985	11	278,335	16	315,531	16
Farm	689	12	8,068	1	1,244	0	2,460	6	622	1	4,701	8	17,784	1	21,956	1
Nonfarm	5,131	88	1,245,307	99	333,226	100	40,811	94	47,271	98	50,819	92	1,722,565	99	1,938,321	99
Private	4,156	71	1,085,019	67	271,955	81	29,137	67	40,306	84	37,927	68	1,468,500	84	1,630,554	83
Agricultural services, forestry, fisheries, others	395	7	14,675	1	3,352	1	1,085	3	565	1	8,359	15	28,431	2	30,395	2

Table 8. COMPARISON OF 1992 EMPLOYMENT SECTORS BY COUNTY (continued)																
	La Paz	%	*Maricopa*	%	*Pima*	%	*Pinal*	%	*Yavapai*	%	*Yuma*	%	*Total*	%	*Arizona*	%
Mining	120	2	2,496	0	2,842	1	3,916	9	1,126	2	70	0	10,570	1	15,540	1
Construction	301	5	67,996	5	18,002	5	1,298	3	3,900	8	1,911	3	93,408	5	105,302	5
Manufacturing	244	4	133,093	11	25,441	8	4,167	10	3,129	7	1,755	3	167,829	10	180,704	9
Transportation, public utilities	227	4	58,848	5	11,827	4	1,346	3	1,613	3	1,863	3	75,724	4	85,536	4
Wholesale trade	97	2	66,635	5	9,722	3	950	2	1,073	2	2,633	5	81,110	5	86,485	4
Retail trade	1,394	24	219,215	17	63,485	19	6,351	15	10,921	22	8,703	16	310,069	18	355,257	18
Finance, insurance, real estate	274	5	129,703	10	25,256	8	1,632	4	3,912	8	2,518	5	163,293	9	173,999	9

Table 8. COMPARISON OF 1992 EMPLOYMENT SECTORS BY COUNTY (continued)

	La Paz	%	*Maricopa*	%	*Pima*	%	*Pinal*	%	*Yavapai*	%	*Yuma*	%	*Total*	%	*Arizona*	%
Services	1,104	19	392,358	31	112,028	33	8,392	19	14,067	29	10,117	18	538,066	31	597,336	30
Government, government enterprises	975	17	160,288	13	61,271	18	11,674	27	6,965	15	12,892	23	254,065	15	307,767	16
Federal, civilian	165	3	18,850	2	8,295	2	776	2	1,185	2	2,530	5	31,801	2	45,534	2
Military	60	1	14,214	1	7,260	2	439	1	423	1	4,742	9	27,138	2	35,040	2
State, local	750	13	127,224	10	45,716	14	10,459	24	5,357	11	5,620	10	195,126	11	227,193	12

Table 9. COMPARISON OF 1992 INCOME SECTORS BY COUNTY (in thousands of dollars)

	La pez	%	*Maricopa*	%	*Pima*	%	*Pinal*	%	*Yavapai*	%	*Yuma*	%	*Total*	%	*State*	%
Total personal income	233	100	42,793	100	11,493	100	1,526	100	1,785	100	1,569	100	59,398	100	66,687	100
Nonfarm personal income	191	82	42,570	99	11,460	98	1,422	93	1,773	99	1,416	90	58,833	99	66,019	99
Farm income	42	18	224	1	33	0	104	7	11	1	152	10	565	1	668	1
Population (in thousands)	13.7		2,209.6		690.2		120.8		116.1		117.5		3,267.9		3,832.4	
Per capita personal income (dollars)	17		19		17		13		15		13		18		17	
Earnings by place of work	133	57	30,929	72	7,187	63	1,025	67	827	46	1,152	73	41,253	69	45,882	69

Table 9. COMPARISON OF 1992 INCOME SECTORS BY COUNTY (in thousands of dollars) (continued)

	La paz	%	*Maricopa*	%	*Pima*	%	*Pinal*	%	*Yavapai*	%	*Yuma*	%	*Total*	%	*State*	%
Less: Personal cont. for social insur.	5	2	1,953	5	448	4	56	4	58	3	62	4	2,580	4	2,856	4
Plus: Adjustment for residence	28	12	30	0	118	1	-52	-3	84	5	-40	-3	168	0	246	0
Equals: Net earnings by place of residence	156	67	29,006	68	6,858	60	917	60	853	48	1,050	67	38,841	65	43,272	65
Plus: Dividends, interest and rent	24	10	7,173	17	2,294	20	177	12	490	27	171	11	10,329	17	11,284	17
Plus: Transfer payments	53	23	6,614	16	2,340	20	432	28	441	25	347	22	10,228	17	12,131	18

Table 9. COMPARISON OF 1992 INCOME SECTORS BY COUNTY (in thousands of dollars) (continued)

	La paz	%	*Maricopa*	%	*Pima*	%	*Pinal*	%	*Yavapai*	%	*Yuma*	%	*Total*	%	*State*	%
Wages and salaries	76	33	25,734	60	5,972	52	786	52	603	34	880	56	34,052	57	37,728	57
Other labor income	8	3	2,630	6	575	5	94	6	63	4	74	5	3,444	6	3,813	6
Proprietors' income	49	21	2,565	6	640	6	144	9	161	9	198	13	3,757	6	4,342	7
Farm	32	14	139	0	22	0	80	5	10	1	96	6	379	1	469	1
Nonfarm	17	7	2,426	6	618	5	64	4	151	8	102	6	3,378	6	3,873	6
Farm	42	18	224	1	33	0	104	7	11	1	152	10	565	1	668	1
Nonfarm	91	39	30,706	72	7,155	62	921	60	816	46	1,000	64	40,688	69	45,214	68
Private	66	28	26,312	61	5,496	48	650	43	646	36	672	43	33,841	57	36,860	55
Agricultural services, forestry, fishing, others	5	2	198	0	46	0	15	1	7	0	106	68	378	1	396	1

Table 9. COMPARISON OF 1992 INCOME SECTORS BY COUNTY (in thousands of dollars) (continued)

	La paz	%	*Maricopa*	%	*Pima*	%	*Pinal*	%	*Yavapai*	%	*Yuma*	%	*Total*	%	*State*	%
Mining	4	2	67	0	122	1	172	11	42	2	1	0	407	1	632	1
Construction	7	3	1,784	4	434	4	26	2	83	5	51	3	2,385	4	2,654	4
Manufacturing	6	3	5,048	12	863	8	135	9	74	4	41	3	6,168	10	6,526	10
Transportation and public utilities	4	1	1,974	5	364	3	40	3	40	2	52	3	2,473	4	2,789	4
Wholesale trade	2	1	2,185	5	252	2	27	2	21	1	57	4	2,543	4	2,675	4
Retail trade	19	8	3,345	8	882	8	89	6	136	8	122	8	4,592	8	5,178	8
Finance, insurance, real estate	2	1	2,670	6	320	3	14	1	27	2	28	2	3,062	5	3,169	5

Table 9. COMPARISON OF 1992 INCOME SECTORS BY COUNTY (in thousands of dollars) (continued)																
	La paz	%	*Maricopa*	%	*Pima*	%	*Pinal*	%	*Yavapai*	%	*Yuma*	%	*Total*	%	*State*	%
Services	17	7	9,040	21	2,214	19	132	9	217	12	214	14	11,834	20	12,840	19
Government, government enterprises	25	11	4,394	10	1,659	14	271	18	170	10	328	21	6,847	12	8,354	13
Federal, civilian	5	231	723	2	305	3	25	2	41	2	86	5	1,186	2	1,663	2
Military	.4	0	242	1	157	1	3	0	3	0	107	7	513	1	706	1
State, local	19	8	3,429	8	1,197	10	243	16	126	7	135	9	5,148	9	5,985	9

Table 10. PER CAPITA INCOME INCREASE BY COUNTY -- 1988 to 1992				
County	*1988*	*1992*	*Rank*	*Percent of change*
La Paz	$12,127	$17,065	2	40.7
Maricopa	$16,815	$19,367	1	15.2
Pima	$14,387	$16,651	3	15.7
Pinal	$11,387	$12,634	6	11.0
Yavapai	$13,089	$15,376	4	17.5
Yuma	$12,664	$13,345	5	5.4

Table 11. TAX BASE					
County	*Total cash value*	*Net assessed value*	*Average rates per $100*		*Total revenue*
			Primary	*Secondary*	
La Paz	1,321,177,985	99,815,817	9.54	2.70	11,956,497
Maricopa	95,670,358,361	13,503,570,335	8.69	3.49	1,626.671,027
Pima	27,379,317,182	2,974,071,684	11.13	4.74	486,350,280
Pinal	3,684,263,485	578,334,264	12.13	2.95	86,320,830
Yavapai	5,332,284,928	744,899,984	9.23	3.00	88,950,924
Yuma	3,154,751,426	399,437,331	10.53	3.12	53,842,395

Table 12. LEGAL CLASSIFICATION TO DETERMINE ASSESSED VALUATION FOR TAX PURPOSES		
Legal class	*Percentage assessed*	*Type of property*
Class 1	30	Mines, mining property and timber
Class 2	30	Telecommunications and utilities
Class 3	25	Commercial and industrial
Class 4	16	Agricultural and vacant land
Class 5	10	Residential property owner
Class 6	11	Rented residential
Class 7	24	Railroad operating
Class 8	5	Historic property
Class 11	8	Livestock
Class C	100	Producing oil and gas

Table 13. IN LIEU PAYMENTS BY COUNTY -- FISCAL YEAR 1994					
County	*Entitlement acres*	*Percent of total acres*	*Total acres*	*In lieu payment*	*Payment/ acres*
La Paz	1,849,719	64.6	2,889,000	434,000	.23
Maricopa	2,312,025	39.58	5,904,000	999,000	.43
Pima	1,523,588	25.91	5,880,000	962,438	.63
Pinal	516,338	15.1	3,439,000	359,744	.70
Yavapai	422,028	8.1	5,201,000	316,511	.75
Yuma	1,516,060	43.0	3,531,000	999,914	.66
AREA TOTAL	8,139,758	30.4	26,844,000		
STATE	27,539,895	37.9	72,645,000		

Table 14. BREAKDOWN OF ESTABLISHMENTS AND RECEIPTS FOR SECTORS BY COUNTY		
County	*Establishments*	*Receipts (in thousands of dollars)*
La Paz	157	88,950
Maricopa	31,801	38,645,429
Pima	9,289	7,423,481
Pinal	947	673,933
Yavapai	1,582	649,339
Yuma	1,214	1,030,163

According to the Census of Retail, Wholesale and Services, the study area had about 44,990 establishments with sales of $48,611,295,000s. Receipts were divided among retail, wholesale and services, with 40, 40 and 20 percent respectively. Table 14 is a breakdown of establishments and receipts for these sectors by county.

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