YUMA/LAKE HAVASU ZONE

2004

FIRE MANAGEMENT PLAN

Developed By: _____ 9/2/04
Zone Fire Management Officer — Date

Recommended By: _____ 9/2/04
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Approved By: _____ 9/28/04
Arizona State Director — Date

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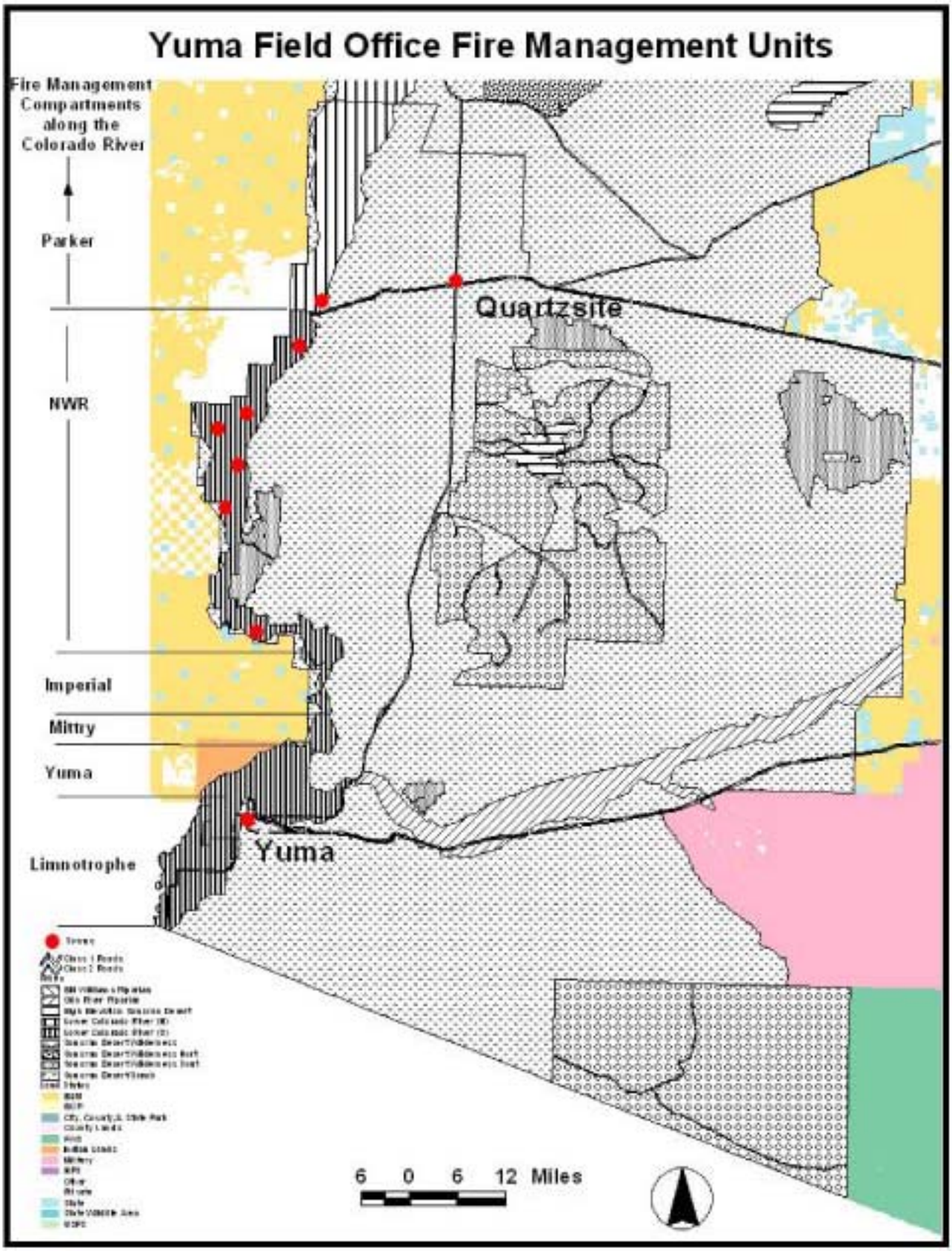
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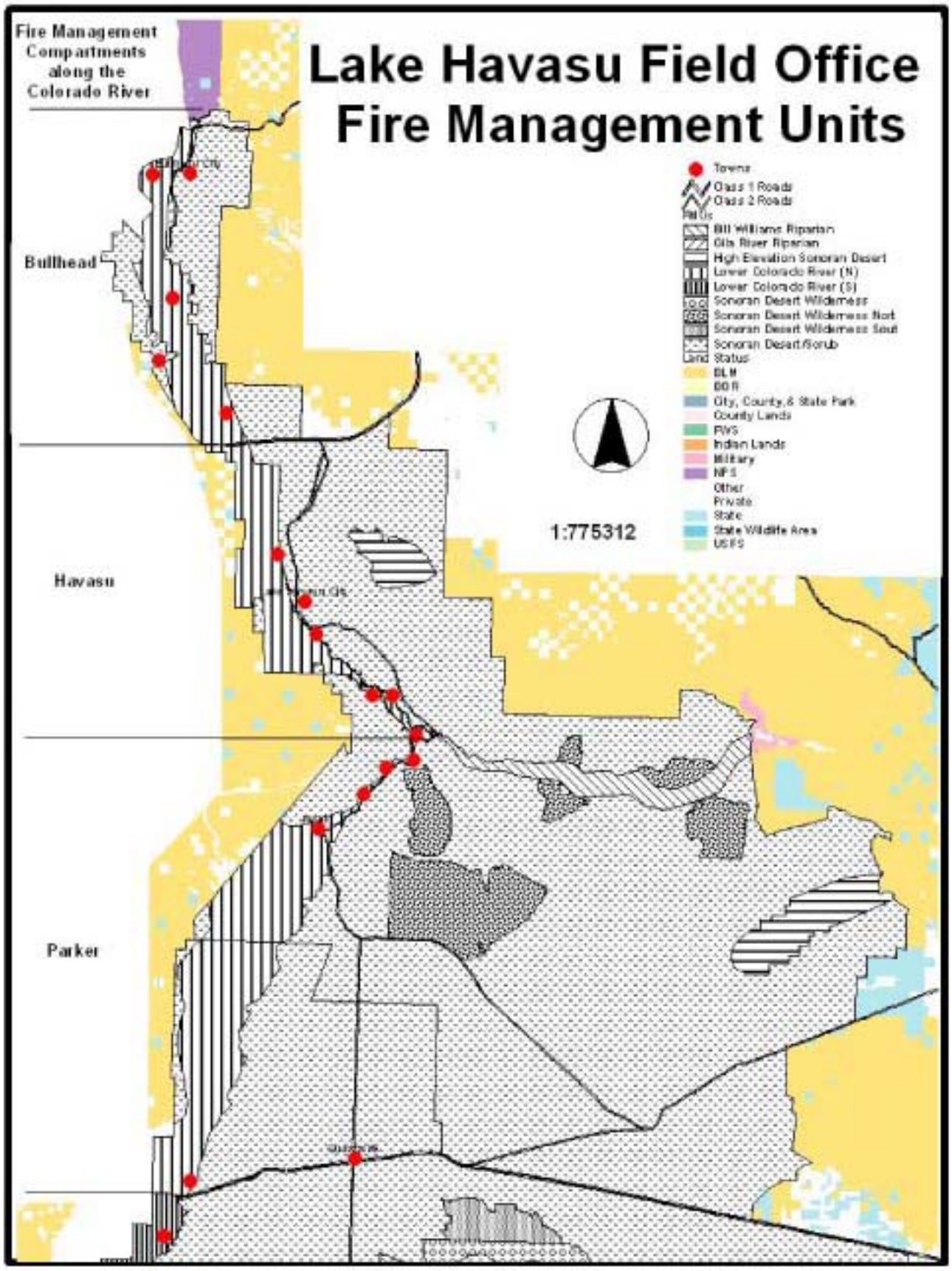
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I. INTRODUCTION

A. Purpose

The purpose of the Yuma/Lake Havasu Zone Fire Management Plan (FMP) is to identify and integrate all Wildland fire management guidance, direction, and activities required to implement national fire policy and fire management direction from the following: Federal Wildland Fire Management Policy and Program Review-1995 and 2001; The Interagency Fire Management Plan Template; and A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: 10-Year Comprehensive Strategy Implementation Plan.

The FMP was developed around a zone fire management program and addresses all aspects of it, including Wildland/Urban Interface (WUI), rural fire assistance, prescribed fire, fuels management, prevention, and suppression. The FMP identifies a fire program that meets identified fire management objectives. This plan covers all burnable acres within the Yuma/Lake Havasu Zone and is a strategic document.

The fire management organization outlined in the FMP will be utilized in the development of annual budget requests and annual work plans. Proposed actions, alternatives, and environmental analyses, in compliance with the National Environmental Policy Act (NEPA), will be based on these strategies and developed for implementation of site specific projects. In addition, this FMP lays the foundation for future collaborative efforts involving interagency partners and state and local cooperators.

B. Relationship to Environmental Compliance

All fire management objectives, constraints, and activities contained within this plan are consistent with the following source document: the Yuma District Resource Management Plan (RMP) as amended, Lower Gila South RMP (1985), the Kingman RMP, the Lower Gila North Management Framework Plan, the Arizona Statewide Land Use Plan Amendment for Fire, Fuels, and Air Quality Management (March, 2004), the Eagletail Mountains Wilderness Plan, the Kofa/New Water Wilderness Plan, the Gibraltar Wilderness Plan, the Muggins Mountains Wilderness Plan, and associated Environmental Impact Statements and Environmental Assessments.

C. Collaboration

Eight public meetings were held to discuss the 2003 statewide RMP amendment for fire management. At the public meetings, the public supported the goals of the plan.

Informal meetings were held with Yuma Valley Rod and Gun Club, Bureau of Indian Affairs, U.S. Fish and Wildlife Service, Arizona Game and Fish Department, and the Resources staffs in the Yuma and Lake Havasu Field Offices.

The National Fire Plan is a collaborative interagency effort to apply the Federal Wildland Policy to all Federal Land Management Agencies and partners in State forestry or lands departments.

Operational collaboration between the Bureau of Land Management (BLM), U.S. Forest Service, National Park Service, and U.S. Fish and Wildlife Service is included in the Interagency Standards for Fire and Fire Aviation Operations 2004. This Federally approved document addresses fire management, wildfire suppression, fuels management, prescribed fire safety, interagency coordination and cooperation, qualifications, training, objectives, performance standards, and fire management program administration. As part of the Fire Land Use Plan amendment process, BLM conducted Endangered Species Act (ESA) Section 7 informal and formal consultation with the U.S. Fish and Wildlife Service.

Under a separate but related project, the BLM arranged for The Nature Conservancy (TNC), a non-profit conservation organization, to review and provide an independent, scientific evaluation of the ecological validity of BLM's existing fire management paradigms. The TNC also conducted an ecosystem evaluation of public lands to provide scientific information regarding the natural role of fire within the various ecosystems.

D. Authorities

The "Principal Wildland Fire Laws" reference guide dated October 2003 consolidates in one guide applicable laws covering the Bureau of Land Management (BLM) fire management program. The guide should be referenced for a more detailed list.

Authorities for the Fire Management program are listed below.

1. Protection and Suppression

a. BLM Lands Generally: Statutory Law

Protection Act of September 20, 1922: Protection of Timber Resource (16 U.S.C. §594)

Taylor Grazing Act: Protection of Grazing Districts and Other Interior Lands (43 U.S.C. §315a)

Federal Land Policy and Management Act (FLPMA): Preservation and Protection of BLM Lands (43 U.S.C. §1701-52)

Wildfire Disaster Recovery Act of 1989: Protection of National Forests: Reforestation; Management: Report on Rehabilitation Needs (16 U.S.C. §551b)

Wildfire Disaster Recovery Act of 1989: Protection of National Forests: Reforestation; Management: Planning for Fire Protection (16 U.S.C. §551c)

Appropriations Act: Wildland Fire Management (2001)

b. BLM Lands Generally: Administrative Law

Fire Management: Wildfire Prevention (43 C.F.R. §9212.0 et seq.)

Fire Management: Wildfire Prevention, Prohibited Acts on BLM Lands (43 C.F.R. §9212.1)

Fire Management: Wildfire Prevention, Fire Prevention Orders (43 C.F.R. §9212.2)

Fire Management: Wildfire Prevention, Permits (43 C.F.R. §9212.3)

Fire Management: Wildfire Prevention, Penalties (43 C.F.R. §9212.4)

Forest Management: Sales of Forest Products May Include Provisions for Fire Safety (43 C.F.R. §5424.0-6)

Visitor Services: Closures and Restriction Orders, Recreation Management (43 C.F.R. §8364.1)

Recreation Management: Temporary Closure of Lands (43 C.F.R. §9268.3)

State and Local Laws (43 C.F.R. §8365.1-7)

Executive Order No. 11644: Use of Off-Road Vehicles on Public Lands

c. Specific BLM Lands: Administrative Law

i. National Wilderness Preservation System

Regulations for Administration and Use of Wilderness Areas (43 C.F.R. §19.6)

Emergency Functions in Wilderness Areas (43 C.F.R. §6303.1)

Provisions to Control Fire, Insects, and Disease in Wilderness Areas (43 C.F.R. §6304.22)

Wild and Scenic Rivers and National Trails System Acts

Emergency Motorized Vehicle Use on National Scenic Trails (43 C.F.R. §8351.1-1)

Special Rules Exempting Fire Fighters on Official Duty (43 C.F.R. §8351.2-1)

Prohibition on Fire within National Wild and Scenic River System (43 C.F.R. §8351.2-1e)

d. Other DOI Lands (Non-BLM): Statutory Law

National Wildlife System Administration Act of 1966: Interagency Agreements (42 U.S.C. §668dd)

2. Prescribed Fire and Fire Use

a. BLM Lands Generally: Statutory Law

McSweeney-McNary Act (16 U.S.C. §1647) – repealed.

Taylor Grazing Act (43 U.S.C. §315a)

Federal Land Policy and Management Act (FLPMA) (43 U.S.C. §§1701-52)

Appropriations Act: Wildland Fire Management (2001)

b. State Lands: Statutory Law

Pittman-Robertson Wildlife Restoration Act or Federal Aid in Wildlife Restoration (16 U.S.C. §669)

3. Contracts, Cooperative Agreements, Grants And Community Assistance

a. BLM Generally: Statutory Law, Contracts

Federal Property and Administrative Services Act: Guidelines for Contracting (40 U.S.C. §471)

Federal Land Policy and Management Act (FLPMA) (43 U.S.C. §§1701-52)

Federal Grant and Cooperative Agreement Act: Using Procurement Contracts, Grants, and Cooperative Agreements (31 U.S.C. §§6301-6307)

Federal Grant and Cooperative Agreement Act: Intergovernmental Cooperation: Authority to Provide Specialized or Technical Services (31 U.S.C. §6505)

Federal Grant and Cooperative Agreement Act: Intergovernmental Cooperation (31 U.S.C. §§6501-6508)

Economy Act of 1932: Interagency Orders for Goods and Services (31 U.S.C. §1535)

b. BLM Generally: Statutory Law, Cooperative Agreements, and Grants

Federal Grant and Cooperative Agreement Act: Using Procurement Contracts, Grants, and Cooperative Agreements (31 U.S.C. §§6301-6307)

Federal Grant and Cooperative Agreement Act: Using Procurement Contracts and Grant and Cooperative Agreements: Authority to Vest Title in Tangible Personal Property for Research (31 U.S.C. §6306)

Federal Grant and Cooperative Agreement Act: Using Procurement Contracts and Grant and Cooperative Agreements: Use of Multiple Relationships for Different Parts of Jointly Financed Projects (31 U.S.C. §6301-6307)

Reciprocal Fire Protection Act of 1955: Reciprocal Fire Protection Agreements (42 U.S.C. §1856 (a)-(d))

Fish and Wildlife Coordination Act: Protection and Conservation of Wildlife: Game, Fur-bearing Animals and Fish (16 U.S.C. 661).

Appropriations Act: Wildland Fire Management (2001)

Appropriations Act: Wildland Fire Management (Public Law 107-63 [HR 2217])

Supplemental Appropriations of 1982 (U.S.C.C.A.N. 96 Stat. 837)

c. State Lands: Statutory Law

Conservation Programs on Government Lands (16 U.S.C. §670(h))

d. International Agreements Generally

Wildfire Suppression Assistance Act of 1989 (42 U.S.C. §1856(m) - (p))

e. Specific International Agreements, U.S./Canada and U.S./Mexico

Wildfire Suppression Assistance Act of 1989 (42 U.S.C. §1856(m) - (p))

f. Community Assistance

Appropriations Act: Wildland Fire Management (2001)

g. Non-DOI Lands: Administrative Law

Emergency Fire Protection Aid to Other Fire Departments Not Within DOI (43 C.F.R. §28)

h. BLM Generally: Administrative Law, Grants

Grants of Equipment and Supplies from DOI to State and Local Grantees (43 C.F.R. §§12.72 and 12.73)

Enforcement of Grants (43 C.F.R. §12.83)

4. Major Disasters and Emergencies

a. Statutory Law

Major Disaster Assistance Programs: Fire Management Assistance (42 U.S.C. §5187)

Federal Fire Prevention and Control Act of 1974 as amended: The Federal Emergency Management Administration's Ability to Engage BLM and Other Federal Agencies (15 U.S.C. §2201)

National Historic Preservation Act: Historic Sites, Buildings, etc. (16 U.S.C. §464)

b. Administrative Law

Emergency Management and Requested Assistance (44 C.F.R. §10.13)

Fire Prevention and Control: Assistance by Other Federal Agencies (44 C.F.R. §206.5)

Donation or Loan of Federal Equipment and Supplies (44 C.F.R. §206.6)

Implementation of Assistance from Other Federal Agencies (44 C.F.R. §206.7)

Reimbursement of Other Federal Agencies (44 C.F.R.§206.8)

Non-Liability of Federal Government (44 C.F.R. §206.9)

Standards and Reviews (44 C.F.R. §206.13)

Recovery of Assistance: Liable Party (44 C.F.R. §206.15)

Audit and Investigations (44 C.F.R. §206.16)

Designation of Affected Areas and Eligible Assistance (44 C.F.R. §206.40)

Responsibilities of Coordinating Officers (44 C.F.R. §206.42)

Emergency Support Teams (44 C.F.R. §206.43)

Available Assistance under Emergency Declarations (44 C.F.R. §206.62)

Provision of Assistance Limited to the Immediate and Short Term (44 C.F.R §206.63)

Coordination of Assistance under the Federal Coordinating Officer (44 C.F.R. §206.64)

Cost Sharing (44 C.F.R. §206.65)

Duplication of Benefits to Individuals and Families (44 C.F.R. §206.191)

Direct Federal Assistance (44 C.F.R. §206.208)

Fire Suppression Assistance (44 C.F.R. §206.390)

FEMA-State Agreement Governs Federal Assistance (44 C.F.R. §206.391)

Providing Assistance (44 C.F.R. §206.393)

Expense Recovery (44 C.F.R. §206.394)

5. Other Federal Laws That May Apply

National Environmental Policy Act of 1970 (NEPA) (42 U.S.C. §§4321-4370e)

Endangered Species Act of 1973 (ESA) (16 U.S.C. §§1531 - 1544)

Clean Water Act of 1948, as amended 1966, 1972 (CWA) (33 U.S.C. §§1251 – 1387)

The Clean Air Act of 1970 (CAA) (42 U.S.C. §§7401 - 7671q)

Wilderness Act of 1964 (16 U.S.C. §§1131-1136)

Antiquities Act of 1906 (16 U.S.C. §§431-433)

National Historic Preservation Act of 1966 (NHPA), as amended (1992) (16 U.S.C. §§470 et seq.)

6. Other Guidance

United States Department of the Interior Manual (910 DM 1.3).

1995 Federal Wildland Fire Management Policy (12-18-95)

2001 Updated Federal Wildland Fire Management Policy (1995 Federal Wildland Fire Management Policy Update)

1998 Departmental Manual 620 Chapter 1, Wildland Fire Management General Policy Act

II. RELATIONSHIP TO LAND MANAGEMENT PLANNING AND FIRE POLICY

The Fire Management Plan has been tiered to decisions contained within the Yuma District Resource Management Plan, the Lower Gila South RMP, the Kingman RMP, the Lower Gila North Management Framework Plan, Arizona Statewide Land Use Plan Amendment for Fire, Fuels, and Air Quality Management, the Eagletail Mountains Wilderness Plan, the Kofa/New Water Wilderness Plan, the Gibraltar Wilderness Plan, the Muggins Mountains Wilderness Plan, the Interim Wilderness Guidance, and the Federal Wildland Fire Policy. These plans provide the basis for the development of fire management goals and objectives.

The FMP derives overall program guidance from the following:

- 1998 BLM Handbook 9214 "Prescribed Fire Management" describes authority and policy for prescribed fire use on public lands administered by the Bureau of Land Management.

- September 2000, "Managing the Impacts of Wildfires on Communities and the Environment"

- October 2000, National Cohesive Strategy goal is to coordinate an aggressive, collaborative approach to reduce the threat of wildland fire to communities and to restore and maintain land health.

- August 2001, "Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment -10 Year Comprehensive Strategy" provides a foundation for wildland agencies to work closely with all levels of government, tribes, conservation and commodity groups, and community-based restoration groups to reduce wildland fire risk to communities and the environment.

- May 2002, "Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment, 10 Year Comprehensive Strategy – Implementation Plan"

- August 2002, "Healthy Forests - An Initiative for Wildfire Prevention and Stronger Communities"

- May 2004 , "Healthy Forest Restoration Act"

A. Goals Related to Fire and Fuels Management from the Resource Management Plan

- Human Life: Protect human life, both the public and firefighters. This is the single, overriding priority in fire management.

- Property and Resources: Protect human communities, their infrastructure, and the natural resources on which they depend. Other property and improvements will be protected.

- Setting priorities among human communities, other property, and natural resources will be based on the values to be protected, human health and safety, and the costs of protection. The risk of wildfire to communities and property will be reduced using the full range of options available to fire managers, including prescribed fire and mechanical fuels reduction.

- Ecosystem Sustainability: Where possible, allow wildland fire to function as an essential ecological process and natural change agent in fire-dependent ecosystems.

- Wildlife components, including Special Status Species (Federally Threatened, Endangered, Proposed, and Candidate Species, BLM Sensitive Species, and State Species of Concern): Protect, maintain, preserve, and/or restore habitats necessary for the conservation of species, and the ecosystems upon which they depend, to maintain viable and diverse populations of native terrestrial and aquatic species including special status species.

- Vegetation components: Each vegetative community will be maintained within its natural range of variation in plant composition, structure, and function, and fuel loads are maintained below levels that are considered to be hazardous.

- Cultural, Historical, and Paleontological: Protect high value cultural, historical, and paleontological resources.

- Designated Special Areas: Protect the characteristics that warranted designation of Areas of Critical Environmental Concern (ACECs), Special Recreation Management Areas (SRMAs), Wilderness Areas, Wilderness Study Areas (WSAs), National Monuments, and National Conservation Areas.

B. Goals, Standards, Objectives, and/or Desired Future Condition

- Air: Meet federal and state air quality standards through proper management of emissions.

- Flora and Fauna/Threatened and Endangered Species: Ensure that BLM actions will not reduce the likelihood of survival or recovery of any listed species or destroy or adversely affect or modify designated critical habitat to those species.

- Water: Meet Federal and State water quality standards and prevent degradation through Best Management Practices during and after fires and vegetative treatments.

- Visual: Meet established Visual Resource Management (VRM) class objectives through appropriately planning fuel reduction treatments. VRM will be a consideration for any post-fire erosion control and other burned area rehabilitation and restoration needs.

- Public Lands Health: Meet Standards for Public Lands Health through appropriately planning fuel reduction treatment projects. These standards will be considered for all

phases of treatment irregardless of the environment the treatment is taking place in grasslands, brushlands, woodland, and forest.

C. Natural and Biological Resource Objectives

Vegetation: Fire and fuels management and related actions will reduce the amount of shrub lands that are characterized as Condition Class (CC) II and III. Those characteristics are:

- where fire regimes have been moderately to significantly altered from their historical ranges ;
- where there is a moderate to high risk of losing key ecosystem components;
- where vegetative attributes have been significantly altered from their historical range; and
- where fire return frequencies have departed from their historical frequencies by more than one return interval.

Wilderness/Wilderness Study Areas: Fire and fuels management actions will meet the wilderness non-impairment mandate for Wilderness Areas. For Wilderness Study Areas fire and fuels management will strive to avoid unnecessary impairment that would affect the suitability toward wilderness designation of these areas. The ultimate goal would be to return fire to its natural role in these ecosystems.

D. Resource Use Objectives

- Fire is recognized as a natural process in fire-adapted ecosystems and is used to achieve objectives for other resources.

- Fuels in WUI areas are maintained at non-hazardous levels to provide for public and fire fighter safety.

- Prescribed fire activities comply with Federal and State air quality regulations.

- Each vegetation community is maintained within its natural range of variation in plant composition, structure, and function, and fuel loads are maintained below levels that are considered to be hazardous.

III. WILDLAND FIRE MANAGEMENT STRATEGIES

A. General Management Considerations

The Yuma/Lake Havasu Zone participates in the Central West Zone (CWZ) Operations committee. Fire Management Officers from the Tonto National Forest, Prescott National Forest, National Park Service, Bureau of Indian Affairs Western Regional Office, State of Arizona, Yuma/Lake Havasu BLM and Phoenix/Kingman BLM have representatives on the committee. The committee coordinates interagency efforts on fire prevention, education, dispatching, training, fuels management, suppression, rural fire assistance, and preparedness. A Zone Board meets twice yearly to guide the operations of the group.

This committee and the interagency approach it represents is guided by the 2001 update of the 1995 Federal Wildland Fire Management Policy, the Wildland and Prescribed Fire Management Policy, the Implementation Procedures Reference Guide, the Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment, and the 10-Year Comprehensive Strategy.

B. Wildland Fire Management Goals

The goals of the Fire Management Program are:

- Firefighter and public safety are the highest priority in every fire management activity.

- To identify appropriate management response (AMR) goals, objectives, and constraints by specific Fire Management Units (FMU) within the Fire Planning Unit (Zone). All wildland fire management activities will be managed as described in the FMU guidance outlined in Chapter III, section D.

- To work collaboratively with communities at risk within the Wildland/Urban Interface (WUI) to develop plans for risk reduction.

- To allow wildland fire to protect, maintain, and enhance public resources, and, as nearly as possible, be allowed to function in its ecological role when appropriate for the site and situation.

- To create an integrated approach to fire and resource management across the landscape and agency boundaries. This approach will be designed to meet the desired outcomes of Land and Resource Management Plans.

- To provide a program that fosters interagency interaction, cooperation, and effectiveness for all fire management activities. The program should be evident within all levels of the agencies, cooperators, and other public entities.

C. Wildland Fire Management Options

The appropriate management response concept will be applied for all public lands. Responses range from full fire suppression to managing fires for resource benefits (fire use). Management responses applied to a fire will be based on objectives derived from the land use allocations, relative risk to resources, the public and fire fighter safety, potential complexity; and the ability to defend management boundaries. Any wildland fire can be aggressively suppressed and any fire that occurs in an area designated for fire use can be managed for resource benefits, when it meets the prescribed criteria identified in the approved fire management plan and fire use plan.

All fire management actions will adhere to the standards outline in the Interagency Standards for Fire and Aviation Operations.

The Arizona Statewide Land Use Plan Amendment for Fire, Fuels, and Air Quality Management assigned all BLM-administered lands in Arizona one of the two following land use allocations. The best science available was used to determine the allocations and response to fire.

1. **Allocation 1- Wildland Fire Use**

   Areas suitable for wildland fire use for resource management benefit.
   This includes areas where wildland fire is desired and there are few or no constraints for its use. Where conditions are suitable, unplanned and planned wildfire may be used to achieve desired objectives, such as to improve vegetation, wildlife habitat, or watershed conditions; maintain non-hazardous levels of fuels; reduce the hazardous effects of unplanned wildland fires; and meet resource objectives. Where fuel loading is high but conditions are not initially suitable for wildland fire, fuel loads are reduced by mechanical, chemical, or biological means to reduce hazardous fuels levels and meet resource objectives (includes WUI areas).

   In the Yuma/Lake Havasu Zone the High Elevation Sonoran Desert (HESD) is the only FMU in Allocation 1.

2. **Allocation 2 – Non Wildland Fire Use**

   Areas not suitable for wildland fire use for resource benefit.
   This allocation includes areas where mitigation and suppression are required to prevent direct threats to life or property. It includes areas where fire never played a large role, historically, in the development and maintenance of the ecosystem, and some areas where fire return intervals were very long. It also includes areas (including some WUI areas) where an unplanned ignition could have negative effects to the ecosystem unless some form of mitigation takes place. Mitigation may include mechanical, biological, chemical, or prescribed fire means to maintain non-hazardous levels of fuels and reduce the hazardous effects of unplanned wildland fires and meet resource objectives.

   The allocation of lands is based on the desired future condition of vegetation communities, ecological conditions, and ecological risks. The allocation of lands is determined by contrasting current and historical conditions and ecological risks

associated with any changes. The condition class concept helps describe alterations in key ecosystem components such as species composition, structural stage, stand age, canopy closure, and fuel loadings. BLM Fire Management Plans, will include the two allocations and identify areas for including fire use, mechanical, biological, or chemical means to maintain non-hazardous levels of fuels, reduce the hazardous effects of unplanned wildland fires, and meet resource objectives. They will also identify areas for exclusion from fire (through fire suppression), chemical, mechanical, and/or biological treatments.

In the Yuma/Lake Havasu Zone all FMUs other than HESD are within Allocation 2.

D. Descriptions of the Wildland Fire Management Strategies by Fire Management Unit

1. Background for all FMUs

Historically wildfire was not a major cause of disturbance within the lower Colorado River riparian ecosystem prior to 1935. Flood control activities initiated after the completion of Hoover Dam have allowed the wide-spread establishment of the exotic saltcedar (*Tamarix ramosissima/chinensis*). Suppression of annual floods has limited the ability of native plant communities to regenerate and has created a system where wildfire has become the major disturbance influencing riparian stand development. Saltcedar is adapted to respond to fire through vigorous sprouting. It also has the ability to produce seed throughout most of the year so that it is uniquely able to colonize newly burned areas. Native riparian species vary in their ability to respond to fire. Arrowweed (*Pluchea purpurascens*) responds to fire and has the ability to colonize newly burned areas where salinity and water limit other native plant species. Willow (*Salix spp.*) also actively resprouts from the base after a burn. Cottonwood (*Populus fremontii*) does not respond to fire and is often lost as a stand component after a fire.

Wildfire and the subsequent progression towards monotypic saltcedar stand composition, has been detrimental to many riparian-obligate species. While some species have been able to utilize stands of large "old growth" saltcedar habitat, few species have been found utilizing recently established or burned habitats. The ability of saltcedar to vigorously sprout after fire creates conditions that produce fire intervals as short as five to fifteen years. These repeated fires can produce large monotypic, early successional stands of saltcedar that do not provide habitat for most indigenous wildlife species.

Sonoran Desert vegetation is not considered to be fire adapted or dependent. The invasion of non-native species has created areas that are now prone to high intensity fires with high rates of spread. The vegetation in this management unit is dominated by desert shrubs, trees, and cacti. Deep upland sites have overstories of mesquite, palo verde, and ironwood, with understories of perennial and annual grasses and forbs. This management unit also supports saguaro cactus as well as a variety of Opuntia species. Big galleta is the dominant perennial grass. Other grasses include slender gramma , purple threeawn , mesa and spidergrass threeawn, slim tridens, and fluff grass. Major forbs include slender janusia, twinberry, spiny goldenhead, desert globemallow, and yerba del venado.

Triangle bursage is the dominant shrub in this area. Other shrubs include jojoba, false mesquite, desert zinnia, Mormon tea, creosote bush, flattop buckwheat, ocotillo, limberbush, and wolfberry species. Annual grasses and forbs of both winter and summer seasons are well represented in years with favorable moisture.

2. Fire Management Objectives Common to All FMUs

Goal: Hazard reduction around the urban interface.

Objectives: Reduce hazardous fuels by the use of mechanical and prescribed fire where applicable around communities at risk from wildfire.

Goal: Suppress all unwanted wildland fires with minimum cost, using an appropriate suppression response, while protecting values at risk.

Objectives: Use an Appropriate Management Response (AMR) to manage all fires in accordance with management objectives based on current conditions and locations.

Goal: Establish or update cooperative agreements to maximize coordination with BLM's cooperators.

Objectives: Review all existing agreements annually, updating or changing them as necessary to promote full cooperation in mutual fire management.

3. Fire Management Strategies Common to All FMUs

The full range of available responses are available to implement protection objectives for unplanned ignitions:

- Monitoring and holding actions to check or confine spread
- Monitoring with pre-planned contingency actions
- Monitoring actions
- Control and extinguishment

a. Criteria to Use for Developing a Management Response

- Risk to firefighters and public health and safety
- Land and Resource Management Objectives
- Weather
- Fuel conditions
  - Threats and values to be protected
  - Cost efficiencies

Management strategies and action points will be based on fire activity and location. Normally, specific actions or combinations of actions will be determined on site by the incident commander or fire use manager.

b. Fuel Management Treatment Target Acreage

It is expected that the 2004 Arizona statewide amendment that specifically covers Fire and Fuels Management would be in place for 20 years until updated again. In the description of each FMU the acres treated for wildland fire use, prescribed fire, and non-fire treatments are based on this best case scenario from the RMP update. The acres treated are based on an annual target. The targeted annual acres will probably never be treated in a given year; some years no acres may be treated in a given FMU; in other years more acres may be treated. But over the 20 years it should average out.

At any time as further analyses (such as the fuels module in the Fire Program Analysis (FPA) or other risk assessment models such as Landfire) are developed, fuel treatment priorities by FMU may be modified.

Once the burn acre target has been met, from either planned or unplanned ignitions, a review of objectives and strategies will be initiated to develop new suppression criteria on all wildland fires.

E. Fire Management Unit (FMU) Descriptions

1. Fire Management Unit Name: BILL WILLIAMS RIVER

Category/Number: A/1

1. Location

This FMU consists of the Bill Williams River riparian area from the east end of the Bill Williams National Wildlife Refuge to the Alamo Dam for a total of 20,455 federal acres. The FMU interfaces 3,154 acres of State land and 8,124 acres of private land.

2. Characteristics

This FMU is a riparian river corridor flanked on the north and south by Sonoran Desert scrub. The vegetation in this area is dominated by dense stands of the exotic saltcedar (*Tamarix ramosissima*) with isolated stands of native vegetation including willow (*Salix spp*), cottonwood (*Populus fremontii*), and mesquite (*Prosopis spp*). The absence of flooding allows saltcedar to accumulate litter rapidly, resulting in frequent wildfires. Native riparian vegetation is not tolerant of wildfire, resulting in further spread of the fire tolerant saltcedar.

Cultural resource values such as homesteads and prehistoric sites have been found within the FMU.

The FMU includes areas of scenic value and development, including a boundary shared with the Bill Williams River National Wildlife Refuge.

The main improved road access into the FMU is on the Planet/Lincoln Ranch Road; there are numerous unimproved two-track roads that transect the area.

An analysis of Threatened and Endangered Species for the FMU indicates that the area is inhabited at least seasonally by yellow billed cuckoo, southwesternn willow flycatcher, Yuma clapper rai,l and American bald eagle.

Air and water quality in the FMU meet national standards.

3. Wildland Fire History

Lightning is the predominate cause of unplanned wildfires in the FMU. Between 1984 and 2003 the average number of fires per year was .3 (6 fires in 20 years) with 63 acres burned.

Fire season can start as early as mid-February and last until early October. Spring rains from February through April significantly contribute to the severity of the summer fire season. The FMU supports a variety of fuel complexes, including grass, saltcedar, and cottonwood/willow galleries.

Fire behavior can range from extreme in the grass and saltcedar under 20 feet with wind speeds of over 10 mph, high temperatures and low relative humidities with rates of spread of 80 chains per hour plus with crowning and torching beyond direct attack capability. Fire intensity in the grass is dependant on spring rains and the amount of herbaceous growth from year to year.

4. Values at Risk/Resource Protection Constraints

Threatened and Endangered Species habitat is the greatest concern for protection in this FMU. Appropriate clearances are required before any fuels management activities are initiated.

Cultural resource values are also of concern for protection in the FMU. Appropriate cultural resource clearances will be required before any fuels management activities are initiated.

A resource advisor will be assigned to any fire that escapes initial attack.

In holdings of private property and structures are intermingled throughout the FMU. An Appropriate Management Response (AMR) will be used to stop any unplanned

ignitions from burning on to private land or improvements.

Community education and outreach on prudent firewise practices will be offered to the communities within the FMU.

5. Communities at Risk

There are two communities of concern within the FMU. None of the communities is currently listed on the Federal Register as communities at risk

Planet Ranch is located on the western boundary of the FMU.

Lincoln Ranch is located on the eastern boundary of the FMU.

6. Fire Management Objectives

Goal: Reduce wildland fire hazard around identified communities at risk.

Objectives: Apply mechanical fuel reduction and prescribed fire where applicable around vulnerable structures to reduce damage from wildland fire.

Goal: Reduce wildland fire hazard around identified cultural sites.

Objectives: Apply mechanical fuel reduction and prescribed fire where applicable around vulnerable prehistoric and historic resources to reduce damage from wildland fire.

7. Fire Management Strategies

Suppression - The priority for Appropriate Management Response (AMR) is to prevent wildland fires from spreading to private lands, cultural resources, or improvements on BLM and other agencies' lands. Use AMR to manage all fires in accordance with management objectives based on current conditions and fire location.

All fires occurring at a Fire Intensity Level (FIL) 1-3 will be suppressed at less than 5 acres 90 percent of the time. All fires occurring at FIL 4-6 will be suppressed at less than 100 acres 75 percent of the time.

Wildland Fire Use – Wildland Fire Use for Resource benefits is not planned for this FMU but should be considered after more fuels management activities can be implemented to reduce the severity of an unplanned ignition.

Prescribed Fire – Currently there are no planned projects in this FMU.

Non-Fire Treatments - Currently there are no planned projects in this FMU.

Post-Fire Rehabilitation and/or Actions Needed for Restoration – An interdisciplinary team will develop Plans for post-fire rehabilitation. Post-fire rehabilitation and restoration will be used to facilitate reestablishment of the potential natural community of the site. In addition, the following rehabilitation concerns should be addressed:

- Non-native species invasion in area disturbed by wildfire
- Threatened and Endangered species habitat rehabilitation
- Cultural Resource protection

2. Fire Management Unit Name: GILA RIVER
Category/Number: A/2

1. Location

The FMU is located east of Yuma and starts at the north end of the Gila Mountains and follows the Gila River riparian area east approximately 80 miles to the Field Office boundary. This area encompasses approximately 42,861 acres of BLM land, 10,545 acres of State land, and 106,039 acres of Private land for a total of 159,445 acres.

2. Characteristics

The vegetation in this area is dominated by dense stands of the exotic saltcedar with isolated stands of native vegetation including willow, cottonwood, and mesquite. The absence of flooding allows saltcedar to accumulate litter rapidly, resulting in frequent wildfires. Native riparian vegetation is not tolerant of wildfire, resulting in further spread of the fire tolerant saltcedar.

Vehicle access is a series of county roads along the river corridor.

An analysis of Threatened and Endangered Species indicate that the area is used at least seasonably by southwesternn willow flycatcher and Yuma clapper rails.

Air and water quality in the FMU meet national standards.

3. Wildland Fire History

Humans are the predominate cause of unplanned wildfires in the FMU. Between 1984 and 2003 the average number of fires per year was 2.1 with 65 acres burned.

Fire season can start as early as mid-February and last until mid-October. Spring rains from February through April significantly contribute to the severity of the summer fire season. The FMU supports two major fuel complexes: grass with shrubs and riparian. Fire behavior can range from extreme in the grass fuel types

when there has been enough spring rains and the herbaceous growth is heavy. Rates of spread could be over 60 chains per hour plus with flame lengths over 10 feet. Fire behavior in the riparian area would also exhibit extreme fire behavior of 40 chains per hour with flame lengths of 30 feet.

4. Values at Risk/Resource Protection Constraints

In holdings of private property and structures within the FMU are key resources to protect.

The priority for Appropriate Management Response (AMR) is to prevent wildland fires from spreading to private land.

Cultural resource values are also of concern for protection in the FMU. Appropriate cultural resource clearances will be required before any fuels management activities are initiated.

A Resource Advisor (RA) will be assigned to the incident commander as needed to ensure cultural resource protection objectives are met.

All suppression tactics and support actions will be selected commensurate with potential fire behavior and minimizing impacts to values to be protected. These decisions will be based on interdisciplinary inputs to the extent possible, with respect to conditions on the ground.

5. Communities at Risk

There are three communities of concern within the FMU. None of the communities are currently listed on the Federal Register as communities at risk

Wellton is located 15 miles from the western boundary of the FMU.

Tacna is located in the middle of the FMU.

Hyder is located near the eastern boundary of the FMU.

6. Fire Management Objectives

Goal: Reduce wildland fire hazard around identified communities at risk.

Objectives: Apply mechanical fuel reduction and prescribed fire where applicable around vulnerable structures to reduce damage from wildland fire.

Goal: Reduce wildland fire hazard around identified cultural sites.

Objectives: Apply mechanical fuel reduction and prescribed fire where applicable around vulnerable prehistoric and historic resources to reduce damage from wildland fire.

Goal: Use prescribed fire to improve Threatened and Endangered species habitat.

Objectives: Use prescribed fire to encourage new growth in marshes where the vegetation has become decadent.

7. Fire Management Strategies

Suppression - The priority for Appropriate Management Response (AMR) is to prevent wildland fires from spreading to private land, cultural resources, or improvements on BLM and other agencies' lands. Use AMR to manage all fires in accordance with management objectives based on current conditions and fire location.

All fires occurring at a Fire Intensity Level (FIL) 1-3 will be suppressed at less than 5 acres 90 percent of the time. All fires occurring at FIL 4-6 will be suppressed at less than 100 acres 75 percent of the time.

Wildland Fire Use – Wildland Fire Use for Resource benefits is not planned for this FMU but should be considered after more fuels management activities can be implemented to reduce the severity of an unplanned ignition..

Prescribed Fire – Currently there is one project scheduled for this FMU. A 50-acre prescribed fire is scheduled for FY-06. The Quigley burn will be used to enhance T&E Species habitat.

Non-Fire Treatments - Currently there is one planned project in this FMU scheduled for FY-05. This project will be to protect cultural resources at Sears Point.

Post-Fire Rehabilitation and/or Actions Needed for Restoration – An interdisciplinary team will develop plans for post-fire rehabilitation. Post-fire rehabilitation and restoration will be used to facilitate reestablishment of the potential natural community of the site. All rehabilitation actions will be commensurate with wilderness values using the minimum tool concept. The following rehabilitation concerns should be addressed:

- Non-native species invasion in area disturbed by wildfire
- Threatened and Endangered species habitat rehabilitation
- Cultural Resource protection

3. Fire Management Unit Name: HIGH ELEVATION SONORAN DESERT
Category/Number: A/3

1. Location

This FMU consists of two mountain ranges within the Havasu Field Office boundaries. It represents all of the uplands in the Fire Zone with an elevation of 3500 feet or more and includes the Harcuvar Wilderness area and the Mohave Mountains. Within the FMU there are 59,129 acres of BLM land, 4,887 acres of State land, and 755 acres of private land.

Harcuvar Wilderness Area is located north and west of Wenden, Arizona.

Crossman Peak is located north and east of Lake Havasu City.

2. Characteristics

Harcuvar Wilderness – The Harcuvars rise abruptly from the desert floor with over 10 miles of rugged ridgeline. Elevations range from 2,400 feet to 5,100 feet. An isolated 3,500 acre island of interior chaparral exists on the northern ridgeline. Sonoran Desert vegetation is not considered to be fire adapted or dependent. The invasion of non-native species has created areas that are now prone to high intensity fires with high rates of spread. The vegetation in this management unit is dominated by desert shrubs, trees, and cacti. Deep upland sites have overstories of mesquite, palo verde, and ironwood, with understories of perennial and annual grasses and forbs. This management unit also supports saguaro cactus as well as a variety of Opuntia species. Big galleta is the dominant perennial grass. Other grasses include slender gramma, purple threeawn, mesa and spidergrass threeawn, slim tridens, and fluff grass. Major forbs include slender janusia, twinberry, spiny goldenhead, desert globemallow, and yerba del venado. Triangle bursage is the dominant shrub in this area. Other shrubs include jojoba, false mesquite, desert zinnia, Mormon tea, creosote bush, flattop buckwheat, ocotillo, limberbush, and wolfberry species. Annual grasses and forbs of both winter and summer seasons are well represented in years with favorable moisture.

Crossman Peak – This area is characterized by steep rocky slopes, thin soil cover, and 5-inch annual rainfall. This produces a sparse vegetative cover, consisting of desert shrubs and grasses, cholla and prickly pear cactus, with scattered pinyon and juniper on the ridges.

There are no known threatened or endangered species in this FMU.

Air and water quality in the FMU meet national standards.

3. Wildland Fire History

Lightning is the predominate cause of unplanned wildfires in the FMU. Between 1984 and 2003 the average number of fires per year was .4 (8 fires in 20 years) with 1373 acres burned.

Fire season can start as early as mid-February and last until mid-October. Spring rains from February through April significantly contribute to the severity of the summer fire season. The FMU supports a two fuel complexes: Sonoran Desert and oakbrush/grass.

Fire behavior can range from extreme in the grass and oakbrush under 20 feet with wind speeds of over 10 mph, high temperatures, and low relative humidities. Rates of spread could exceed 80 chains per hour with crowning and torching beyond direct attack capability. Fire intensity in the both fuel types are dependant on spring rains and the amount of herbaceous growth from year to year.

4. Values at Risk/Resource Protection Constraints

The priority for Appropriate Management Response (AMR) is to prevent wildland fires from spreading to private land, other agencies' land, and burnable historic cultural resources.

For wildland fires requiring an incident management team with multiple resources, RAs will be assigned to the incident commander to ensure wilderness protection objectives are met.

Under extreme fire danger conditions (generally PL-4 and 5), advance approval may be granted by the Field Manager to allow motorized access for suppression purposes. Limitations will be set on type, number, and extent of use**.** Unlimited motorized access will not be permitted**.**

Under no conditions should motorized access be permitted following a successful initial attack, or subsequent monitoring, etc. If such a contained fire should flare up later, wilderness access will be considered in the Wildland Fire Situation Analysis (WFSA) for which a new response strategy is developed with RA input.

All suppression tactics and support actions will be selected commensurate with potential fire behavior and minimizing impacts to values to be protected. These decisions will be based on interdisciplinary inputs to the extent possible, with respect to conditions on the ground.

5. Communities at Risk

None

6. Fire Management Objective

Goal: Reduce wildland fire hazard to cultural/historic resources and other improvements.

Objectives: Where necessary to meet fuels reduction objectives, utilize approved fuels management techniques which include prescribed fire treatments and non-fire treatments to reduce localized fuel concentrations around historic structures and other improvements

7. Fire Management Strategies

Suppression - The priority for Appropriate Management Response (AMR) is to prevent wildland fires from spreading to private land, cultural resources, or improvements on BLM and other agencies' lands. Use AMR to manage all fires in accordance with management objectives based on current conditions and fire location.

All fires occurring at a Fire Intensity Level (FIL) 1-3 will be suppressed at less than 100 acres 90 percent of the time. All fires occurring at FIL 4-6 will be suppressed at less than 1000 acres 75 percent of the time.

Wildland Fire Use - Wildland Fire Use for Resource benefits is not planned for this FMU but should be considered after more fuels management activities can be implemented to reduce the severity of an unplanned ignition.

Prescribed Fire - Treat 100 acres within the FMU. Prescribed fire will be used to move FRCC II and III lands to FRCC I. Fire will also be used to maintain FRCC I lands as well.

Non-Fire Treatments - Mechanical thinning will be used to protect several historic cabins adjacent to the Harcuvar Wilderness. It will also be used to protect a communications site and wildlife water catchment on top of Smith Peak.

Post-Fire Rehabilitation and/or Actions Needed for Restoration – An interdisciplinary team will develop plans for post-fire rehabilitation. Post-fire rehabilitation and restoration will be used to facilitate reestablishment of the potential natural community of the site. All rehabilitation actions will be commensurate with wilderness values using the minimum tool concept. The following rehabilitation concerns should be addressed:

- Slopes of 15% or greater where surface erosion is likely
- Temporary fences in areas where grazing pressure may inhibit reestablishment of native plants following wildfire
- Road obliteration or restoration where the road created by the suppression activity does not meet resource objectives for the area or may cause erosion

4. Fire Management Unit Name: LOWER COLORADO RIVER NORTH

Category/Number: A/4

1. Location

The FMU is located along the Colorado River from Davis Dam south to Interstate 10. The FMU consist of 17,989 acres of BLM land, 11,600 acres of State land, and 33,574 acres of Private land for a total 63,163 acres.

2. Characteristics

Historically wildfire was not a major cause of disturbance within the lower Colorado River riparian ecosystem prior to 1935. Flood control activities initiated after the completion of Hoover Dam have allowed the wide spread establishment of the exotic saltcedar. Suppression of annual floods has limited the ability of native plant communities to regenerate and has created a system where wildfire has become the major disturbance influencing riparian stand development. Saltcedar is adapted to respond to fire through vigorous sprouting. It also has the ability to produce seed throughout most of the year so that it is uniquely able to colonize newly burned areas. Native riparian species vary in their ability to respond to fire. Arrowweed responds to fire and has the ability to colonize newly burned areas where salinity and water related stress limit other native plant species. Willow resprouts from the base after a burn. Cottonwood does not respond to fire and is often lost as a stand component after a burn.

Wildfire and the subsequent progression towards monotypic saltcedar stand composition, has been detrimental to many riparian obligate species. While some species have been able to utilize stands of large "old growth" saltcedar habitat, few species have been found utilizing recently established or burned habitats. The ability of saltcedar to vigorously sprout after fire creates conditions that produce fire intervals as short as five to fifteen years. These repeated fires can produce large monotypic, early successional stands of saltcedar that do not provide habitat for most indigenous wildlife species.

Access to the FMU is Arizona Highway 95 on the Arizona side of the river.

There are several State or Federally listed threatened or endangered species in this FMU which include: southwestern Willow flycatcher, Yuma clapper rail, yellow billed cuckoo, American bald eagle, and several fish species.

Air and water quality in the FMU meet national standards.

3. Wildland Fire History

Humans are the predominate cause of unplanned wildfires in the FMU. Between 1984 and 2003 the average number of fires per year was 7.47 with 376 acres burned.

The FMU supports two major fuel complexes: grass with shrubs and riparian. Fire behavior can be extreme in the grass fuel types when there has been enough spring rains and herbaceous growth. Rates of spread could exceed 60 chains per hour with flame lengths over 10 feet Fire behavior in the riparian area would also exhibit extreme fire behavior with rates of spread exceeding 40 chains per hour with flame lengths of 30 feet.

4. Values at Risk/Resource Protection Constraints

Threatened and Endangered Species habitat is the greatest concern for protection in this FMU. Appropriate clearances are required before any fuels management activities are initiated.

Cultural resource values are also of concern for protection in the FMU. Appropriate cultural resource clearances will be required before any fuels management activities are initiated.

A resource advisor will be assigned to any fire that escapes initial attack.

In holdings of private property and structures are intermingled throughout the FMU. An Appropriate Management Response (AMR) will be used to stop any unplanned ignitions from burning onto private land or improvements.

Community education and outreach on prudent firewise practices will be offered to the communities within the FMU

All suppression tactics and support actions will be selected commensurate with potential fire behavior and minimizing impacts to values to be protected. These decisions will be based on interdisciplinary inputs to the extent possible, with respect to conditions on the ground.

This is an area of high visitor use, safety of the public is a major concern. The size of unplanned wildfires will be minimized to protect public safety.

5. Communities at Risk

Golden Shores is on the 2001 Federal Register as a community at risk from wildfire. There are many other communities that are at risk that are not on the 2001 list.

6. Fire Management Objectives

Goal: Reduce wildland fire hazard around identified cultural sites, private property, and recreational facilities.

Objective: Apply mechanical fuel reduction and prescribed fire where applicable around vulnerable prehistoric, historic resources, private property, and recreational

facilities to reduce damage from wildland fire.

7. Fire Management Strategies

Suppression - The priority for Appropriate Management Response (AMR) is to prevent wildland fires from spreading to private land, cultural resources, or improvements on BLM lands, other agencies' lands, and to protect the public users. Use AMR to manage all fires in accordance with management objectives based on current conditions and fire location.

All fires occurring at a Fire Intensity Level (FIL) 1-3 will be suppressed at less than 5 acre 90 percent of the time. All fires occurring at FIL 4-6 will be suppressed at less than 50 acres 75 percent of the time.

Wildland Fire Use – Wildland Fire Use for Resource benefits is not planned for this FMU but should be considered after more fuels management activities can be implemented to reduce the severity of an unplanned ignition.

Prescribed Fire – There is one project scheduled for this FMU for FY-04 to treat 60 acres with prescribed fire. Prescribed fire will be used to clear non-native saltcedar for restoration of native species.

Non-Fire Treatments - Mechanical tree thinning will be used on 11 WUI projects scheduled for FY-05 in this FMU for a total of 243 acres.

Chemical or biological treatments may be considered as needed by a site-specific plan.

Post-Fire Rehabilitation and/or Actions Needed for Restoration – An interdisciplinary team will develop Plans for post-fire rehabilitation. Post-fire rehabilitation and restoration will be used to facilitate reestablishment of the potential natural community of the site. In addition, the following rehabilitation concerns should be addressed:

- Non-native species invasion in area disturbed by wildfire
- Threatened and Endangered species habitat rehabilitation
- Cultural resource protection

5. Fire Management Unit Name: LOWER COLORADO RIVER SOUTH
Category/Number: A/5

1. Location

The FMU is located along the Colorado River from Interstate 10 south to the southern International boundary at San Luis, Arizona. The FMU consist of 47,171 acres of

BLM land, 26,559 acres of State land, and 124,343 acres of private land for a total 198,073 acres.

2. Characteristics

Historically wildfire was not a major cause of disturbance within the lower Colorado River riparian ecosystem prior to 1935. Flood control activities initiated after the completion of Hoover Dam have allowed the wide spread establishment of the exotic saltcedar. Suppression of annual floods has limited the ability of native plant communities to regenerate and has created a system where wildfire has become the major disturbance influencing riparian stand development. Saltcedar is adapted to respond to fire through vigorous sprouting. It also has the ability to produce seed throughout most of the year so that it is uniquely able to colonize newly burned areas. Native riparian species vary in their ability to respond to fire. Arrowweed responds to fire and has the ability to colonize newly burned areas where salinity and water related stresses limit other native plant species. Willow resprouts from the base after a burn. Cottonwood does not respond to fire and is often lost as a stand component after a burn.

Wildfire and the subsequent progression towards monotypic saltcedar stand composition, has been detrimental to many riparian-obligate species. While some species have been able to utilize stands of large "old growth" saltcedar habitat, few species have been found utilizing recently established or burned habitats. The ability of saltcedar to vigorously sprout after fire creates conditions that produce fire intervals as short as five to fifteen years. These repeated fire can produce large monotypic, early successional stands of saltcedar that do not provide habitat for most indigenous wildlife species

Access is available using U.S. Highway 95 in Arizona and a variety of county and other access ways.

There are several State or Federally listed threatened or endangered species in this FMU which include: southwesternn willow flycatcher, Yuma clapper rail, California black rail, yellow billed cuckoo, American bald eagle, and several fish species.

Air and water quality in the FMU meet national standards.

3. Wildland Fire History

Humans are the predominant cause of unplanned fires in this FMU. Between 1984 and 2003 the average number of fires per year was 21.6 with 812 acres burned.

Fire season can start as early as mid-February and last until mid-October. Spring rains from February through April significantly contribute to the severity of the summer fire season. The FMU supports two major fuel complexes: grass with shrubs and riparian. Fire behavior can range from extreme in the grass fuel types

when there has been enough spring rains and the herbaceous growth is heavy. Rates of spread could exceed 60 chains per hour with flame lengths over 10 feet. Fire behavior in the riparian area would also exhibit extreme fire behavior with rates of spread exceeding 40 chains per hour with flame lengths of 30 feet.

4. Values at Risk/Resource Protection Constraints

Threatened and Endangered Species habitat is the greatest concern for protection in this FMU. Appropriate clearances are required before any fuels management activities are initiated.

Cultural resource values are also of concern for protection in the FMU. Appropriate cultural resource clearances will be required before any fuels management activities are initiated.

A resource advisor will be assigned to any fire that escapes initial attack.

In holdings of private property and structures are intermingled throughout the FMU. An Appropriate Management Response (AMR) will be used to stop any unplanned ignitions from burning onto private land or improvements.

Community education and outreach on prudent firewise practices will be offered to the communities within the FMU.

All suppression tactics and support actions will be selected commensurate with potential fire behavior and minimizing impacts to values to be protected. These decisions will be based on interdisciplinary inputs to the extent possible, with respect to conditions on the ground.

This is an area of high visitor use; safety of the public is a major concern. The size of unplanned wildfires will be minimized to protect public safety

5. Communities at Risk

Yuma is on the 2001 Federal Register as a community at risk form wildfire. There are many other communities that are of concern that are not on the 2001 list.

6. Fire Management Objectives

Goal: Reduce wildland fire hazard around identified cultural sites, private property, and recreational facilities.

Objectives: Apply mechanical fuel reduction and prescribed fire where applicable around vulnerable prehistoric, historic resources, private property, and recreational facilities to reduce damage from wildland fire.

Goal: Prescribed fire will be used to enhance Threatened and Endangered species habitat.

Objectives: Use prescribed fire to encourage new growth in marshes where the vegetation has become decadent. Operational burn plans will be designed to minimize the chance of fire damaging riparian areas.

7. Fire Management Strategies

Suppression - The priority for Appropriate Management Response (AMR) is to prevent wildland fires from spreading to private land, cultural resources, or improvements on BLM lands and other agencies' lands. Use AMR to manage all fires in accordance with management objectives based on current conditions and fire location.

All fires occurring at a Fire Intensity Level (FIL) 1-3 will be suppressed at less than 5 acres 90 percent of the time. All fires occurring at FIL 4-6 will be suppressed at less than 50 acres 75 percent of the time.

Wildland Fire Use – Wildland Fire Use for Resource benefits is not planned for this FMU but should be considered after more fuels management activities can be implemented to reduce the severity of an unplanned ignition.

Prescribed Fire - There are two projects scheduled in this FMU for FY-05 to treat 150 acres with prescribed fire. Prescribed fire will be used to burn decadent marsh vegetation to encourage new growth for the T&E Yuma clapper rail.

Non-Fire Treatments - There are 13 WUI projects scheduled for FY-05 in this FMU for a total of 118 acres.

Chemical or biological treatments will be addressed in a site specific environmental assessment.

Post-Fire Rehabilitation and/or Actions Needed for Restoration – An interdisciplinary team will develop plans for post-fire rehabilitation. Post-fire rehabilitation and restoration will be used to facilitate reestablishment of the potential natural community of the site. All rehabilitation actions will be commensurate with wilderness values using the minimum tool concept. The following rehabilitation concerns should be addressed:

- Non-native species invasion in area disturbed by wildfire
- Threatened and Endangered species habitat rehabilitation
- Cultural resource protection

6. Fire Management Unit Name: SONORAN DESERT WILDERNESS NORTH

Category/Number: A/6

1. Location

This FMU consists of BLM-administered wilderness areas in Arizona north of Interstate 10 excluding the Harcuvar Wilderness. BLM administers 184,982 acres in this FMU. There are 15 State in-holdings and 20 private in-holdings for a total of 185,017 acres.

2. Characteristics

Rawhide Mountains Wilderness - The wilderness includes portions of two mountain ranges, the Rawhide Mountains to the north and the Buckskins to the south, separated by eight miles of the Bill Williams River. More than five miles of this perennial stream meander through a 600-foot-deep gorge. Several rocky side canyons with small waterfalls enter the main canyon within the wilderness. The riparian vegetation consists of cottonwood, willow, and saltcedar. Access is from Alamo Lake on the east and Lincoln Ranch on the west.

Swansea - This wilderness includes the eastern end of the Buckskin Mountains, the Black Mesa extension to the north and six miles of the Bill Williams River. The northern portion is a series of eroded volcanic dikes and plugs with precipitous cliffs. The Buckskin portion is a more subtle and rounded topography with a complex drainage system leading to the river. Access is from Bouse along Swansea Road.

East Cactus Plain Wilderness - This area is dominated by an intricate dune crescent—topography and dense dunescrub vegetation known only in this area of Arizona. Access is from Bouse north on Swansea Road.

Gibraltar Mountain Wilderness - This wilderness includes the western end of the Buckskin Mountains. The topography consists of rugged volcanic rock dissected by deep sandy washes and rocky canyons. Access is from Parker east on Shea Road**.**

Cactus Plain Wilderness Study Area - The wilderness study area embraces the western two thirds of the Cactus Plain, an immense open area of stabilized and semi-stabilized dunes, unique to western Arizona. Access is from Bouse along Swansea Road.

Threatened and Endangered Species within the FMU consist of the American bald eagle which nests in the Rawhide Wilderness.

Air and water quality in the FMU meet national standards.

3. Wildland Fire History

There has not been a reported fire for the planning period for this FMU.

Fire season can start as early as mid-February and last until mid-October. Spring rains from February through April significantly contribute to the severity of the summer fire season. The FMU supports one major fuel complex: grass with shrubs.

Fire behavior can be extreme in the grass fuel types when there has been enough spring rains and the herbaceous growth is heavy. Rates of spread could be over 60 chains per hour with flame lengths over 10 feet.

4. Values at Risk/Resource Protection Constraints

Threatened and Endangered Species habitat is the greatest concern for protection in this FMU. Appropriate clearances are required before any fuels management activities are initiated.

Cultural resource values are also of concern for protection in the FMU. Appropriate cultural resource clearances will be required before any fuels management activities are initiated.

In holdings of private property and structures are intermingled throughout the FMU. An Appropriate Management Response (AMR) will be used to stop any unplanned ignitions from burning onto private land or improvements.

5. Communities at Risk

There are no communities at risk within this FMU.

6. Fire Management Objectives

Wildland Fire Use – Wildland Fire Use for Resource benefits is not planned for this FMU.

Prescribed Fire – There are no projects currently planned for this FMU.

Non-Fire Treatments - There are no projects currently planned for this FMU.

Chemical or biological treatments may be considered as needed by a site-specific plan.

Post-Fire Rehabilitation and/or Actions Needed for Restoration – An interdisciplinary team will develop plans for post-fire rehabilitation. Post-fire rehabilitation and restoration will be used to facilitate reestablishment of the potential natural community of the site. In addition, the following rehabilitation concerns should be addressed:

- Slopes of 15% or greater where surface erosion is likely
- Temporary fences in areas where grazing pressure may inhibit reestablishment of native plants following wildfire
- Road obliteration or restoration will take place where roads were created by the suppression activity.

7. Fire Management Strategies

The priority for Appropriate Management Response (AMR) is to prevent wildland fires from spreading to private land, cultural resources, or improvements on BLM lands and other agencies' lands. Use AMR to manage all fires in accordance with management objectives based on current conditions and fire location.

In the Rawhide Wilderness the priority for response is to protect Threatened and Endangered Species habitat. Appropriate clearances are required before any fuels management activities are initiated.

For wildland fires requiring an incident management team with multiple resources, RAs will be assigned to the incident commander to ensure wilderness protection objectives are met.

Under extreme fire danger conditions (generally PL-4 and 5), advance approval may be granted by the Field Manager to allow motorized access for suppression purposes. Limitations will be set on type, number, and extent of use**.** Unlimited motorized access will not be permitted**.**

Suppress fires that exceed or are expected to exceed five chains per hour rate of spread.

Fire rate of spread monitoring may be conducted from aircraft or on the ground using foot or horseback travel inside the wilderness. Helicopters may be used to transport crews and supplies inside the wilderness. Crews are authorized to conduct burnout operations and construct firelines using hand tools. Small fire camps may be set up within the wilderness. Surface disturbance from fireline construction will be rehabilitated before crews are released. All evidence of camp use and flagging or other debris will be removed. A Wilderness Resource Advisor will provide guidance for suppression and rehabilitation activities. Activities not listed involving motorized or mechanical equipment or vehicles in the wilderness require Field Office approval before initiation. Limit fire spread in locations where there are cultural sites, special status plants, and habitat for threatened, endangered, and sensitive species.

Under no conditions should motorized access be permitted following a successful initial attack, or subsequent monitoring, etc. If such a contained fire should flare up later, wilderness access will be considered in the Wildland Fire Situation Analysis (WFSA) for which a new response strategy is developed with RA input.

All suppression tactics and support actions will be selected commensurate with potential

fire behavior and minimizing impacts to values to be protected. These decisions will be based on interdisciplinary inputs to the extent possible, with respect to conditions on the ground.

Suppression – All fires occurring at a Fire Intensity Level (FIL) 1-3 will be suppressed at less than 10 acres 90 percent of the time. All fires occurring at FIL 4-6 will be suppressed at less than 100 acres 75 percent of the time.

7. Fire Management Unit Name: SONORAN DESERT WILDERNESS SOUTH
Category/Number: A/7

1. Location

This FMU consists of the BLM Wilderness Areas south of Interstate 10 in Arizona. BLM administers 160,297 acres with 7 acres of State of Arizona in-holdings, and 5 acres of private in-holdings for a total of 160,309 acres.

2. Characteristics

Eagletail Mountains - This wilderness includes 15 miles of the Eagletail Mountains ridgeline with Courthouse Rock to the north and Cemetery Ridge to the south and a large desert plain in between. Several different rock strata are visible with natural arches, high spires, monoliths, and jagged sawtooth ridges. The vegetation in this management unit is dominated by desert shrubs, trees, and cacti. Deep upland sites have overstories of mesquite, palo verde, and ironwood, with understories of perennial and annual grasses and forbs. This management unit also supports saguaro cactus as well as a variety of Opuntia species. Big galleta is the dominant perennial grass. Other grasses include slender gramma, purple threeawn, mesa and spidergrass threeawn, slim tridens, and fluff grass. Major forbs include slender janusia, twinberry, spiny goldenhead, desert globemallow, and yerba del venado. Triangle bursage is the dominant shrub in this area. Other shrubs include jojoba, false mesquite, desert zinnia, Mormon tea, creosote bush, flattop buckwheat, ocotillo, limberbush, and wolfberry species. Annual grasses and forbs of both winter and summer seasons are well represented in years with favorable moisture.

Access is from Interstate 10 on the north and Clanton Wells Road from the south.

New Water Mountains Wilderness - This area is characterized by strings of rocky spires, sheer rock outcrops, natural arches, slick rock canyons, and deep sandy washes. The vegetation in this management unit is dominated by desert shrubs, trees, and cacti. Deep upland sites have overstories of mesquite, palo verde, and ironwood, with understories of perennial and annual grasses and forbs. This management unit also supports saguaro cactus as well as a variety of Opuntia species. Big galleta is the dominant perennial grass. Other grasses include slender gramma, purple threeawn, mesa and spidergrass threeawn, slim tridens, and fluff grass. Major forbs include slender janusia, twinberry, spiny goldenhead, desert globemallow, and yerba del

venado. Triangle bursage is the dominant shrub in this area. Other shrubs include jojoba, false mesquite, desert zinnia, Mormon tea, creosote bush, flattop buckwheat, ocotillo, limberbush, and wolfberry species. Annual grasses and forbs of both winter and summer seasons are well represented in years with favorable moisture.

Access is from Interstate 10.

Trigo Mountains Wilderness - This wilderness includes 14 miles of the Trigo Mountains ridgeline, Red Cloud Wash on the south, Clip Wash in the middle and Hart Mine Wash to the north. This area is characterized by sawtooth ridges, steep sided canyons, and is heavily dissected by washes. The vegetation in this management unit is dominated by desert shrubs, trees, and cacti. Deep upland sites have overstories of mesquite, palo verde and ironwood, with understories of perennial and annual grasses and forbs. This management unit also supports saguaro cactus as well as a variety of Opuntia species. Big galleta is the dominant perennial grass. Other grasses include slender gramma, purple threeawn, mesa and spidergrass threeawn, slim tridens, and fluff grass. Major forbs include slender janusia, twinberry, spiny goldenhead, desert globemallow, and yerba del venado. Triangle bursage is the dominant shrub in this area. Other shrubs include jojoba, false mesquite, desert zinnia, Mormon tea, creosote bush, flattop buckwheat, ocotillo, limberbush, and wolfberry species. Annual grasses and forbs of both winter and summer seasons are well represented in years with favorable moisture.

Access is from Martinez Lake to the south and Cibola Road to the north.

Muggins Mountains Wilderness - This wilderness includes a cluster of rugged peaks at the western end of the Muggins Mountains. The rugged landform and colorful geologic strata of the area is considered exceptionally scenic for the region. The vegetation in this management unit is dominated by desert shrubs, trees, and cacti. Deep upland sites have overstories of mesquite, palo verde, and ironwood, with understories of perennial and annual grasses and forbs. This management unit also supports saguaro cactus as well as a variety of Opuntia species. Big galleta is the dominant perennial grass. Other grasses include slender gramma, purple threeawn, mesa and spidergrass threeawn, slim tridens, and fluff grass. Major forbs include slender janusia, twinberry, spiny goldenhead, desert globemallow, and yerba del venado. Triangle bursage is the dominant shrub in this area. Other shrubs include jojoba, false mesquite, desert zinnia, Mormon tea, creosote bush, flattop buckwheat, ocotillo, limberbush, and wolfberry species. Annual grasses and forbs of both winter and summer seasons are well represented in years with favorable moisture.

Access is from Dome Valley Road.

Cultural resource values such as prehistoric sites have been found within the FMU.

There is no known State or Federally listed threatened or endangered species in this FMU.

Air and water quality in the FMU meet national standards.

3. Wildland Fire History

There has not been a reported fire for the planning period for this FMU.

Fire season can start as early as mid-February and last until mid-October. Spring rains from February through April significantly contribute to the severity of the summer fire season. The FMU supports a Sonoran Desert variety of fuels. Fires intensity in the grasses and brush are dependant on spring rains and the amount of herbaceous growth from year to year.

4. Values at Risk/Resource Protection Constraints

Cultural resource values are the greatest concern for protection in the FMU. Appropriate cultural resource clearances will be required before any fuels management activities are initiated.

For wildland fires requiring an incident management team with multiple resources, RAs will be assigned to the incident commander to ensure wilderness protection objectives are met.

5. Communities at Risk

There are no communities at risk within this FMU.

6. Fire Management Objectives

Goal: Reduce wildland fire hazard around identified cultural sites.

Objectives: Apply mechanical fuel reduction and prescribed fire where applicable around vulnerable prehistoric and historic resources to reduce damage from wildland fire.

7. Fire Management Strategies

For wildland fires requiring an incident management team with multiple resources, RAs will be assigned to the incident commander to ensure wilderness protection objectives are met.

Under extreme fire danger conditions (generally PL-4 and 5), advance approval may be granted by the Field Manager to allow motorized access for suppression purposes. Limitations will be set on type, number, and extent of use**.** Unlimited motorized access will not be permitted**.**

Suppress fires that exceed or are expected to exceed five chains per hour rate of spread.

Fire rate of spread monitoring may be conducted from aircraft or on the ground using foot or horseback travel inside the wilderness. Helicopters may be used to transport crews and supplies inside the wilderness. Crews are authorized to conduct burnout operations and construct fireline using hand tools. Small fire camps may be set up within the wilderness. Surface disturbance from fireline construction will be rehabilitated before crews are released. All evidence of camp use and flagging or other debris will be removed. A Wilderness Resource Advisor will provide guidance for suppression and rehabilitation activities. Activities not listed involving motorized or mechanical equipment or vehicles in the wilderness require Field Office approval before initiation. Limit fire spread in locations where there are cultural sites, special status plants, and habitat for threatened, endangered, and sensitive species.

Under no conditions should motorized access be permitted following a successful initial attack, or subsequent monitoring, etc. If such a contained fire should flare up later, wilderness access will be considered in the Wildland Fire Situation Analysis (WFSA) for which a new response strategy is developed with RA input.

All suppression tactics and support actions will be selected commensurate with potential fire behavior and minimizing impacts to values to be protected. These decisions will be based on interdisciplinary inputs to the extent possible, with respect to conditions on the ground.

Suppression - The priority for Appropriate Management Response (AMR) is to prevent wildland fires from impacting cultural resources or improvements on BLM lands and other agencies' lands. Use AMR to manage all fires in accordance with management objectives based on current conditions and fire location.

All fires occurring at a Fire Intensity Level (FIL) 1-3 will be suppressed at less than 10 acres 90 percent of the time. All fires occurring at FIL 4-6 will be suppressed at less than 100 acres 75 percent of the time.

Wildland Fire Use – Wildland Fire Use for Resource benefits is not planned for this FMU.

Prescribed Fire – There are no projects currently planned for this FMU.

Non-Fire Treatments - There are no projects currently planned for this FMU.

Chemical or biological treatments may be considered as needed by a site-specific plan.

Post-Fire Rehabilitation and/or Actions Needed for Restoration – An interdisciplinary

team will develop plans for post-fire rehabilitation. Post-fire rehabilitation and restoration will be used to facilitate reestablishment of the potential natural community of the site. In addition, the following rehabilitation concerns should be addressed:

- Slopes of 15% or greater where surface erosion is likely
- Temporary fences in areas where grazing pressure may inhibit reestablishment of native plants following wildfire
- Road obliteration or restoration where the road created by the suppression activity does not meet resource objectives for the area or may cause erosion

8. Fire Management Unit Name: SONORAN DESERT SCRUB
Category/Number: A/8

1. Location

The FMU includes the entire upland Sonoran Desert that is not included elsewhere. The FMU consist of 2,413,814 acres of BLM land, 479,808 acres of State land, and 461,186 acres of private land for a total of 3,354,808 acres.

This FMU can be accessed from Interstates 8, 10, and 40

2. Characteristics

Landforms in the area are broad valleys dissected by desert washes and rocky desert mountains.

The vegetation in this management unit is dominated by desert shrubs, trees, and cacti. Deep upland sites have overstories of mesquite, palo verde, and ironwood, with understories of perennial and annual grasses and forbs. This management unit also supports saguaro cactus as well as a variety of Opuntia species. Big galleta is the dominant perennial grass. Other grasses include slender gramma, purple threeawn, mesa and spidergrass threeawn, slim tridens, and fluff grass. Major forbs include slender janusia, twinberry, spiny goldenhead, desert globemallow, and yerba del venado. Triangle bursage is the dominant shrub in this area. Other shrubs include jojoba, false mesquite, desert zinnia, Mormon tea, creosote bush, flattop buckwheat, ocotillo, limberbush, and wolfberry species. Annual grasses and forbs of both winter and summer seasons are well represented in years with favorable moisture.

Sonoran Desert vegetation is not considered to be fire adapted or dependent. The invasion of non-native species has created areas that are now prone to high intensity fires with high rates of spread.

There is no known State or Federally listed threatened or endangered species in this FMU.

Air and water quality in the FMU meet national standards.

3. Wildland Fire History

Humans are the predominate cause of unplanned wildfires in the FMU. Between 1984 and 2004 the average number of fires per year was 3.9 with 333 acres burned.

Fire season can start as early as mid-February and last until mid-October. Spring rains from February through April significantly contribute to the severity of the summer fire season.

The FMU supports a fuel complex of grass/brush.

Fire behavior can be extreme in the grass/brush under 20 feet with wind speeds of over 20 mph, high temperatures and low relative humidities. Rates of spread can exceed 80 chains per hour with crowning and torching beyond direct attack capability. Fires intensity in the grass/brush is dependant on spring rains and the amount of herbaceous growth from year to year.

4. Values at Risk/Resource Protection Constraints

Cultural resource values are the greatest concern for protection in the FMU. Appropriate cultural resource clearances will be required before any fuels management activities are initiated.

A resource advisor will be assigned to any fire that escapes initial attack. Fire crews are briefed on cultural resource issues prior to the start of each fire season.

All suppression tactics and support actions will be selected commensurate with potential fire behavior and minimizing impacts to values to be protected. These decisions will be based on interdisciplinary inputs to the extent possible, with respect to conditions on the ground.

5. Communities at Risk

There are no communities at risk on the 2001 Federal Register as a community at risk form wildfire.

6. Fire Management Objectives

Goal: Reduce wildland fire hazard around identified cultural sites and recreational facilities.

Objectives: Apply mechanical fuel reduction and prescribed fire where applicable around vulnerable prehistoric and historic resources and recreational facilities to

reduce damage from wildland fire.

7. Fire Management Strategies

Suppression - The priority for Appropriate Management Response (AMR) is to prevent wildland fires from spreading to private land, cultural resources, or improvements on BLM, other agencies' lands, and to protect the public users. Use AMR to manage all fires in accordance with management objectives based on current conditions and fire location.

All fires occurring at a Fire Intensity Level (FIL) 1-3 will be suppressed at less than 100 acre 90 percent of the time. All fires occurring at FIL 4-6 will be suppressed at less than 300 acres 75 percent of the time.

Wildland Fire Use – Wildland Fire Use for Resource benefits is not planned for this FMU.

Prescribed Fire –There are no projects planned for this FMU.

Non-Fire Treatments - There are no projects planned for this FMU.

Chemical or biological treatments may be considered as needed by a site-specific plan.

Post-Fire Rehabilitation and/or Actions Needed for Restoration – An interdisciplinary team will develop plans for post-fire rehabilitation. Post-fire rehabilitation and restoration will be used to facilitate reestablishment of the potential natural community of the site. In addition, the following rehabilitation concerns should be addressed:

- Slopes of 15% or greater where surface erosion is likely
- Temporary fences in areas where grazing pressure may inhibit reestablishment of native plants following wildfire
- Road obliteration or restoration where the road created by the suppression activity does not meet resource objectives for the area or may cause erosion

IV. Wildland Fire Management Program Components

A. Wildland Fire Suppression

1. Fire History

Between 1984 and 2003 approximately 98 percent of fires in this Yuma/Lake Havasu Zone were human caused and generally occurred between the months of February and October. Human caused fires are usually associated with main travel corridors and the rivers.

The twenty year annual average for all fire causes is 35.77 fires per year burning an average of 3022 acres per year. (See Appendix A.)

Multiple fires days consisting of 2 fires or more per day have occurred 34 times. Of the multiple fire days there were six 3-fire days.

The number of fires varies from year to year. Fires are largely confined to the Lower Colorado River North, Lower Colorado River South, and Gila River FMUs, where they are almost entirely human caused. Annual grasses are the primary fire carrier in the other FMUs, and their growth is dependent upon precipitation received during the late winter and spring months.

Fire occurrence is most common in the Lower Colorado River South area. The probability of large fires (based on historic data) is also highest because of public use, fuel continuity**,** and reduced access.

While the majority of this Field Office experiences primarily Class A, B, and C fires, the Lower Colorado River South area has a history of large fire activity, a total of 8 Classes E and F fires ranging from 240 to 4,100 acres have occurred. (See Appendix A.)

Mobilization of a Type I Incident Management Team has occurred once during this time period for fires in the Lower Colorado River South area.

2. Fire behavior

The Zone supports a variety of fuel types, including saltcedar, arrowweed (*Pluchea sericea),* mesquite, annual grass, and interior chaparral.

The following table represents best available information on fuels complexes within the Zone and expected fire behavior during the fire season.

Saltcedar, Arrowweed, Mesquite (Brush Fuel Group)			
Fuel Model	**Rate of Spread, ch/hr**	**Flame Lengths, ft.**	**Fire Characteristics/ Representative Conditions**
4	0-300	0-40	Intense and erratic fire behavior with long range spotting. Saltcedar/ arrowweed stands that have not burned in 5 years or longer as well as some dense interior chaparral stands
5	0-100	0-12	May represent fires in dormant saltcedar stands
6	0-200	0-15	Moderate dense to open interior chaparral and saltcedar/arrowweed that has burned within the last 5 years
Saltcedar Woodland (Timber/Litter Fuel Group)			
8	2 – 5	0.9 – 1.9	Only under low wind, high RH, and high duff load conditions under saltcedar during dormancy
Desert Scrub (Grass Fuel Group) (1 and 2 Require above Average Moisture)			
1	0 – 350	0 – 10	Fires burn out quickly (Representative examples: areas of annual brome lacking shrub or tree cover)
2	0 – 200	0 – 15	Continuous and rapid spread under high wind conditions (Representative examples: open mesquite or open interior chaparral)
3	0-500	0-30	Intense heat and rapid rates of spread (Cattails and phragmites)

3. Suppression and Preparedness Actions

Use AMR to suppress all fires in accordance with management objectives for the FMU based on current conditions and fire location. All tactics will be developed around fire fighter and public safety.

The priority for a quick suppression response for the Zone is to prevent wildland fires from spreading to private land, cultural resources, T&E Species habitat, and improvements on BLM lands. For any type of response, minimizing cost must be considered.

The operational roles of the BLM in the wildland/urban interface are wildland

firefighting, hazardous fuels reduction, cooperative prevention, education, and technical assistance. Structural fire suppression is the responsibility of tribal, State, or local governments, as described in the Interagency Standards for Fire and Fire Aviation Operations.

Agency Administrators will ensure employees are trained, certified, and available to participate in the wildland fire program locally, regionally, and nationally as the situation demands, as described in the Interagency Standards for Fire and Aviation Operations.

The Zone has two small fire caches: Yuma and Camp Proctor.

Requirements for fire operations can be found in the Interagency Standards for Fire and Aviation Operations.

See Chapter V section A for a complete summary of the preparedness organization.

The Zone has a Fire Danger Operating Plan. (See Appendix B.) As part of the plan a Preparedness and Dispatch Response Matrix was developed. On the next page is a copy of the matrix.

In some cases the engine crews will have to park their engines and hike into the fire for size up. If the distance is too great aerial observation may be required.

Preparedness and Dispatch Level Matrix

STAFFING CLASS/ PREPAREDNESS LEVEL)	**BURNING INDEX (BI)**	**FIRE DANGER**	**MANAGEMENT ACTIONS**
PL –1	0 – 44 (FIL -1)	***LOW*** Initiating fires low intensity with low resistance to control; fine fuels drying	▪Normal tour of duty 0800 – 1630 •One engine dispatched initial attack response ▪Phone and radio monitored by Yuma Dispatch until 1630 (or longer if initial attack is extended)
PL-2	45 – 99 (FIL-2)	***MODERATE*** Initiating fires moderate intensity with low-moderate resistance to control; heavy fuels drying	All above plus: •Daily Roster/staffing reports to Yuma Dispatch started
PL-3	100 – 159 (FIL-3)	***HIGH*** Initiating fires of moderate to moderate-high intensity with potential for spotting with winds and passive crowning possible; all fuel classes available at high end BI	All Above Plus: •Consider increased patrols following dry lightning storms; •Predicted LAL between 4 – 6, bump up to LEVEL IV
PL-4	160 – 210 (FIL-4)	***VERY HIGH*** Fires present moderate to high intensity and high resistance to control; escapes are common at high end BI; all fuels classes available for rapid combustion; high air temps, low humidities with high winds possible; spotting and intermittent crowning likely	All Above Plus: •Briefings for Agency Administrators as needed; •Advise Yuma Dispatch if extended staffing hours required; •Consider fire restrictions; fire safety messages distributed •Consider canceling planned prescribed-fires and postponing project work
PL-5	211 + (FIL-5+)	***EXTREME*** High to extreme intensities with crowning, short/long range spotting common; project fires likely under high wind conditions	All Above Plus: •Consider ordering-standby, canceling, annual leave, etc. •Consider daily briefings for AA and press releases issued regularly •Review AA Briefing package

The Preparedness and Dispatch Level Matrix is based on the National Fire Danger Rating System (NFDRS) Weather Stations:

Squaw Lake 32598110,
Havasu 325846F4, and
Smith Peak 327D7540 data 1990 – 2003.

Analysis used NFDRS Fuel Model B, Slope class 1 (0-25%), California chaparral (semi-arid).

4. Prevention

a. Annual Prevention Program

Annual fire prevention activities include participation in the City of Yuma, Somerton, San Luis, Gadsden, Quartzsite, Parker, Lake Havasu City, Bullhead City fairs, parades, school programs, and distribution of fire prevention materials from public areas and offices. The annual prevention program was developed utilizing the RAMS process. (See RAMS Summary Reports-Appendix C.)

Prevention efforts will continue to increase into the future. The Yuma/Lake Havasu Fire Zone has the potential to participate in a wide variety of fire prevention activities due to the proximity of a large metropolitan area and the numerous small communities that surround the office.

With the major emphasis on the Wildland/Urban Interface, the office will be involved in implementing Fire Education Planning, partnerships, evaluation, risk planning, and assessments for the counties of Mohave, La Paz, and Yuma in Arizona; and the counties of Imperial, Riverside, San Bernardino in California.

b. Special Orders and Closures

The Field Managers or delegated actings have authority to issue restrictions and closures. Fire restrictions and closures are normally put into place after conferring with other agencies with in Yuma/Lake Havasu Zone. Generally, restrictions are instituted during times of high fire danger, occurrence, or both, and in time of drawdown of fire personnel due to high fire activity in the area (region).

Annual fire restrictions are in place from mid-May through mid-September.

c. Fire Training

Training and fitness requirements for all personal involved in fire/suppression support can be found in the Interagency Standards for Fire and Aviation Management. Attendance at the refresher training along with successful competition on the appropriate level of work capacity testing is a prerequisite for the annual issuance of a Red Card prior to May 1.

d. Detection

Detection of fires within the Yuma/Lake Havasu Zone is generally dependent upon reports from other agencies, Field Office employees, and the public. The Automated Lightning Detection System is checked daily during the monsoon season. Post-high lightning activity patrols in high probability areas within the Field Office are routinely conducted on the ground, with some fire detection flights at dry times of the year. Interagency cooperation through the zones provides aerial detection coverage by coordinating flights for all the agencies. Each agency within the Zone contributes to their fair share of the cost of detection flights.

e. Fire Weather and Fire Danger

The Field Office has two permanent Remote Automatic Weather Stations (RAWS) that are used for NFDRS. The office also has one Portable Micro-RAWS that is used for prescribed fire projects. The Field Office Fire Danger Operating plan can be found in Appendix B.

Station	Station ID	Elevation	Location
Squaw Lake	045801	400	32 N. 114 W.
Havasu	020118	475	34 N. 114 W.

f. Aviation Management

The Fire Management Officer (FMO) has been designated as the Unit Aviation Officer. All flights involving Field Office employees need to be coordinated through the FMO. Local vendors are available and are ordered through CWZ.

The horse and burro program utilizes aerial reconnaissance for census and captures for a total of 40 hours per year. The fire program utilizes helicopters and air attack for an average of 20 hours per year.

g. Initial Attack

All fires within the Zone will be managed with suppression actions consistent with preplanned dispatch protocols in conformance with resource management objectives identified in this plan. Tactics and strategies will be based on the current and predicted weather and fire behavior. Firefighter and public safety is always the first priority. Use the following information for determining initial attack priorities.

Based on the 1998 NFMS runs the zone requires the following equipment for initial attack: 2 light engines, 1 heavy engine, and 1 fire boat.

The highest priority FMUs within the Field Office for initial attack are ranked as:

1) Lower Colorado River South
2) Lower Colorado River North
3) High Elevation Sonoran Desert
4) Gila River
5) Bill Williams River
6) Sonoran Desert Wilderness North
7) Sonoran Desert Wilderness South
8) Sonoran Desert Scrub

As fire complexity increases, additional staffing will be requested as appropriate and consistent with incident complexity.

Initial attack dispatch and fire reporting procedures are located in the Yuma Dispatch office.

h. Extended Attack

Extended attack positions that are available within Yuma/Lake Havasu Zone (such as Incident Commander Type III [ICT3], Task Force Leader [TFLD], Strike Team Leader Crews [STCR], and other positions) are reported to dispatch daily. These resources can be ordered as needed by the initial attack Incident Commander (ICT4).

The Zone currently has one Type III IC and is in need of at least two additional ones. The Zone also currently needs at least two more dozer bosses for a total of four. There is a need for at least two additional boat operators.

Direction for extended attack operations can be found in the Interagency Standards for Fire and Fire Aviation Operations

B. Wildland Fire Use

The HESD FMU was allocated as a possible fire use for resource benefit area in the Arizona Statewide Land Use Plan Amendment for Fire, Fuels, and Air Quality Management.

C. Prescribed Fire

Since the advent of the National Fire Plan in 2001 the prescribe fire program has been created and its expansion is under way. The primary goals for the Zone burns are:

1. Hazardous fuel reduction
2. Management of cattail marsh T&E and other species of interest
3. Management of interior chaparral
4. Removal of existing vegetation to facilitate restoration

Focus has been treating Condition Class III lands. The prescribed fire program has been developed utilizing the Risk Assessment and Mitigation Strategies (RAMS) process. The following are the acres that have either been treated or are proposed for treatment by prescribed fire:

Year	Acres
2003	212
2004	20
2005	158
2006	458
2007	290
2008	250
2009	400

All burns were or are planned for Condition Class III lands.

The prescribed burn season starts in November and runs through March 15. This allows us to burn outside the nesting and breeding seasons as well as outside the worst portion of the year-round wildfire season.

The fire management staff initiates most of the prescribed fire projects. Resource specialist input is developed through the bi-weekly environment planning meeting where the core team for the office meets to discuss up-coming projects.

Prioritizations of projects are determined by the following:

1. Fuels Reduction around a federally listed communities at risk from wildfire (Yuma and Golden Shores)

2. Fuels reduction around communities of interest where catastrophic fire is possible and likely (See attached RAMS Report.)

3. Habitat improvement for either the Yuma clapper rail or southwesternn willow flycatcher, both T&E Species

All burning activities in cattail marsh areas are part of Joint Fire Science work (Effects of Fire on Yuma Clapper Rails and California Black Rails) being conducted on the Yuma clapper rail by Dr. Courtney Conway.

A priority for the Zone is developing Environmental Assessments for rotational burning in the Mittry and Imperial Compartments with in the Lower Colorado River South FMU.

Positions needed for the prescribed fire workload are 1 Type I Burn Boss, 2 Type II Burn

Bosses, 2 Ignition Specialists, and 2 Holding Specialists.

Prescribed burn bosses are required to evaluate prescribed burns each day after completion of burning to assess results and effectiveness of the burn as implemented. These evaluations are maintained as part of the project file. The Zone monitoring plan is currently being developed.

Maps displaying prescribed fire treatments since 2002 are maintained in Geographical Information System (GIS) by the local fuels staff.

1. Smoke Management/Air Quality

Air Quality in the lands administered by the Field Offices can be an issue depending on the location. There are no Class I airsheds within the Zone. However, there are two non-attainment areas within the Zone: the Yuma area and the Bullhead City area.

Burns located in Arizona are registered with the Arizona Department of Environmental Quality (ADEQ) on annual basis. Authorization for burning is obtained from the Arizona Department of Environmental Quality (ADEQ). A burn plan detailing the smoke management issues must be submitted to ADEQ two weeks before a planned ignition date. A daily burn request must also be submitted 24 hours before and each day of the burn when there is planned to be active ignition.

In California authorization for burning is controlled at the district level. The districts we work with are the Imperial, Riverside, and San Bernardino County Districts. The processes for requesting a permit vary by county, size of the burn, and the duration of the burn.

D. Non-Fire Fuel Applications

The majority of the fuels work within the Yuma/Lake Havasu Zone falls in the non-fire category. The RAMS process was utilized to develop the non-fire fuels program. Much of the fuels workload is associated with the creation, maintenance, and protection of quality native riparian habitat. This workload falls into two categories. The mechanical category covers all activities to reduce unwanted vegetative debris from fuel breaks and restoration sites. This could include mowing, bull hogging, thinning, and piling. The other category is herbicide application. The herbicide application is targeted at eliminating resprouting saltcedar from fuel breaks and restoration sites. Most of the project areas are small in size, but require active annual maintenance; otherwise within 5 years most of these sites are back in Condition Class III. The following is the planned acreage totals for herbicide application and mechanical treatments for the next 5 years as discussed in the Zone RAMS assessment.

Fiscal Year	Acres

2005	686
2006	755
2007	955
2008	1077
2009	1182

1. Fuel Treatment Summary 2005 Update

A goal of treating 844 acres in FY-05 by prescribed fire and non-fire treatments for the zone was developed in the Zone RAMS update in 2004. In some years fewer acres may be treated in a given FMU. In other years more acres may be treated. But over time it should average out. At any time as further analyses (such as the fuels module in the Fire Program Analysis (FPA) or other risk assessment models such as Landfire) are developed, fuel treatment priorities by FMU may be modified.

Annual Fuels Treatments by Compartment 2005			
Compartment	**Prescribed Fire**	**Mechanical**	**Chemical**
Parker		28	28
Havasu		60	60
Bullhead		130	80
Limnotrophe		20	
Yuma		42	42
Mittry	150	69	1
Imperial	50	20	20
NWR		18	18
Harcuvar		30	
Gila River		15	15
Total	200	432	264

Between 2006 and 2009 the average annual treatments will total 1248 treated acres.

E. Emergency Rehabilitation and Restoration

The Zone has had three fire rehabilitation projects over the last 20 years. The Zone does not have a Normal Fire Rehabilitation Plan. However, there is a goal to develop such a plan within the next 2 years. Until then, if emergency rehabilitation or restoration is needed, an interdisciplinary burned area rehabilitation team will be formed, and plans will be developed at that time. Emergency fire rehabilitation based on FMU requirements would most likely focus on

sites within the Lower Colorado River North, Lower Colorado River South, and the Gila River FMUs. These would be sites where native riparian vegetation will be out-competed by saltcedar because of the fire disturbance.

F. Community Protection/Community Assistance

There are two communities within the Yuma/Lake Havasu Fire Zone that are listed in the Federal Register as communities at risk from wildfire: Yuma and Golden Shores. At this time Yuma has not completed a Community Risk Action Plan. Fuel reduction projects are planned for FY-05 around this community; fully collaborative planning efforts have begun. Community Risk Action plans will only be initiated with the counties that have their Actions plan complete.

There are 14 compartments and 40 communities of interest within the Yuma/Lake Havasu Fire Zone that are at risk from wildfire. The RAMS process identified 14 high risk, 13 moderate risk, and 13 low risk communities. (See attached RAMS summary report in Appendix C.)

The compartments are Parker, Havasu, Bullhead, Limnotrophe, Yuma, Mittry, Imperial, NWR (National Wildlife Refuge), Wilderness-North, Wilderness-South, HESD (High Elevation Sonoran Desert), SDS (Sonoran Desert Scrub), Gila River, and Bill Williams. Numerous unnamed communities and subdivisions are also scattered throughout the planning area.

Following is a list of all of the communities prioritized for accomplishment of Community Risk Action Plans:

Compartment	Planned Completion
Yuma	FY-05
Parker	FY-05
Lake Havasu Cuty	FY-06
Bullhead City	FY-06
Limnotrophe	FY-07
Mittry	FY-07
Imperial	FY-08

1. Rural Fire Assistance Program

The Rural Fire Assistance Program was a new initiative in 2001 under National Fire Plan Community Assistances. The Rural Fire Assistance Program improves the local fire capability by assisting rural fire departments in meeting basic needs for wildland fire equipment, training, organization, and prevention activities. Of greater importance, the safety of both rural and Federal firefighters is enhanced when local departments are fully equipped with proper wildland safety equipment, updated radios, well rounded training curriculum, and other essential tools for wildland firefighting.

BLM has built the Rural Fire Assistance program around interagency cooperation and

collaboration with the State, local fire departments, and other federal wildland agencies.

- Through collaboration, a one stop process has been established for both Department of Agriculture and Interior Rural Fire Assistance grants. One application is sent out and made available on the web to fire departments.
- An interagency panel made up of federal, state, state fire marshal, and rural fire district association representatives review and make selections for grants.
- BLM established an agreement with Arizona State Land Department to collectively manage the award of RFA grants. Arizona State Lands Department administers the grants for the BLM.
- This provides needed funding to ASLD, saves BLM FTE, and ensures funding for grants are carried out

Arizona BLM has averaged 35 grant awards per year to rural fire departments. The following table lists the communities within the Zone that have received funding since the program's inception.

Community	2001	2002	2003	2004	Amount	For
Buckskin				X	$20,000	Equipment
Ehrenberg	X				$ 1,080	Equipment, Training, Prevention
		X			$7,100	Equipment
			X		$18,000	PPE, Equipment
Golden Shores	X				$9,261	PPE, Equipment
		X			$10,300	Equipment, Training
Mohave Valley	X				$14,850	Equipment
		X			$13,800	PPE, Equipment
			X		$12,000	Equipment
				X	$13,000	Fire Truck, Equipment
Quartzsite	X				$9,873	Equipment
Total					**$129,264**	

V. Budget and Organization

A. Budget and Organization

The table below is the organization and equipment required to meet 100 percent of program objectives.

The budget table does not address the 10 percent administrative costs for each of the fire accounts that can be assessed for support and fixed costs.

Resource	Current Staffing[1]	Desired Staffing	Normal Activation	Sub Activity	Cost
FMO	1 PFT	1 PFT	yearly	2810	$76,800
Dispatch Coordinator	1 PFT	1 PFT	yearly	2810	$62,400
Dispatcher	1 PFT	1 PFT	yearly	2810/other	$44,500
Light Engine Yuma					
FOS	1 PFT	1 PFT	yearly	2810	$54,800
Engine Module Leader	1 CSLT	1 CSLT	Feb-Sept	2810	$37,300
Engine Operator	1 CSLT	1 CSLT	Apr-Sept	2810	$34,600
Firefighter	1 TEMP	1 TEMP	May - Aug	2810	$20,800
Firefighter	1 TEMP	1 TEMP	May - Aug	2810	$12,000
Light Engine Yuma					
Engine Module Leader	1 CLST	1 CLST	Feb-Sept	2810	$37,400
Engine Operator	1 CSLT	1 CSLT	Apr-Sept	2810	$36,900
Firefighter	1 TEMP	1 TEMP	May - Aug	2810	$20,800
Firefighter	0 TEMP	1 TEMP	May - Aug	2810	$15,000
Firefighter	0 TEMP	1 TEMP	May - Aug	2810	$12,000
Light Engine Lake Havasu					
FOS	1 PFT	1 PFT	yearly	2810	$49,800
Engine Operator	1 CSLT	1 CSLT	Feb-Sept	2810	$36,900
Firefighter	1 CSLT	1 CSLT	Apr-Sept	2810	$34,700
Firefighter	1 TEMP	1 TEMP	May - Aug	2810	$15,000
Firefighter	0 TEMP	1 TEMP	May - Aug	2810	$13,400
NEPA / Planner – Fuels	1 PFT	1 PFT	yearly	2810	$93,200
Mitigation Education Spec	1 PFT	1 PFT	yearly	2810	$78,600
Fuels Program Manager	1 PFT	1 PFT	yearly	2810	$68,500
Wildlife Biologist	1 PFT	1 PFT	yearly	2810	$56,700
Dispatcher / Fire(Fuels) clerk	1 PFT	1 PFT	yearly	2810 2823/2824	$8,400 $42,000
Contract/Services[2]				2810	$2,000
Equipment[2]				2810	$5,000
Other[2]				2810	$14,000
Rent[2]				2810	$6000
Supplies/Materials[2]				2810	$52,000
Telecomm[2]				2810	$5,700
Travel[2]				2810	$63,600
Vehicles[2]				2810	$48,000

[1]Zeros indicate positions vacant or unfilled during the peak of the fire season.

[2]For 2823 and 2824 operational and implementation dollars, see RAMS report.

Bureau of Land Management Implemented Fire Resources - Attachment 1
Office: Yuma / Lake Havusu Fire Zone 2004

Resources	Quantity	Number of Personnel	Total Work Months
Number of Engines:	3	10	78
Number of Water tenders:			
Number of Dozers:			
Number of Tractors / plows:			
Number of Fire Boats:	1		
Number of Type 1 Crews:			
Number of Helitack Crews:			
Number of Fuels Crews:			
Number of Type 2 Crews sponsored:			
Number of Smokejumpers (AK & NIFC only):			
Number of Fire Management Officers:	1		12
Number of Assistant FMOs / FCOs:			
Number of Fire Operations Specialists:	2		24
Number of Dispatchers:	2		12
Number of Other Aviation Staff (Aviation Mgr., Seat Mgr, etc.):			
Number of Mitigation/Education/Prevention Specialists / Techs:	1		12
Number of Resource Specialists:	2		24
Number of Fuels Specialists:	1		12
Number of Other Fire Staff:	1		12
Number of PFT funded by Preparedness:	5		
Number of Career Seasonals funded by Preparedness:	6		
Number of Temporaries funded by Preparedness:	6		
Number of PFT funded by Fuels:	5		
Number of Career Seasonals funded by Fuels:	0		
Number of Temporaries funded by Fuels:	0		

* In completing this table, only include Preparedness resource numbers funded by Fire Preparedness (2810) and reflect the peak fire organization resources for the year. Do not include resources funded under severity. The fuels related resources numbers are to include the resource funded by the non-WUI (2823) and WUI (2824) programs.

Bureau of Land Management Planned Fire Resources - Attachment 2
Office:

Resources	Quantity	Number of Personnel	Total Work Months
Number of Engines:	3	10	78
Number of Water tenders:			
Number of Dozers:			
Number of Tractors / plows:			
Number of Fire Boats:	1		
Number of Type 1 Crews:			
Number of Helitack Crews:			
Number of Fuels Crews:			
Number of Type 2 Crews sponsored:			
Number of Smokejumpers (AK & NIFC only):			
Number of Fire Management Officers:	1		12
Number of Assistant FMOs / FCOs:			
Number of Fire Operations Specialists:	2		24
Number of Dispatchers:	2		24
Number of Other Aviation Staff (Aviation Mgr., Seat Mgr, etc.):			
Number of Mitigation/Education/Prevention Specialists / Techs:	3		36
Number of Resource Specialists:	2		24
Number of Fuels Specialists:	1		12
Number of Other Fire Staff:	1		12
Number of PFT funded by Preparedness:	5		
Number of Career Seasonals funded by Preparedness:	6		
Number of Temporaries funded by Preparedness:	6		
Number of PFT funded by Fuels:	7		
Number of Career Seasonals funded by Fuels:			
Number of Temporaries funded by Fuels:			

B. Assistance Agreements and Intra/Interagency Agreements

The following is a list of agreements that pertain to fire management activities for the Field Offices:

- Central/West Zone Operations Plan – This agreement covers the operations of the CWZ dispatch center and initial attack responsibilities for the Zone.

C. Equipment Rental Agreements

The Yuma/Lake Havasu Zone uses emergency rental agreements prepared by the Yuma Field Office. Copies are stored in dispatch.

VI. Monitoring and Evaluation

The fire program will use monitoring and evaluating to determine if the program and associated projects are meeting the various resource plans' directions, and to determine if the costs of implementing the fire program and management effects are occurring as predicted.

Monitoring related to wildland fire or fire-related projects falls under the general monitoring and evaluation guidelines outlined in the Resource Management Plan. Site-specific monitoring needs are identified in analysis for individual fire related projects. Project level plans will be evaluated to ensure that the treatments and/or actions meet the resource objectives for the project.

FMPs describe fire management forces, equipment, support, and administrative personnel and associated budgets needed to manage the fire program. FMPs do not make new decisions or Land Use Allocations and do not qualify as documents constituting discretionary Federal actions. Whenever implementation level plans (Fuels Management Plans, Fire Use Plans, etc.) are prepared, additional environmental analysis and documentation will be required. Environmental analysis of site-specific projects at the watershed or FPA-wide programmatic level may analyze multiple fire management projects. Section 7 consultation for multiple projects planned over a three to five year period will be batched together or done on a case-by-case basis.

Section 106 cultural consultation will be implemented according to IB 2004-112.

The 2004 Fire Management Plan will be updated and amended as the Bureau implements the Fire Planning Analysis on an interagency basis. The new FMP will follow the interagency FMP template as directed.

Accomplishments will be reported in Management Information System (MIS), National Fire Plan Operations Reporting System (NFPORS), and National Fire Reporting System (DI-1202).

APPENDICES

Appendix A
Fire Danger Operating Plan

The Fire Danger Operating Plan can be found in Dispatch at the Yuma Field Office.

Appendix B
RAMS Summary Reports

The complete RAMS Report and database is maintained by the Fuels Program Manager at the Yuma Field Office.

RAMS Compartment Listing
Yuma-Lake Havasu Fire Zone

Code	Description	Acres	SubUnit	FMU
101	**Parker**	**18,339**	**7**	**1**
102	**Havasu**	**14,707**	**7**	**1**
103	**Bullhead**	**30,094**	**7**	**1**
201	**Limnotrophe**	**45,709**	**5**	**2**
202	**Yuma**	**61,364**	**5**	**2**
203	**Mittry**	**8,313**	**5**	**2**
204	**Imperial**	**6,998**	**5**	**2**
205	**NWR**	**75,129**	**5**	**2**
301	**Wilderness N**	**185,017**	**5**	**3**
401	**Wilderness S**	**160,309**	**7**	**4**
501	**HESD**	**64,771**	**7**	**5**
601	**SDS**	**3,354,808**	**5**	**6**
701	**Gila River**	**159,445**	**5**	**7**
801	**Bill Williams**	**31,733**	**7**	**8**

Yuma-Lake Havasu Fire Zone
Category Summary (Hours)

Category	Hist-Now	Plan	Difference
Patrol	**6,372**	**6,388**	**-16**
Signs	**558**	**1,050**	**-492**
Law Enforcement	**80**		**80**
Hazards	**4,727**	**5,047**	**-320**
Public Contact	**378**	**386**	**-8**
Inspections	**167**	**278**	**-111**
Administration	**96**	**97**	**-1**
General Actions	**2,686**	**3,471**	**-785**
Totals	15,064	16,717	-1,653

Yuma-Lake Havasu Fire Zone
Personnel & Expense Summary

Option Hist-Now	Option	Plan		
Sub Unit	**Years**	**Cost**	**Years**	Cost
1: Yuma Field Office	5.5	$317,970	5.9	$337,310
2: Havasu Field Office	1.7	$99,173	2.2	$125,632
Personnel:	7.2	$417,143	8	$462,942
Expenses:		$		$149,800
Total:		$417,143		$612,742

Yuma-Lake Havasu Fire Zone
Non-Personnel Expenses (Dollars)

Expense Item	Hist-Now	Plan	Difference
Vehicle Aquisition		**$60,000**	**-$60,000**
Vehicle Operating Co	**$**	**$30,000**	**-$30,000**
Smokey Costume	**$**	**$600**	**-$600**
Sign Materials	**$**	**$1,200**	**-$1,200**
Prevention travel an	**$**	**$35,000**	**-$35,000**
Computer	**$**	**$5,000**	**-$5,000**
Fire Prevention Mate	**$**	**$6,000**	**-$6,000**
Training	**$**	**$8,000**	**-$8,000**
Workshops	**$**	**$4,000**	**-$4,000**
	$		
Totals		$149,800	-$149,800
	$		

The zone has never had a set prevention budget allocation. It has been run on a variety of funding sources as money was available.

Fuels Program

The Yuma-Lake Havasu Fire Zone Fuels Program includes the following Projects, listed by Fiscal Year:

Fiscal Year: 2005

Project Name	Acres	Total Cost
Imperial Ponds RX (WUI)	**50**	**$10,000.00**
Mittry Islands RX (WUI)	**100**	**$15,000.00**
HNWR Break Bull. CD40 (WUI)	**50**	**$33,500.00**
Sears Point Bull. CD05 (WUI)	**15**	**$16,000.00**
Monkeyhead Bullhogg CD21 (WUI)	**6**	**$4,900.00**
Riverland Resort Bullhogg CD20 (WUI)	**10**	**$7,500.00**
Oxbow Breaks Bull CD07 (WUI)	**8**	**$5,800.00**
Needles Reveg. Fuel Break Bull (WUI)	**10**	**$7,500.00**
Beal Slough Reveg Bullhogg (WUI)	**10**	**$7,500.00**
CNC - Bullhogg CD23 (WUI)	**10**	**$7,500.00**
South Mittry 2 Bull. (WUI)	**40**	**$22,600.00**
Topock Break Bull. CD39 (WUI)	**50**	**$27,000.00**
Ferguson Breaks Bull CD13 (WUI)	**10**	**$7,000.00**
Cocopah (N) Break Bull. CD28 (WUI)	**10**	**$7,500.00**
Mittry Jetties Mech. (WUI)	**20**	**$11,800.00**
Paradise Break Bull. CD12 (WUI)	**1**	**$3,000.00**
Confluence Break Bull CD10 (WUI)	**10**	**$7,000.00**
Confluence Thin. CD26 (WUI)	**10**	**$7,000.00**
Yuma Face Break CD06 (WUI)	**10**	**$7,000.00**
Border Patrol (Mech) CD27 (WUI)	**10**	**$7,500.00**
Cabin 1 (WUI)	**10**	**$7,500.00**
Cabin2 CD37 (WUI)	**10**	**$7,500.00**
Harc. Comm. Site (WUI)	**10**	**$7,500.00**
Oxbow Thin CD07 (WUI)	**10**	**$7,500.00**
Havasu Monitoring (WUI)	**100**	**$2,000.00**
Parker Monitoring (WUI)	**50**	**$2,000.00**
Yuma Lakes Mech. CD25 (WUI)	**10**	**$7,500.00**
Fortuna Pond (WUI)	**10**	**$7,500.00**
Parker Strip Camp. CD16 (WUI)	**10**	**$7,500.00**

Project Name	Acres	Total Cost
Limnotrophe Monitoring (WUI)	50	$2,000.00
Bullhead Monitoring (WUI)	100	$2,000.00
Betty's Mech. (WUI)	1	$3,000.00
NWR Monitoring (WUI)	100	$2,000.00
Paradise Rec. Break Mech. CD29 (WUI)	1	$3,000.00
Mittry Monitoring (WUI)	200	$2,000.00
Yuma Monitoring (WUI)	200	$2,000.00
Imperial Monitoring (WUI)	200	$2,000.00
Monkeyhead Thinning CD21 (WUI)	3	$2,950.00
Pratt Thinning CD04 (WUI)	8	$5,000.00
Standard Wash Thinning CD22 (WUI)	10	$7,500.00
Boat-in Camp. Thinning CD24 (WUI)	50	$33,500.00
Standard Wash Herb. CD22 (WUI)	10	$7,500.00
Yuma Face Break Herb. CD06 (WUI)	10	$3,000.00
Paradise Break Herb. CD12 (WUI)	1	$3,000.00
Topock Break Herb. CD39 (WUI)	25	$14,500.00
CRNC - Herbicide (WUI)	10	$2,600.00
Beal Slough Reveg. Herb. CD16 (WUI)	10	$3,500.00
Ferguson Breaks Herb. CD13 (WUI)	10	$3,000.00
Confluence Break Herb. CD10 (WUI)	10	$3,000.00
Boat-in Camp. Herb. CD24 (WUI)	50	$21,000.00
Oxbow Thin Herb. CD07 (WUI)	10	$3,000.00
Riverland Resort Herb. CD20 (WUI)	10	$3,000.00
Monkeyhead Herbicide CD21 (WUI)	8	$3,000.00
Yuma Lakes Herb. CD25 (WUI)	10	$3,500.00
P. S. Camp. Herb. CD16 (WUI)	10	$3,000.00
Oxbow Breaks Herb. CD07 (WUI)	8	$2,600.00
Transient Reveg. Herb. (WUI)	10	$3,000.00
Needles Reveg. Fuel Break Herb (WUI)	10	$3,500.00
Sears Point Herb. CD05 (WUI)	15	$4,750.00
Confluence Thin Herb. CD26 (WUI)	10	$3,000.00
Betty's Herb. CD03 (WUI)	1	$3,000.00
HNWR Break Herb. (WUI)	25	$4,500.00
Paradise Rec. Break Herb. CD29 (WUI)	1	$3,000.00
Gila Monitoring	100	$2,000.00

Project Name	Acres	Total Cost
HESD Monitoring	**200**	**$2,000.00**
Total Project Costs	2147	$454,000.00

Fiscal Year: 2006

Project Name	Acres	Total Cost
Taylor Lake RX (WUI)	**100**	**$15,000.00**
Mittry Islands RX 06 (WUI)	**50**	**$11,000.00**
Mittry Island Reveg. Rx 06 (WUI)	**8**	**$9,000.00**
EL Centro (WUI)	**20**	**$21,000.00**
Quigley Pond Rx (WUI)	**50**	**$14,750.00**
Yuma Face Rx (WUI)	**100**	**$15,000.00**
Cocopah (N) Break 06 (WUI)	**10**	**$6,000.00**
Border Patrol (Mech) CD27 (WUI)	**10**	**$6,000.00**
Paradise Break 06 (WUI)	**1**	**$2,000.00**
Confluence Break 06 (WUI)	**10**	**$6,000.00**
Confluence Thin. 06 (WUI)	**10**	**$6,000.00**
Oxbow Breaks 06 (WUI)	**8**	**$5,000.00**
South Mittry 2 06 (WUI)	**40**	**$21,000.00**
Ferguson Breaks 06 (WUI)	**10**	**$6,000.00**
Mittry Jetties 06 (WUI)	**20**	**$11,000.00**
Mittry Jetties Reveg. (WUI)	**5**	**$6,000.00**
Yuma Face Break 06 (WUI)	**10**	**$6,000.00**
Sears Point 06 (WUI)	**15**	**$8,500.00**
Riverland Bullhogg 06 (WUI)	**10**	**$6,000.00**
Needles Reveg. Break 06 (WUI)	**10**	**$6,000.00**
Needles New 06 (WUI)	**10**	**$7,000.00**
Parker Strip Reveg. 06 (WUI)	**5**	**$4,250.00**
Beal Slough 06 (WUI)	**10**	**$6,000.00**
CNC Bull. 06 (WUI)	**10**	**$6,000.00**
Topock Break 06 (WUI)	**25**	**$13,500.00**
HNWR Break Bull. 06 (WUI)	**25**	**$13,500.00**
Imperial Monitoring (WUI)	**200**	**$2,000.00**
Limnotrophe Monitoring (WUI)	**50**	**$2,000.00**
Fortun Pond 06 (WUI)	**10**	**$6,000.00**
Yuma Monitoring (WUI)	**200**	**$2,000.00**

Project Name	Acres	Total Cost
Kool Korner 06 (WUI)	1	$3,000.00
Pratt Thinning 06 (WUI)	8	$5,000.00
Yuma Lakes 06 (WUI)	1	$1,000.00
Havasu Monitoring (WUI)	100	$2,000.00
Betty's 06 (WUI)	1	$2,000.00
Parker Monitoring (WUI)	50	$2,000.00
Cabin 1 06 (WUI)	10	$6,000.00
Harc Com. Site 06 (WUI)	10	$6,000.00
Parker Strip Camp 06 (WUI)	10	$6,000.00
NWR Monitoring (WUI)	100	$2,000.00
Oxbow Thin. 06 (WUI)	10	$6,000.00
Cabin 2 06 (WUI)	10	$6,000.00
Mittry Monitoring (WUI)	200	$2,000.00
Paradise Thin. 06 (WUI)	10	$7,000.00
Paradise Rec. Break 06 (WUI)	1	$2,000.00
Morelas Dam Reveg. (WUI)	1	$3,000.00
Bullhead Monitoring (WUI)	100	$2,000.00
Standard Wash Thin. 06 (WUI)	10	$6,000.00
Boat-in Camp. Thin. 06 (WUI)	50	$26,000.00
Lake Havasu Reveg. (WUI)	5	$4,250.00
Monkeyhead Thinning 06 (WUI)	8	$5,000.00
Yuma Face Break Herb. 06 (WUI)	10	$2,000.00
Confluence Break Herb. 06 (WUI)	10	$2,000.00
P.S. Camp Herb. 06 (WUI)	10	$2,000.00
Needles New Herb. 06 (WUI)	10	$3,000.00
Cocopah Break (N) Herb. (WUI)	10	$3,500.00
Beal Slough Herb. 06 (WUI)	10	$2,000.00
Transient Reveg. Herb. 06 (WUI)	10	$2,000.00
Kool Korner Herbicide 06 (WUI)	1	$3,000.00
Yuma Lakes Herb. 06 (WUI)	10	$2,000.00
Paradise Rec. Break Herb. 06 (WUI)	1	$1,500.00
Mittry Island Reveg. Herb. 06 (WUI)	8	$4,200.00
Needles Reveg. Break Herb. 06 (WUI)	10	$2,000.00
Monkeyhead Herb. 06 (WUI)	8	$1,800.00
Topock Break Herb. 06 (WUI)	25	$3,500.00

Project Name	Acres	Total Cost
Confluence Thin Herb. 06 (WUI)	**10**	**$2,000.00**
Betty's Herb 06 (WUI)	**1**	**$2,000.00**
South Mittry 2 Herb. 06 (WUI)	**20**	**$5,000.00**
Mittry Jetties Reveg. Herb. 06 (WUI)	**5**	**$4,000.00**
South Mittry Herb. 06 (WUI)	**80**	**$9,000.00**
Sears Point Herb. 06 (WUI)	**15**	**$2,500.00**
Paradise Break Herb. 06 (WUI)	**1**	**$1,500.00**
Lake Havasu Reveg. Herb. 06 (WUI)	**5**	**$4,250.00**
Oxbow Thin Herb. 06 (WUI)	**10**	**$2,000.00**
Ferguson Breaks Herb. 06 (WUI)	**10**	**$2,000.00**
Boat-in Camp. Herb. 06 (WUI)	**50**	**$16,000.00**
Standard Wash Herb. 06 (WUI)	**10**	**$6,000.00**
CNC Herb. 06 (WUI)	**10**	**$2,000.00**
HNWR Break Herb 06 (WUI)	**25**	**$3,500.00**
Oxbow Breaks Herb. 06 (WUI)	**8**	**$1,800.00**
Riverland Resort Herb. 06 (WUI)	**10**	**$2,000.00**
P. S. Reveg. Herb. 06 (WUI)	**5**	**$3,250.00**
Paradise Thin. Herb. 06 (WUI)	**10**	**$3,000.00**
Harcuvar RX 06	**100**	**$26,000.00**
HESD Monitoring	**200**	**$2,000.00**
Gila Monitoring	**100**	**$2,000.00**
Cabin 3 06	**10**	**$7,500.00**
Total Project Costs	2566	$497,550.00

Fiscal Year: 2007

Project Name	Acres	Total Cost
Mittry Islands RX 07 (WUI)	**50**	**$11,000.00**
Imperial Islands Rx. 07 (WUI)	**100**	**$16,000.00**
Growler Pond RX 07 (WUI)	**20**	**$10,000.00**
Oxbow Rx 07 (WUI)	**20**	**$13,000.00**
Con. Thin. 07 (WUI)	**10**	**$6,000.00**
Topock Rancheros 07 (WUI)	**25**	**$3,500.00**
Mittry Jetties Reveg. 07 (WUI)	**5**	**$3,500.00**
Confluence Break 07 (WUI)	**10**	**$6,000.00**
Border Patrol 07 (WUI)	**10**	**$6,000.00**

Project Name	Acres	Total Cost
Paradise Break 07 (WUI)	**1**	**$2,000.00**
Imperial Housing 07 (WUI)	**10**	**$7,000.00**
A7 07 (WUI)	**5**	**$6,750.00**
HNWR Break 07 (WUI)	**25**	**$13,500.00**
Parker Strip Reveg. 07 (WUI)	**5**	**$3,500.00**
Oxbow Breaks 07 (WUI)	**8**	**$5,000.00**
Riverland Bullhogg 07 (WUI)	**10**	**$6,000.00**
Picacho Reveg. 07 (WUI)	**5**	**$6,750.00**
CNC Bull. 07 (WUI)	**10**	**$6,000.00**
Walter's 07 (WUI)	**10**	**$7,500.00**
Yuma Face Break 07 (WUI)	**10**	**$6,000.00**
Icehouse Reveg. 07 (WUI)	**10**	**$7,500.00**
Beal Slough 07 (WUI)	**10**	**$6,000.00**
Cocopah (S) Break 07 (WUI)	**10**	**$7,500.00**
Mittry Jetties 07 (WUI)	**20**	**$11,000.00**
Needles Reveg. Fuelbreak 07 (WUI)	**10**	**$6,000.00**
Cocopah (N) Break 07 (WUI)	**10**	**$6,000.00**
South Mittry 2 07 (WUI)	**40**	**$21,000.00**
N. Reveg. Add. 07 (WUI)	**10**	**$6,000.00**
Ferguson Breaks 07 (WUI)	**10**	**$6,000.00**
Cabin 3 07 (WUI)	**10**	**$6,000.00**
OXbow Thin. 07 (WUI)	**10**	**$6,000.00**
Havasu Monitoring (WUI)	**100**	**$2,000.00**
Cabin 2 07 (WUI)	**10**	**$6,000.00**
Harc Com. Site 07 (WUI)	**10**	**$6,000.00**
Paradise Thin. 07 (WUI)	**10**	**$6,000.00**
Fortuna Pond 07 (WUI)	**10**	**$6,000.00**
Yuma Lakes 07 (WUI)	**10**	**$6,000.00**
Sears Point 07 (WUI)	**15**	**$8,500.00**
Kool Corner 07 (WUI)	**1**	**$2,000.00**
Betty's 07 (WUI)	**1**	**$2,500.00**
Cabin 1 07 (WUI)	**10**	**$6,000.00**
Limnotrophe Monitoring (WUI)	**50**	**$2,000.00**
Bullhead Monitoring (WUI)	**100**	**$2,000.00**
Parker Monitoring (WUI)	**50**	**$2,000.00**
Parker Strip Camp 07 (WUI)	**10**	**$6,000.00**

Project Name	Acres	Total Cost
Mittry Monitoring (WUI)	200	$2,000.00
Imperial Monitoring (WUI)	200	$2,000.00
Moreles Dam Reveg. 07 (WUI)	1	$2,500.00
Paradise Rec. Break 07 (WUI)	1	$2,000.00
Yuma Monitoring (WUI)	200	$2,000.00
NWR Monitoring (WUI)	100	$2,000.00
Pratt Thinning 07 (WUI)	8	$5,000.00
Lake Havasu Reveg. 07 (WUI)	10	$5,000.00
Standard Wash Thin 07 (WUI)	10	$2,250.00
Boat-in Thin. 07 (WUI)	50	$26,000.00
Monkeyhead Thinnning 07 (WUI)	8	$5,000.00
P.S. Reveg. Thin. 07 (WUI)	5	$3,500.00
Y.L. Herb. 07 (WUI)	10	$2,000.00
P. S. Reveg. Herb. 07 (WUI)	10	$2,000.00
HNWR Break Herb. 07 (WUI)	25	$3,500.00
Standard Wash Herb. 07 (WUI)	10	$4,000.00
Paradise Rec. Break Herb. 07 (WUI)	1	$1,500.00
CNC Herb. 07 (WUI)	10	$2,000.00
Oxbow Breaks Herb. 07 (WUI)	8	$1,800.00
Needles Reveg. Break Herb 07 (WUI)	10	$2,000.00
Boat-in Camp Herb. 07 (WUI)	50	$16,000.00
N.Reveg. Add. Herb. 07 (WUI)	20	$3,000.00
Topock Rancheros Herb. 07 (WUI)	25	$3,500.00
Oxbow Thin. Herb. 07 (WUI)	10	$2,000.00
Lake Havasu Reveg. Herb. 07 (WUI)	10	$4,000.00
Cocopah Break (S) Herb. 07 (WUI)	10	$3,500.00
Kool Korner Herb 07 (WUI)	1	$2,000.00
Icehouse Herb. 07 (WUI)	10	$3,500.00
Walter's Herb. 07 (WUI)	10	$3,500.00
Imperial Housing Herb. 07 (WUI)	10	$3,000.00
M.J. Reveg. Herb. 07 (WUI)	10	$2,000.00
Con. Thin. Herb. 07 (WUI)	10	$2,000.00
Con. Break Herb. 07 (WUI)	10	$2,000.00
South Mittry 2 Herb. 07 (WUI)	40	$5,000.00
Paradise Break Herb. 07 (WUI)	1	$2,000.00

Project Name	Acres	Total Cost
Beal Slough Herb. 07 (WUI)	**10**	**$2,000.00**
M. Islands Herb. 07 (WUI)	**8**	**$3,400.00**
P.S. Camp Herb. 07 (WUI)	**10**	**$2,000.00**
Betty's Herb. 07 (WUI)	**1**	**$2,000.00**
South Mittry Herb. 07 (WUI)	**80**	**$9,000.00**
Picacho Reveg. Herb. 07 (WUI)	**5**	**$3,250.00**
Riverland Herb. 07 (WUI)	**10**	**$2,000.00**
Paradise Thin. Herb. 07 (WUI)	**10**	**$2,000.00**
Ferg. Breaks Herb. 07 (WUI)	**10**	**$2,000.00**
Transient Reveg. Herb. 07 (WUI)	**10**	**$2,000.00**
Cocopah Break (N) Herb. 07 (WUI)	**10**	**$2,000.00**
YFB Herb. 07 (WUI)	**10**	**$2,000.00**
Monkeyhead Herb. 07 (WUI)	**8**	**$1,800.00**
Harcuvar RX 07	**100**	**$26,000.00**
Gila Monitoring	**100**	**$2,000.00**
HESD Monitoring	**200**	**$2,000.00**
Total Project Costs	2572	$497,500.00

Fiscal Year: 2008

Project Name	Acres	Total Cost
Imperial Islands RX 08 (WUI)	**100**	**$16,000.00**
Mittry Islands RX 08 (WUI)	**50**	**$11,000.00**
Yuma Face Break 08 (WUI)	**10**	**$6,000.00**
Oxbow Breaks 08 (WUI)	**8**	**$5,000.00**
Imperial Housing 08 (WUI)	**10**	**$6,000.00**
Ferguson Breaks 08 (WUI)	**10**	**$6,000.00**
Picacho Reveg. 08 (WUI)	**5**	**$6,000.00**
Cocopah (N) Break 08 (WUI)	**10**	**$6,000.00**
Riverland Bull. 08 (WUI)	**10**	**$6,000.00**
A9 08 (WUI)	**5**	**$6,750.00**
A7 08 (WUI)	**5**	**$6,000.00**
Walter's 08 (WUI)	**10**	**$6,000.00**
South Mittry 2 08 (WUI)	**40**	**$21,000.00**
M. J. Reveg. 08 (WUI)	**5**	**$3,500.00**
Mittry Jetties 08 (WUI)	**20**	**$11,000.00**
Paradise Break 08 (WUI)	**1**	**$2,000.00**

Project Name	Acres	Total Cost
N. Reveg. 08 (WUI)	10	$6,000.00
Border Patrol 08 (WUI)	10	$6,000.00
Con. Thin. 08 (WUI)	10	$6,000.00
P.S. Reveg. 08 (WUI)	5	$3,500.00
Cocopah (S) Break 08 (WUI)	10	$6,000.00
Icehouse Reveg. 08 (WUI)	10	$6,000.00
CNC Bull. 08 (WUI)	10	$6,000.00
Beal Slough 08 (WUI)	10	$6,000.00
N. Reveg. Add. 08 (WUI)	10	$6,000.00
Needles Reveg. Break. 08 (WUI)	10	$6,000.00
Palo. D. D. Break 08 (WUI)	1	$3,000.00
Confluence Break 08 (WUI)	10	$6,000.00
HNWR Break 08 (WUI)	25	$13,500.00
Cabin 3 08 (WUI)	10	$6,000.00
NWR Monitoring (WUI)	100	$2,000.00
Havasu Monitoring (WUI)	100	$2,000.00
Bullhead Monitoring (WUI)	100	$2,000.00
Oxbow Thin. 08 (WUI)	10	$6,000.00
Limnotrophe Monitoring (WUI)	50	$2,000.00
Yuma Monitoring (WUI)	200	$2,000.00
Paradise Thin. 08 (WUI)	10	$6,000.00
Paradise Rec. Break 08 (WUI)	1	$2,000.00
Mittry Jetties Reveg. Herb. 06 (WUI)	200	$2,000.00
Cabin 1 08 (WUI)	10	$6,000.00
Mittry Monitoring (WUI)	200	$2,000.00
P.S. Camp. 08 (WUI)	10	$6,000.00
Sears Point 08 (WUI)	15	$8,500.00
Cabin 2 08 (WUI)	10	$6,000.00
Imperial Monitoring (WUI)	200	$2,000.00
Yuma Lakes 08 (WUI)	10	$6,000.00
Fortuna Pond 08 (WUI)	10	$6,000.00
Harc. Com. Site 08 (WUI)	10	$6,000.00
Hunter's Hole 08 (WUI)	5	$6,000.00
Kool Corner 08 (WUI)	1	$2,000.00
Morelas Dam Reveg. 08 (WUI)	1	$2,500.00
Betty's 08 (WUI)	1	$2,500.00

Project Name	Acres	Total Cost
Parker Monitoring (WUI)	50	$2,000.00
Pratt Thinning 08 (WUI)	8	$5,000.00
Icehouse Thin. 08 (WUI)	10	$6,000.00
Monkeyhead Thin. 08 (WUI)	8	$5,000.00
Boat-in Camp. Thin. 08 (WUI)	50	$26,000.00
Standard Wash Thin. 08 (WUI)	10	$6,000.00
P.S. Reveg. Thin. 08 (WUI)	10	$6,000.00
Lake Havasu Reveg. 08 (WUI)	15	$8,500.00
Paradise Rec. Break Herb. 08 (WUI)	1	$1,500.00
Kool Corner Herb. 08 (WUI)	1	$2,000.00
Sears Point Herb. 08 (WUI)	15	$2,500.00
Sears Point Herb. 07 (WUI)	15	$2,500.00
HNWR Break Herb. 08 (WUI)	25	$3,500.00
Riverland Herb. 08 (WUI)	10	$2,000.00
P.S. Reveg. Thin. 08 (WUI)	15	$2,500.00
Standard Wash Herb. 08 (WUI)	10	$4,000.00
Lake Havasu Reveg. Herb. 08 (WUI)	15	$5,500.00
Yuma Lakes Herb. 08 (WUI)	10	$2,000.00
Confluence Break Herb. 08 (WUI)	10	$2,000.00
Palo. D. D. Break Herb. 08 (WUI)	1	$3,000.00
Con. Thin. Herb. 08 (WUI)	10	$2,000.00
Paradise Thin. Herb. 08 (WUI)	10	$2,000.00
Transient Reveg. Herb. 08 (WUI)	10	$2,000.00
Imperial Housing Herb. 08 (WUI)	10	$2,000.00
Yuma Face Break Herb. 08 (WUI)	10	$2,000.00
Ferg. Breaks Herb. 08 (WUI)	10	$2,000.00
Picacho Reveg. Herb. 08 (WUI)	5	$2,500.00
Oxbow Breaks Herb. 08 (WUI)	8	$1,800.00
P.S. Camp Herb. 08 (WUI)	10	$2,000.00
Paradise Break Herb. 08 (WUI)	1	$1,500.00
Beal Slough Herb. 08 (WUI)	10	$2,000.00
Monkeyhead Herb. 08 (WUI)	8	$1,800.00
Boat-in Camp. Herb. 08 (WUI)	50	$16,000.00
N. Reveg. Add. Herb. 08 (WUI)	30	$4,000.00

Project Name	Acres	Total Cost
CNC Herb. 08 (WUI)	**10**	**$2,000.00**
Topock Break Herb. (WUI)	**25**	**$3,500.00**
Icehouse Herb. 08 (WUI)	**20**	**$51,160.00**
Cocopah Break (S) Herb. 08 (WUI)	**10**	**$2,000.00**
Cocopah Break (N) Herb. 08 (WUI)	**10**	**$2,000.00**
Hunter's Hole Herb. 08 (WUI)	**5**	**$5,000.00**
Betty's Herb. 08 (WUI)	**1**	**$2,000.00**
M. J. Reveg. Herb. 08 (WUI)	**5**	**$1,500.00**
South Mittry 2 Herb. 08 (WUI)	**60**	**$7,000.00**
M. Island Reveg. Herb. 08 (WUI)	**8**	**$3,400.00**
South Mittry Herb. 08 (WUI)	**80**	**$9,000.00**
Oxbow Thin. Herb. 08 (WUI)	**10**	**$2,000.00**
Walter's Herb. 08 (WUI)	**10**	**$4,000.00**
N.Reveg. Herb. 08 (WUI)	**10**	**$2,000.00**
Harcuvar RX 08	**100**	**$26,000.00**
HESD Monitoring	**200**	**$2,000.00**
Gila Monitoring	**100**	**$2,008.00**
Total Project Costs	2829	$525,258.00

Fiscal Year: 2009

Project Name	Acres	Total Cost
Imperial Islands RX 09 (WUI)	**100**	**$16,000.00**
Quigley Pond RX 09 (WUI)	**50**	**$14,750.00**
Mittry Islands RX 09 (WUI)	**50**	**$11,000.00**
Harcuvar RX 09 (WUI)	**100**	**$26,000.00**
N. Mittry RX 09 (WUI)	**100**	**$16,000.00**
Border Patrol (Mech) 09 (WUI)	**10**	**$6,000.00**
Needles Reveg. Break 09 (WUI)	**10**	**$6,000.00**
Yuma Face Break 09 (WUI)	**10**	**$6,000.00**
Icehouse Reveg. 09 (WUI)	**10**	**$6,000.00**
Riverland Bull. 09 (WUI)	**10**	**$6,000.00**
Ferguson Breaks 09 (WUI)	**10**	**$6,000.00**
Cocopah (N) Break 09 (WUI)	**10**	**$6,000.00**
Topock Break 09 (WUI)	**25**	**$13,500.00**
Paradise Break 09 (WUI)	**1**	**$2,000.00**

Project Name	Acres	Total Cost
Mittry Jetties 09 (WUI)	20	$11,000.00
Mittry Jetties Reveg. 09 (WUI)	5	$3,500.00
South Mittry 2 09 (WUI)	40	$21,000.00
Imperial Housing 09 (WUI)	10	$6,000.00
Walter's 09 (WUI)	10	$6,000.00
A7 09 (WUI)	5	$6,000.00
A9 09 (WUI)	5	$6,000.00
A10 09 (WUI)	5	$6,750.00
Cocopah (S) Break 09 (WUI)	10	$6,000.00
Confluence Break 09 (WUI)	10	$6,000.00
Picacho Reveg. 09 (WUI)	5	$6,000.00
Oxbow Breaks 09 (WUI)	8	$5,000.00
Con. Thin. 09 (WUI)	10	$6,000.00
Senators Wash 09 (WUI)	5	$4,000.00
Beal Slough 09 (WUI)	10	$6,000.00
Palo D.D. Break 09 (WUI)	1	$2,500.00
N. Reveg. Add. 09 (WUI)	10	$6,000.00
Parker Strip Reveg. 08 (WUI)	5	$3,500.00
HNWR Break 09 (WUI)	25	$13,525.00
Topock Break 08 (WUI)	25	$13,500.00
CNC Bull. 09 (WUI)	10	$6,000.00
Oxbow Thin. 09 (WUI)	10	$6,000.00
Kool Corner 09 (WUI)	1	$2,000.00
Morelas Dam Reveg. 09 (WUI)	1	$2,500.00
Cabin 2 09 (WUI)	10	$6,000.00
Cabin 1 09 (WUI)	10	$6,000.00
Fortuna Pond 09 (WUI)	10	$6,000.00
NWR Monitoring (WUI)	100	$2,000.00
Yuma Lakes 09 (WUI)	10	$6,000.00
Paradise Thin. 09 (WUI)	10	$6,000.00
Harc. Com. Site 09 (WUI)	10	$6,000.00
Sears Point 09 (WUI)	15	$8,500.00
Imperial Monitoring (WUI)	200	$2,000.00
Paradise Rec. Break 09 (WUI)	1	$2,000.00
Parker Strip Camp 09 (WUI)	10	$6,000.00
Monkeyhead Thin. 09 (WUI)	8	$5,000.00

Project Name	Acres	Total Cost
Yuma Monitoring (WUI)	200	$2,000.00
Betty's 09 (WUI)	1	$2,500.00
Parker Monitoring (WUI)	50	$2,000.00
Limnotrophe Monitoring (WUI)	50	$2,000.00
P.S. Strip Reveg. Thin. 09 (WUI)	15	$8,500.00
Havasu Monitoring (WUI)	100	$2,000.00
Cabin 3 09 (WUI)	10	$6,000.00
Bullhead Monitoring (WUI)	100	$2,000.00
Mittry Monitoring (WUI)	200	$2,000.00
Hunter's Hole 09 (WUI)	5	$6,000.00
Lake Havasu Reveg. 09 (WUI)	20	$11,000.00
Boat-in Camp. Thin. 09 (WUI)	50	$26,000.00
Pratt Thinning 09 (WUI)	8	$5,000.00
Icehouse Thin. 09 (WUI)	10	$6,000.00
Standard Wash Thin. 09 (WUI)	10	$6,000.00
Oxbow Thin. Herb. 09 (WUI)	10	$2,000.00
Yumj Lakes Herb. 09 (WUI)	10	$2,000.00
Ferg. Breaks Herb. 09 (WUI)	10	$2,000.00
Kool Corner Herb. 09 (WUI)	1	$2,000.00
Oxbow Breaks Herb. 09 (WUI)	8	$1,800.00
Sears Point Herb. 09 (WUI)	15	$2,500.00
Picacho Reveg. Herb. 09 (WUI)	5	$2,500.00
Yuma Face Break Herb. 09 (WUI)	10	$2,000.00
Betty's Herb. 09 (WUI)	1	$2,000.00
P. S. Camp Herb. 08 (WUI)	10	$2,000.00
Monkeyhead Herb. 09 (WUI)	8	$1,800.00
Riverland Herb. 09 (WUI)	10	$2,000.00
N. Reveg. Add. Herb. 09 (WUI)	40	$5,000.00
Beal Slough Herb. 09 (WUI)	10	$2,000.00
CNC Herb. 09 (WUI)	10	$2,000.00
HNWR Break Herb. 09 (WUI)	10	$2,000.00
Topock Break Herb. 09 (WUI)	25	$3,500.00
Paradise Break Herb. 09 (WUI)	1	$1,500.00
Confluence Break Herb. 09 (WUI)	10	$2,000.00
Paradise Rec. Break Herb. 09 (WUI)	1	$1,500.00

Project Name	Acres	Total Cost
Con. Thin Herb. 09 (WUI)	**10**	**$2,000.00**
Palo. D.D. Break Herb. 09 (WUI)	**1**	**$2,000.00**
Transient Reveg. Herb. 09 (WUI)	**10**	**$2,000.00**
Cocopah Break (N) Herb. 09 (WUI)	**10**	**$2,000.00**
Imperial Housing Herb. 09 (WUI)	**10**	**$2,000.00**
South Mittry Herb. 09 (WUI)	**80**	**$9,000.00**
M. Islands Reveg. Herb. 09 (WUI)	**8**	**$5,000.00**
S. Mittry 2 Herb. 09 (WUI)	**80**	**$9,000.00**
M. J. Reveg. Herb. 09 (WUI)	**15**	**$2,500.00**
Paradise Thin. Herb. 09 (WUI)	**10**	**$2,000.00**
Hunter's Hole Herb. 09 (WUI)	**5**	**$2,500.00**
Walter's Herb. 09 (WUI)	**10**	**$4,000.00**
Cocopah Break (S) Herb. 09 (WUI)	**10**	**$2,000.00**
Icehouse Herb. 09 (WUI)	**30**	**$16,000.00**
N. Reveg. Herb. 09 (WUI)	**10**	**$2,000.00**
Lake Havasu Reveg. Herb. 09 (WUI)	**20**	**$7,000.00**
Boat in Camp. Herb. 09 (WUI)	**50**	**$16,000.00**
Standard Wash Herb. 09 (WUI)	**10**	**$6,000.00**
P. S. Reveg. Herb. 09 (WUI)	**20**	**$3,000.00**
Gila Monitoring	**100**	**$2,000.00**
HESD Monitoring	**200**	**$2,000.00**
Total Project Costs	2869	$596,625.00

Line Item Cost by Category

ID	Describe	FY	DolHZ	DolWUI	DolPrev
5	Admin	2005	1000	2000	1000
2	Training	2005	1000	2000	1000
4	VehOpCost	2005	5000	15000	5000
3	Supplies	2005	1000	2000	1000
1	Travel	2005	2000	4000	2000
3	Supplies	2006	1000	2000	1000
1	Travel	2006	2000	4000	2000
5	Admin	2006	1000	2000	1000
2	Training	2006	1000	2000	1000
4	VehOpCost	2006	5000	15000	5000

1	Travel	2007	2000	4000	2000
2	Training	2007	1000	2000	1000
3	Supplies	2007	1000	2000	1000
4	VehOpCost	2007	5000	15000	5000
5	Admin	2007	1000	2000	1000
2	Training	2008	1000	2000	1000
4	VehOpCost	2008	5000	15000	5000
1	Travel	2008	2000	4000	2000
5	Admin	2008	1000	2000	1000
3	Supplies	2008	1000	2000	1000
5	Admin	2009	1000	2000	1000
3	Supplies	2009	1000	2000	1000
2	Training	2009	1000	2000	1000
4	VehOpCost	2009	5000	15000	5000
1	Travel	2009	2000	4000	2000

Line Item Cost Summary

FY	SumOfDolHZ	SumOfDolWUI	SumOfDolPr	LINETOTAL
2005	10000	25000	10000	45000
2006	10000	25000	10000	45000
2007	10000	25000	10000	45000
2008	10000	25000	10000	45000
2009	10000	25000	10000	45000

Line Item Equipment Costs

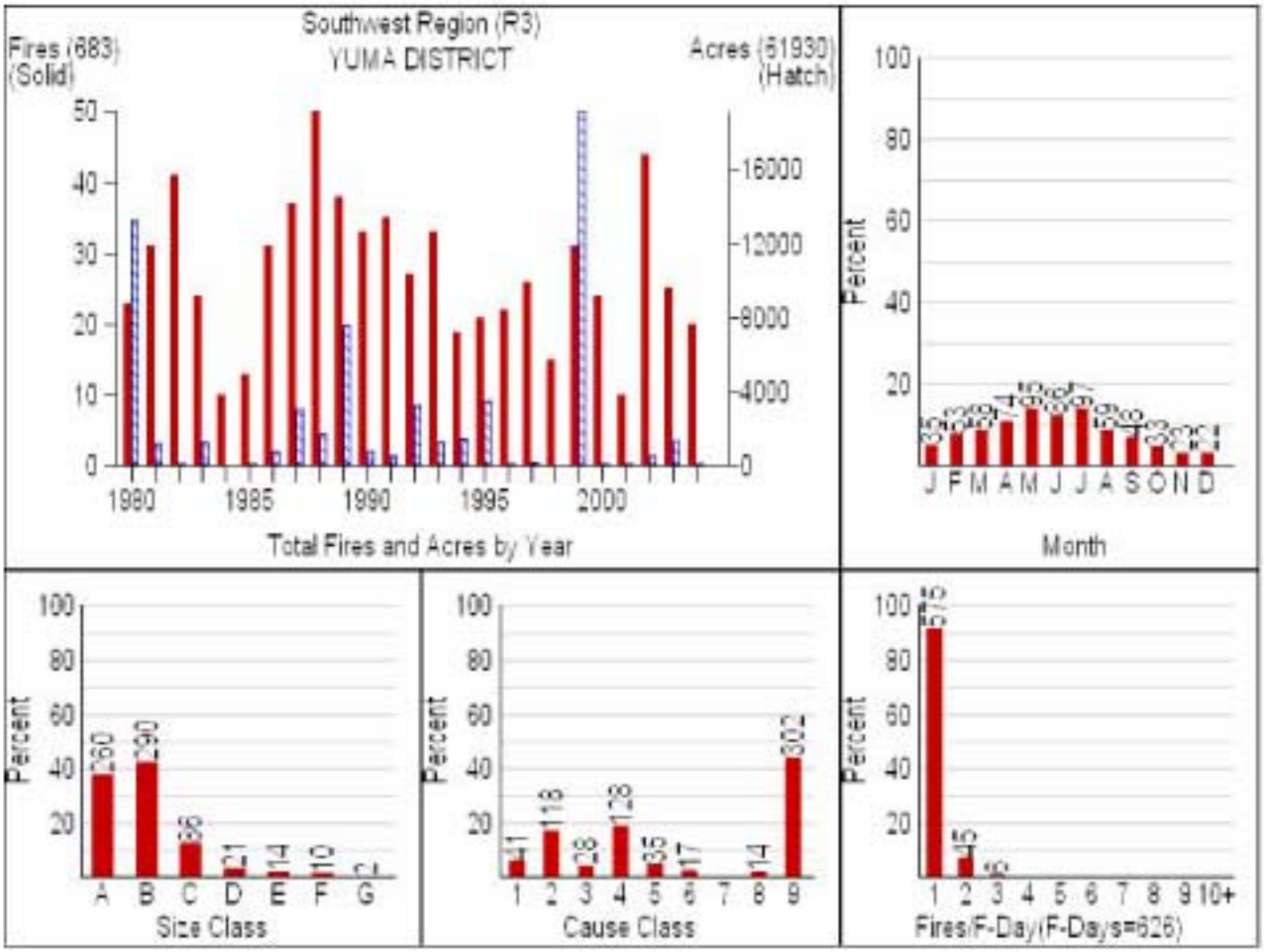
Describe	StatusID	AcqFY	Cost	ReplaceFY
Mit-ed Truck	1	2002	30000	2005
Fuels Specialist Truck	1	2004	30000	2008
Fuels Tech Truck LH	2	2006	30000	2009
Fuels Bio/Tech Truck	2	2002	30000	2006
Planner Truck	1	2003	30000	2007
ATV--Yuma	1	2004	5000	2007
ATV Trailer	1	2004	1200	2009
2 Clearing Saws	1	2003	1200	2007
3 Chainsaws	1	2003	1800	2007
GPS unit	2	2005	5000	2009
Portable weather Station	1	2002	15000	2009
WX Station upgrade	2	2005	10000	2009
RX Signs	1	2003	2000	2007

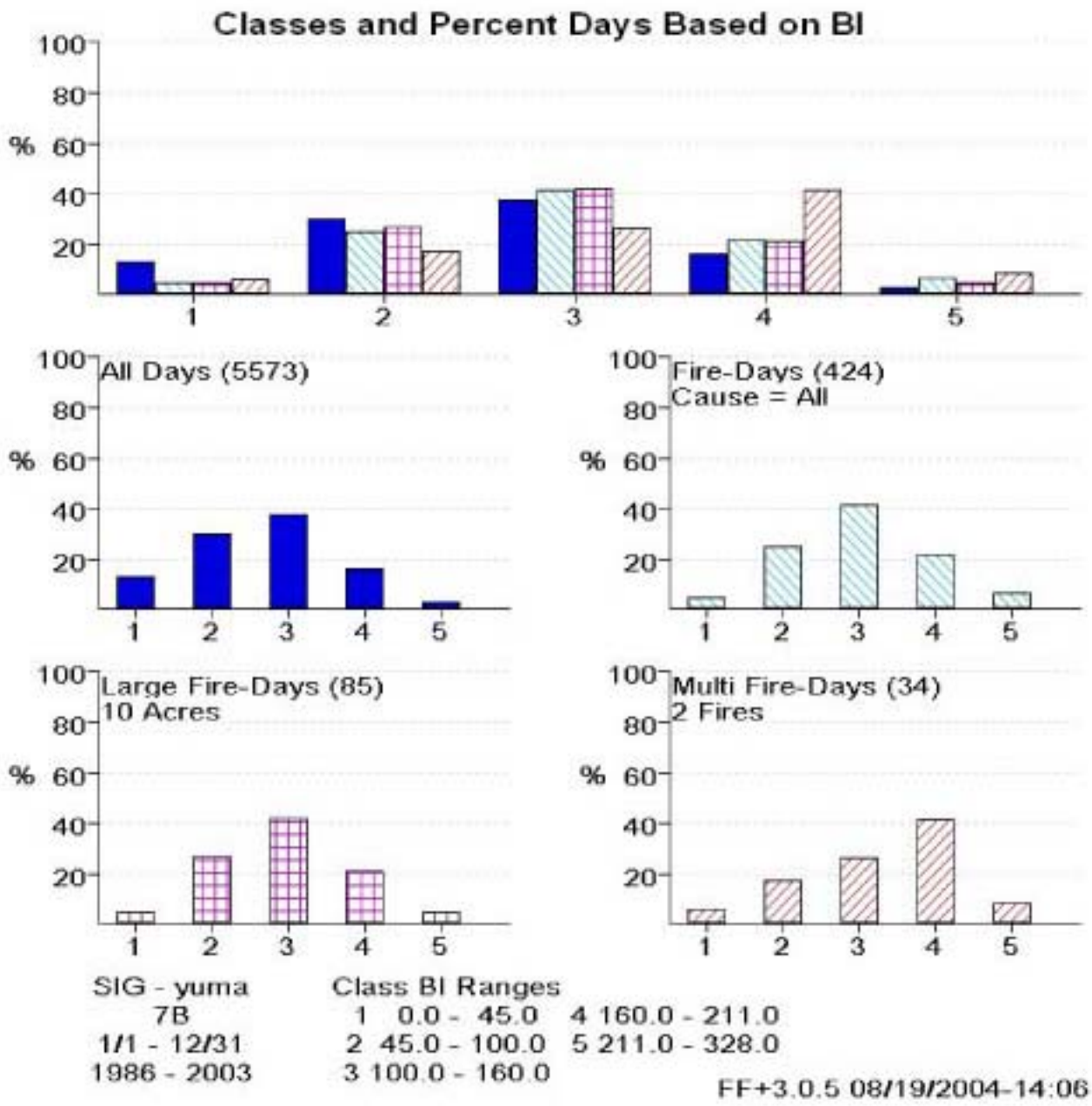
2 Clearing Saws-Proctor	2	2005	1200	2009
3 Chainsaws-Proctor	2	2005	1800	2009
Bullhogg Head for Skid Steer	2	2006	10000	2016
Roller Chopper for Cat	2	2007	35000	2017
ATV--Havasu	2	2006	5000	2009
ATV--Trailer--Proctor	2	2006	1000	2009

Line Items Equipment Costs

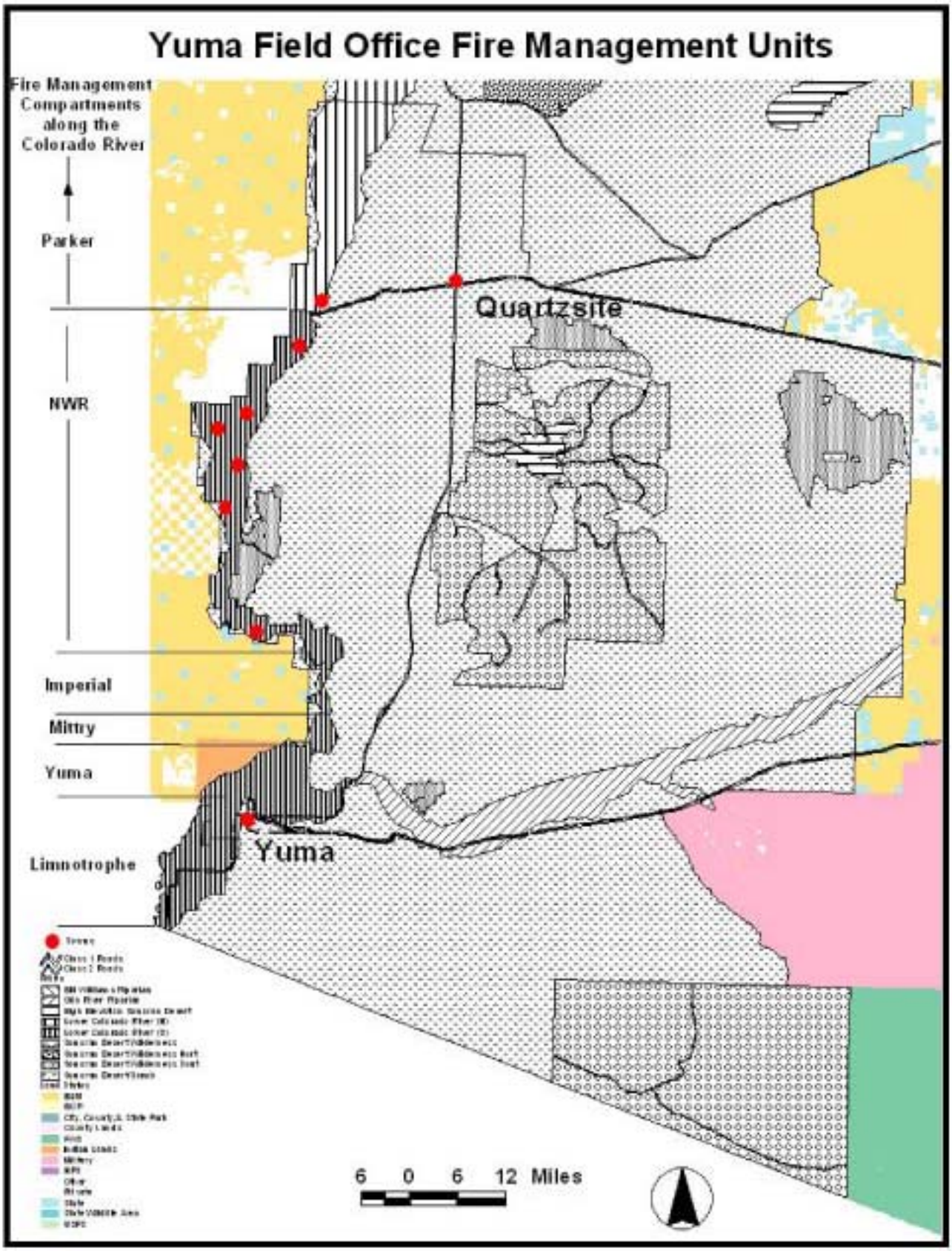
LineEquip_Describe	StatusID	AcqFY	Cost	ReplaceFY	LineEquipStatus_Desc
Portable weather Station	1	2002	15000	2009	Existing
Fuels Bio/Tech Truck	2	2002	30000	2006	Proposed
Mit-ed Truck	1	2002	30000	2005	Existing
Planner Truck	1	2003	30000	2007	Existing
2 Clearing Saws	1	2003	1200	2007	Existing
3 Chainsaws	1	2003	1800	2007	Existing
RX Signs	1	2003	2000	2007	Existing
ATV Trailer	1	2004	1200	2009	Existing
ATV--Yuma	1	2004	5000	2007	Existing
Fuels Specialist Truck	1	2004	30000	2008	Existing
WX Station upgrade	2	2005	10000	2009	Proposed
2 Clearing Saws-Proctor	2	2005	1200	2009	Proposed
3 Chainsaws-Proctor	2	2005	1800	2009	Proposed
GPS unit	2	2005	5000	2009	Proposed
ATV--Trailer--Proctor	2	2006	1000	2009	Proposed
Bullhogg Head for Skid Steer	2	2006	10000	2016	Proposed
ATV--Havasu	2	2006	5000	2009	Proposed
Fuels Tech Truck LH	2	2006	30000	2009	Proposed
Roller Chopper for Cat	2	2007	35000	2017	Proposed

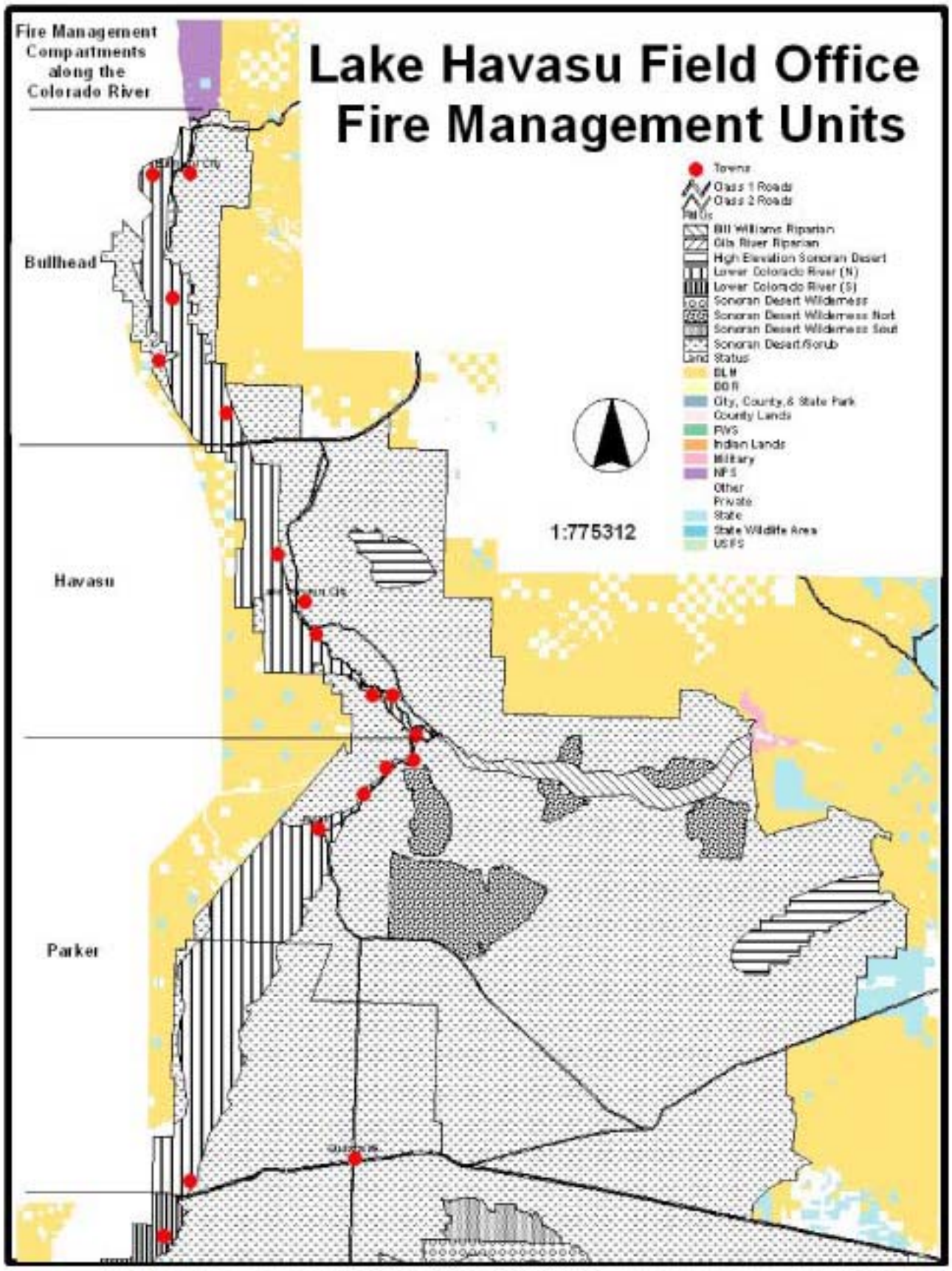
Appendix C
Fire History




Classes and Percent Days Based on BI
All Days (5573)
Fire-Days (424)
Cause = All
Large Fire-Days (85)
10 Acres
Multi Fire-Days (34)
2 Fires
%
100
80
60
40
20
1
2
3
4
5
SIG - yuma
7B
1/1 - 12/31
1986 - 2003
Class BI Ranges
1 0.0 - 45.0
2 45.0 - 100.0
3 100.0 - 160.0
4 160.0 - 211.0
5 211.0 - 328.0
FF+3.0.5 08/19/2004-14:06

Appendix D
Maps


Yuma Field Office Fire Management Units
Fire Management Compartments along the Colorado River
Parker
NWR
Imperial
Mittry
Yuma
Limnotrophe
Quartzsite
Yuma
6 0 6 12 Miles


Fire Management Compartments along the Colorado River
Lake Havasu Field Office
Fire Management Units
Towns
Class 1 Roads
Class 2 Roads
Rivers
Bill Williams Riparian
Gila River Riparian
High Elevation Sonoran Desert
Lower Colorado River (N)
Lower Colorado River (S)
Sonoran Desert Wilderness
Sonoran Desert Wilderness Nort
Sonoran Desert Wilderness Sout
Sonoran Desert Scrub
Land Status
BLM
DOR
City, County, & State Park
County Lands
FWS
Indian Lands
Military
NPS
Other
Private
State
State Wildlife Area
USFS
1:775312
Bullhead
Havasu
Parker

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.

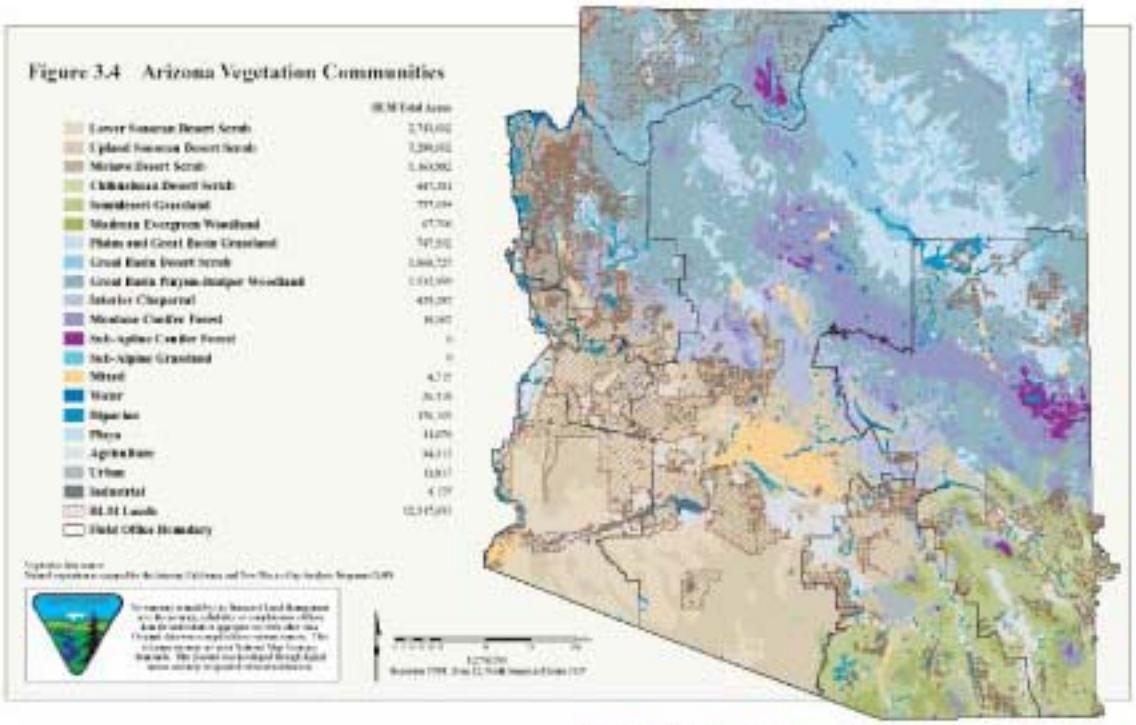


Figure 3.4 Arizona Vegetation Communities
Lower Sonoran Desert Scrub
Upland Sonoran Desert Scrub
Mojave Desert Scrub
Chihuahuan Desert Scrub
Semidesert Grassland
Madrean Evergreen Woodland
Plains and Great Basin Grassland
Great Basin Desert Scrub
Great Basin Pinyon-Juniper Woodland
Interior Chaparral
Montane Conifer Forest
Sub-Alpine Conifer Forest
Sub-Alpine Grassland
Mixed
Water
Riparian
Playa
Agriculture
Urban
Industrial
BLM Lands
Field Office Boundary

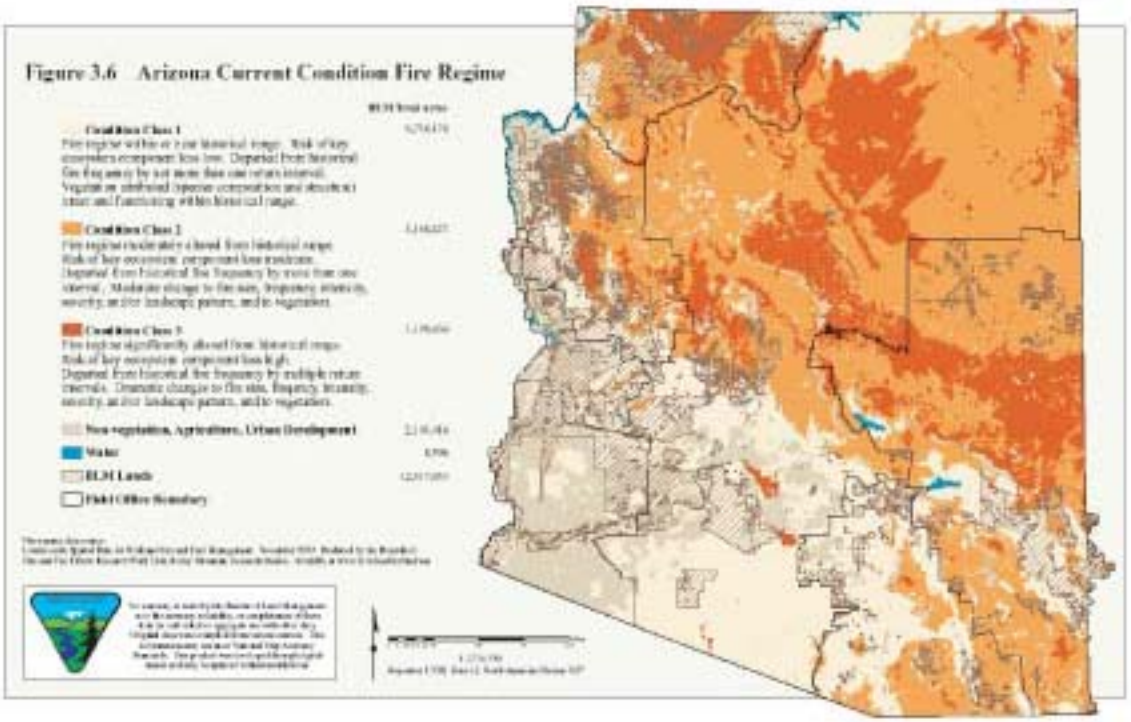


Figure 3.6 Arizona Current Condition Fire Regime
Condition Class 1
Fire regime within or near historical range. Risk of key ecosystem components loss low. Departed from historical fire frequency by not more than one return interval. Vegetation attributes (species composition and structure) intact and functioning within historical range.
Condition Class 2
Fire regime moderately altered from historical range. Risk of key ecosystem components loss moderate. Departed from historical fire frequency by more than one interval. Moderate change in fire size, frequency, intensity, severity, or landscape pattern, and/or vegetation.
Condition Class 3
Fire regime significantly altered from historical range. Risk of key ecosystem components loss high. Departed from historical fire frequency by multiple return intervals. Dramatic change in fire size, frequency, intensity, severity, or landscape pattern, and/or vegetation.
Non-vegetation, Agriculture, Urban Development
Water
BLM Lands
Field Office Boundary

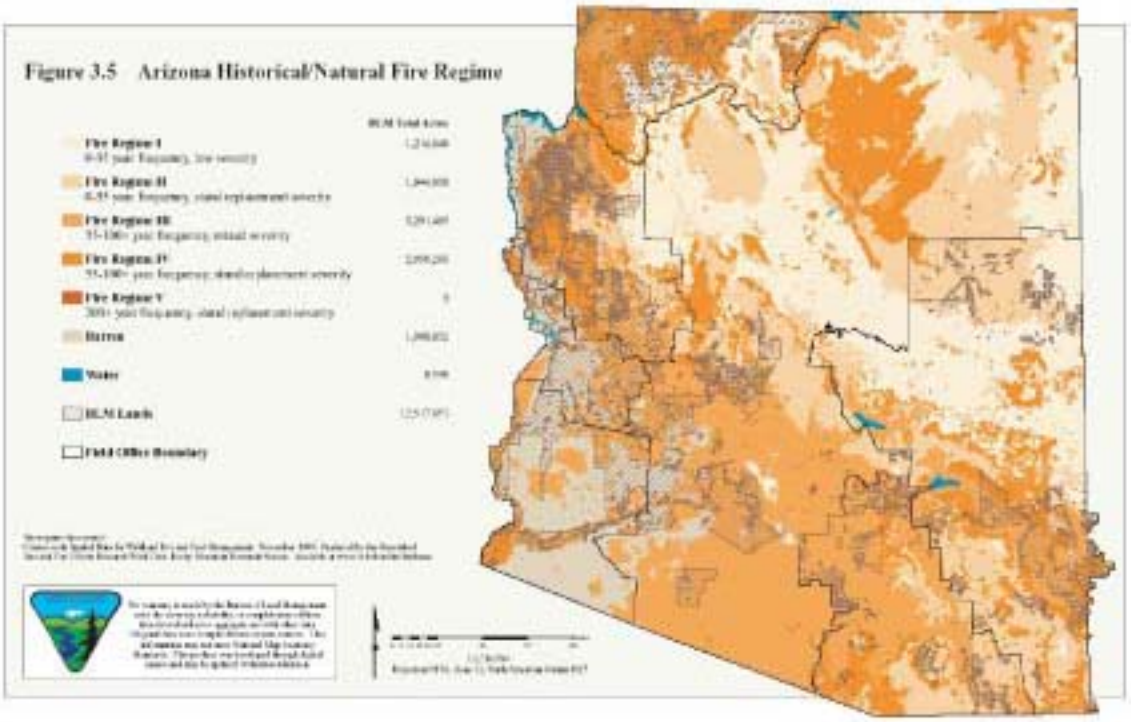
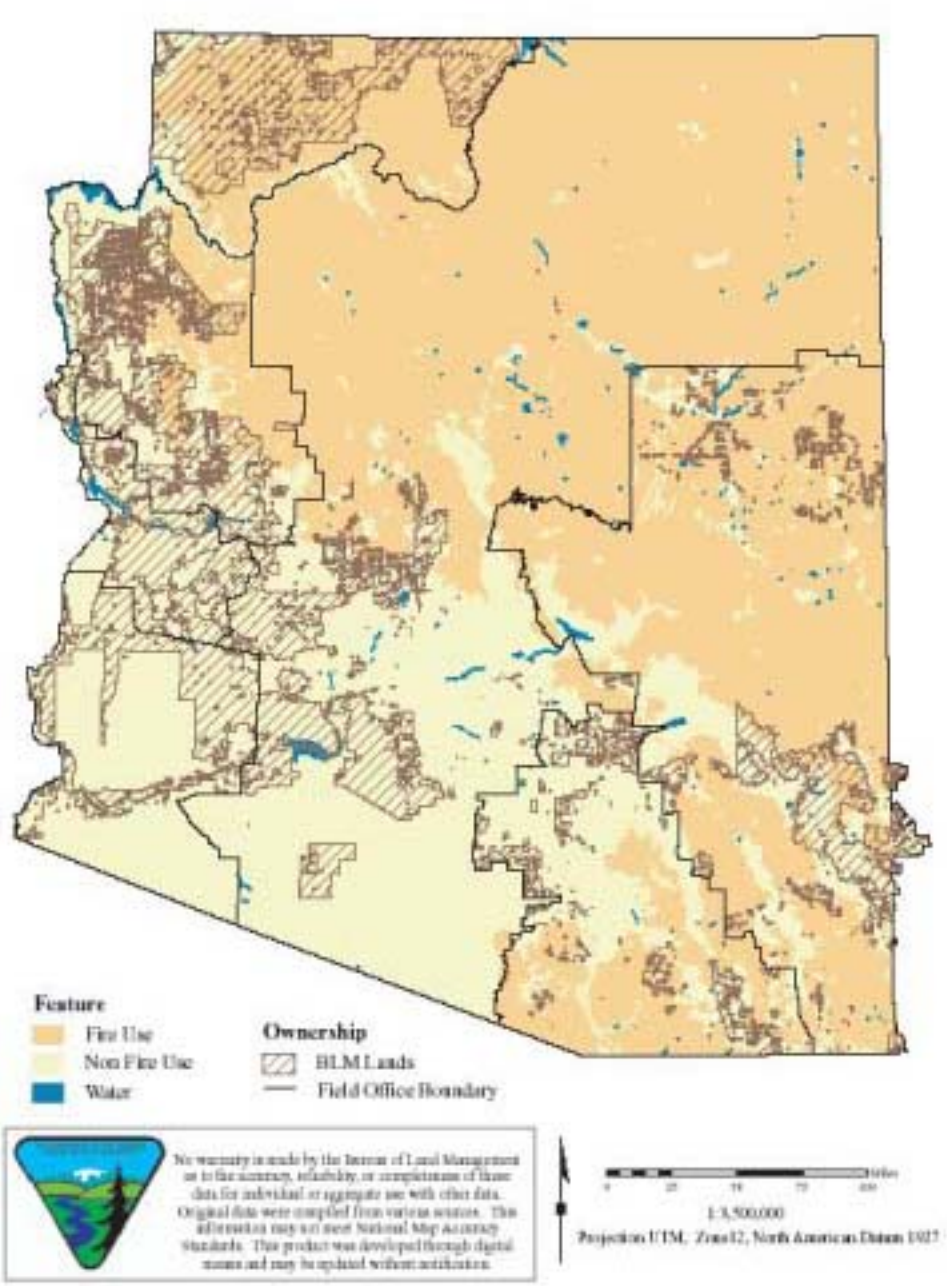


Figure 3.5 Arizona Historical/Natural Fire Regime
Fire Regime I
Fire Regime II
Fire Regime III
Fire Regime IV
Fire Regime V
Barren
Water
BLM Lands
Field Office Boundary


Feature
Fire Use
Non Fire Use
Water
Ownership
BLM Lands
Field Office Boundary
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1:3,500,000
Projection UTM, Zone12, North American Datum 1927

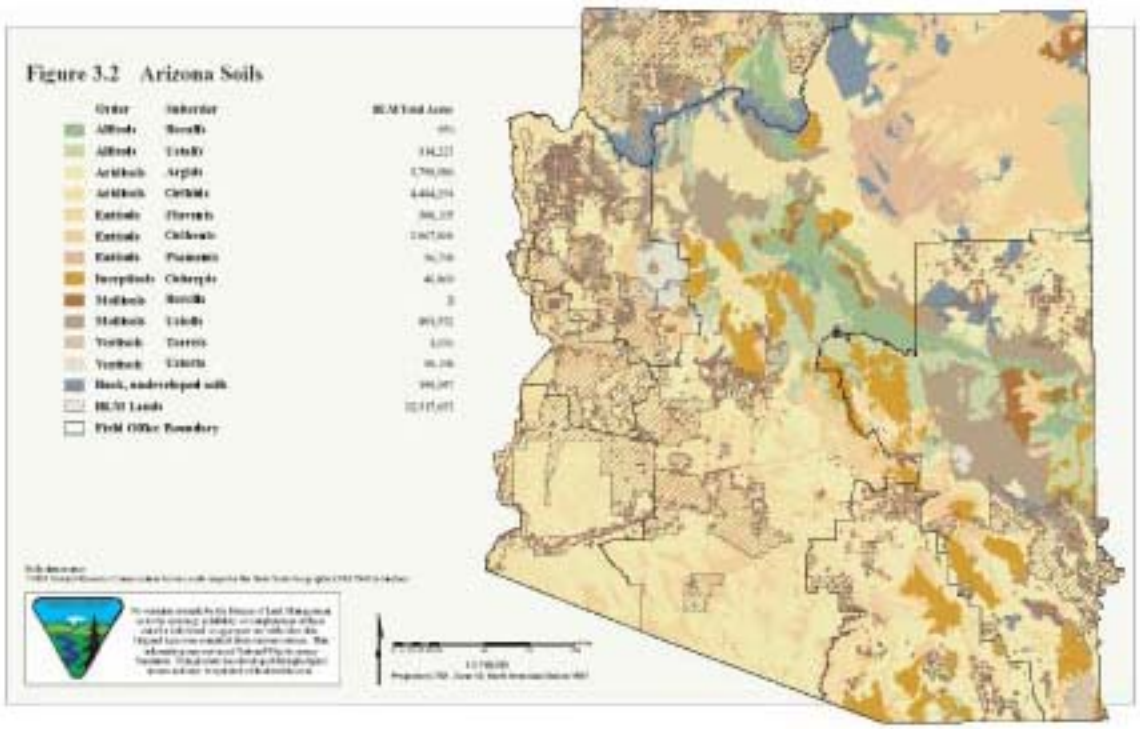
Figure 3.2 Arizona Soils
Order
Suborder
BLM Land Acres
Aridisols
Argids
Cambids
Entisols
Torrerts
Orthents
Psamments
Inceptisols
Ochrepts
Mollisols
Borolls
Ustolls
Vertisols
Torrerts
Uderts
Rock, undeveloped soil
BLM Lands
Field Office Boundary