

Lower Colorado River Multi-Species Conservation Program



Balancing Resource Use and Conservation

Lower Colorado River Multi-Species Conservation Program Fire Management & Law Enforcement Strategy



January 2010

Lower Colorado River Multi-Species Conservation Program Steering Committee Members

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Bureau of Reclamation
U.S. Fish and Wildlife Service
National Park Service
Bureau of Land Management
Bureau of Indian Affairs
Western Area Power Administration

Arizona Participant Group

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Arizona Electric Power Cooperative, Inc.
Arizona Game and Fish Department
Arizona Power Authority
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City of Lake Havasu City
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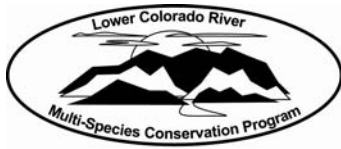
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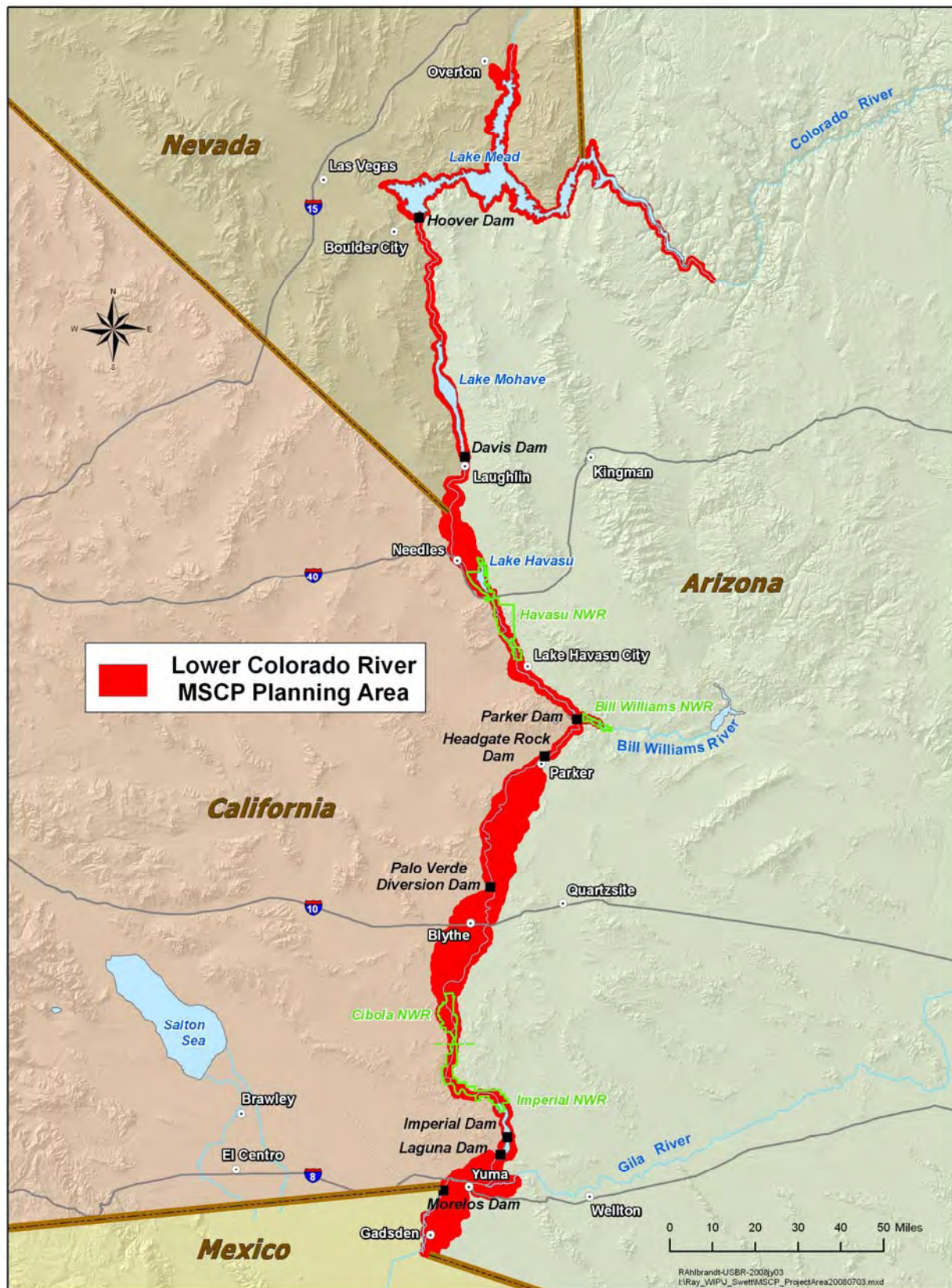


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**Lower Colorado River
Multi-Species Conservation Program
Bureau of Reclamation
Lower Colorado Region
Boulder City, Nevada
<http://www.lcrmscp.gov>**

January 2010



Map of LCR MSCP Planning Area

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ACRONYMS

AIFC – Arizona Interagency Fire Center
AOP – Annual Operating Plan
BAR – Burned Area Rehabilitation
BAER – Burned Area Emergency Response
BI – Burning Index
BIA – Bureau of Indian Affairs
BLM – Bureau of Land Management
CFR – Code of Federal Regulations
EA – Environmental Assessment
ERC – Energy Release Component
ES – Emergency Stabilization
ESA – Endangered Species Act
FMO – Fire Management Officer
FMP – Fire Management Plan
FS – Forest Service
GACC – Geographic Area Coordination Center
GOES – Geospatial Operational Environmental Satellite
HFI – Healthy Forest Initiative
HMP – Habitat Management Plan
IC – Incident Commander
IDC – Interagency Dispatch Center
IMT – Incident Management Team
KBDI – Keetch-Byram Drought Index
LAL – Lightning Activity Level
MIST – Minimum Impact Suppression Tactics
MOU – Memorandum of Understanding
NEPA – National Environmental Policy Act
NFDRS – National Fire Danger Rating System
NFFL – Northern Forest Fire Lab
NIFC – National Interagency Fire Center
NWCG – National Wildfire Coordinating Group
NWS – National Weather Service
OHV – Off Highway Vehicles
PKFMZ – Phoenix/Kingman Fire Management Zone
PSA – Predictive Services Area
RAWS – Remote Automated Weather Station
RMP – Resource Management Plans
SC – Staffing Class
SRA – Seasonal Risk Analysis
SWCG – Southwest Area Coordinating Group
TES – Threatened, endangered, and sensitive species
USFWS – U.S. Fish and Wildlife Service
WFDSS – Wildland Fire Decision Support System
WFSA – Wildland Fire Situation Analysis
WFAS – Wildland Fire Assessment System
WIMS – Weather Information Management System

WRCC – Western Region Coordination Center
WUI – Wildland Urban Interface

1.0 INTRODUCTION

1.1 Purpose

The Lower Colorado River Multi-Species Conservation Program (LCR MSCP) is a multi-stakeholder, federal and non-federal partnership responding to the need to balance the use of lower Colorado River (LCR) water resources and the conservation of native species and their habitats in compliance with the Endangered Species Act (Bureau of Reclamation 2008a).

The Bureau of Reclamation (BOR, Reclamation) is responsible for implementing the LCR MSCP. The purpose of the Comprehensive Fire and Law Enforcement Strategy (Comprehensive Strategy) is to identify and describe these two areas of MSCP program responsibility. With respect to the LCR MSCP, it is important to emphasize the following: that in a worst case scenario any existing or planned conservation area, land acquisition and development, habitat creation, and maintenance work accomplished could be totally destroyed by a single wildfire caused by humans and/or lightning. Dry lightning, gusty and erratic winds, along with dense stands of tamarisk or other riparian vegetation is a formula for potentially destructive wildfires.

“.....land acquisition and development, habitat creation, and [MSCP] maintenance work accomplished could be totally destroyed by a single wildland fire caused by humans and/or lightning....”

A contract has been awarded by the Bureau of Reclamation (BOR) to produce the Comprehensive Fire and Law Enforcement Strategy and seven site-specific conservation area plans that will provide information regarding law enforcement jurisdictions, generally accepted wildland fire management practices, and operational recommendations that would support the management efforts of local agencies and jurisdictional authorities involved with the LCR MSCP. The contract will also support Conservation Measure CMM1 that will reduce effects of wildfire and vandalism on created habitats within Reaches 1-7 (LCR MSCP Work Task E18: Law Enforcement and Fire Suppression).

The following sections (2.0 – 4.0) provide “industry standards” for law enforcement and wildland fire management programs that directly or indirectly relate to the LCR MSCP.

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1.2 Program Background: LCR MSCP Habitat Conservation Plan and Work Plan

As mentioned in Section 1.0 (Introduction) of this Comprehensive Strategy, the LCR MSCP is a long-term (50-year) plan to conserve at least 26 species along the LCR from Lake Mead to the southerly International Boundary with Mexico through the implementation of a Habitat Conservation Plan (HCP). Most covered species are state and/or federally-listed special status species. Reclamation is responsible for implementing the LCR MSCP over the 50-year term of the program.

Reclamation has been implementing LCR program activities since 1997 when the USFWS issued a Biological Opinion for southwestern willow flycatcher, bonytail, Yuma clapper rail and razorback sucker. Since this time, the establishment of a long-term, stakeholder-driven framework for habitat creation and maintenance on 8,132 acres on federal and non-federal lands has evolved into the present LCR MSCP.

Program documents signed in 2005 include an Environmental Impact Statement/Environmental Impact Report (EIS/EIR), a Biological Assessment (BA), a Biological Opinion (BO), a Record of Decision (ROD), a Funding and Management Agreement (FMA), an Implementation Agreement (IA), a Section 10 (ESA) permit, and a Habitat Conservation Plan (HCP).

The LCR MSCP HCP was completed in 2004 in support of the Endangered Species Act (ESA) and is intended to meet regulatory requirements necessary to avoid, minimize, and mitigate potential effects from covered activities on listed and other sensitive species and their habitats (MSCP 2004a).

The HCP also includes actions designed to meet the biological needs for 26 covered species and potentially benefit 5 evaluation species included in the LCR MSCP. The HCP provides program-level guidance for ensuring that implementation of the conservation measures will be based on scientific information, methods, principles, and standards. An overall HCP goal is to conserve habitat and work toward recovery of threatened and endangered species, as well as reduce the likelihood of additional species being listed (MSCP 2004a).

The FMA (Section 7.4.1) requires Reclamation to submit a work plan and budget (annual report) to a steering committee that provides oversight functions in support of LCR MSCP implementation. Among other information included in the annual report is a tabulation of habitat created or restored by the LCR MSCP. Through adaptive management, the establishment and management of habitat may evolve to reflect new knowledge of habitat needs, thus creating opportunities to modify habitat according to covered species requirements. Work Task E18 (Law Enforcement and Fire Suppression) is intended to be an integral management component for all habitats created or maintained through Section E (Work Plan) tasks for the duration of the program.

1.3 Common Attributes of Conservation Area Creation and Maintenance

The HCP provides the MSCP with broad measures or attributes that would accomplish stated goals and objectives:

- Creation of native land cover types (see 1.5 below) that include: 5,940 acres of cottonwood-willow, 1,320 acres of honey mesquite, 512 acres of marsh, and 360 acres of backwaters to provide habitat for covered species.
- Avoid and minimize impacts to covered species and their habitats resulting from program activities.
- Population enhancement that directly or indirectly increases the abundance of covered species.
- Monitoring and research necessary to assess and improve conservation measure effectiveness and adaptively manage implementation of the HCP over time.
- Provision of funding to support projects implemented by land use managers in the planning area that maintain existing habitat for listed species that would be covered by the HCP.
- Other conservation measures relating to the covered species and the strategies for implementing them (MSCP 2004a).

1.4 LCR MSCP Land Cover Types

Lower Colorado River ecosystems have gone through a wide variety of natural and man-made disturbance events, ranging from land development to channel alterations with subsequent changes in habitat components. A major impact has been massive loss of native vegetative communities, many of which are being replaced with exotic species such as the invasive tamarisk (or saltcedar).

The LCR MSCP creates conservation areas to provide for the restoration or creation of native habitat in support of covered species, many of which are now listed as threatened or endangered. The MSCP has identified the following four major land cover types within reaches 1-7 as cottonwood-willow, honey mesquite, backwater, and marsh.

1.4.1 Cottonwood-willow Land Cover Type

The deciduous cottonwood-willow community consists of Fremont cottonwood and Goodding's willow along with other similar willow species. A critical habitat requirement for this land cover type is periodic winter and/or spring floods to enhance seed germination in silt beds (MSCP 2004a). Typically, canopy cover varies from open to closed with a variety of understory shrubs, forbs and grasses. These shrubs, forbs, and grasses have the potential to create a substantial wild-fire hazard under certain conditions.

1.4.2 Honey Mesquite Land Cover Type

The honey mesquite land cover type was prevalent along the broad alluvial floodplains of the LCR, normally situated on adjacent terraces above the channel. This species is adapted—by virtue of a long taproot—to both upland and wetland areas. Honey mesquite can also co-exist with other shrub species that naturally occur on the same site. The canopy can be open or closed. Young stands with herbaceous understories will carry wildland fire readily. Mature stands, due to their more sparse understories, will normally carry fire only under moderate or high wind conditions.

1.4.3 Backwater Land Cover Type

Backwater is an aquatic land cover type that occurs as a pre-dam river channel and floodplain. Examples include oxbow lakes, abandoned channel pools, floodplain ponds and lakes, secondary channel pools, and isolated cove hydrologic features (MSCP 2004a). Features may exist permanently or only temporarily, depending on seasonal moisture and type of connection to the river (i.e., dikes, weirs, culverts, groundwater seep). Except for the most extreme fire weather conditions and where continuous patches of vegetation occur, wildfire potential is normally minimal in this type.

1.4.4 Marsh Land Cover Type

The marsh land cover type can occur where there has been long-term inundation from flooding; however, much of this type is sustained where minimal water level fluctuation occurs. Consisting of emergent vegetation as cattail, bulrush, and common reed, this type can become very dense

and continuous. It is a fire tolerant system and may present a significant wildfire threat, especially where it adjoins honey mesquite and/or cottonwood-willow stands.

1.5 LCR MSCP Law Enforcement and Fire Management Overview

Approximately 95% of ignitions along the LCR are human-caused (MSCP 2004a). Accordingly, wildfire prevention needs to be a priority program element. As conservation areas are established with native species and the spread of exotics continues, wildfire will remain as a disturbance factor that threatens habitats.

Several agencies in the LCR Interagency Fire Management Group (see below) conduct prescribed fires to reduce hazardous fuels (wildfire risk), encourage fire-adapted native vegetation, consume debris, and create defensible space for wildfire suppression purposes. Farmers also use fire to burn agricultural fields.

With respect to law enforcement and fire management, Reclamation has no management authority for lands included in the MSCP. The HCP provides cost estimates for law enforcement and wildland fire personnel to cover MSCP lands. For example, law enforcement officers and wildland firefighters are listed for annual out-year funding, including vehicle travel for officers and firefighters (MSCP 2004b).

The Lower Colorado River Interagency Fire Management Group, formed in 1999 but no longer active, consisted of fire managers from the Bureau of Land Management (BLM), U.S. Fish and Wildlife Service (USFWS), and the Bureau of Indian Affairs (BIA). The purpose of this group was to coordinate wildland fire activities for approximately 3 million acres of federal lands, including the MSCP conservation areas.

As of this writing, agency fire management plans are in various stages of revision and/or completion. A copy of this comprehensive plan will be forwarded to those agencies which are revising their Fire Management Plans.

2.0 LAW ENFORCEMENT AUTHORITIES, JURISDICTIONS AND POINTS OF CONTACT/PROTOCOLS

2.1 Authorities

Reclamation Lands: Real property administered by the Secretary, acting through the Commissioner of Reclamation, including acquired and withdrawn land and water surface areas under the jurisdiction of the Bureau of Reclamation (16 USC 4601-32(1)).

Reclamation Projects: Any water supply or water delivery project constructed or administered by the Bureau of Reclamation under the federal reclamation laws and acts supplementary thereto and amendatory thereof (16 USC 4601 § 32(1)).

Law Enforcement Authority at Bureau of Reclamation Facilities of 2001: Public Law 107-69, 115 Stat. 593 (*P.L. 107-69*, Appendix B): P.L. 107-69 amended the Reclamation Recreation Management Act of 1992 in order to provide for the security of dams, facilities, and resources under the jurisdiction of Bureau of Reclamation.

Activities Associated with Enforcing Federal Law: Enforcement of federal law on Reclamation lands and water bodies is governed by P.L. 107-69, Law Enforcement Authority at Bureau of Reclamation Facilities and 43 CFR part 422, Law Enforcement Authority at Bureau of Reclamation Projects. The Reclamation Law Enforcement Administrator and Regional Special Agent will be involved in determining when additional law enforcement resources are necessary to enforce federal laws on lands or water bodies under Reclamation jurisdiction. An interagency agreement between the Bureaus in the Department of the Interior (See Delegation of Authority, Appendix B) is in place to provide cross designation of Department law enforcement officers to provide law enforcement and investigative support in areas under their responsibility or control.

Reclamation may enter into additional agreements to more fully detail the scope, objectives, and the range of responsibilities. Reclamation's Regional Special Agent and Regional Security Officer will be involved in planning and implementing contracts, interagency agreements, and cooperative agreements for law enforcement services. The Law Enforcement Administrator is the Reclamation official authorized to enter into agreements that allow law enforcement personnel of any other federal agency with law enforcement authority (with the exception of the Department of Defense) or law enforcement personnel of any state or local government, including an Indian tribe, when deemed economical and in the public interest, through cooperative agreement or contract, to act as law enforcement officers to enforce federal laws and regulations within a Reclamation project or on Reclamation lands, with such enforcement powers as may be so assigned to them by the Secretary of the Interior. The length of term for these law enforcement agreements is limited to three (3) years. Generally, the closest available resource will be requested.

2.2 Jurisdiction and Agreements in Effect

United States Fish & Wildlife Service (USFWS), Refuge System: Pursuant to the Department of the Interior (DOI) Interagency Agreement for the Cross Designation of DOI Law Enforcement Officers dated July, 2007, and through other approved operating agreements between the USFWS and BOR, Reclamation law enforcement authority may specify USFWS designated enforcement officers (refuge officers and special agents) to conduct routine law enforcement and perform investigations and response as required and appropriate on Reclamation lands and projects. Additionally, USFWS special agents and refuge officers have existing authority to enforce federal and state regulations on refuge lands. Refuge officers have proprietary jurisdiction on refuges in Arizona. In addition, local law enforcement agreements are in place with BLM, NPS and BOR (See attached USFWS & BOR Operating Agreement, Appendix B-2).

Bureau of Land Management (BLM): Pursuant to the Department of the Interior (DOI) Interagency Agreement for the Cross Designation of DOI Law Enforcement Officers dated July, 2007, and through approved operating agreements between the BLM and BOR, Reclamation law enforcement authority may specify BLM designated enforcement officers (BLM rangers and special agents) to conduct routine law enforcement and perform investigations and response as required and appropriate on Reclamation lands and projects. DOI cross designation of law enforcement authority allows BLM rangers to enforce rules and regulations on other DOI-managed lands. BLM rangers have proprietary jurisdiction on refuges in Arizona. In addition, local law enforcement agreements are in place with USFWS, NPS and BOR (See Appendix B-1).

Las Vegas Metropolitan Police (Clark County, NV): Las Vegas Metropolitan Police provide the primary enforcement response to the Big Bend Conservation Area in Laughlin, Nevada. The conservation area is located on land under the ownership of the Southern Nevada Water Authority. Additional law enforcement assistance for the conservation area may be obtained from state park rangers at Big Bend State Park, the Nevada Highway Patrol, and Nevada Game and Fish wardens.

Arizona Game and Fish: The Arizona Game and Fish Department manages all resident wildlife populations and has primary responsibility to promulgate regulations for the harvest of these resources, as provided for under Arizona Revised Statutes (A.R.S.) Title 17 and Arizona Administrative Code Title 12, shares management authority for migratory and threatened and endangered species with the U.S. Fish and Wildlife Service, and also has responsibility for managing recreational off-highway vehicles in accordance with A.R.S. Title 17-454 and 28-1174. Arizona Wildlife Managers have full law enforcement authority throughout the state and are responsible for enforcement actions on BOR conservation areas.

California Fish and Game: The Department of Fish and Game maintain native fish, wildlife, plant species and natural communities for their intrinsic and ecological value and their benefits to people. This includes habitat protection and maintenance in a sufficient amount and quality to ensure the survival of all species and natural communities. The department is also responsible for the diversified use of fish and wildlife including recreational, commercial, scientific and educational uses. The mission of the law enforcement division is to protect California's natural resources and provide public safety through effective and responsive law enforcement. California Fish and Game wardens have broad law enforcement authority throughout the state and are the primary authority responsible for enforcement actions on conservation areas.

Colorado River Indian Tribes: The Colorado River Indian Tribes (CRIT) include four distinct tribes – the Mohave, Chemehuevi, Hopi and Navajo. The CRIT Reservation was created in 1865 by the federal government for “Indians of the Colorado River and its tributaries.” It was originally only for the Mohave and Chemehuevi who had inhabited the area for centuries. The reservation stretches along the Colorado River on both the Arizona and California side and includes almost 300,000 acres of land, with the river serving as the focal point and lifeblood of the area. CRIT police officers have exclusive law enforcement jurisdiction over all tribal lands while game wardens have exclusive law enforcement jurisdiction on tribal game lands including the Ahakhav Tribal Preserve. There is a law enforcement “mutual aid” agreement in place as part of the legislation that set aside the Colorado River Indian Tribes land. This mutual aid agreement provides emergency law enforcement assistance between the tribe and the States of Arizona and California.

Nevada Department of Wildlife: The Division of Law Enforcement is responsible for protecting Nevada's wildlife resources and ensuring the safety of the boating public, which includes enforcing the provisions of Nevada Revised Statutes and all other regulations that affect wildlife issues. Nevada game wardens have broad authority to enforce all game and fish regulations on all lands throughout the state.

National Park Service, Lake Mead National Recreation Area (Lake Mead and Lake Mojave): Pursuant to the Department of the Interior (DOI) Interagency Agreement for the Cross Designation of DOI Law Enforcement Officers dated July, 2007, Reclamation law enforcement authority

may specify NPS designated enforcement officers (park rangers and special agents) to conduct routine law enforcement and perform investigations and response as required and appropriate on Reclamation lands and projects. DOI cross designation of law enforcement authority allows NPS rangers to enforce rules and regulations on other DOI-managed lands. Local law enforcement agreements are in place with BLM, USFWS and BOR.

2.3 Other Law Enforcement Considerations

Additional law enforcement situations and concerns need to be taken into consideration and discussed with each conservation area law enforcement authority, and protocols developed that will meet the requirements of the LCR MSCP. These may include:

- Vandalism of government property
- Illegal dumping
- Theft of Trees
- Theft/poaching of flora or fauna (i.e., plants, snakes, spiders, insects, fossils)
- Arson (wildland)

If a dollar value can be assigned to any natural resource on conservation area lands, there is a high probability that the resource will be taken for profit at some time.

3.0 SPECIAL STATUS SPECIES

3.1 Federal Endangered Riparian Species

3.1.1 Southwest willow flycatcher occurrence

The historical breeding range of the southwest willow flycatcher (*Empidonax traillii extimus*) included all of the lower Colorado River drainage. Its current range extends into southern California, southern Nevada, southern Utah, Arizona, New Mexico, western Texas, southwestern Colorado and small portions of Mexico (Sogge et al. 1997).

Distribution of the southwestern willow flycatcher follows low elevation riparian habitats along the lower Colorado River and other southwest rivers. Within these habitats, distribution is clumped in small, isolated, and widely dispersed localities (U.S. Fish and Wildlife Service 2002).

The southwestern willow flycatcher was listed as endangered in 1995. The population is estimated at 900-1100 pairs (U.S. Fish and Wildlife Service 2002). Critical habitat was designated in 1997, and re-designated in 2005 pursuant to a court ruling. Lands along the LCR were exempted from critical habitat, in part because the MSCP was determined to obviate the need for critical habitat.

3.1.2 Southwest willow flycatcher habitat requirements

Southwestern willow flycatchers require a mosaic of riparian habitats of various seral stages for nesting, foraging, migration, and dispersal. Dense thickets of riparian trees and shrubs ranging in height from 6 to nearly 100 feet tall are preferred nesting habitats (U.S. Fish and Wildlife Service

2002). Mixed stands of dense cottonwood and willow with standing water or saturated soil seem to offer the best nesting habitats.

Suitable nesting habitats are often patchy in distribution; larger patches may contain several breeding territories. Flycatchers seem to have general site fidelity rather than specific nest fidelity and may move several miles from one season to the next in response to dynamic habitat conditions (Federal Register 2005).

The Final Recovery Plan for southwestern willow flycatchers (U.S. Fish and Wildlife Service 2002) and the critical habitat designation (Federal Register 2005) provide detailed discussions of flycatcher habitat needs and habitat restoration needs.

3.1.3 Yuma clapper rail occurrence

The Yuma clapper rail breeds in freshwater marshes in the southwestern U.S. and Mexico (U.S. Fish and Wildlife Service 1983). The largest extant populations occur in the Cienga de Santa Clara in Mexico, along the Lower Colorado River, and in the Salton Sea (CA) area (U.S. Fish and Wildlife Service 2006). Population numbers on survey routes vary due to population dynamics, habitat quality, surveyor expertise, timing of surveys and other factors (U.S. Fish and Wildlife Service 2006).

Recent surveys suggest a population of between 800 and 900 birds in the U.S. with about 300-350 birds along the LCR, primarily in the Havasu NWR, Cibola NWR, and Imperial NWR (U.S. Fish and Wildlife Service 2006). The species status is considered stable.

Some Yuma clapper rails appear to be non-migratory, but there is apparently sufficient movement of birds among inhabited river reaches to colonize suitable habitats (U.S. Fish and Wildlife Service 2006).

The Yuma clapper rail was listed as endangered in 1967 (U.S. Fish and Wildlife Service 1983). Critical habitat has not been designated. Threats to populations include habitat loss and selenium (Eddleman 1989).

3.1.4 Yuma clapper rail habitat requirements

Rail habitat includes freshwater marshes along rivers, backwaters, and irrigation return flow areas (U.S. Fish and Wildlife Service 2006). Predominant plant species in these marshes are cattail (*Typha latifolia*), bulrush (*Scirpus* sp.), and common reed (*Phragmites australis*). The recovery plan suggested that dense, mature stands of cattail-bulrush were preferred habitats (U.S. Fish and Wildlife Service 1983) but more recent literature (e.g. U.S. Fish and Wildlife Service 2006) indicates seral stands, particularly those with up to about 12 inches of standing water, are more important.

The 5-year review further indicates that declines in clapper rail numbers may be in part due to maturing (decadence) of marsh habitats. The LCR was cited specifically: “Because of current water management regimes, marshes on the LCR age out of suitability over time due to the build-up of dead plant materials that fill in water-filled depressions and result in the conversion of the marsh to dry land. As the marshes age and become decadent, they lose habitat suitability

for clapper rails.” Citing Conway and Nadeau (2005), the 5-year review notes that preliminary results of post-burn fire effects research suggest that prescribed fire has promise for habitat management.

3.1.5 Other species of concern

In addition to the southwestern willow flycatcher and Yuma clapper rail, 25 other species are addressed by the Multi-Species Conservation Program (2004). These species include:

- Desert tortoise (*Gopherus agassizii*)
- Bonytail (*Gila elegans*)
- Humpback chub (*Gila cypha*)
- Razorback sucker (*Xyrauchen texanus*)
- Western red bat (*Lasiurus blossevillii*)
- Western yellow bat (*Lasiurus xanthinus*)
- Desert pocket mouse (*Chaetodipus penicillatus sobrinus*)
- Colorado River cotton rat (*Sigmodon arizonae plenus*)
- Yuma hispid cotton rat (*Sigmodon hispidus eremicus*)
- Western least bittern (*Ixobrychus exilis herperis*)
- California black rail (*Laterallus jamaicensis coturniculus*)
- Yellow-billed cuckoo (*Coccyzus americanus occidentalis*)
- Elf owl (*Micrathene whitneyi*)
- Gilded flicker (*Colaptes chrysoides*)
- Gila woodpecker (*Melanerpes uropygialis*)
- Vermilion flycatcher (*Pyrocephalus rubinus*)
- Arizona Bell’s vireo (*Vireo bellii arizonae*)
- Sonoran yellow warbler (*Dendroica petechia sonorana*)
- Summer tanager (*Piranga rubra*)
- Flat-tailed horned lizard (*Phrynosoma mcalli*)
- Relict leopard frog (*Rana onca*)
- Flannelmouth sucker (*Catostomus latipinnis*)
- MacNeill’s sootywing skipper (*Pholisora graciellae*)
- Sticky buckwheat (*Eriogonum viscidulum*)
- Threecorner milkvetch (*Astragalus geyeri* var. *triquetrus*)

3.1.6 Other species’ habitat requirements

This document does not discuss the other species’ habitats. Based on the use of cottonwood-willow, honey mesquite, and marsh habitats by some of these potentially affected species, the effects of wildland fire and law enforcement actions are deemed to be neutral or similarly beneficial as the effects are on southwestern willow flycatcher and the Yuma clapper rail.

3.2 Effects of Fire on T&E species

Direct effects of wildfire on the southwestern willow flycatcher and Yuma clapper rail should be negligible unless a fire occurs in nesting habitat during the breeding season. In such a wildfire, nests and associated eggs or broods could be lost (U.S. Fish and Wildlife Service 2002). The

possibility of such loss would be increased if there is a dense (or thatched) understory which would increase flame length. The likelihood of such a fire, however, would be low since fuels in the LCR MSCP conservation areas would usually not be receptive to fire in the spring. Further, the young stands—both of cottonwood-willow and marshes—which are most desirable for nesting would also be much less prone to carry fire than would mature or decadent stands or stands invaded by tamarisk.

Paxton et al. (1996) reported on the effects of a wildfire in June on southwestern willow flycatcher in a mature cottonwood-tamarisk stand on the lower San Pedro River in Arizona. Of an estimated 13 territories, 4 were totally burned and 3 were partially burned. Four nests with eggs or young were lost. Nine adult flycatchers were still in the fire area immediately post-burn but had abandoned the area within about two weeks. Two of the three nests in the partially burned area were abandoned. One flycatcher renested within the unburned area. Researchers concluded that even if the remaining flycatchers renested in other adjacent habitats, their production would likely be diminished. They further speculated that it may be over a decade before the tamarisk stand would again provide suitable nesting habitat.

A similar situation is reported in Appendix L of the recovery plan (U.S. Fish and Wildlife Service 2002) where wildfire burned through a small patch of southwestern willow flycatcher habitat during March, prior to the non-breeding season. Later in that breeding season, three territories in partially burned areas were occupied, while two of the three territories in the completely burned habitat were only occupied by unpaired males.

3.3 Effects of Fire on the LCR MSCP Land Cover types (unless otherwise noted, all information in this section is drawn from the Fire Effects Information System at <http://www.fs.fed.us/database/feis/>)

Cottonwood-willow

In the LCR-MSCP plantings, Fremont cottonwood (*Populus fremontii*) occurs as a dominant or co-dominant with Goodding's willow (*Salix gooddingii*) and/or coyote willow (*Salix exigua*). This community will provide the primary nesting habitat for southwestern willow flycatcher in the LCR MSCP conservation areas. Fremont cottonwood and the willows respond far differently to wildland fire and will therefore be discussed separately below.

Wildfires were infrequent in native riparian communities dominated by Fremont cottonwood before invasion by saltcedar (*Tamarix* sp.). With establishment of a dense understory of saltcedar, where saltcedar becomes the primary fire carrier, the fire return interval may become as short as 10-20 years. Of greatest impact, however, is the possibility of cottonwood-willow stands converting to tamarisk after wildfire and the subsequent loss of high quality nesting habitat (U.S. Fish and Wildlife Service 2002). Unless some intervention is made to ensure cottonwood dominance, a site may be converted to a saltcedar monoculture with repeated fire.

Cottonwood is not regarded as a fire dependent species and is readily top-killed by moderate to high severity fires. Cambium may be damaged even by low severity fire. Cottonwoods under the age of 25 years that are top-killed by fire may sprout vigorously from the root crowns.

Disturbances such as wildland fire may favor cottonwood seedling establishment by opening the canopy, exposing mineral soil, and allowing light to reach the forest floor. Following fire, dis-

turbed areas may be recolonized from adjacent seed sources if site conditions are suitable (particularly with wet soil).

Goodding's willow and coyote willow share several ecological characteristics: both are pioneer species, both are fairly shade intolerant, both tolerate repeated flooding, both are prolific seed producers, and both sprout vigorously after disturbance. In stands with Fremont cottonwood, both will usually diminish in number and vigor as cottonwoods mature and provide increased shading.

Both species are top-killed by wildland fire, though older and larger trees may survive a surface fire. Low to moderate severity fires will initially reduce the density of willow stems. A temporary increase in herbaceous vegetation is then followed by vigorous regrowth of willows. Both species readily resprout from roots, root crowns, and basal stems following fire. Riparian sites cleared by fire may also be quickly recolonized by wind-dispersed seeds from adjacent sources if site conditions (notably moist soil) are present.

Riparian areas dominated by cottonwood and willow may serve as impediments or barriers to wildland fire spread. Conditions in the communities are usually characterized by lower temperature, higher relative humidity, and substantially reduced wind speed. When fire then enters these communities, flame length, rate of spread, and fireline intensity may be markedly diminished.

The current LCR MSCP conservation areas of cottonwood and willow are young stands. Future plantings will continue the preponderance of relatively young stands. Most of these stands are bounded by roads, have interior fire breaks, and are flood irrigated during the growing season. They are relatively invulnerable to wildfire.

There are, however, two fuel conditions that are evident vulnerabilities to wildfire. Very young stands (and older stands with low stem density) often have a fairly dense understory of Bermudagrass, Johnsongrass, alfalfa and/or morning glory. This understory, when cured, will readily and rapidly carry fire. Fire under these conditions would result in high mortality to cottonwoods and willows. Most of these habitat areas will become shaded within two to four years and the herbaceous understory will be eliminated. The primary surface fuel in these older stands is leaf litter. This fuel understory is not conducive to rapid fire spread or high fire intensity.

The second vulnerability to wildfires arises from the proximity of LCR MSCP conservation areas to dense stands of saltcedar. Saltcedar has a short fire return interval, burns with high intensity, and throws many firebrands. Fire in saltcedar stands adjacent to cottonwood-willow habitat may have three effects on the plantings. The high radiant and convective heat produced by fire in saltcedar may scorch adjacent plantings, resulting in mortality of cottonwoods and willows along the edge of the planting. Secondly, unless there is a sufficient fuel break, fire in adjacent saltcedar stands may simply spread into the plantings. And thirdly, fire in adjacent saltcedar stands will throw many firebrands into downwind plantings. These firebrands may or may not initiate new fires in the cottonwood-willow plantings, depending on the understory fuels and soil moisture as described above. There are several actions, identified in recommendations below, which can reduce the vulnerability of cottonwood-willow plantings to fire effects from fire in adjacent saltcedar stands.

Other possible sources of ignition in cottonwood-willow stands include lightning, unattended campfires, fireworks, arson, and the like.

Honey mesquite

Honey mesquite often occurs in riparian communities in either pure stands or interspersed with other species. It is not particularly flood tolerant and therefore appears most often along the outer floodplain in stands of mixed-age plants.

Honey mesquite is fire adapted. Fire return intervals may be as low as 10 years when there is sufficient understory to carry fire. Mortality of honey mesquite following fire is usually quite low. Studies have reported top-kill of over 75% of trees in a stand but actual mortality of 10% or less. Mortality tends to be greater if dense surface fuels are present.

The response of honey mesquite to wildland fire depends on the amount of damage inflicted upon individual plants. Following low severity fire, plants may initiate new growth from axillary buds on branches or from underground buds on the taproot. Canopies may return to pre-burn densities in as few as two years. When fire top-kills a stand, regeneration usually occurs by sprouting from lateral roots within a foot of the soil surface. Even very young plants develop sufficient underground stem buds to withstand low severity fires. Honey mesquite also establishes by seed following disturbance.

Young stands with a dense grass understory are likely to be receptive to and carry fire, particularly once the understory has cured. Fires from any ignition source are likely to be surface fires and have few long-term adverse effects on the honey mesquite stand. If that stand is contiguous with cottonwood-willow stands, as is the case with many LCR MSCP conservation areas, fire in the honey mesquite stand might be sufficiently established (intensity, width of flaming front, etc.) to carry fire into cottonwood-willow stands with subsequent adverse effects on those stands.

Marsh

Cattail is an aquatic or semiaquatic emergent perennial that is typical of early seral, open canopy communities. It establishes quickly after disturbance in moist habitats. It regenerates vegetatively through rhizome sprouts and sexually through seed germination. It is tolerant of fluctuating water levels.

Cattail is also fire adapted; it is highly tolerant of fire. Wildland fires are not uncommon in cattail stands and fuel loading may actually be higher than on adjacent upland sites. Fires in cattail stands typically exhibit high rates of spread and high fireline intensity. The fire return interval in cattail stands is most influenced by fire frequency in adjacent communities.

Fire typically only top-kills cattail stands though some mortality may occur with severe fires in drained (dried) marshes (flooding a site after fire may increase cattail mortality). Following even severe fire, cattail stands typically sprout from rhizomes and, within a year, the only difference between burned and unburned stands may be in litter accumulations. Recently burned areas also provide a suitable seedbed for germination of cattail seeds.

The fire ecology of and fire effects on bulrushes and common reed are virtually the same as that described for cattail.

As noted earlier, when marshes mature and senesce they become less suitable for the Yuma clapper rails. Conway and Nadeau (2005) suggest that prescribed fire may be a useful management tool for maintaining habitat suitability for rails. Recommendations below incorporate the use of prescribed fire as a management tool.

Backwater

The backwater land cover type does not carry wildland fire except on its margins where marsh vegetation occurs.

4.0 WILDLAND FIRE MANAGEMENT PROGRAM STANDARDS AND COMPONENTS

4.1 Federal, State, and Local Wildland Fire Policy and Goals

4.1.1 Federal Wildland Fire Policy and Implementation Guides

In response to the catastrophic wildfires of 1994, which caused multiple firefighter fatalities, the land managing agencies of the Departments on Interior and Agriculture developed a consolidated Federal Wildland Fire Management Policy and Program Review (USDI/USDA 1995). This was the first fully interagency fire management policy. Implementation guidance for the policy was provided in Wildland and Prescribed Fire Management Policy: Implementation Procedures Reference Guide (USDI/USDA 1998).

In 2001, the Review and Update of the 1995 Federal Wildland Fire Management Policy was completed and approved by multiple federal departments and agencies (USDI/USDA/DOE/DOD/DOC/USEPA/FEMA/NASF 2001). This document directs the agencies to work together to develop common language, unified guidance and direction for all agencies and bureaus manuals, handbooks and guidelines to complete final implementation of the policy. Several implementation guides have succeeded each other since 2003 (see References); the most recent was released in February 2009 (USDA/USDI 2009). Discussion and terminology of fire management actions in succeeding sections will follow this 2009 guidance.

The 2001 Review and Update of the 1995 Federal Wildland Fire Management Policy affirmed the 1995 policy. The guiding principles noted in this report—intended to direct implementation of fire management planning, activities, and projects—remain the foundational principles for the Federal Wildland Fire Management Policy. These are:

1. Firefighter and public safety is the first priority in every fire management activity.
2. The role of wildland fire as an essential ecological process and natural change agent will be incorporated into the planning process.
3. Fire management plans, programs, and activities support land and resource management plans and their implementation.
4. Sound risk management is a foundation for all fire management activities.

5. Fire management programs and activities are economically viable, based upon values to be protected, costs, and land and resource management objectives.
6. Fire management plans and activities are based upon the best available science.
7. Fire management plans and activities incorporate public health and environmental quality considerations.
8. Federal, state, tribal, local, interagency, and international coordination and cooperation are essential.
9. Standardization of policies and procedures among federal agencies is an ongoing objective.

For purposes of the following discussion, “wildland fire” is a general term describing any non-structure fire that occurs in the wildland (i.e., it includes both wildfires and prescribed fires). “Wildfire” is defined as an unplanned ignition and “prescribed fire” is defined as a fire originating from a planned ignition to meet specific objectives contained in a written plan. Wildland fire suppression is an emergency operation which takes precedence over all other operations with the exception of safeguarding human life.

Key features of the 2009 implementation guidance include:

- Natural ignitions may be managed for multiple objectives.
- A full range of suppression strategies and tactics may be applied on any individual wild-fire.
- The Wildland Fire Decision Support System (WFDSS) replaces former decision support programs such as the Wildland Fire Situation Analysis (WFSA), Long Term Implementation Plan (LTIP), and Wildland Fire Implementation Plan (WFIP).

Section 4.5 below states the Department of Interior wildland fire policy and details the broad suppression program.

4.1.2 National, Regional, and Local Protocols: The National Fire Plan

Though wildland fires play an integral role in many forest and rangeland ecosystems, decades of effort directed at extinguishing every fire that burned on public lands has disrupted the natural fire regimes that once existed. Further, as more and more human communities develop and grow in areas that are adjacent to fire-prone lands in what is known as the wildland urban interface, wildfires pose increasing threats to people and their property (USDI/USDA 2000).

What is now referred to as the National Fire Plan (NFP) is a collection of documents, budget requests, and action plans and agency strategies. The two key documents are *Managing the Impact of Wildfires on Communities and the Environment, A Report to the President In Response to the Wildfires of 2000* (USDI/USDA 2000) and *A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment - A 10-Year Comprehensive Strategy - Implementation Plan* (Western Governors Association 2000).

The NFP addresses five key points: firefighting, rehabilitation, hazardous fuel reduction, community assistance, and accountability (USDI/USDA FS 2000).

The NFP continues to provide technical, financial, and resource guidance and support for wildland fire management across the United States. The USDA Forest Service and the Department of the Interior are working together to successfully implement the key points outlined in the NFP by taking the following steps:

1. Assuring that necessary firefighting resources and personnel are available to respond to wildland fires that threaten lives and property.
2. Conducting emergency stabilization and rehabilitation activities on landscapes and in communities affected by wildland fire.
3. Reducing hazardous fuel (dry brush and trees that have accumulated and increase the likelihood of unusually large fires) in the country's forests and rangelands.
4. Providing assistance to communities that have been or may be threatened by wildland fire.
5. Committing to the Wildland Fire Leadership Council, an interagency team created to set and maintain high standards for wildland fire management on public lands.

Congress, the Administration, states, tribes, local governments, and many others throughout the country recognized that achieving the key points outlined in the NFP was a long-term challenge. A series of strategy documents, the Healthy Forests Initiative, and the Healthy Forests Restoration Act provided the framework necessary to lessen risks to people and restore forest and rangeland health by addressing hazardous fuel buildup on public lands and reducing the threat of wildland fire. The relationship between major wildland fire reports and initiatives prior to the latest initiative, Protecting People and Natural Resources – A Cohesive Fuels Treatment Strategy (USDI/USDA 2006).

A key principle—coordination—was stressed when the U.S. Department of the Interior and the U.S. Department of Agriculture prepared a joint strategy for addressing hazardous fuel to reduce the risk of catastrophic wildland fires on more than 180 million acres of public forests, woodlands, and rangelands. Protecting People and Natural Resources – A Cohesive Fuels Treatment Strategy, outlines a coordinated approach to fuels treatment adopted by the five major federal land management agencies: Bureau of Indian Affairs, Bureau of Land Management, U.S. Fish and Wildlife Service, National Park Service, and USDA Forest Service. It describes practices that have worked since the agencies began collaborating on the strategy and establishes a framework for future priority-setting, accountability, and partnerships to reduce the fuel buildup that contributes to large destructive wildfires. Four principles guide the strategy:

1. **Prioritization:** First priority should be given to the Wildland Urban Interface (WUI) and second priority to areas outside the WUI. Priority treatments must concentrate on sites where vegetation is most likely to support catastrophic wildfires that threaten vital resources or locations of particular value to local communities. In addition, non-WUI treatments must be applied to areas where fuel loads could quickly increase to dangerous levels without active management.

2. **Coordination:** Coordinating land management activities, including fuels reduction, timber sales, insect and disease eradication, habitat improvement, watershed improvement, and other vegetation management activities, is key to maximizing their combined benefits toward overall fuels management objectives and achieving a well-coordinated fuels management program.
3. **Collaboration:** Each year’s federal program should increasingly reflect the input and priorities of local, tribal, and state interests.
4. **Accountability:** The strategy builds in accountability through an approved monitoring plan and state-of-the-art geographic information system, assuring continued improvement in the ability of federal land managers to systematically track and support program planning, implementation, and effectiveness.

The strategy outlined in the document provides a strategic and realistic approach for reducing fuels on federal lands by focusing on specific goals that address the multiple factors that influence fuels treatments and by working collaboratively to achieve them. These four key principles are incorporated in this risk/hazard assessment.

Table 1. Relationship Among Major Wildland Fire Reports and Initiatives.

Report/Initiative and Date	What it Does	Relationship to Other Initiatives
Federal Wildland Fire Management Policy and Program Review, December 1995.	A response to the tragic fires of 1994. Key elements include (1) reaffirming that protection of life has the first priority, (2) recognizing wildland fire as a critical natural process, (3) requiring fire management plans be developed for all burnable acres, (4) requiring fire management decisions be consistent with approved land and resource management plans, and (5) clarifying the role of federal agencies in the wildland urban interface.	First national wildland fire policy document.
Managing the Impact of Wildfires on Communities and the Environment, September 2000.	Response to a Presidential request. Provides recommendations to the Departments of Agriculture and Interior on how best to respond to the severe fire season of 2000. Makes key recommendations, among them (1) provide additional firefighting resources, (2) restore fire-damaged landscapes and communities, (3) increase efforts to remove hazardous fuel, and (4) work directly with local communities to improve community firefighting capacity and coordination, implement restoration and fuel reduction projects, and expand education and risk mitigation efforts in the WUI.	Provided the basis and conceptual framework for the National Fire Plan and the 10-Year Comprehensive Strategy—this document was also known as the National Fire Plan, a term which now is often used in conjunction with it and later actions like the Healthy Forest Initiative.

<p>Review and Update of the 1995 Federal Wildland Fire Management Policy, January 2001.</p>	<p>This review was prepared in response to a request from the Secretaries of the Interior and Agriculture to (1) review the 1995 federal fire policy and its implementation, (2) address specific issues raised in the Cero Grande Prescribed Fire Investigation Report and subsequent documents, (3) provide recommendations to the Secretaries for strengthening the organizational aspect of the wildland fire management programs in the two Departments, (4) provide additional recommendations that would improve the wildland fire programs in the two Departments, and (5) recommend a management structure for completing implementation of the recommendations.</p>	<p>This report validated the 1995 Federal Wildland Fire Management Policy and laid the groundwork for future wildland fire policy and guidance.</p>
<p>10-Year Comprehensive Strategy, August 2001.</p>	<p>A coordinated 10-year strategy to comprehensively manage wildfire, hazardous fuels, and ecosystem restoration. Developed in collaboration with governors and in consultation with a broad range of stakeholders. Scope includes federal and adjacent state, tribal, and private lands.</p> <p>Primary goals are to (1) improve prevention and suppression, (2) reduce hazardous fuels, (3) restore fire-adapted ecosystems, and (4) promote community assistance.</p> <p>Core principles of the strategy: priority-setting, collaboration, and accountability.</p>	<p>Extends concepts of the President's report and focus of the National Fire Plan into a broader, longer-term, collaborative effort.</p>
<p>Implementation Plan, 10-Year Comprehensive Strategy, May 2002.</p>	<p>Identified 22 specific tasks to achieve the four goals identified in the 10-Year Comprehensive Strategy. Established performance measures that are interagency and interdepartmental in scope. Developed in collaboration with governors and in consultation with a broad range of stakeholders.</p> <p>Emphasizes a collaborative, community-based approach to address wildland fire-related issues.</p>	<p>Translates the conceptual framework of the 10-Year Comprehensive Strategy into specific actions identifying timeframes for completion.</p>
<p>Healthy Forests Initiative (HFI) Healthy Forests: An Initiative for Wildfire</p>	<p>Presidential initiative to better protect people and natural resources by lowering the procedural and process hurdles that impede the reduction of hazardous fuel on public land and</p>	<p>HFI speeds implementation of projects and improves implementation of the NFP and</p>

<p>Prevention and Stronger Communities, August 2002.</p>	<p>to fulfill the original objectives of the Northwest Forest Plan. The initiative has legislative and administrative components.</p> <p>The legislative proposal called for (1) allowing agencies to enter into stewardship contracts, (2) further streamlining of NEPA analytic requirements, and (3) assuring judges consider balance of harm between short- and long-term impacts of fuel treatments when considering any request for injunctive relief.</p>	<p>the 10-Year Comprehensive Strategy.</p> <p>Legislative proposal requires use of collaborative process consistent with the Implementation Plan for the 10-Year Comprehensive Strategy.</p>
<p>Healthy Forests Restoration Act, December 2003.</p>	<p>Earlier Congress had given stewardship authority to the Forest Service (FS) and the Bureau of Land Management (BLM), partially fulfilling a request within HFI. With HFRA, Congress addressed other issues raised in HFI and contains other changes. HFRA applies chiefly to FS and BLM. Its major provisions include (1) a streamlined environmental analysis process for fuels treatments and other activities that would remove hazardous fuels from public lands, (2) incentives for states and local communities to prepare community wildfire protection plans, (3) measures to expedite judicial review of challenges to the conduct of fuels treatment projects, and (4) a requirement that judges consider the consequences of delaying or preventing a fuels treatment compared to the impacts of conducting the treatment.</p>	<p>Implemented many of the legislative proposals in the HFI.</p>

Source: Appendix E, Cohesive Fuels Treatment Strategy (USDI/USDA 2006).

4.2 Prevention and Community Outreach

Wildfire prevention includes all activities designed to reduce the number of human-caused wildfires that occur in a given management area. The objectives of a fire prevention program are to reduce undesirable human-caused ignitions, reduce damages and losses caused by wildfires, and reduce the suppression costs of wildfires. As weather and fuel conditions move from average to above average or severe, and/or human activity increases, mitigation and prevention activities should be strengthened to maintain effectiveness.

Federal fire program policy stipulates that agencies will work together with their partners and other affected groups and individuals to prevent unauthorized ignition of wildland fires (USDI/USDA 2008). Prevention activities are generally carried out by firefighters and others familiar with wildland fire. An effective prevention program includes education (posting signs, school programs, radio and news releases, recreation contacts, contacts with local business, exhibits),

monitoring of industrial activities (farming activities, power line maintenance operations), reconnaissance patrols, and other activities designed to prevent and mitigate wildfire damage and loss. Recommendations for prevention activities are found in Appendix G.

4.3 Preparedness

Preparedness is the result of activities that are planned and implemented prior to wildfire ignitions. Preparedness is a continuous process that includes developing and maintaining unit, state, regional, and national level firefighting infrastructure; predicting fire activity; hiring, training, equipping, and deploying firefighters; evaluating performance and correcting deficiencies; and improving overall operations. The preparedness process includes routine pre-season actions as well as incremental in-season actions conducted in response to increasing fire danger.

4.3.1 National Fire Danger Rating System (NFDRS) Overview

Land management agencies are to maintain appropriate levels of preparedness to meet fire management objectives. Preparedness is based on the assessment of fuel and weather conditions produced by the National Fire Danger Rating System (NFDRS).

NFDRS is a set of models that estimate fire danger by evaluating the approximate upper limit of fire behavior in a given area during a 24-hour period. The NFDRS output gives relative ratings of the potential growth and behavior of any wildfire in that area. Fire danger ratings form a framework that allow land management agencies to initiate preparedness activities¹ and select the appropriate level of initial response to a reported wildfire in lieu of detailed, site- and time-specific information. The various responses are identified in a Fire Danger Rating Operating Plan, which is a fire danger applications guide for land managers at the local level. The plan documents the establishment and management of the local unit fire weather station network and describes how fire danger ratings are applied to local unit fire management decisions.

4.3.2 NFDRS Assumptions

- The system assumes fires are burning through a continuous bed of fuels on the surface of the ground. Fires are not behaving erratically or spreading through downwind spotting or crowning.
- The system predicts fire behavior at the head of the fire.
- The length of the flames at the head of the fire is directly related to fire behavior.
- The system evaluates the “worst” conditions on a rating area by taking fuel and weather measurements when fire danger is normally the highest (mid-afternoon), measuring fire danger in the open, and measuring fire danger on south to west exposures.
- The system provides ratings and indices which are interpreted in terms of fire occurrence and fire behavior.
- Fire-danger ratings are relative, not absolute. When a component or index of the system doubles, a doubling of the fire activity or intensity should be expected.

¹ Preparedness – Activities that lead to a safe, efficient, and cost-effective fire management program in support of land and resource management objectives through appropriate planning and coordination. A complete overview of Preparedness is available in the *Interagency Standards for Fire & Aviation Operations*, Chapter 10. Available on the Internet at: http://www.nifc.gov/policies/red_book.htm.

4.3.3 Key NFDRS Output: Staffing Class

As indicated previously, the environmental values entered into the NFDRS database are recorded during the heat of the day—a worst case scenario. The outputs in the form of a fire forecast are delivered to the land manager later in the workday. This allows the manager to plan for remainder of the burning period and the following day. Many of the actions are outlined in a Fire Danger Rating Operating Plan (Preparedness Plan, which is also known as a Step-Up Plan) developed for the unit and are based on a Staffing Class, which is the key output necessary for the day-to-day operation of a fire prevention and suppression program (Figure 1).

Figure 1. Example of a Preparedness Plan

Staffing Class	Burning Index (BI)	Step-Up Action
SC 1 Low	0-24	Normal workweek and daily tours of duty for red-carded personnel.
SC 2 Moderate	25-49	Normal workweek and daily tours of duty for red-carded personnel.
SC 3 High	50-70	SC 2 action plus: Fire engines maintained in state of readiness.
SC 4 Very High	70-98	SC 3 actions plus: Notify zone fire personnel and refuge manager when BI's are in this range. Water tender not to be used for refuge project work and maintained in state of readiness. Post notices on bulletin boards and information kiosks regarding fire danger. Automatically move up to SC 5 if red flag warning issued by NWS and dry lightning, LAL 5 or 6, and winds greater than 15 mph forecast.
SC 5 Extreme	98 – 118	SC 4 actions plus: Workweek and daily tours of duty may be expanded for red-carded personnel. Emergency pre-suppression funds will be accessed to cover expanded workweek and daily tours of duty for red-carded personnel. Red-carded personnel to remain on-refuge and be capable of staffing engines and water tender within 15 minutes of fire report if red flag warning issued by NWS and dry lightning, LAL 4, 5, or 6, and winds greater than 15 mph forecast.

Source: USFWS. 2001. Ruby Lakes NWR. Fire Management Plan. Appendix J: Step-Up Plan.

The assumption behind staffing levels is that the continuum of fire danger can be divided into discrete intervals to which preplanned management actions are keyed. For each staffing level or adjective class, there should be management actions that address prevention activities and the dispatch of suppression resources that constitutes an appropriate level of response in consideration of environmental conditions that affect fire behavior. Staffing levels, or adjective class ratings, are ways of linking fire danger information to fire management decisions. In Arizona, for example, the designations for the various class or staffing levels are identified as low to extreme. State and federal land management agencies in Arizona generally use the energy release component (ERC) to determine staffing levels, generally referred to as adjective class ratings.

4.3.4 LCR Fire Weather Stations

Weather readings used in the NFDRS process are taken at dedicated observation stations. Each NFDRS observation station is assigned a six-digit station identification number for use in Weather Information Management System (WIMS). Three observation stations located along the lower Colorado River are included in Table 2. The fire weather observations for these and other stations are available at: http://www.fs.fed.us/land/wfas/fdr_obs.dat.

Table 2. Weather Observation Stations—Lower Colorado River

Station Name	Station Number	Agency
Havasu	20118	USFWS
Cibola	20121	USFWS
Squaw Lake	45801	BLM – CA

4.3.5 Remote Automated Weather Stations (RAWS)

There are nearly 2,200 interagency Remote Automated Weather Stations (RAWS) strategically located throughout the United States. These mobile stations provide weather data that assists land management agencies with a variety of projects such as monitoring air quality, rating fire danger, and providing information for research applications.

Most of the stations owned by the wildland fire agencies are placed in locations where they can monitor fire danger. RAWS units collect, store, and forward data to a computer system at the National Interagency Fire Center (NIFC) in Boise, Idaho, via the Geostationary Operational Environmental Satellite (GOES). The GOES is operated by the National Oceanic and Atmospheric Administration (NOAA). These data are automatically forwarded to several other computer systems including the Weather Information Management System (WIMS) and the Western Regional Climate Center (WRCC) in Reno, Nevada.

Wildland fire managers use these data to predict fire behavior and monitor fuels; resource managers use the data to monitor environmental conditions. Locations of RAWS stations can be searched online courtesy of the Western Regional Climate Center. Information about RAWS is available on the Internet at: <http://www.fs.fed.us/raws/>.

4.3.6 Other NFDRS Products

4.3.6.1 Fire Danger Pocket Card for Firefighter Safety

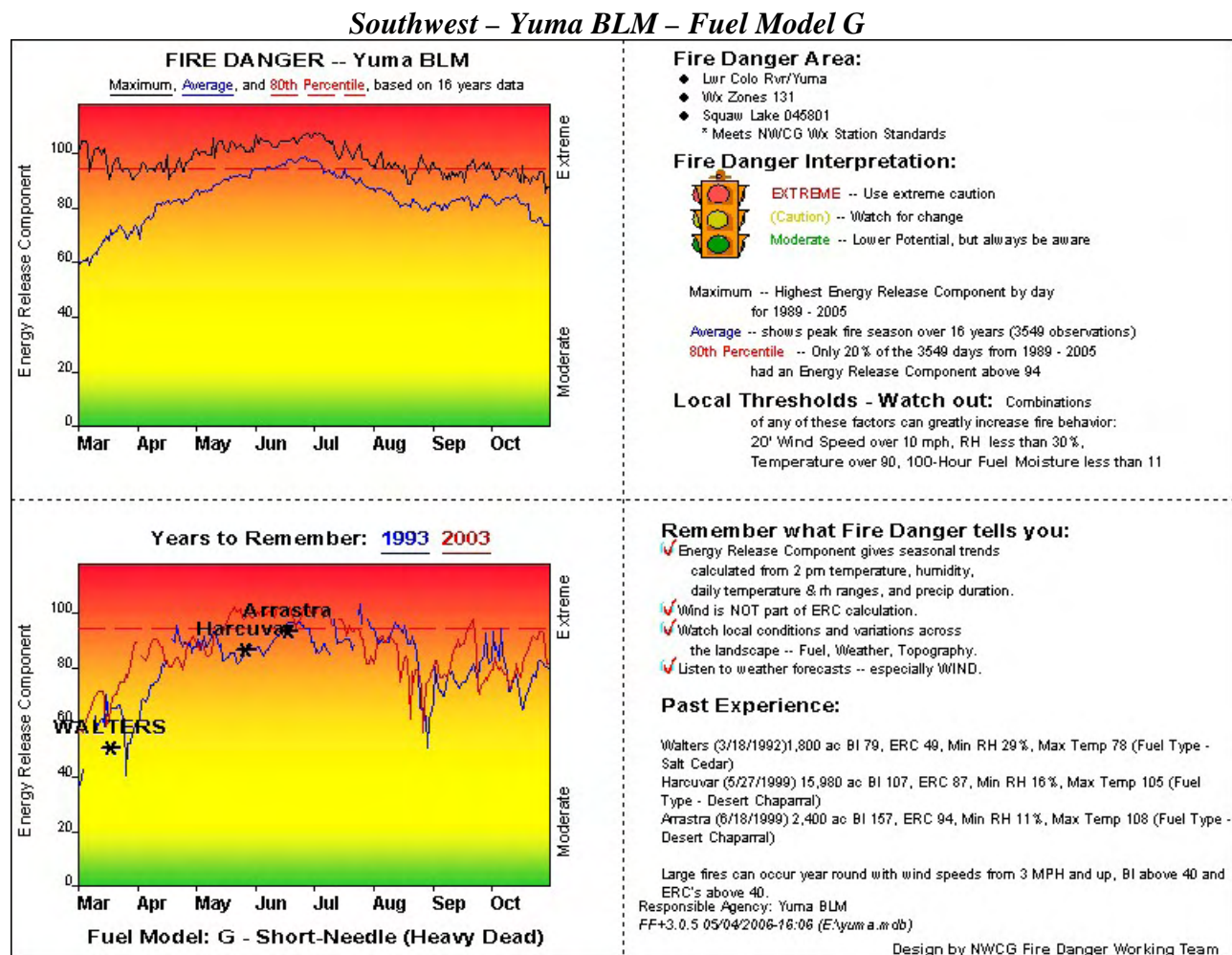
The Fire Danger Pocket Card is a method of communicating information related to fire danger to firefighters. The objective is to increase firefighter awareness of fire danger, which will contribute to firefighter safety. The pocket card provides a description of seasonal changes in fire danger in a local area. It is useful tool for both local and out-of-area firefighters.

The pocket card serves a very important preparedness function. The actual and predicted indices, in the case of the example in Figure 2, the Energy Release Component (ERC), are included as part of the fire weather forecast, which is issued by the National Weather Service twice daily. A firefighter can determine where the ERC value from the weather report falls on the pocket card

to see where the current conditions are in relationship to the level of risk. Most importantly, the card provides a method for everyone involved with wildland fire operations to communicate a common understanding of key index values provided by the National Fire Danger Rating System.

Local fire management personnel can produce the cards using Fire Family Plus. Cards should be developed locally with local fire management involvement to meet local fire management needs.

Figure 2. Example of a Pocket Card



Source: <http://fam.nwcg.gov/fam-web/pocketcards/southwest.htm>

4.3.6.2 Fire Danger Maps

Each day during the fire season, national maps of selected fire weather and fire danger components of the National Fire Danger Rating System are produced by the Wildland Fire Assessment System (WFAS-MAPS), located at the USDA Forest Service Rocky Mountain Research Station in Missoula, Montana. A Current Fire Danger Rating Map includes current conditions. A Fore-

casted Fire Danger Map indicates future trends, generally for a set period of time. Current fire danger and forecasted fire danger maps are available on the Internet at: <http://www.wrh.noaa.gov/sew/fire/olm/nfdrs.htm>.

4.3.6.3 Fire Weather Planning Forecast

A fire weather planning forecast for Southern Nevada, Northwest Arizona, and Southeast California is available from the National Weather Service at: <http://radar.srh.noaa.gov/fire/>. The forecast for the lower Colorado River valley is included in the synopsis for Zones 229 and 231.

4.3.6.4 Fire Weather Watches and Warnings

Watches and warnings are issued by the National Weather Service in response to expected environmental conditions. Fire weather forecasters issue a Fire Weather Watch when forecasts indicate that a possible critical fire weather pattern may occur. A Red Flag Warning is issued when a critical fire weather pattern is ongoing or imminent. Watches and warnings are used by land managers to establish preparedness actions which are appropriate to the situation. The criteria used to issue a fire weather watch or warning for the lower Colorado River valley are indicated in Table 3.

Table 3. Criteria to Issue a Fire Weather Warning

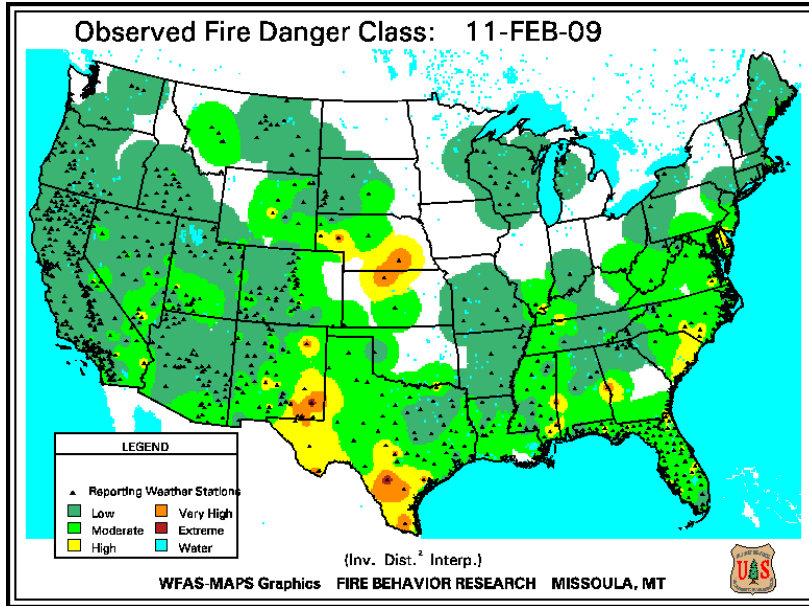
Local	Fire Weather Zone	Weather Criteria
Lower Colorado River Valley	229,231	relative humidity \leq 15% with sustained winds \geq 20 mph or wind gusts \geq 35 mph for 3 hours or more.

4.3.6.5 Long-Term Fire Weather Forecast

A discussion of upcoming weather trends for the year that address conditions in the Southwest can be found on the internet at: http://gacc.nifc.gov/swcc/predictive/outlooks/seasonal/2009/seasonal_briefing.pdf.

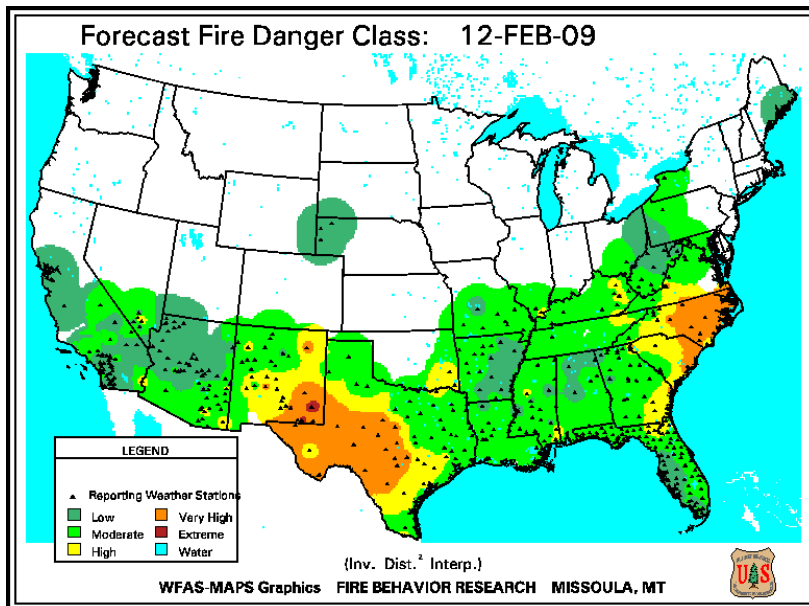
Due to the natural cycling of weather patterns, periods of drought can occur at various times during the year or may persist for extended periods of time measured in years. It is important to be aware of periods of drought because of the effects of drought on fire behavior and fire effects.

Figure 3. Example of an Observed Fire Danger Map



Source: NOAA. 2009. National Fire Danger Rating System. Available on the Internet at: http://www.fs.fed.us/land/wfas/fd_class.gif

Figure 4. Example of a Forecast Fire Danger Map



Source: NOAA. 2009. National Fire Danger Rating System. Available on the Internet at: http://www.fs.fed.us/land/wfas/fd_cls_f.gif

Of the two frequently used drought indices, the Keetch-Byram Drought Index (KBDI) is a drought index developed initially for the southeastern United States but is used nationwide (Ketch and Bram 1968). The KBDI is a mathematically calculated drought indicator related to the amount of moisture in the top seven inches of soil or duff/soil, and is an output of the National Fire Danger Rating System (NFDRS) when calculated by the Wildfire Information Management System (WIMS). The KBDI is based on the ambient air temperature and recent precipitation in relation to the mean annual rainfall for a specific weather station. The range of the KBDI is 0-800, with 0 being saturated and 800 being maximum drought. A KBDI reading above 400 generally indicates wildfire management problems, but this threshold varies based on location.

The Palmer Drought Severity Index was developed in the 1960s and uses temperature and rainfall information in a formula to determine dryness. The Palmer index is most effective in determining long-term drought—a matter of several months—and is not as good with short-term forecasts (a matter of weeks). It uses a 0 as normal, and drought is shown in terms of minus numbers; for example, minus 2 is moderate drought, minus 3 is severe drought, and minus 4 is extreme drought (NOAA 2008).

The Palmer index can also reflect excess rain using a corresponding level reflected by plus figures (i.e., 0 is normal, plus 2 is moderate rainfall).

The advantage of the Palmer index is that it is standardized to local climate, so it can be applied to any part of the country to demonstrate relative drought or rainfall conditions. The disadvantage is that it is not as reliable for short-term forecasts, and is not particularly useful in calculating supplies of water locked up in snow, so it works best east of the continental divide.

4.4 Seasonal Risk Analysis

A Seasonal Risk Analysis (SRA) requires wildland fire managers to review current and predicted weather and fuels information, compare this information with historic weather and fuels records, and predict the upcoming fire season's severity and duration for any given area. It is important to incorporate drought indices into this assessment.

Information from a SRA can be used to modify the annual operating plan (AOP)², step-up plans, and pre-attack plans. It provides the basis for actions such as repositioning critical resources, requesting additional funding, or modifying memoranda of understanding (MOU) to meet anticipated needs. Each unit selects, and compares to normal, the current value and seasonal trend of one or more of the following indicators which are most useful in predicting fire season severity and duration in its area:

- NFDRS index values (ERC, BI)
- Temperature levels
- Precipitation levels
- Humidity levels
- Palmer Drought Severity Index or Standardized Precipitation Index
- 1000-hour dead fuel moisture (timber fuels)
- Vegetation moisture levels

² An AOP is an agreement between two or more agencies that define actions to be taken during the year in order to implement an effective fire management program.

- Live fuel moisture (brush fuels)
- Curing rate (grass fuels)
- Episodic wind events (moisture drying days)
- Unusual weather events (early severe frost)
- Fires to date

The seasonal trend of each selected indicator is graphically compared to normal and all-time worst. This comparison is updated regularly and posted in dispatch and crew areas.

If the SRA suggests an abnormal fire season might be anticipated, a unit should notify the state/regional office and request additional resources commensurate with the escalated risk. The SRA for each geographic area is prepared, issued, and updated each year by Geographical Area Coordination Center (GACC) predictive service staffs. This analysis considers detailed information for each of the Predictive Services Areas (PSAs) within the geographic area. The GACC that serves the LCR is located in Albuquerque, New Mexico and the SRA is distributed by the Arizona Interagency Dispatch Center in Phoenix, Arizona.

4.5 Suppression

4.5.1 Policy

Department of the Interior policy (USDI/USDA/DOE/DOD/DOC/USEPA/FEMA/NASF 2001) on wildland fire states:

Fire, as a critical natural process, will be integrated into land and resource management plans and activities on a landscape scale, and across agency boundaries. Response to wildland fire is based on ecological, social, and legal consequences of the fire. The circumstances under which a fire occurs, and the likely consequences on firefighter and public safety and welfare, natural and cultural resources, and values to be protected dictate the appropriate management response to the fire.

The protection of human life is the single, overriding priority. Setting priorities among protecting human communities and community infrastructure, other property and improvements, and natural and cultural resources will be based on the values to be protected, human health and safety, and the costs of protection. Once people have been committed to an incident, these human resources become the highest value to be protected.

Fires are suppressed at minimum cost, considering firefighter and public safety, benefits, and values to be protected, consistent with resource objectives.

4.5.2 Objective of Fire Suppression

The objective of wildland fire suppression on the LCR-MSCP lands is to suppress wildfires at minimum cost consistent with values at risk while minimizing the impacts from suppression activities. All suppression decisions (including preparedness decisions, i.e., hazard reduction, pre-attack positioning) should be based on this objective.

Habitat benefits due to a wildland fire may offset losses however, affecting an economic analysis of the selected fire suppression strategies.

As noted earlier, “wildfire” is defined as an unplanned ignition and “prescribed fire” is defined as a fire originating from a planned ignition to meet specific objectives contained in a written plan. Wildland fire suppression is an emergency operation which takes precedence over all other operations with the exception of safeguarding human life.

4.5.3 Dispatch Hierarchy

The dispatch offices for the LCR MSCP utilize the closest forces concept for all fire dispatches. Agency jurisdiction is not a factor in dispatching wildland fire suppression resources. Initial attack resources maintain location and availability status with their dispatch office throughout the duty day. Initial attack forces for the seven BOR resource units from the lower Colorado River will be dispatched from different locations using the three-tiered system.

The three-tiered system consists of a Zone Coordination Center, Geographic Area Coordination Center (GACC), and the National Interagency Fire Coordination Center (NIFCC) located in Boise, Idaho (before a local unit goes to the three-tiered system to request additional firefighting resources, it can assign or reassign any local fire suppression resource to and from its own wildland fires). The zone coordination center supplies wildfire suppression resources from areas adjacent to the unit in need. The GACC supplies wildfire suppression resources from the defined geographic area and places orders to NIFCC.

Most local and county fire departments have or are working on written agreements to clarify the parameters of mutual aid for wildland fire suppression. The Interagency Standards for Fire and Aviation Operations (USDI/USDA 2009) provides that in an emergency all federal agencies may provide assistance to adjacent agencies and jurisdictions to suppress wildland fire. It further directs agencies to pursue written agreements but does not preclude mutual aid without a written agreement.

The lower Colorado River units from the Bureau of Reclamation are covered by different GACCs and several local dispatch centers. The BOR units in Arizona use the Arizona Interagency Dispatch Center (AIDC) and the Southwest Coordination Center (SWCC). The units in Nevada use the Las Vegas Coordination Center (LVCC) in Las Vegas and the Great Basin Coordination Center in Salt Lake City (GBCC).

4.5.4 Wildland Fire Qualification

Wildfires will be considered emergencies and their suppression given priority over other Departmental programs (USDI 1998). Fire duty assignments will include only those duties for which each employee is personally qualified according to guidelines specified in the National Interagency Incident Management System Wildland Fire Qualification System Guide (NWCG 2008). Individuals must meet training, experience, and physical fitness requirements. Depending on fire complexity, several non-line support functions may be necessary. Examples of these types of positions are “Resource Advisors” or “Agency Representatives.” These positions can be activated as needed.

4.5.5 Initial Attack Mobilization Strategy

The dispatch offices for the LCR MSCP utilize the closest forces concept for all fire dispatches (see Table 5). Agency jurisdiction is not a factor in dispatching wildland fire suppression resources. Initial attack resources maintain location and availability status with their dispatch office throughout the duty day. Initial attack forces for the seven BOR MSCP units from the lower Colorado River will be dispatched from different locations using the three-tiered system.

4.5.6 Suppression Strategy and Tactics

Suppression ranges from initial attack for small, brief, low complexity wildfires to extended attack on large, longer duration, high-complexity fires. With these latter fires, different management objectives may be applied to various parts of the fires (USDA/USDI 2009).

In the event of a wildfire, the cooperating land management agency will provide an appropriate management response on all wildland fires that occur within the LCR MSCP Planning Area. The full range of suppression strategies are available to managers provided that selected options do not compromise firefighter and public safety, cost-effectiveness, benefits, and values to be protected. Suppression of potentially damaging wildfires is guided by actions identified in this Comprehensive Fire and Law Enforcement Strategy.

The suppression strategy on LCR MSCP conservation areas would usually be to minimize fire size. That strategy may utilize a range of tactics including direct attack, parallel attack, and indirect attack with hand crews, engines, aircraft, and/or heavy equipment. Burning out fire lines, enhancing a defensible boundary, backfiring from strategic barriers, using existing natural barriers or constructed barriers, cold-trailing, and other activities may accompany the more standard tactics. An initial action may be simply monitoring fire behavior while deciding which tactics would be most effective. All of these actions are employed with the intention of safely suppressing the wildfire with minimal overall costs and damage to resources.

An early response to a wildfire in or threatening an LCR MSCP Conservation Area would be to open the irrigation gates or valves and allow water to flood the unit. However, depending on the size of the unit and volume of irrigation water available, the flooding of the unit may take several hours. A rapidly spreading wildfire in fine fuels could easily burn through an entire unit in that amount of time. A safety consideration for an engine crew taking suppression action would be the difficulty in moving an engine out of the middle of a unit after the flooding had begun. The engine could literally get stuck in the mud. Engine access may be limited to the existing road system and some planting lanes that have been maintained.

Reducing and controlling the fine fuels along the edges, roadways, access lanes, and irrigation canals in and around MSCP conservation areas will aid in the effectiveness of selected suppression strategies. These access areas can provide anchor points to begin burnout or direct attack by hand crews or engines. The stand density of the plantings will reduce the access for initial attack engine crews and hose-lays. The engines may be confined to established roads and access lanes.

Because chemical retardants and foams can cause adverse environmental impacts, their use should be prohibited within 300 feet of waterways or wet areas.

Minimum Impact Suppression Tactics (MIST), wherein the environmental impacts of emergency fire management methods will be no greater than necessary to meet fire management objectives, should apply within plantings. Heavy equipment may be used outside the plantings with little or no adverse environmental impact.

When a wildfire cannot be contained/controlled by initial attack forces, the Initial Attack IC will report to the dispatcher that the incident is now an extended attack incident. The complexity of the incident will determine the type of Incident Management Team to be ordered.

4.5.7 Extended Attack Strategy, Wildland Fire Decision Support System (WFDSS)

All wildfires should receive aggressive initial attack. If a wildfire escapes initial attack, a range of management objectives might be applied to that fire together with a subsequent range of suppression strategies and monitoring actions. Selection of the most appropriate strategy should consider threats to life and property, values at risk, other fire activity, and fire suppression resource availability. The selected strategy or strategies will be approved by the agency administrator prior to going into extended attack. An IC will be assigned and given the authority to accomplish the objectives identified by the Delegation of Authority (a written authorization to conduct suppression actions and obligate funds). Ensuring public and firefighter safety is the first priority. Secondary protection priorities are threatened and endangered species habitat and associated natural resources, and infrastructure. The Delegation of Authority may also include constraints on suppression operations.

If a wildfire that escapes initial attack, the Wildland Fire Decision Support System (WFDSS) must be completed to identify suppression alternatives. When analyzing alternatives, consideration should always be given to least expensive suppression tactics as long as other resource objectives can be met. The agency administrator or his delegated official will be the approving authority for the document. Information on the WFDSS can be found at:
http://wfdss.usgs.gov/wfdss/WFDSS_Home.html.

Prescribed fires which exceed the limits of an approved prescription or which have escaped the geographic bounds of the maximum manageable area as designated in the prescribed fire plan will be reclassified as wildfires and handled under appropriate response(s) as identified through the Wildland Fire Decision Support System (WFDSS).

(The Wildland Fire Decision Support System (WFDSS) replaces former decision support programs such as the Wildland Fire Situation Analysis (WFSA), Long Term Implementation Plan (LTIP), and Wildland Fire Implementation Plan (WFIP). The USFS had mandated use of WFDSS in 2009. Department of Interior agencies are phasing in the use of WFDSS; some units will still use WFSA, etc. in 2009, but conversion to WFDSS should be complete in 2010.)

4.6 Burned Area Rehabilitation: Policies and Protocols

4.6.1 Overview of Emergency Stabilization (ES) and Burned Area Rehabilitation (BAR)

Emergency Stabilization (ES) and Burned Area Rehabilitation (BAR) are part of a holistic approach to addressing post wildfire issues that also includes repair of suppression activity damage.

es and long-term (>3 years) restoration. The incident management team begins the process by repairing suppression activity damage. ES includes planned actions performed by Burned Area Emergency Response (BAER) teams within one year of wildfire containment to stabilize and prevent unacceptable degradation to natural and cultural resources, to minimize threats to life or property resulting from the effects of a fire, or to repair/replace/construct physical improvements necessary to prevent degradation of land or resources. BAR includes efforts undertaken within three years of wildfire containment to repair or improve fire-damaged lands unlikely to recover naturally to management approved conditions, or to repair or replace minor facilities damaged by fire. The process concludes with long-term restoration. ES is part of the Emergency Operations appropriation and BAR is a separate non-emergency appropriation. The Wyden Amendment allows federal, state, local, tribes and private landowners to enter into BAER agreements (Appendix H) (<http://www.fws.gov/fire/ifcc/Esr/home.htm>).

4.6.2 Interagency Burned Area Emergency Response Guidebook, Version 4.0, February 2006

The purpose of the Interagency Burned Area Emergency Response Guidebook (Guidebook) is to provide general operational guidance for Department of Agriculture and the Department of the Interior emergency stabilization activities after a wildfire. It is designed to provide agency administrators and emergency stabilization specialists with sufficient information to:

- Understand emergency stabilization policy, standards, and procedures.
- Assess wildfire damage and develop a cost effective plan or report.
- Assess and report accomplishments.

It consolidates and provides an interagency interpretation of emergency stabilization policies, procedures, objectives, and standards where there is Departmental and agency agreement. Individual agency policy and procedure manual guidance can be more but not less restrictive than that presented in this Guidebook.

4.6.3 Emergency Stabilization Policy Implementation

Objective and Priority: To determine the need for and to prescribe and implement emergency treatments to minimize threats to life or property or to stabilize and prevent further unacceptable degradation to natural and cultural resources resulting from the effects of a wildfire. Natural recovery is preferable.

Employee and Public Safety Is the First Priority in Every Management Activity. All planning activities must reflect this commitment. Assessment activities need to be closely coordinated with firefighting activities to avoid conflicts between wildfire firefighting efforts and emergency stabilization planning. A job hazard analysis will be prepared for each incident activity.

BAER Plan/Report Implementation: The BAER Plan/Report may or may not be implemented by the same individuals involved in its development. The agency administrator should appoint an implementation leader before the assessment team demobilizes. The assessment team and implementation team leader should coordinate assessment recommendations and proposed activities.

4.6.4 Emergency Stabilization Standards

Emergency stabilization treatments/activities are intended to protect public safety and stabilize and prevent further degradation to affected natural and cultural resources. These treatments/activities must be in accordance with approved management plans and applicable agency policy, standards, and all relevant federal, state, and local laws and regulations. Emergency Stabilization funds can only be used for burned area assessments, BAER Plan/Report development and implementation, and monitoring on agency lands within the perimeter of the wildfire or potential impact area downstream from the burned area (see agency guidance on Wyden Amendment, Appendix H). The cost of emergency stabilization treatment(s) will be commensurate with the values to be protected.

4.6.4.1 Treatment Considerations

- **Prescribed Fire:** Emergency Stabilization funding is not appropriate for prescribed fire actions. However, if a prescribed fire is converted to a wildfire, then Emergency Stabilization funding may be appropriate for only those acres that are delineated or partitioned following the conversion or declaration as a wildfire.
- **Fuels Management:** Post-fire fuel management activities that are designed to address a fuels issue rather than site stabilization are not appropriate for Emergency Stabilization funding.
- **Clean Water Act:** The Corps of Engineers may require modifications to emergency stabilization treatments to ensure that the environmental impacts to stream channels or wetlands are minimal under General Permit 37.
- **Wildfire Suppression Activity Damage Repair:** Suppression activity damage repairs are the responsibility of the Incident Commander and are funded through the suppression account. This work should be completed by the Incident Management Team prior to final demobilization of the suppression forces whenever practical. In practice, these activities are often completed by a Type 3 Incident Management Team after a Type 1 or Type 2 team has been released.
- **Wildlife:** Wildlife populations may continue to degrade unburned areas in and adjacent to the burned area, and may have a major affect on the success of emergency stabilization treatments. Agreements with the appropriate fish and wildlife management agencies (if needed), prescribing how wildlife is managed, should be developed before the emergency stabilization treatments are implemented. Treatments to mitigate the loss of fish and wildlife habitat are not appropriate for Emergency Stabilization funding except to prevent permanent impairment of designated critical habitat for federal, state-listed, proposed or candidate threatened and endangered species.

4.6.4.2 Treatment Standards

Nonnative Invasive Control: Emergency Stabilization funds can be used to control nonnative invasive plants in burned areas only if an approved management plan and existing program is in place addressing nonnative invasive species control.

The use of integrated pest management methods is preferred when addressing the management and control of existing or potential invasive nonnative plant species. The emergency stabilization

program funds the use of chemical, biological, mechanical, cultural, and physical treatments necessary to minimize the establishment of invasive species in conjunction with vegetative treatments, or for site preparation proposed for other emergency stabilization treatments.

Allowable Actions:

- Assessments to determine the need for treatment.
- Treatments to prevent detrimental invasion (not present on the site) by nonnative invasive species.
- Treatment of invasive plants introduced or aggravated by the wildfire. The treatment objective when the population is aggravated is to maintain the invasion at no more than pre-wildfire conditions.
- Treatments to prevent permanent impairment of designated critical habitat for federal and state-listed, proposed or candidate threatened and endangered species.

Prohibited Actions:

- Treatments beyond one year post wildfire containment.

Re-vegetation: It is essential that the potential for recovery of native or seeded vegetation and invasion by weeds be evaluated prior to making a decision whether to seed a burned area. Revegetation of burned areas is not an appropriate use of Emergency Stabilization funds if natural regeneration will result in a vegetation type that meets emergency stabilization objectives.

Planting of seed or seedlings, for emergency stabilization in a burned area is an appropriate treatment if seeding or planting of vegetation is prescribed to be effective within Departmental policy and:

- Stabilizes the site and minimizes water or wind erosion,
- Reduces the invasion of nonnative invasive plants, or
- Prevents critical habitat for federally listed threatened or endangered species from being more impaired than if nothing was done.

The use of pesticides must be identified in an existing approved management plan and have an existing program. Site preparation using integrated pest management methods on burned land may be funded with Emergency Stabilization funds for revegetation treatments (see nonnative invasive species control section).

Native versus Nonnative Plants: Species planted on burned areas must provide the protection required by BAER Plan/Report objectives. Nonnative seed may be used when allowed in agency policy. Use of native species is preferred to the use of nonnative species for emergency stabilization treatments.

Recovery/Establishment Period: Revegetated and recovering areas may be closed to livestock grazing to promote recovery of burned perennial plants and/or facilitate the establishment of seeded species. Livestock permittees must be informed of potential closures early during the plan preparation process.

Federal Field Unit Infrastructure: The emergency stabilization of improvements and minor facilities (e.g., signs, guardrails, pit toilets) burned or damaged by wildfire is appropriate only for public health and safety.

Early Warning Flood/Evacuation System: Federal agencies should address flooding risks on federal and tribal lands. Early warning systems rain gauges, or satellite-driven systems are often necessary to monitor rainfall amounts and intensity in moderate to high intensity burns in immediate proximity to values to be protected (highways, structures, etc.). The local emergency action agency is responsible for public evacuation planning, public notification, and evacuation on non-federal lands.

Emergency Road Repair and Maintenance: The responsibility for road repair and maintenance does not change due to wildfires. Identified road system issues and identified repair and maintenance needs are coordinated between all parties involved.

Fencing: Permittee agreements dictate the responsibility of fencing related to livestock management. The livestock owner has the responsibility to keep livestock out of burned areas. Gates, cattle guards, and fencing that exceed the amount required to protect treatments or values to be protected should be funded with a separate benefiting account.

Safety Signs: Signs necessary to close trails, warn of pending floods, promote public safety, or otherwise assist with emergency stabilization actions (directional, road, danger signs, etc.) may be procured, installed, maintained, and removed using emergency stabilization funds.

Monitoring: Emergency Stabilization funds for monitoring are limited to:

- Treatment Implementation: It is appropriate to determine if the treatment was implemented according to plan specifications.
- Treatment Effectiveness: It is appropriate to monitor whether a treatment achieved its objective.

Prohibited Actions:

- Monitoring to determine if the decision not to implement any treatment was appropriate.
- Monitoring the impacts or effects of the wildfire (e.g. water quality monitoring to evaluate the impacts of the burn on and post-fire recovery of an endangered species, post-fire monitoring of threatened and endangered species presence, reproductive status and reproductive success).

Public Use Management: Agency administrators should consider area closures to protect public safety, natural recovery, and active emergency stabilization treatments. Burned or seeded areas may be temporarily closed to the public by excluding vehicle, bicycle, horse, and foot use if unacceptable resource damage would occur. Public information services concerning hazards, public use and area closures can be provided.

Threatened and Endangered Species: A burned area assessment should identify post-fire threats to federal and tribal-listed or proposed threatened and endangered species and what, if any, cost-effective stabilization measures can be implemented to prevent further post-fire condition degradation.

All BAER Plans/Reports should be reviewed to determine if threatened or endangered species or their habitat would be benefited or adversely affected by the implementation of emergency stabilization treatments. Agencies must consult with the U.S. Fish and Wildlife Service (Ecological Services Offices) or National Marine Fisheries Service, as appropriate, on all emergency stabilization actions that may affect a threatened and endangered listed species or its habitat to ensure compliance with Section 7 of the Endangered Species Act. Timeframes for review and consultation may last several months. Therefore, every effort should be made to initiate these actions early in the emergency stabilization planning process.

Watershed Stabilization: Watershed stabilization includes those emergency stabilization treatments necessary to protect life, property, and watershed values (soil productivity and water quality and quantity). Watershed treatments may meet a prevention strategy, protection strategy, or removal strategy.

Protection strategies are based on recognition that an emergency cannot be prevented by direct application of prevention treatments to flood/debris flow source areas. Protection strategies are treatments designed to control an emergency when it happens, to slow or delay flood flows, to redistribute sediment loads, and to directly control flood runoff within channels. Removal strategies are treatments designed to remove values to be protected from damage caused by increased water runoff.

4.6.5 Program Administration

4.6.5.1 Roles and Responsibilities

Agency Administrator directs and coordinates the development and implementation of all management operations of an administrative unit. This includes developing and implementing the Incident Action Plan and the BAER Plan/Report.

Burned Area Emergency Response (BAER) Team assesses the need for emergency stabilization treatments/activities and prepares a BAER Plan/Report for the agency administrator. BAER teams are established to quickly address emergency stabilization issues.

Incident Management Team plans and implements wildfire suppression activity damage repair for the agency administrator.

4.6.5.2 BAER Plan/Report

The BAER Plan/Report must be consistent with approved land and resource management plans. Development of the BAER Plan/Report objectives are guided by resource management objectives and general management practices identified in approved land and resource management plans. The emergency nature of the anticipated post-fire response dictates that the BAER Plan/Report must be developed expeditiously. The planning approach is to use a local BAER team to assess the values at risk and recommend treatments to reduce the risk. A regional or national team may be used if the complexity of the plan exceeds the capability of the local unit, or includes multiple agency ownerships, or on large complex wildfires. An approved BAER Plan/Report is required before any emergency stabilization funds can be obligated toward implementation.

4.6.5.3 Agreements

Agreements can be made between agencies for the implementation of emergency stabilization activities and treatments. Funding for Bureau of Reclamation projects will be from Bureau of Reclamation funds only.

There must be an agreement before any service is performed. Without an agreement, there is no authority to obligate funds for services. If an agreement cannot be executed prior to the start of work, at a minimum there must be a letter of intent signed by the parties involved.

4.6.6 Emergency Stabilization Plan Implementation

Actions to implement emergency stabilization treatments should begin immediately upon plan approval. Implementation should begin as soon as necessary to complete the treatment prior to the rainy season, onset of winter weather, or other shutdowns. Implementation complexity increases dramatically in situations where a wildfire has burned across property boundaries (<http://www.fws.gov/fire/outreach/>).

4.7 Fuels Management Strategies for LCR MSCP Conservation Areas

Fuels management is a strategy that entails altering the vegetation of an area in order to help meet management objectives (habitat maintenance/modification, fire hazard reduction, etc.). The strategy can be employed either reactively or proactively. An example of a reactive approach of fuels management would be fire personnel attempting to suppress a wildfire or manage a prescribed fire by cutting or burning fuels to keep the fire from leaving an area. Proactive use of fuels management would include the alteration of fuels before a fire starts in an attempt to help prevent a fire from entering or exiting an area, or if a fire does enter an area with resources to be protected the treatment will minimize the amount and severity of the damage. Common use of the term “fuels management” typically refers to the proactive strategy.

Of paramount importance in fuels management process is the consideration of the existing fuels on adjacent lands. The protection of values at risk can be enhanced or compromised depending on the existing fuels situation and the selection of an appropriate fuel management strategy. It should be noted that in the desert environment, periods of abundant rainfall might result in unusual grass and forb growth, which can potentially compromise existing fuel treatments that in normal years would provide adequate protection.

4.7.1 Methods of Fuels Treatment

Proactive fuels management can be accomplished by employing a number of methods:

- **Manual** – Usually used on smaller sites or locations where there is close proximity to sensitive resources at risk to fire and in instances where there is a need to minimize disturbance. This method is often the most exact and has the highest cost per acre. Pruning, selective thinning or cutting using chainsaws, brush/grass cutters, or hand tools are examples of the application of this method.
- **Mechanical** – Typically entails the use of wheeled or tracked vehicles such as tractors, chippers, bulldozers, or similar equipment to reduce fuel loading. Although these ma-

chines incur a high cost per hour, they can reduce the cost per acre, because they are able to treat a large number of acres in a short period of time.

- Cultural – This entails the use of other natural processes to reduce hazardous fuels. This includes the use of planting designs to reduce the fine fuels at the edges of plantings where fire may enter the plantings. Another example would be the use of sheep to consume fine fuels in young planting, thus reducing the vulnerability of that planting to fire and/or reduce fire behavior in the event fire did enter the planting.
- Chemical – The use of various herbicides can be very cost effective and can be delivered by either mechanical or manual methods. The resulting dead vegetation can pose an increased wildfire risk unless removed.
- Prescribed fire – The application of fire to a designated area under specified conditions can be used to create a more favorable habitat or reduce fuel loading.

Although there are many variations of fuel management techniques some of the more common practices are:

- Prescribed fire – May be done with a low intensity burn across an entire location to reduce the risk of a catastrophic wildfire sweeping through an area.
- Pile burning – Ground fuels or vegetation cut from standing fuels are placed in individual piles and then burned in place. This practice does not work well in locations where trees have been planted in rows.
- Buffer strips – These may be either green strips (live vegetation) or strips that are plowed, mowed or otherwise treated. If these strips are of adequate width they may prevent a fire from crossing to another planting, except by embers spotting over long distances.
- Fuel or fire breaks – These are similar to buffer strips, but are typically not as wide. Breaks are often for the purpose of allowing access of wildland fire vehicles and for providing a defensible anchor point from which the fire can be suppressed or managed.
- Chipping – Excess woody vegetation is run through a chipping machine and reduced to small sized “chips”. These chips can be spread out across the area or removed from the site.

4.7.2 Prescribed Fire in LCR MSCP Land Cover Types

The use of prescribed fire in habitat areas is highly dependent on the land owner’s management objectives. A fire monitoring plan should be initiated in conjunction with a prescribed fire program to insure management objectives are being met and to ensure any negative effects are identified.

The potential benefits of prescribed fire on the four land cover types are discussed below:

- Cottonwood-Willow Land Cover Type: Most willows (and young Fremont cottonwoods) will resprout after a low to moderate severity prescribed fire. It should be noted that mature Fremont cottonwood trees could be easily top-killed by moderate fire. If the objective is to maintain a habitat of tall mature trees then prescribed fire should probably not be used. If the objective is to create a stand composed of the same species only younger, of lower height, and with a high stem count, then prescribed fire can be a viable alternative.

- Honey Mesquite Land Cover Type: Low to moderate severity prescribed fires will result in low fire mortality. Following most fires, honey mesquite is completely or partially top-killed and then resprouts from the taproot. Prescribed fire can be used to modify the stand density, height, and age to meet management objectives. Saltcedar can also be top-killed by the application of prescribed fire, but will vigorously resprout and may further displace honey mesquite in riparian areas.
- Backwater Cover Type: It is highly unlikely that prescribed fire would ever have any application in this cover type.
- Marsh Land Cover Type: Prescribed fire in this cover type is largely limited to short term habitat modification. Total elimination of dense surface vegetation during the dormant season can be easily accomplished; however, when the growing season begins recovery of the local species is fairly rapid. It should be noted that in areas where *Phragmites* occurs, the use of fire may stimulate the re-growth of this species. Prescribed fire has been used in conjunction with herbicides to successfully reduce the presence of this species.

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GLOSSARY OF COMMON TERMS

Note: the official complete National Wildfire Coordinating Group (NWCG) glossary of terms is found on the web at: <http://www.nwccg.gov/pms/pubs/pubs.htm#PMS205>. This glossary is supplemented or amended from the Guidance for Implementation of Federal Wildland Fire Management Policy (USDA/USDI 2009).

Agency Administrator. The appropriate level manager having organizational responsibility for management of an administrative unit.

Burned Area Emergency Response Plan/Report (BAER Plan/Report). This emergency stabilization document specifies treatments approved to implement post-wildfire emergency stabilization policies on an individual incident.

Burned Area Emergency Response Team (BAER Team). A standing or ad hoc group of technical specialists (hydrologists, rangeland management specialists, biologists, soil scientists, etc.) that are assigned to prepare a BAER Plan/Report.

Emergency Stabilization. Planned actions to stabilize and prevent unacceptable degradation to natural and cultural resource, to minimize threats to life or property resulting from the effects of a fire, or to repair/replace/construct physical improvements necessary to prevent degradation of land or resources.

Escaped Prescribed Fire. A prescribed fire that has exceeded or is expected to exceed prescription parameters or otherwise meets the criteria for conversion to wildfire. Criteria is specified in “Interagency Prescribed Fire – Planning and Implementation Procedures Reference Guide”.

Extended attack. A fire that escapes initial attack, in which initial attack forces are reinforced by additional forces.

Fire effects. Any consequences to the vegetation or the environment resulting from fire, whether neutral, detrimental, or beneficial.

FLI (Fireline Intensity). The amount of heat produced by the fastest moving part of a fire. Usually compared by reference to the length of the flames.

Fire management. All activities related to the prudent management of people and equipment to prevent or suppress wildland fire and to use fire under prescribed conditions to achieve land and resource management objectives.

Fire Management Plan (FMP). A plan that identifies and integrates all wildland fire management and related activities within the context of approved land/resource management plans. It defines a program to manage wildland fires (wildfire and prescribed fire). The plan is supplemented by operational plans, including but not limited to preparedness plans, preplanned dispatch plans, prescribed fire burn plans and prevention plans. Fire Management Plan’s assure that wildland fire management goals and components are coordinated.

Fire Suppression Activity Damage. Damage to resources, lands, and facilities resulting from wildfire suppression actions, in contrast to damages resulting from a wildfire.

Fuels. Materials that are burned in a fire; primarily grass, surface litter, duff, logs, stumps, brush, foliage, and live trees.

Fuel loading. Amount of burnable fuel on a site, usually expressed in pounds/acre or tons/acre.

Hazard fuels. Those vegetative fuels which, when ignited, threaten public safety, structures and facilities, cultural resources, natural resources, natural processes, and other values at risk.

Initial Action. The actions taken by the first resources to arrive at a wildfire.

IA (Initial Attack). An aggressive suppression action consistent with firefighter and public safety and values to be protected.

KBDI (Keetch – Byram Drought Index). An indicator of drought on the availability of fuel to burn in the heavier fuels and litter and duff layers.

Land/Resource Management Plan (L/RMP). A document prepared with public participation and approved by an agency administrator that provides general guidance and direction for land and resource management activities for an administrative area. The L/RMP identifies the need for fire's role in a particular area and for a specific benefit. The objectives in the L/RMP provide the basis for the development of fire management objectives and the fire management program in the designated area.

Maintenance burn. A fire set by agency personnel to remove debris; i.e., leaves from drainage ditches or cuttings from tree pruning. Such a fire does not have a resource management objective.

NFDRS (National Fire Danger Rating System). A uniform fire danger rating system that focuses on the environmental factors that control the moisture content of fuels.

NFDRS Fuel Model. One of 20 mathematical models used by the National Fire Danger Rating System to predict fire danger. The models were developed by the US Forest Service and are general in nature rather than site specific.

NFFL Fuel Model. One of 13 mathematical models used to predict fire behavior within the conditions of their validity. The models were developed by US Forest Service personnel at the Northern Forest Fire Laboratory, Missoula, Montana.

Nonnative Invasive Species. Species that were not components of pre-European settlement vegetative communities:

- which have been introduced, either deliberately or inadvertently;
- which have the capacity to aggressively invade new habitats, displacing and out-competing native species, and;
- whose introduction does or is likely to cause economic or environmental harm or harm to human health.

Planned Ignition. The intentional initiation of a wildland fire by hand-held, mechanical or aerial device where the distance and timing between ignition lines or points and the sequence of igniting them is determined by environmental conditions (weather, fuel, topography), firing technique, and other factors which influence fire behavior and fire effects (see prescribed fire).

Prescription. Measurable criteria that define conditions under which a prescribed fire may be ignited, guide selection of appropriate management responses, and indicate other required actions.

Prescribed Fire. A wildland fire originating from a planned ignition to meet specific objectives identified in a written, approved, prescribed fire plan for which NEPA requirements (where applicable) have been met prior to ignition (see planned ignition).

Preparedness. Activities that lead to a safe, efficient, and cost-effective fire management program in support of land and resource management objectives through appropriate planning and coordination.

Prevention. Activities directed at reducing the incidence of fires, including public education, law enforcement, personal contact, and reduction of fuel hazards (fuels management).

Protection. The actions taken to limit the adverse environmental, social, political, and economical effects of fire (FEC Briefing Paper, 3/14/2008).

Rehabilitation. Efforts undertaken within three years of a wildland fire to repair or improve fire damaged lands unlikely to recover to management-approved conditions or to repair or replace minor facilities damaged by fire.

Response to wildland fire. The mobilization of the necessary services and responders to a fire based on ecological, social, and legal consequences, the circumstances under which a fire occurs, and the likely consequences on firefighter and public safety and welfare, natural and cultural resources, and values to be protected.

Restoration. The continuation of rehabilitation beyond the initial three years, or the repair or replacement of major facilities damaged by the fire.

Suppression. All the work of extinguishing a fire or confining fire spread.

Unplanned Ignition. The initiation of a wildland fire by lightning, volcanoes, unauthorized and accidental human-caused fires (see wildfire).

Use of Wildland Fire. Management of either wildfire or prescribed fire to meet resource objectives specified in Land/Resource Management Plans.

Values to be Protected (values at risk). Includes property, structures, physical improvements, natural and cultural resources, community infrastructure, and economic, environmental, and social values.

Wildfire. An unplanned ignition of a wildland fire (such as a fire caused by lightning, volcanoes, unauthorized and accidental human-caused fires) and escaped prescribed fires. (See unplanned ignition and escaped prescribed fire).

Wildland Fire. A general term describing any non-structure fire that occurs in the wildland.

WFDSS (Wildland Fire Decision Support System). A system to assist fire managers and analysts in making strategic and tactical decisions for fire incidents. It replaces the WFSAs (Wildland Fire Situation Analysis), Wildland Fire Implementation Plan (WFIP), and Long-Term Implementation Plan (LTIP) processes with a single process that is easier to use, more intuitive, linear, scalable, and progressively responsive to changing fire complexity.

WFSAs (Wildland Fire Situation Analysis). A decision-making process that evaluates alternative wildfire suppression strategies against selected environmental, social, political, and economic criteria and provides a record of those decisions.

WUI (Wildland-Urban Interface). The line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels.

Appendix A. Applicable Law Enforcement Regulations and Local Agreements

ORDER NO. 3238, Amendment No. 3 (*Amended material italicized*)

SIGNATURE DATE: May 31, 2006

Subject: Delegation of Authority to the Commissioner of Reclamation to Implement Public Law 107-69

Sec. 1 Purpose. In order to provide for the security of dams, facilities, and resources under the jurisdiction of the Bureau of Reclamation, this Order delegates to the Commissioner of Reclamation, through the Assistant Secretary - Water and Science, the Secretary's authority under Public Law 107-69 (November 12, 2001), an act amending the Reclamation Recreation Management Act of 1992. This amended Secretary's Order reissues the delegation of authority granted in Secretary's Order No. 3238, dated February 1, 2002, and amends the expiration date.

Sec. 2 Authority. This Order is issued under the authority of Public Law 107-69 and Section 2 of Reorganization Plan No. 3 of 1950, as amended (64 Stat. 1262), 5 U.S.C. App.

Sec. 3 Delegation. The Commissioner of Reclamation is delegated, through the Assistant Secretary - Water and Science, all of the Secretary's authority under Public Law 107-69.

Sec. 4 Law Enforcement. The Commissioner may authorize law enforcement personnel from the Department of the Interior to act as law enforcement officers to enforce Federal laws and regulations within a Reclamation project or on Reclamation lands, and, may authorize the use of law enforcement personnel of any other Federal agency that has law enforcement authority (with the exception of the Department of Defense), or law enforcement personnel of any State or local government, including an Indian tribe, when deemed economical and in the public interest, through cooperative agreement or contract, to act as law enforcement officers to enforce Federal laws and regulations within a Reclamation project or on Reclamation lands, as provided in Section 1(c) of Public Law 107-69.

Sec. 5 Effective Date. This Order is effective immediately. It shall remain in effect until its provisions are converted to the Departmental Manual or until it is amended, superseded, or revoked, whichever occurs first. (*This Order was Revised and Reissued on July 17, 2007; [See attached DOI Interagency Agreement]*)

/s/ DIRK KEMPTHORNE

Secretary of the Interior

Public Law 107-69
107th Congress
An Act

To amend the Reclamation Recreation Management Act of 1992 in order to provide for the security of dams, facilities, and resources under the jurisdiction of the Bureau of Reclamation.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, SECTION. 1. LAW ENFORCEMENT AUTHORITY AT BUREAU OF RECLAMATION FACILITIES.

(a) PUBLIC SAFETY REGULATIONS.—The Secretary of the Interior shall issue regulations necessary to maintain law and order and protect persons and property within Reclamation projects and on Reclamation lands.

(b) VIOLATIONS; CRIMINAL PENALTIES.—Any person who knowingly and willfully violates any regulation issued under subsection (a) shall be fined under chapter 227, subchapter C of title 18, United States Code, imprisoned for not more than 6 months, or both. Any person charged with a violation of a regulation issued under subsection (a) may be tried and sentenced by any United States magistrate judge designated for that purpose by the court by which he was appointed, in the same manner and subject to the same conditions and limitations as provided for in section 3401 of title 18, United States Code.

(c) AUTHORIZATION OF LAW ENFORCEMENT OFFICERS.—The Secretary of the Interior may—

(1) authorize law enforcement personnel from the Department of the Interior to act as law enforcement officers to enforce Federal laws and regulations within a Reclamation project or on Reclamation lands;

(2) authorize law enforcement personnel of any other Federal agency that has law enforcement authority (with the exception of the Department of Defense) or law enforcement personnel of any State or local government, including an Indian tribe, when deemed economical and in the public interest, through cooperative agreement or contract, to act as law enforcement officers to enforce Federal laws and regulations within a Reclamation project or on Reclamation lands with such enforcement powers as may be so assigned to them by the Secretary;

Applicability.

(d) **POWERS OF LAW ENFORCEMENT OFFICERS.**—A law enforcement officer authorized by the Secretary of the Interior under subsection (c) may—

(1) carry firearms within a Reclamation project or on Reclamation lands;

(2) make arrests without warrants for—

(A) any offense against the United States committed in his presence; or

(B) any felony cognizable under the laws of the United States if he has—

(i) reasonable grounds to believe that the person to be arrested has committed or is committing such a felony; and

(ii) such arrest occurs within a Reclamation project or on Reclamation lands or the person to be arrested is fleeing there from to avoid arrest;

(3) execute within a Reclamation project or on Reclamation lands any warrant or other process issued by a court or officer of competent jurisdiction for the enforcement of the provisions of any Federal law or regulation issued pursuant to law for any offense committed within a Reclamation project or on Reclamation lands; and

(4) conduct investigations within a Reclamation project or on Reclamation lands of offenses against the United States committed within a Reclamation project or on Reclamation lands if the Federal law enforcement agency having investigative jurisdiction over the offense committed declines to investigate the offense.

(e) **LEGAL STATUS OF STATE OR LOCAL LAW ENFORCEMENT OFFICERS.**—

(1) **STATE OR LOCAL OFFICERS NOT FEDERAL EMPLOYEES.**— Except as otherwise provided in this section, a law enforcement officer of any State or local government, including an Indian tribe, authorized to act as a law enforcement officer under subsection (c) shall not be deemed to be a Federal employee and shall not be subject to the provisions of law relating to Federal employment, including those relating to hours of work, rates of compensation, employment discrimination, leave, unemployment compensation, and Federal benefits.

(2) **APPLICATION OF FEDERAL TORT CLAIMS ACT.**—For purposes of chapter 171 of title 28, United States Code (commonly known as the Federal Tort Claims Act), a law enforcement officer of any State or local government, including an Indian tribe, shall, when acting as a law enforcement officer under subsection (c) and while under Federal supervision and control, and only when carrying out Federal law enforcement responsibilities, be considered a Federal employee.

(3) **AVAILABILITY OF WORKERS COMPENSATION.**—For purposes of subchapter I of chapter 81 of title 5, United States Code, relating to compensation to Federal employees for work injuries, a law enforcement officer of any State or local government, including an Indian tribe, shall, when acting as a law enforcement officer under subsection (c) and while under Federal supervision and control, and only when carrying out Federal law enforcement responsibilities, be deemed a civil service employee of the United States within the meaning of the term employee as defined in section 8101 of title 5, and the provisions

of that subchapter shall apply. Benefits under such subchapter shall be reduced by the amount of any entitlement to State or local workers compensation benefits arising out of the same injury or death.

(f) **CONCURRENT JURISDICTION.**—Nothing in this section shall be construed or applied to limit or restrict the investigative jurisdiction of any Federal law enforcement agency, or to affect any existing right of a State or local government, including an Indian tribe, to exercise civil and criminal jurisdiction within a Reclamation project or on Reclamation lands.

(g) **REGULATIONS.**—Except for the authority provided in section 2(c)(1), the law enforcement authorities provided for in this section may be exercised only pursuant to regulations issued by the Secretary of the Interior and approved by the Attorney General.

SEC. 2. DEFINITIONS. 43 USC 373c.

In this Act:

(1) **LAW ENFORCEMENT PERSONNEL.**—The term “law enforcement personnel” means an employee of a Federal, State, or local government agency, including an Indian tribal agency, who has successfully completed law enforcement training approved by the Secretary and is authorized to carry firearms, make arrests, and execute service of process to enforce criminal laws of his or her employing jurisdiction.

(2) **RECLAMATION PROJECT; RECLAMATION LANDS.**—The terms “Reclamation project” and “Reclamation lands” have the meaning given such terms in section 2803 of the Reclamation Projects Authorization and Adjustment Act of 1992 (16 U.S.C. 4601–32). Approved November 12, 2001.

LEGISLATIVE HISTORY—H.R. 2925:

CONGRESSIONAL RECORD, Vol. 147 (2001):

Oct. 23, considered and passed House.

Oct. 30, considered and passed Senate.

Appendix A-1. Interagency Agreement for the Cross Designation of USDI Law Enforcement Officers to Provide Law Enforcement and Investigative Support

INTERAGENCY AGREEMENT FOR THE CROSS DESIGNATION OF DEPARTMENT OF THE INTERIOR LAW ENFORCEMENT OFFICERS TO PROVIDE LAW ENFORCEMENT AND INVESTIGATIVE SUPPORT IN AREAS UNDER THE RESPONSIBILITY OF THE NATIONAL PARK SERVICE, BUREAU OF LAND MANAGEMENT, FISH AND WILDLIFE SERVICE, BUREAU OF RECLAMATION, OF INDIAN AFFAIRS, AND THE OFFICE OF LAW ENFORCEMENT, SECURITY, AND EMERGENCY MANAGEMENT

I. Introduction and Purpose.

Law enforcement programs within the Department of the Interior (DOI) must be able to support one another. To accomplish this, the National Park Service, Bureau of Land Management, Fish and Wildlife Service, Bureau of Reclamation, Bureau of Indian Affairs, and the Office of Law Enforcement, Security, and Emergency Management (collectively the "Agencies" or, when singly referring to anyone of these entities, "Agency") now enter into this Interagency Agreement ("Agreement") which, under their respective statutory authorities and under the following procedures, herein now designate their law enforcement personnel with each Agency's law enforcement authorities, so that Agency officers may support one another in the enforcement of applicable laws and regulation in areas within their responsibility or control.

II. Statutory Authority.

The capacity of DOI programs to support one another not only is beneficial, appropriate, economical, and advantageous to the public interest, it also increases the efficiency and effectiveness of each law enforcement program within the Department. The National Park Service (pursuant to 16 U.S.C. § 1a-6), the Bureau of Land Management (pursuant to 43 U.S.C. § 1733), the Fish and Wildlife Service (pursuant to 16 U.S.C. § 742(b), 16 USC § 3375(b), 16 USC § 668dd(g)), the Bureau of Reclamation (pursuant to 43 U.S.C. § 373b), the Bureau of Indian Affairs (pursuant to 25 U.S.C. § 2804(a), and the Office of Law Enforcement, Security, and Emergency Management (pursuant to Reorganization Plan Number 3 of 1950, 5 U.S.C. Appendix) are authorized to designate Federal law enforcement personnel with certain law enforcement authority to act in areas within their responsibility or control.³

This Agreement is intended to operate pursuant to the statutory designation authority of the Agencies set forth in the paragraph above, as well as under such future statutory changes to these authorities that may occur.

Any Agency whose designation authority changes after entering into this Agreement shall provide other Agencies with a written notice of the changes and details of the new authority.

III. Procedures

Requests for law enforcement and investigative support may be made through an Agency's Incident Command System, first-line supervisors, or officer-to-officer, and may be communi-

³ The statutory scopes of the current designation authorities for the Agencies, most of which have geographic or operational limitations, are detailed in Attachment A to this Agreement.

cated in person, electronically, or by radio or by telephone. All requests shall be documented and communicated to the respective Agencies' incident command systems and first-line supervisors as soon as possible.

An agency may decline to provide law enforcement and investigative support to a requesting Agency. When an Agency agrees to provide such support, it shall be the requesting Agency's responsibility to supervise and otherwise ensure that the proper exercise of law enforcement authority occurs by the personnel it receives.

Personnel of an Agency providing support shall use and display their own credentials. When deemed necessary by the requesting Agency, it may also issue credentials to such personnel.

It will also be the responsibility of the Agency obtaining such personnel to advise them of its: (i) law enforcement authority and its geographic and operational limitations (if any); (ii) geographic boundaries and jurisdictional status; (iii) applicable public conduct laws and regulations that may be enforced; (iv) communication system, notification protocols, and reporting and record keeping requirements; and (v) any other police agencies that operate in the area, how to communicate with them, and the local police's recognition protocol for armed non uniformed officers (if any). Additionally, to the extent that designated law enforcement personnel use equipment or weapons from the Agency that requested the assistance, they should be trained regarding their proper use.

While the designation of law enforcement authority is now in effect by this Agreement, the Agencies are encouraged to have their local law enforcement managers enter into local written agreements that more fully detail its scope and objectives and the range of responsibilities including, where applicable, reimbursement of expenses under the Economy Act (31 U.S.C. § 1535).

IV. Duration and Effect

This Agreement shall be in effect for 10 years but is subject to periodic review and modification upon the written consent of the Agencies. An agency wishing to terminate participation in this Agreement shall provide the other Agencies with thirty days written notice of intent signed by the head of the Agency.

Nothing in this Agreement is intended to either expand, limit, or restrict the law enforcement authority of an Agency, or preclude other law enforcement agreements.

Nothing in this Agreement or in any local written agreement is intended to create any right, privilege, or benefit not otherwise recognized by law. Rather, this Agreement and any local written agreement are meant to ensure that DOI's law enforcement personnel deployed to assist another Agency have and properly exercise the designated law enforcement authority of the requesting Agency, based on legally appropriate and relevant law enforcement and public safety considerations and are properly supervised.

Nothing in this Agreement is intended to affect such authority delegated to the Deputy Assistant Secretary - Law Enforcement, Security, and Emergency Management over all law enforcement resources within DOI during a catastrophic, unusual occurrence, or National emergency situation.

Nothing in this Agreement is intended to affect the policies, procedures, and other guidelines applicable to the Agencies during a catastrophic, unusual occurrence, or National emergency situation as discussed in the Departmental Manual.

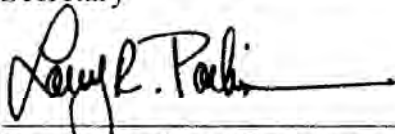
The 1992 and 2004 Interagency Agreements entered into by the Agencies is rescinded



Secretary

7/17/07

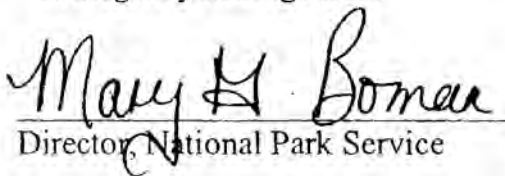
Date



Deputy Assistant Secretary - Law
Enforcement, Security, and
Emergency Management

7/3/07

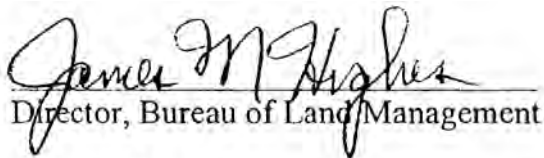
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Director, National Park Service

7/6/07

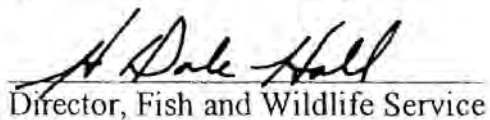
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Director, Bureau of Land Management

7/5/07

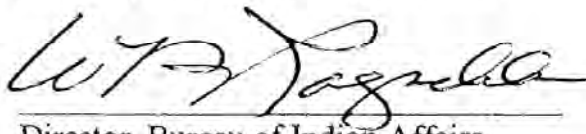
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Director, Fish and Wildlife Service

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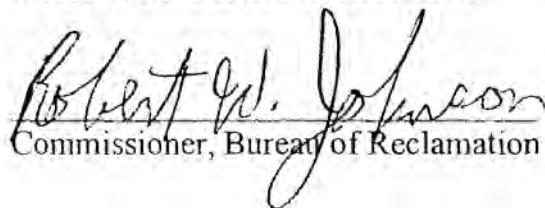
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Director, Bureau of Indian Affairs

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Date



Commissioner, Bureau of Reclamation

7/12/07

Date

and no longer has any force or effect.

Attachment A

I. The National Park Service:

- A. 16 U.S.C. § 1a-6(b) (1)-(3) provides that the Secretary may designate officers [commissioned park rangers and United States Park Police officers pursuant to 41 Fed. Reg. 44, 879 (Oct. 13, 1976)] to carry firearms, make arrests with or without a warrant, and conduct investigations of Federal offenses that were committed within the National Park System.
- B. 6 U.S.C. § 1a-6(c) provides that the Secretary may designate Federal and State officers to act as "special policemen," with the same powers as NPS officers, in the National Park System.
- C. 16 U.S.C. § 1b(1), provides that the Secretary may provide "emergency assistance" outside the National Park System for "[r]endering of emergency rescue, fire fighting, and cooperative assistance to nearby law enforcement and fire protection agencies and for related purposes." The Act does not actually convey law enforcement authority to act outside park boundaries, which must be obtained from another source. "Emergency assistance," usually done under an agreement, generally stems from some sort of an unexpected occurrence that requires immediate action as detailed at NPS DO-9 Chapter 1-5,2.2 (2000).
- D. D.C. Code Ann. § 5-201 (2001) gives United States Park Police the same law enforcement authority as the Metropolitan Police Department throughout the District of Columbia.
- E. D.C. Code Ann. §§ 5-206 208 (2001) gives United States Park Police law enforcement authority, "to make arrests without a warrant for any felony or misdemeanor committed in the presence or view of such member in violation of Federal law or regulation" on and within roads, parks, parkways, and other Federal reservations in the "environs of the District of Columbia," which are the surrounding Maryland and Virginia counties and cities.
- F. The Land and Water Conservation Fund Act, 16 U.S.C. § 4601-6a authorizes agencies like the NPS to enact regulations for areas under their administration for the collection of recreation use fees. The Act authorizes such agency law enforcement personnel to enforce such fee regulations and to make arrests without warrant for offenses committed in the presence of an arresting officer for such a fee violations. 16 U.S.C. § 4601-6a(e).

II. The U.S. Fish and Wildlife Service:

- A. The National Wildlife Refuge System Administration Act of 1966, 16 U.S.C. § 660dd(f), gives FWS officers the authority to make arrests with or without a warrant for violations of the Act or FWS regulations in the National Wildlife Refuge System.
- B. The Upper Mississippi River Wildlife and Fish Refuge Act, 16 U.S.C. § 727(a), authorizes FWS officers to make arrests with or without a warrant for violations in

their presence, including trespass that occur within the refuge. Weapons and boats may be seized or searched.

- C. The Bear River Migratory Bird Refuge Act, 16 U.S.C. § 690e(a), authorizes FWS officers to make arrests with or without a warrant within the Bear River Refuge for violations in their presence, including trespass. Weapons and boats may be seized or searched.
- D. FWS officers may enforce the Endangered Species Act, 16 U.S.C. § 1540(e)(3), the Migratory Bird Treaty Act, 16 U.S.C. § 706, the Bald and Golden Eagle Protection Act 16 U.S.C. § 668b(a) and the Lacey Act, 16 U.S.C. § 3375(b), wherever such violations occur within the United States.
- E. The Marine Mammal Protection Act of 1972, 16 U.S.C. § 1377(d)(1)(2), authorizes FWS officers to make arrests with or without a warrant for violations of the Act and its regulations that the Secretary may utilize, by agreement, the personnel, services, and facilities of any other Federal agency for purposes of enforcing this title. Title 16 U.S.C. § 1377 (a) authorizes the Secretary to designate officers and employees of any State or of any possession of the United States to enforce the provisions of this title. Title 16 U.S.C. § 1377(d)(2) provides the authority for an agent "with a warrant or other process, or without a warrant if he has reasonable cause to believe that a vessel or other conveyance subject to the jurisdiction of the United States or any person on board is in violation of any provisions of this title or the regulations issued thereunder, search such vessel or conveyance and arrest such person. The Act also includes procedures at 1377(d) to "seize the cargo of any vessel or other conveyance subject to the jurisdiction of the United States used or employed contrary to the provisions of this title or the regulations issued hereunder or which reasonably appears to have been so used or employed."
- F. The Airborne Hunting Act, 16 U.S.C. § 742j1(d), provides that employees of the Department, authorized by the Secretary, may execute arrest warrants and arrest without warrant any person committing a violation of the Act in their presence or view. FWS officers have been authorized by the Secretary under the Act.
- G. The Land and Water Conservation Fund Act, 16 U.S.C. § 4601-6a authorizes agencies like the FWS to enact regulations for areas under their administration for the collection of retreat ion use fees. The Act authorizes such agency law enforcement personnel to enforce such fee regulations and to make arrests without warrant for offenses committed in the presence of an arresting officer for such a fee violations. 16 U.S.C. § 4601-6a(e).

III. **Bureau of Land Management:**

- A. Section 303 of the Federal Land Policy and Management Act (FLPMA), 43 U.S.C. § 1733(c), authorizes the Secretary to enforce Federal laws and regulations relating to the public lands and their resources. FLPMA defines public lands as "any land and interest in land owned by the United States within the several States and administered by the Secretary of the Interior through the Bureau of Land Management, without regard to how the United States acquired ownership, except (1) lands located

on the Outer Continental Shelf; and (2) lands held for the benefit of Indians, Aleuts, and Eskimos." 43 U.S.C. § 1702(e).

FLPMA provides two ways the secretary may carry out Federal law enforcement functions on public lands:

- (1.) The Secretary may authorize Federal personnel or appropriate local officials to carry out the Secretary's law enforcement responsibilities pertaining to the public lands and their resources. 43 U.S.C. § 1733(c)(2).
- (2.) The Secretary may contract with local law enforcement officials "when the Secretary determines assistance is necessary in enforcing Federal laws and regulations relating to the public lands or their resources ... with the view of achieving maximum feasible reliance upon local law enforcement. .. " 43 U.S.C. § 1733(c)(1). Note: contracts with local officials have not been feasible for legal and practical reasons, and BLM has rarely attempted to use them.

The Secretary may use cooperative agreements with State or local governments to enforce State and local laws on public lands. 43 U.S.C. § 1733(d).

The Secretary has delegated section 303 law enforcement authority to the Director, Bureau of Land Management who has relegated it to BLM special agents and rangers. BLM law enforcement personnel may carry firearms, execute and serve applicable federal law. 43 U.S.C. § 1733(c)(1)-(2).

- B. The Wild Free-Roaming Horses and Burros Act of 1971, 16 U.S.C. § 1331-40, (Act) authorizes the Secretary to designate employees to enforce the Act. Designated employees may make arrests for violations of the Act committed in their presence and may serve warrants and other processes executed by an officer or court of competent jurisdiction to enforce the Act. 16 U.S.C. § 1338(b). BLM officers have been authorized by the Secretary under the Act.
- C. The Sikes Act, 16 U.S.C. §670j, authorizes the Secretary to enforce public lands violations pertaining to fish and wildlife conservation and rehabilitation programs implemented under the Act. The Act authorizes law enforcement personnel to carry firearms, execute and serve warrants, makes arrests, search without a warrant or process any person, place, or conveyance as provided by law; and seize evidence, as provided by law, for the purpose of enforcing the violation and penalty provisions of the Act.
- D. The Land Water Conservation Fund Act, 16 U.S.C. § 4601-6a authorizes agencies like BLM to enact regulations for areas under their administration for the collection of recreation use fees. The Act authorizes such agency law enforcement personnel to enforce such fee regulations and to make arrests without warrant for offenses committed in the presence of an officer for such a fee violation. 16 U.S.C. § 4601-6a(e).

IV. Bureau of Reclamation:

- A. 107 Pub.L. 69 § 1(c)(1), 115 Stat. 593 § 1(c)(1) provides that the Secretary may designate Interior law enforcement personnel "to act as law enforcement officers to enforce Federal laws and regulations within a Reclamation project or on reclamation lands." The Act also authorizes the Secretary to "(2) authorize law enforcement personnel of any other Federal agency that has law enforcement authority (with the exception of the Department of Defense) or law enforcement personnel of any State or local government, including an Indian tribe, when deemed economical and in the public interest, through cooperative agreement or contract, to act as law enforcement officers to enforce Federal laws and regulations within a Reclamation project or on Reclamation lands with such enforcement powers as may be so assigned to them by the Secretary; (3) cooperate with any State or local government, including an Indian tribe, in the enforcement of the laws or ordinances of the State or local government; and (4) provide reimbursement to a State or local government, including an Indian tribe, for expenditures incurred in connection with the activities under paragraph 2)."

The Act, 107 Pub.L. 69 § 1(d), 115 Stat. 593 § 1(d) provides that a law enforcement officer authorized by the Secretary, may "(1) carry firearms within a Reclamation project or on Reclamation lands; (2) make arrests without warrants for--(A) any offense against the United States committed in his presence; or (B) any felony cognizable under the laws of the United States if he has (i) reasonable grounds to believe that the person to be arrested has committed or is committing such a felony; and (ii) such arrest occurs within a Reclamation project or on Reclamation lands or the person to be arrested is fleeing therefrom to avoid arrest; (3) execute within a Reclamation project or on Reclamation lands any warrant or other process issued by a court or officer of competent jurisdiction for the enforcement of the provisions of any Federal law or regulation issued pursuant to law for any offense committed within a Reclamation project or on Reclamation lands; and (4) conduct investigations within a Reclamation project or on Reclamation lands of offense against the United States committed within a Reclamation project or on Reclamation lands if the Federal law enforcement agency having investigative jurisdiction over the offense committed declines to investigate the offense."

The Act, 107 Pub.L. 69 § 2(2), 115 Stat. 593 § 2(2), defines "Reclamation lands" and "Reclamation project" as defined at 16 U.S.C. § 4601-32, respectively, as "real property administered by the Secretary, acting through the Commissioner of Reclamation, and includes all acquired and withdrawn lands and water areas under jurisdiction of the Bureau," "any water supply or water delivery project constructed or administered by the Bureau of Reclamation under the Federal reclamation laws ... "

- B. BOR also has law enforcement authority specific to the Hoover Dam facility in Boulder City, Nevada. In 1973, the Department requested from the Administrator of General Services delegation of authority to the Secretary of the Interior to appoint security guards as "special policemen" for protection of the Hoover Dam under the Act of June 1, 1948, 62 Stat. 281, as amended (codified at 40U.S.C. §§ 318, 318a, 318d). On August 24, 1973, the Administrator delegated to the Secretary:

[Authority to permit the appointment of Department of the Interior guards as special policemen for the duty in connection with the protection of the Hoover Dam facility on the Colorado River near Boulder City, Nevada.]

Under this delegation and the rules of conduct at Hoover Dam, 43 C.F.R. 421, the special policemen, known collectively as the Hoover Dam Police, may enforce Federal felony laws at Hoover Dam, the regulations at Part 421, and other lesser Federal laws or assimilated State laws that relate to visitor control or the protection of Hoover Dam. This delegated law enforcement authority appears to be narrower in scope than the authority of Pub.L. 107-69 and is limited to the Hoover Dam Police at Hoover Dam.

V. Bureau of Indian Affairs:

A. The Indian Law Enforcement Reform Act, 25 U.S.C. §§ 2801-2809, is the basis of BIA law enforcement authority:

- (1.) Section 2802(a) authorizes the Secretary, acting through the BIA, to provide, or assist in providing, law enforcement services in Indian country, as outlined in the Act.
- (2.) Section 2802(b) establishes the BIA Division of Law Enforcement Services (now called the Office of Justice Services – OJS), to be supervised by either the Secretary or someone designated by the Secretary. The Office is responsible for carrying out the Secretary's law enforcement functions in Indian country and implementing the provisions of the section.
- (3.) Section 2802(c) charges the BIA OJS with the responsibility for: "(1) the enforcement of Federal law and, with the consent of the Indian tribe, tribal law; (2) in cooperation with appropriate Federal and tribal law enforcement agencies, the investigation of offenses against criminal laws of the United States; (3) the protection of the and property; (4) the development of methods and expertise to resolve conflicts and solve crimes; (5) the provision of criminal justice remedial actions, correctional and detention services, and rehabilitation; (6) the reduction of recidivism and adverse social effects; (7) the development of preventive and outreach programs which will enhance the public conception of law enforcement responsibilities through training and development of needed public service skills; (8) the assessment and evaluation of program accomplishments in reducing crime; (9) and the development and provision of law enforcement training and technical assistance."
- (4.) Section 2802(d)(1) authorizes the Secretary to establish a Branch of Criminal Investigations, which is responsible for "the investigation, and presentation for prosecution, of cases involving violations of sections 1152 and 1153 of Title 18, within Indian country." This authority is subject to agreements with the Department' of Justice and guidelines from the United States attorneys. The Branch in not "primarily responsible for the routine law enforcement and police operations of the Bureau in Indian country." § 2802(d)(2).
- (5.) Section 2803 provides that the Secretary may authorize Bureau employees with law enforcement responsibility to: "(1) carry firearms; (2) execute or serve warrants, summonses, or other orders relating to a crime committed in Indian country and issued under the laws of - (A) United States (including those issued by a Court of Indian Offenses under regulations prescribed by

the Secretary), or (B) and Indian tribe if authorized by the Indian tribe; (3) make and arrest without a warrant for an offense committed in Indian country if – (A) the offense is committed in the presence of the employee, or (B) the offense is a felony and the employee has reasonable grounds to believe that the person to be arrested has committed, or is committing, the felony; (4) offer and pay a reward for services or information, or purchase evidence, assisting in the detection or investigation of the commission of an offense committed in Indian country or in the arrest of an offender against the United States; (5) make inquiries of any person, and administer to, or take from, any person an oath, affirmation, or affidavit, concerning any matter relevant to the enforcement or carrying out in Indian country of a law of either the United States or an Indian tribe that has authorized the employee to enforce or carry out tribal laws; (6) wear a prescribed uniform and badge or carry prescribed credentials; (7) perform any other law enforcement related duty; and (8) when requested, assist (with or without reimbursement) any Federal, tribal, State or local law enforcement agency in the enforcement or carrying out the law or regulations the Agency enforces or administers."

(6.) Section 2804 grants the Secretary the authority to enter into agreements with local, tribal, State, or Federal law enforcement agencies for the purpose of enforcing Federal laws, or where a tribe has authorized the enforcement of its tribal laws. The Secretary can grant these officers any of the authorities outlined in § 2803. These agreements must be made pursuant to any agreements between the Secretary and the Attorney General and with the agreement of the affected tribe(s). § 2804(b)-(c).

B. 25 C.F.R. § 12.21 authorizes the BIA to issue law enforcement commissions to other Federal, State, local and tribal full-time certified law enforcement officers to obtain active assistance in enforcing applicable Federal criminal statutes, including Federal hunting and fishing regulations, in Indian country." This commission grants these officers the authority to enforce Federal laws. With a tribe's permission, the commissioned officers are also authorized to enforce the laws of the tribe. 25 C.F.R. § 12.22.

VI. Office of Law Enforcement, Security, and Emergency Management:

A. The Reorganization Plan Number 3 of 1950 (5 U.S.C. Appendix), is the basis of OLESEM authority:

(1.) Section 1 authorizes the Secretary to transfer all functions of all other officers of the Department of the Interior and all functions of all agencies and employees of such Department.

Under this delegation the OLESEM has the authorities of all the above listed Bureaus and Offices.

Appendix A-2. Operating Agreement Between BLM, Arizona State Office, and BOR, Office of Safety, Security, and Law Enforcement

**LOCAL OPERATING AGREEMENT
BETWEEN THE
BUREAU OF LAND MANAGEMENT,
ARIZONA STATE OFFICE,
AND THE
BUREAU OF RECLAMATION,
OFFICE OF SAFETY, SECURITY AND LAW ENFORCEMENT**

I. Purpose

This Agreement prescribes the procedures and guidelines for designating law enforcement authority between the United States Department of Interior, Bureau of Reclamation (Reclamation), and the Bureau of Land Management, Arizona State Office (BLM), for Reclamation lands and projects within Arizona.

II. Authority

This Agreement is entered into by and between the BLM and Reclamation under the provisions of Public Law 107-69 (November 12, 2001), an Act to Amend the Reclamation Recreation Management Act of 1992, and as delegated by the Secretary of the Interior to the Commissioner of Reclamation by Order No. 3238 (February 1, 2001), through the Assistant Secretary/Water and Science. Additionally, this agreement is made pursuant to the Department of the Interior (DOI) Interagency Agreement for the Cross Designation of DOI Law Enforcement Officers dated July, 2007.

III. Statement of Mutual Interests and Mutual Benefits

Several hundred thousand acres of Reclamation land, both acquired and withdrawn, and related projects are located near or adjacent to public lands managed by the Bureau of Land Management, Arizona State Office. These Reclamation lands receive intensive public and recreation use. Local law enforcement agencies are generally unwilling or unable to assume responsibility for enforcement of resource protection regulations as well as public safety matters related to ongoing use patterns. The natures of many of the Reclamation lands and facilities are isolated and linear, often surrounded or adjoined by public lands administered by BLM.

BLM and Reclamation have determined that delegation of Reclamation law enforcement authority to Law Enforcement Rangers and Special Agents of the BLM will increase overall protection of the region's natural and cultural resources, and enhance protection of Reclamation lands and projects. Thus being mutually beneficial, economical, and advantageous to the public interest.

This Agreement allows Reclamation law enforcement authority to specific BLM designated enforcement officers to conduct routine law enforcement, perform investigations

and response, as required and appropriate on Reclamation lands and projects, incidental to normal BLM activities on adjacent or nearby public lands.

This Agreement supports a cooperative goal of the BLM and Reclamation to enhance the protection of persons and property on Reclamation lands, adjacent to public lands, and on other Reclamation lands and projects. Reclamation and the BLM share a mutual interest in the application and enforcement of Federal laws and regulations which are established to maintain law and order and to protect natural and cultural resources, as well as developments and facilities located on these lands. Reclamation is accordingly authorizing designated law enforcement officers employed by the BLM to enforce Reclamation laws, rules, and regulations to accomplish this end on these Reclamation lands.

This Agreement does not cover cost reimbursement. The BLM and Reclamation recognize that, at some point in time, a need for reimbursement may arise from certain specific law enforcement services or planned activities. In that event, a separate Interagency Agreement would establish procedures for reimbursement to occur.

IV. Definitions

Reclamation Lands. Real property administered by the Secretary, acting through the Commissioner of Reclamation, and includes acquired and withdrawn land and water surface areas under the jurisdiction of Reclamation (16 USC 4601-32(1)).

Reclamation Projects. Any water supply or water delivery project constructed or administered by the Bureau of Reclamation under the Federal Reclamation laws, and Acts supplementary thereto and amendatory thereof ((16 USC 4601 § 32(1)).

Public Lands. Lands and interests in lands administered by the Secretary, acting through the Director of the BLM, and not otherwise appropriated or withdrawn. (43 USC 1702).

Violations in Progress. Violations that are encountered on Reclamation lands and projects, incidental to the normal duties of the designated law enforcement officer, or reported by a federal employee, contractor, a law enforcement agency, or the general public.

Designated Law Enforcement Officer. Law enforcement rangers and special agents employed by the BLM who have been delegated law enforcement authority by the Secretary of the Interior and who have met the requirements as outlined in Section VIII of this Agreement.

Routine Law Enforcement. Regular or intermittent patrol work and response to law enforcement emergencies as conducted by designated law enforcement officers.

Law Enforcement Emergencies. Incidents involving an immediate threat to persons, property, or resources for which time is of the essence.

Investigative Support and Law Enforcement Assistance. Law enforcement assistance or follow up to a law enforcement incident that is not routine law enforcement and is not in support of a law enforcement emergency.

Special Agent-in-Charge (SAC). The BLM Special Agent-in-Charge for the BLM State Office, Arizona, subject to this Agreement.

Regional Special Agent (RSA). The Reclamation regional position, which is responsible for the management of Reclamation's law enforcement program for the Lower Colorado Region.

Law Enforcement Administrator (LEA). Reclamation's position which is responsible for the management of Reclamation's entire law enforcement program.

V. Designation of Authority

Reclamation authorizes the BLM to designate law enforcement officers to enforce Reclamation laws, rules, and regulations, now or hereafter in effect, on Reclamation lands and projects within the boundaries of Arizona and under administrative jurisdiction of the Bureau of Reclamation.

The BLM agrees, subject to availability and funding, to designate law enforcement officers to perform the following law enforcement duties on Reclamation lands and projects within the boundaries of Arizona.

- Routine law enforcement patrol.
- Response to violations in progress.
- Investigative support and law enforcement assistance.
- Response to law enforcement emergencies.

VI. Procedures

A. **Routine Law Enforcement.** No requests or approvals are required.

B. **Violations in Progress.** No requests or approvals are required.

C. **Investigative Support and Law Enforcement Assistance.** A request must be made by a designated law enforcement officer, a Reclamation manager, or the RSA through the SAC, or designee. The SAC, or designee, must approve any such request. The LEA, or designee, must also approve any requests. Interagency cost reimbursement will be addressed on a case-by case basis.

D. **Law Enforcement Emergencies.** Requests for BLM response to law enforcement emergencies may be made by anyone, and may be made to the local BLM Field Manager or any BLM law enforcement officer. Requests may also be made to the appropriate BLM law enforcement dispatch center. The RSA and SAC shall be notified as soon as practicable of any such emergencies.

VII. Training and Incident Reporting

- A. Designated law enforcement officers will be provided training/briefing on the laws, regulations, policies, and procedures of Reclamation.
- B. All law enforcement actions taken or incidents detected under this Agreement will be documented in the BLM Law Enforcement Reporting system and identified as “Reclamation” land status. All incidents reported by designated law enforcement officers on Reclamation lands will also be reported to the RSA through the SAC as soon as practical following the action. Necessary formats, and procedures will be approved and provided by the RSA.

VIII. Requirements for Designation

Each designated law enforcement officer must meet the following:

- A. Be a permanent, full-time, commissioned Law Enforcement Ranger or Special Agent of the BLM, and be assigned law enforcement responsibilities as the primary duty on a full-time basis.
- B. Shall have successfully completed an approved basic course of instruction at the Federal Law Enforcement Training Center, or as required by, and in accordance with, Departmental Manual 446 and BLM Law Enforcement General Orders.
- C. Shall successfully complete at least 40 hours of in-service law enforcement training annually as required by, and in accordance with, Departmental Manual 446 and BLM Law Enforcement General Orders.
- D. Shall have successfully qualified with agency-approved firearms as required under current BLM Law Enforcement General Orders.

IX. Standard Provisions

- A. Neither party shall be liable to the other for any loss, damage, personal injury, or death occurring as a consequence of the performance of this Agreement, except as provided herein.
- B. No member of, or delegate to, Congress or State Official, shall be admitted to any share or part of this Agreement, or any benefit that may arise there from.
- C. During the performance of this Agreement the participants agree to abide by the terms of Executive Order 11246 of nondiscrimination and will not discriminate against any person because of race, color, religion, sex, age, disability or national origin. The participants will take affirmative action to ensure that applicants are employed without regard to their race, color, religion, sex, age, disability or national origin.
- D. All activities under this agreement are contingent upon availability of funds.

X. Principal Contacts

Bureau of Reclamation

Tom Lobkowitz	Regional Special Agent (RSA)	O:(702) 293-8052
	Bureau of Reclamation	C:(702) 249-0292
	Lower Colorado Regional Office	
	P.O. Box 61470 (LC-1603)	
	Boulder City, NV 89006	

Bureau of Land Management

Lyle Shaver	Special Agent-in-Charge (SAC)	O:(602) 417-9317
	Bureau of Land Management	C:(602) 501-5951
	Arizona State Office	
	One North Central Ave, Suite 800	
	Phoenix, AZ 85004	

These principal contacts are specific to position and duties, and not personal. In the absence of any named contact person, the official contact responsibility shall automatically transfer, for the purpose of this Agreement, to the acting or new incumbent in the position unless otherwise designated by the contact's agency. Each agency will inform the other in a timely manner of changes in principal contacts.

XI. Designated Law Enforcement Officer List

The Special Agent-in-Charge, Arizona State Office, will provide a list of BLM Law Enforcement Officers and Special Agents approved to operate under this Agreement to the Regional Special Agent, within 60 days of execution of this Agreement. This list will be updated as appropriate.

XII. Length of Term and Termination

This Agreement shall be effective from the date of execution and shall remain in effect indefinitely, unless terminated with a written notice to either party from the other party. This Agreement may be modified or amended upon written notice to either party from the other, and effective immediately upon written concurrence by the party notified. This Agreement may also be terminated unilaterally by means of a 60-day written notice by either party to the other formally advising the other of the decision to terminate.

Appendix A-3. Local Operating Agreement Between The U.S. Fish & Wildlife Service, National Wildlife Refuge System, Southwest Region And The Bureau Of Reclamation, Lower Colorado Region Office

**LOCAL OPERATING AGREEMENT
BETWEEN THE
U.S. FISH & WILDLIFE SERVICE,
NATIONAL WILDLIFE REFUGE SYSTEM
SOUTHWEST REGION
AND THE
BUREAU OF RECLAMATION,
LOWER COLORADO REGION OFFICE**

I. Purpose

This Memorandum of Understanding/Local Operating Agreement prescribes the procedures and guidelines for designating law enforcement authority between the, US Fish & Wildlife Service (FWS), Region 2 National Wildlife Refuge System and the Bureau of Reclamation (BOR) on Reclamation lands pursuant 613 DM 1.1 and other Reclamation lands and facilities.

II. Authority

This agreement is entered into by and between FWS and BOR as a local implementation of the Interagency Agreement authorizing cross-designation of Department of the Interior (DOI) Law Enforcement Officers dated *06/17/2004* and under the provisions of Public Law 107-69 (November 12,2001), an Act to amend The Reclamation Recreation Management Act of 1992, and as delegated by the Secretary of Interior to the Commissioner of Reclamation by Order No. 3238 (February 1,2001), through the Assistant Secretary/Water & Science.

III. Statement of Mutual Interest and Mutual Benefits

Several hundred thousand acres of BOR land, both acquired and withdrawn, accommodate the Boulder Canyon and related projects from Davis Dam to Mexico.

Under a unique provision of the Departmental Manual (DM) at 613 DM 1.1, the Secretary assigned certain non-project management responsibilities over a portion of these lands, which constitute a corridor along the Lower Colorado River (LCR) in the States of Arizona and California, to the BLM. However, they remain BOR lands. FWS manages several thousand acres for National Wildlife Refuges (NWRS) on lands along the LCR over which BOR has primary jurisdiction for operations and maintenance. This part of the DM was added in 1972, following completion of the Lower Colorado River Land Use Plan in 1964 by the Office of the Secretary. The 613 DM does not include specific authorization to FWS for law enforcement management.

This area receives high public and recreation use, with estimates of five million visitor use days per year on these Reclamation lands. Local law enforcement agencies are both unwilling and unable to assume responsibility for enforcement of Federal reserve protection regulations as well as public safety matters related to ongoing use patterns. It is essential to ensure continued law enforcement presence on these lands subject to 613 DM 1.1 to provide for public safety and protection of BOR resources and facilities.

This agreement supports a cooperative goal between BOR and FWS to enhance the protection of persons and property on Reclamation lands which are administered subject to 613 DM 1.1 and on other Reclamation lands and facilities.

BOR and FWS share a mutual interest in the application and enforcement of Federal laws and regulations which are established to maintain law and order and to protect natural and cultural resources, as well as, the facilities located on these lands. BOR is accordingly authorizing designated law enforcement officers employed by FWS to enforce Reclamation laws, rules and regulations to accomplish this end.

This agreement does not cover cost reimbursement. BOR and FWS recognize that, at some point in time, a need for reimbursement may arise from certain law enforcement services or planned activities. In anticipation of this a separate, Interagency Agreement will establish procedures for reimbursement to occur.

IV. Definitions

Reclamation Lands. Real property administered by the Secretary, acting through the Commissioner of Reclamation, and includes acquired and withdrawn lands and water areas under jurisdiction of the BOR (16 USC 4601-32(1)).

613 DM 1.1 Lands. Reclamation lands that fall within the boundaries of the 613 DM 1.1 area, as delineated in the Lower Colorado River Use Plan of 1964, including those under 613 DM 1.3.

613 DM 1.3(A) Lands. Reclamation lands withdrawn for National Wildlife Refuges (NWRS) and managed by FWS.

613 DM 1.3(B) Lands. Reclamation lands and Reclamation facilities located thereon that are within the boundaries of the 613 DM 1.1 area, as defined in the Lower Colorado River Use Plan of 1964, but that are accepted from 613 DM 1.2 pursuant to 613 DM 1.3(B). This includes, but is not limited to, Davis Dam and Power Plant, Parker Dam and Power Plant, Imperial Dam, and the Yuma Desalting Plant.

Violations in Progress. Violations that are encountered incidental to the normal duties of the designated law enforcement officer.

Designated Law Enforcement Officer. Law enforcement officers employed by FWS who have met the requirements as outlined in Section VIII of this agreement.

Routine Law Enforcement. Regular and reoccurring patrol work and emergency response activities conducted by designated law enforcement officers.

Law Enforcement Emergencies. Incidents involving an immediate threat to persons, property, or resources for which time is of the essence.

Investigative Support and Law Enforcement Assistance. Law enforcement assistance that is not routine law enforcement and is not in support of a law enforcement emergency.

Regional Chief, Office of Refuge Law Enforcement. (RCORLE) FWS regional position which is responsible for the NWRS law enforcement program.

Regional Special Agent. The BOR regional position which is responsible for the management of BOR's law enforcement program.

V. Designation of Authority

The BOR authorizes the FWS to designate law enforcement officers to enforce Reclamation laws, rules, and regulations, now or hereafter in effect, on 613 DM 1.1 lands, 613 DM 1.3(A) Lands, and 613 DM 1.3(B) Lands.

The FWS agrees, subject to availability, to designate law enforcement officers to perform the following law enforcement duties:

1. Response to violations in progress on 613 DM 1.1 lands, 613 DM 1.3 (A) Lands, and 613 DM 1.3(B) Lands,
2. Investigative support and law enforcement assistance on 613 DM 1.1 lands and 613 DM 1.3(B) Lands, and
3. Response to law enforcement emergencies on 613 DM 1.1 lands, 613 DM 1.3(A) Lands, and 613 DM 1.3(B) Lands.

VI. Procedures

A. Routine Law Enforcement. No requests or approvals are required.

B. Violations in Progress. No requests or approvals are required.

C. Investigative Support and Law Enforcement Assistance. A request must be made by a designated law enforcement officer, a BOR manager, or the Regional Special Agent. The Regional Chief, Office of Refuge Law Enforcement, or designee, must approve any such request. The Regional Special Agent must also approve any requests concerning 613 DM 1.3(B) Lands.

D. Law Enforcement Emergencies. Requests for FWS response to law enforcement emergencies, on either 613 DM 1.1 lands or 613 DM 1.3(B) Lands may be made by anyone.

The Regional Special Agent shall be notified as soon as practicable of any such emergencies.

VII. Training and Incident Reporting

- A. Designated law enforcement officers will be provided specific training/briefing on the laws, regulations, policies and procedures of the BOR.
- B. All law enforcement actions taken or incidents detected or investigated by designated law enforcement officers on 613 DM 1.1 lands or 613 DM 1.3(B) Lands will be reported to the Regional Special Agent as soon as practical following the action, Necessary formats will be approved or provided by the Regional Special Agent.

VIII. Requirements for Designation.

Each designated law enforcement officer must meet the following:

- A. Be a currently commissioned Law Enforcement Officer of the FWS;
- B. Shall have successfully completed a basic course of instruction at the Federal Law Enforcement Training Center or other basic law enforcement training approved by the Department's Office of Managing Risk and Public Safety;
- C. Shall have successfully completed at least 40 hours of in-service law enforcement training each year;
- D. Shall have successfully qualified with agency approved firearms at least twice each year.

IX. Standard Provisions

- A. Neither party shall be liable to the other for any loss, damage, personal injury or death occurring as a consequence of the performance of this agreement, except as provided herein,
- B. No member of, or delegate to, Congress, or State Official, shall be admitted to any share or part of this agreement, or any benefit that may arise there from.
- C. During the performance of this agreement the participants agree to abide by the terms of Executive Order 11246 of nondiscrimination and will not discriminate against any person because of race, color, religion, sex, age, disability or national origin. The participants will take affirmative action to ensure that applicants for positions as designated law enforcement officers are employed without regard to their race, color, religion, sex, age, disability or national origin.

X. Principal Contacts

Bureau of Reclamation

Tom Lobkowitz Regional Special Agent

702-293-8052

These principal contacts are specific to position and duties, and not personal. In the absence of any named contact person, the official contact responsibility shall automatically transfer, for the purpose of this agreement, to the acting or new incumbent in the position unless otherwise designated by the contact's agency. Each agency will inform the other in a timely manner of changes in principal contacts.

XI. Designated Law Enforcement Officer List. To be updated annually. (See Appendix A.)

XII. Length of Term/Termination

This agreement shall be effective from the date of execution and shall remain in effect indefinitely, unless terminated with a 60-day written notice to either party from the other party.

This agreement may be modified or amended upon written notice to either party from the other, and following written concurrence of the party notified.

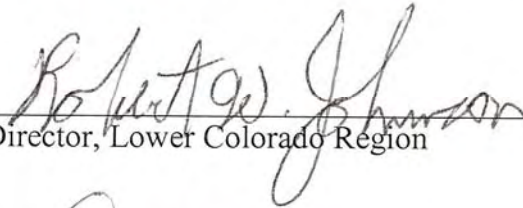
Approved:

Bureau of Reclamation



Director Security, Safety & Law Enforcement

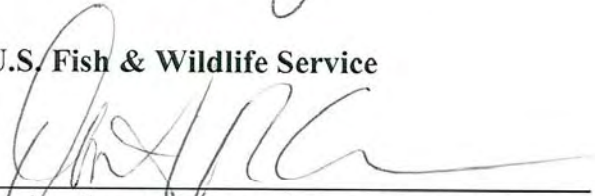
June 13, 2005
Date



Director, Lower Colorado Region

8/3/05
Date

U.S. Fish & Wildlife Service



Regional Chief, NWRS, Southwest Region

9/9/05
Date

ACTING 

Regional Director, Southwest Region

9/12/05
Date

Appendix B. Lower Colorado River Law Enforcement Points of Contact

BOR Reach 3

Location: Laughlin, Nevada

Land Owner: Southern Nevada Water Authority

Law Enforcement Contact: Las Vegas Metropolitan Police Department

Sgt. Bruce Harper; 702-298-2223

Additional Law Enforcement:

- Nevada Department of Wildlife, Law Enforcement Division

BOR Reach 3

Location: Havasu National Wildlife Refuge; Needles, California

Land Owner: US Fish & Wildlife Service

Law Enforcement Contact:

- John Earle, <john_earle@fws.gov>, 760-326-3853
- Wayne Dingman, Refuge Officer, 760-326-3853
- Dale Enlow, 928-0680-0414, Lake Havasu, AZ
- 24-Hour Dispatch Operation: 1-800-637-9152

Additional Law Enforcement:

- BLM Rangers
- Arizona Department of Game & Fish
- Mojave County Sheriff's Office
- Lake Mead National Recreation Area Rangers

BOR Reach 4

Location: South of Parker, Arizona

Land Owner: Colorado River Indian Tribes

Law Enforcement Contact:

- Deputy Police Chief Randy Stewart, 928-669-1318
- Colorado River Indian Tribes Fish and Game Department
- Chief Game Warden Dave Martinez
- Game Warden Ray Aspa; 928-669-9285

BOR Reach 4

Location: Blythe, California

Land Owner: California Department of Fish and Game

Law Enforcement Contact:

- Game Warden Jason Green (Blythe), 760-702-0086 (c)
- Game Warden Greg VerBrugg (Lake Havasu, AZ), 928-505-0239, (c) 760-485-1651, <gverbrugge@dfg.ca.gov>

Additional Law Enforcement:

- Riverside County Sheriff's Office-Colorado River Station, Captain James Carney, 760-921-7900
- California Highway Patrol, Blythe, CA, 760-922-6141

BOR Reach 4

Location: Cibola, Arizona (15 miles south of Blythe, California)

Land Owner: Arizona Game and Fish Commission

Law Enforcement Contact:

Courtney Fitzgerald, Arizona Game Warden, 928-814-9500 (c), <cfitzgerald@azgfd.gov>

Additional Law Enforcement:

- La Paz County Sheriff's Office, Ehrenburg, AZ, 928-669-6141
- Arizona Department of Public Safety (DPS), Quartzite, AZ, 928-782-1679

BOR Reach 4

Location: Cibola, Arizona (15 miles south of Blythe, California)

Land Owner: U.S. Fish & Wildlife Service

Law Enforcement Contact:

- Dale Enlow, 928-680-0414, Lake Havasu, AZ
- 24-Hour Dispatch Operation: 1-800-637-9152
- No Refuge Officer on site.

Additional Law Enforcement:

- BLM Rangers
- Arizona Game and Fish Department
- La Paz County Sheriff's Office

BOR Reach 5

Location: 25 miles Northwest of Yuma, Arizona

Land Owner: U.S. Fish & Wildlife Service

Law Enforcement Contact:

- Refuge Officer Drew Cyprian, 928-783-3371, 928-580-3024(c), <drew_cyprian@fws.gov>
- 24-Hour Dispatch Operation: 1-800-637-9152

Additional Law Enforcement:

- BLM Rangers
- Arizona Department of Game & Fish
- Yuma County Sheriff's Office

Agency Contacts:

Bureau of Reclamation

Law Enforcement Contact:

- Tom Lobkowicz, Special Agent, 702-293-8052 (o), 702-249-0292 (c), <tlobkowicz@lc.usbr.gov>

Bureau of Land Management

Law Enforcement Contact:

- Rubin Conde, District Ranger, Yuma, Arizona, 928-317-3257

US Fish & Wildlife Service, Refuge System

Law Enforcement Contact:

- Dale Enlow, Lake Havasu City, Arizona, 928-680-0414

National Park Service, Lake Mead National Recreation Area

Law Enforcement Contact:

- Mary Hinson, Chief Ranger, 702 293-8998

Appendix C. Applicable Legal Documents to the LCR

16 USC 431-433

16 USC 470

16 USC 4601

43 USC 373b [P.L. 107-69]

DM 413

50 CFR [USFWS]

43 CFR 422-423 [BOR]

43 CFR [BLM]

CA Fish & Game Code 1-16541

AZ Revised Statues Title 17 (Game & Fish)

CRIT Natural Resource Code (Article I) – Fish & Game

NV Revised Statues 501-

Appendix D. Burned Area Rehabilitation Guidelines

Interagency Burned Area Rehabilitation Guidebook Version 1.3, October 2006

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1. Introduction

The purpose of the Interagency Burned Area Rehabilitation Guidebook (Guidebook) is to provide general operational guidance for the Department of the Interior Burned Area Rehabilitation (BAR) activities after a wildfire. In conjunction with Departmental and agency policy, it is designed to provide agency administrators and BAR specialists with sufficient information to:

- Understand BAR policy, standards, and procedures.
- Assess wildfire damage and develop a cost effective plan or report.
- Assess and report accomplishments.

It consolidates and provides an interagency interpretation of BAR policies, procedures, objectives, and standards where there is Departmental and agency agreement. Individual agency policy and procedure manual guidance can be more but not less restrictive than that presented in this Guidebook.

2. BAR Policy Implementation

a. Policy, Direction, and Program Coordination

BAR and emergency stabilization activities are an integral part of wildfire incidents, but are planned, programmed, and funded separately from each other.

b. Objective, Priority and Allowable Actions

c. Objectives

Based on actions identified in approved land and fire management plans:

- To evaluate actual and potential long-term post-fire impacts to critical cultural and natural resources and identify those areas unlikely to recover naturally from severe wildfire damage.
- To develop and implement cost-effective plans to emulate historical or pre-fire ecosystem structure, function, diversity, and dynamics consistent with approved land management plans, or if that is infeasible, then to restore or establish a healthy, stable ecosystem in which native species are well represented.
- To repair or replace minor facilities damaged by wildland fire.

d. Priority

- To repair or improve lands damaged directly by a wildland fire; and
- To rehabilitate or establish healthy, stable ecosystems in the burned area. All burned area rehabilitation plans and actions must reflect these priorities.

Allowable Actions:

- Repair or improve lands unlikely to recover naturally from wildfire damage by emulating historical or pre-fire ecosystem structure, function, diversity, and dynamics consistent with existing land management plans.
- Chemical, manual, and mechanical removal of invasive species, and planting of native and nonnative species, consistent with 620DM3.8F, restore or establish a healthy, stable ecosystem even if this ecosystem cannot fully emulate historical or pre-fire conditions.
- Tree planting to reestablish burned habitat, reestablish native tree species lost in fire, prevent establishment of invasive plants.
- Repair or replace wildfire damage to minor operating facilities (e.g., campgrounds, interpretive signs and exhibits, shade shelters, fences, wildlife guzzlers, etc.). Rehabilitation may not include the planning or replacement of major infrastructure, such as visitor centers, residential structures, administration offices, work centers and similar facilities. Rehabilitation does not include the construction of new facilities that did not exist before the fire, except for temporary and minor facilities necessary to implement burned area rehabilitation efforts.

e. Safety

Employee and Public Safety Is the First Priority in Every Management Activity. All planning and implementation activities must reflect this commitment.

f. Definitions (as in 620 DM 3)

Agency Administrator: of the agency or jurisdiction that has responsibility for the incident.

Burned Area Rehabilitation Plan (BAR Plan): A document that specifies treatments required to implement post-fire rehabilitation policies. This plan may be programmatic (prepared in advance) and applicable to clearly defined types of incidents and situations, or prepared by an interdisciplinary team of specialists during or immediately following the containment of a wildland fire.

Burned Area Rehabilitation Team (BAR Team): A standing or ad hoc group of technical specialists (hydrologists, rangeland management specialists, biologists, soil scientists, etc.) that are assigned to prepare a BAR Plan.

Burned Area Emergency Response: Planned actions to stabilize and prevent unacceptable degradation to natural and cultural resources, to minimize threats to life or property resulting from the effects of a fire, or to repair/replace/construct physical improvements necessary to prevent degradation of land or resources.

Emergency Stabilization: Planned actions to stabilize and prevent unacceptable degradation to natural and cultural resources, to minimize threats to life or property resulting from the effects of a fire, or to repair/replace/construct physical improvements necessary to prevent degradation of land or resources. Emergency stabilization actions must be taken within one year following containment of a wildland fire.

Fire Suppression Activity Damage: Damage to resources, lands, and facilities resulting from wildfire suppression actions, in contrast to damages resulting from a wildfire.

Nonnative Invasive Species: Species that were not components of pre-European settlement vegetative communities:

- which have been introduced, either deliberately or inadvertently;
- which have the capacity to aggressively invade new habitats, displacing and out-competing native species, and;
- those in which introduction does or is likely to cause economic or environmental harm or harm to human health.

Rehabilitation: Efforts (non-emergency) undertaken within three years of a wildfire to repair or improve fire-damaged lands which are unlikely to recover to management approved conditions; or to repair or replace minor facilities damaged by fire.

Restoration: The continuation of rehabilitation beyond the initial three years, or the repair or replacement of major facilities damaged by the fire.

Wildland Fire: Any non-structure fire that occurs in the wildland. Three distinct types of wildland fire have been defined and include wildfire, wildland fire use, and prescribed fire.

g. Program Coordination

The BIA, BLM, NPS, and FWS will coordinate BAR program activities locally and nationally. Coordination of BAR efforts with the incident management team, other federal land management agencies, other federal (e.g., NRCS, BOR, DOD, USGS, etc.), state and local agencies, tribes, and private landowners is encouraged to meet program objectives.

h. Timeframes

Burned Area Rehabilitation (BAR) finances post-fire efforts up to three years from the containment date of the fire. Treatments and activities are funded in one-year increments and are reviewed at the end of each fiscal year and funded with the next fiscal year funds, as appropriate.

3. BAR Standards

BAR treatments/activities are intended to repair or improve lands damaged directly by the wildfire and unlikely to recover naturally from severe wildfire damage or repair or replace wildfire damage to minor operating facilities. These treatments/activities must be in accordance with approved management plans and applicable agency policy, standards, and all relevant federal, state, and local laws and regulations. BAR funds can only be used for burned area assessments, BAR Plan development and implementation, and monitoring on agency lands within the perimeter of the wildfire or potential impact area downstream from the burned area (see departmental guidance on Wyden Amendment in Appendix H). The cost of BAR treatment(s) will be commensurate with the values to be protected.

a. Treatment Considerations

Prescribed Fire: BAR funding is not appropriate for prescribed fire actions. However, if a prescribed fire is converted to a wildfire, then BAR funding may be appropriate for only those acres that are delineated or partitioned following the conversion or declaration as a wildfire.

Fuels Management: Post-fire fuel management activities that are designed to address a fuels issue and not site rehabilitation are not appropriate for BAR funding.

Clean Water Act: The Corps of Engineers may require modifications to BAR treatments to ensure that the environmental impacts to stream channels or wetlands are minimal under General Permit 37.

Wildlife: Wildlife populations may continue to degrade unburned areas in and adjacent to the burned area, and may have a major effect on the success of BAR treatments. Agreements with the appropriate fish and wildlife management agencies (if needed) should be developed before the BAR treatments are implemented, prescribing how wildlife is managed.

Treatments to mitigate the loss of fish and wildlife habitat are appropriate for BAR funding. BAR treatments must be consistent with wildlife habitat management objectives in approved habitat management plans.

b. Treatment Standards

Nonnative Invasive Control

Burned area rehabilitation funds can be used to control nonnative invasive plants in burned areas only if an approved management plan and existing program is in place addressing non-native invasive species control.

The use of integrated pest management methods is preferred when addressing the management and control of existing or potential invasive nonnative plant species. The rehabilitation program funds the use of chemical, biological, mechanical, cultural, and physical treatments necessary to minimize the establishment of invasive species in conjunction with vegetative treatments, or for site preparation proposed for other rehabilitation treatments.

Allowable Actions:

- Assessments to determine the need for treatment. Contingent on known infestations, possibility of new infestation due to management actions, and suspected contaminated equipment use areas
- Treatments to prevent detrimental invasion (not present on the site) by nonnative invasive species.
- Treatment of invasive plants introduced or aggravated by the wildfire. The treatment objective when the population is aggravated is to maintain the invasion at no more than pre-wildfire conditions.

Prohibited Actions:

- Systematic inventories of burned areas.

The treatment specification must include a threshold level where the treatment is initiated and a practical, cost-effective management action to be undertaken (mechanical removal, broadcast herbicide application, etc.).

Re-vegetation — Natural recovery by native plant species is preferable to planting or seeding, either of natives or nonnatives. It is essential that the potential for recovery of native or seeded vegetation and invasion by weeds be evaluated prior to making a decision whether to seed a burned area. Re-vegetation of burned areas is not an appropriate use of BAR funds if natural regeneration will result in a vegetation type that meets BAR objectives.

Planting of seed or seedlings for BAR is an appropriate treatment if seeding or planting of vegetation is prescribed to be effective within Departmental policy and it repairs or improves land unlikely to recover naturally from wildfire damage by emulating historical or pre-fire ecosystem structure, function, diversity, and dynamics consistent with existing land management plans.

Native versus Nonnative Plants — Species planted on burned areas must provide the protection required by BAR Plan objectives, be consistent with the appropriate approved land management plan.

Nonnative seed may be used when allowed in agency policy. Use of native species is preferred to the use of nonnatives for BAR treatments. However, a mixture of native and nonnative species is preferable to using only nonnatives if the desired natives are not available, and if the use of nonnatives is consistent with approved land management plans.

Recovery/Establishment Period — Re-vegetated and recovering areas may be closed to livestock grazing to promote recovery of burned perennial plants and/or facilitate the establishment of seeded species. An assessment is needed to determine the length of time livestock exclusion is required to meet BAR objectives.

c. Federal Field Unit Infrastructure

Minor Facilities

The repair or replacement of minor improvements and facilities (e.g., kiosks, fences, interpretive or boundary signs, recreation facilities, corrals, guzzlers, trails, permanent long-term monitoring plots, etc.) burned or damaged by wildfire to pre-fire specifications is authorized with the use of BAR funds only if these improvements or facilities are necessary for implementing an approved land management plan.

Major Facilities

Replacement or repair of major facilities (e.g., visitor centers, residential structures, administration offices, work centers or similar facilities and their contents) with BAR funds is prohibited.

d. Monitoring

BAR funds for monitoring are limited to:

Treatment Implementation: It is appropriate to determine if the treatment was implemented according to plan specifications.

Treatment Effectiveness: It is appropriate to monitor whether a treatment achieved its objective (e.g. whether herbicide eradicated the invasive species or whether willow and cottonwood trees successfully survived, grew, and rehabilitated the stream bank).

Prohibited Actions:

- Monitoring to determine if the decision not to implement any treatment was appropriate (e.g., monitoring natural recovery). However, the use of an untreated area (control) in a paired comparison design to evaluate the effectiveness of a treatment is acceptable where values to be protected will not be affected by an untreated area.
- Monitoring the impacts or effects of the wildfire (e.g. water quality monitoring to evaluate the impacts of wildfire on the recovery of an endangered species; post-fire monitoring of threatened and endangered species presence or reproductive status and reproductive success, etc.).

e. Public Use Management

Agency administrators should consider area closures to protect public safety, natural recovery, and active BAR treatments. Burned or seeded areas may be temporarily closed to the public by excluding vehicle, bicycle, horse, and foot use if unacceptable resource damage would occur or if danger to the public is present due to wildfire damage or BAR activities. Law enforcement activities should be accomplished within existing capability and funding authority, or by shifting priorities. Law enforcement is not typically funded using BAR funds except in unusual circumstances.

f. Threatened and Endangered Species

All BAR Plans should be reviewed to determine if threatened or endangered species or their habitat would be benefited or adversely affected by the implementation of BAR treatments. Timeframes for review and consultation may last several months. Therefore, every effort should be made to initiate these actions early in the BAR planning process.

g. Removal of Treatments

Any treatments, or parts thereof, installed using BAR funds can be removed using BAR funds if removal is completed within three years of containment of the wildfire.

4. Program Administration

a. Roles and Responsibilities

Agency Administrator directs and coordinates the development and implementation of all management operations of an administration unit. This includes developing and implementing the BAR Plan.

Burned Area Rehabilitation (BAR) Team assesses the need for BAR treatments/activities and prepares a BAR Plan for the agency administrator. BAR teams are established to quickly address BAR issues.

b. Planning

Each BAR project requires the preparation, submittal, and approval of a BAR Plan. The BAR Plan is written separately from the Emergency Stabilization / Burned Area Emergency Response (BAER) Plan.

c. BAR Plan

The BAR Plan must be consistent with approved land and resource management plans. Development of the BAR Plan objectives are guided by resource management objectives and general management practices identified in approved land and resource management plans.

d. Information Management

Approved BAR Plans, treatment effectiveness reports, and accomplishment reports should be shared with other federal and non-federal agencies/bureaus.

e. Agreements

Agreements can be made between agencies for the implementation of BAR activities and treatments. Funding for Bureau of Reclamation projects will be from that Agency's funds only.

There must be an agreement before any service is performed. Without an agreement, there is no authority to obligate funds for services.

Because funding for burned area rehabilitation treatments is provided in one-year increments for no more than three years following containment of a wildland fire, agreement to obligate funds in one fiscal year for use in another is only done when there is not sufficient time to initiate and complete the contracting necessary to begin treatment work identified in an approved plan.

Appendix E. Wildland Fire Interagency Agreements in Effect

The Southwest Coordinating Group represents the interests of the senior executive leadership of the federal, state, and local government agencies represented by SWCG MOU. SWCG representatives will communicate to individual Agency Administrators any recommendations to establish significant new policies in fire or incident management prior to implementation. The SWCG provides general oversight and direction for the fire management programs throughout the Southwest Area.

The primary cooperating agencies are the Bureau of Land Management, U.S. Fish and Wildlife Service, U.S. Forest Service, National Park Service, Bureau of Indian Affairs, and the States of Arizona and New Mexico.

1. Interregional four-state Agreement

Arizona, California, Nevada, and Utah BLM and their respective dispatch offices along the state borders have an initial attack agreement for use of resources across state boundaries. The initial attack resource can be used for 24 hours. If the resource is needed beyond 24 hours, a resource order will be initiated through dispatch channels.

2. Central West Zone Joint Powers Operating Plan

This agreement allows for the interagency management and operation of fire management activities among Central West Zone fire agencies. These agencies are the Bureau of Land Management – (Phoenix, Kingman, Yuma, Lake Havasu field offices), Tonto National Forest, Prescott National Forest, National Park Service Southern Arizona Group, the Bureau of Indian Affairs (Pima, Salt River, Fort Yuma, Colorado River, Agencies), Western Regional Office, USFWS Bill Williams National Wildlife Refuge, Cibola National Wildlife Refuge, Havasu National Wildlife Refuge, Imperial National Wildlife Refuge, Kofa National Wildlife Refuge and the Arizona State Land Department Fire Management Division - Phoenix District.

3. Memorandum of Understanding – BIA Ft. Yuma, Colorado River Agencies and BLM Yuma District

This MOU establishes an operating plan for the zone.

4. Local Agreements in Effect

(Local agreements are either not in existence or have not been formalized)

Appendix F. Fire Report Form – USDI, Bureau of Reclamation

Template for Incident Type: 48

U.S. Department of the Interior-Bureau of Reclamation Individual Fire Report (DI-1202-BOR)

GENERAL REPORTING INFORMATION

Status (Complete/Incomplete)	Bureau	Region	Reporting Unit
Unit Identifier	Calendar Year	Fiscal Year	Fire Name
Fire Number	Fire Code	Incident Type (Fire Type/Protection Type) 48	Reimbursable (Y/N)
Cause Category human	Burning Index		

STATISTICAL DATA

No.	State	County	Owner	Vegetation	Burned Acres	Project Acres	No.	State	County	Owner	Vegetation	Burned Acres	Project Acres
1							5						
2							6						
3							7						
4							8						

LOCATION DATA (point of origin of fire)

Facility/Feature			Origin-Owner		Origin-Accuracy		Location Method		Datum	
Latitude				Longitude			UTM			
Degrees		Minutes	Seconds	Degrees		Minutes	Seconds	Zone	Easting	Northing

FIRE MANAGEMENT DATA

	Date (DDMMYYYY)	Time (HHMM)	Type	Amount	Acres
Discovery/Start					
Initial Attack					
Controlled/Completed					
Declared Out					

U.S. Department of the Interior-Bureau of Reclamation
Individual Fire Report (DI-1202-BOR)

GENERAL REPORTING INFORMATION

Status (Complete/Incomplete)	Bureau	Region	Reporting Unit
Unit Identifier	Calendar Year	Fiscal Year	Fire Name
Fire Number	Fire Code	Incident Type (Fire Type/Protection Type) 48	Reimbursable (Y/N)
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STATISTICAL DATA

No.	State	County	Owner	Vegetation	Burned Acres	Project Acres	No.	State	County	Owner	Vegetation	Burned Acres	Project Acres
1							5						
2							6						
3							7						
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LOCATION DATA (point of origin of fire)

Facility/Feature			Origin-Owner		Origin-Accuracy		Location Method		Datum	
Latitude				Longitude			UTM			
Degrees		Minutes	Seconds	Degrees		Minutes	Seconds	Zone	Easting	Northing

FIRE MANAGEMENT DATA

	Date (DDMMYYYY)	Time (HHMM)	Type	Amount	Acres
Discovery/Start					
Initial Attack					
Controlled/Completed					
Declared Out					

Appendix G. Recommendations – LCR MSCP

I. Prevention

The following recommendations could be implemented through instruments such as Memorandums of Understand or Interagency Agreements with land managing or partner agencies.

- Conduct prevention patrols during periods of very high fire danger or elevated human-caused risk (e.g. Fourth of July and fireworks).
- Work with nearby campground staff and hosts to encourage them to contact visitors to emphasize fire safety and prevention.
- Issue press releases and distribute materials, where appropriate, informing the public about the benefits of prescribed fire as opposed to the adverse impacts of wildland fire.
- Participate in fire prevention and safety programs at public schools. Part of the development and presentation of prevention messages should include wildland/urban interface awareness and educational messages tailored for adjacent landowners and visitors that should include the importance of using prescribed fire and other means to achieve management goals.
- Engage in outreach programs with adjacent landowners to explain the fire management program and to emphasize prevention of human-caused wildfires and actions that landowners can take to minimize the risk of wildfire on their property.
- Sponsor or participate in annual meetings with cooperators and other stakeholders to develop prevention strategies.
- Attend local citizens' group meetings to address wildfire prevention, structure protection strategies, and fire management practices.
- Post appropriate signage during periods of high fire danger.
- Purchase, install, and maintain a "Smokey Bear" type wildland fire risk sign for areas without a sign and ensure the adjective reading is correct.
- Close or reduce visitor use in and near habitat areas when fire danger is extreme.
- Constrain certain types of visitor activities (e.g. campfires, fireworks, shooting) in and near LCR MSCP conservation areas when fire danger is very high or extreme.
- Encourage land management agencies to restrict open fires and specify the use of propane stoves during periods of high fire danger.
- Work with power companies to reduce fire ignitions due to downed power lines through or adjacent to LCR MSCP conservation areas.

II. Preparedness (Presuppression)

The following recommendations could be implemented through instruments such as Memorandums of Understand or Interagency Agreements with land managing or partner agencies.

Administrative:

- Provide spiral bound catalog of LCR maps for firefighting engines and managers to aid in rapid identification of fuel types and fire locations relative to LCR MSCP conservation areas. Cooperate with firefighting agencies to include data layers of special projects, pinch points, fuel models, suitable habitats, and other items of value in firefighting.

- Provide a pre-season wildland fire risk analysis. The selected party would work with the Southwest Area Coordination Center (SWCC) and the Arizona Interagency Dispatch Center (AIDC) to compile and provide a written assessment prior to the start of fire season (date to be determined) and provide periodic updates (bi-weekly or monthly depending on fuels and weather conditions and long-term trends).
- Develop a program designed to monitor live fuel moisture on a predetermined schedule and identify a representative fuel type.
- Subscribe to (or ensure cooperating wildfire agencies subscribe to) the Automated Lightning Detection System (ALDS) to be able to quickly determine the occurrence of lightning strikes in MSCP plantings and adjacent areas.
- Purchase, install, and maintain a RAWS station that could be moved from site to site to assess conditions and compare the observations to existing weather observation stations located on the LCR.
- Work with adjacent landowners to maintain boundaries that are free of flammable debris which, if ignited, could threaten the adjacent area; focus on bi-annual fuels reduction in irrigation ditches and drains.
- Conduct patrols using a variety of means, including engines, aircraft, and/or boats during periods of extreme fire danger. Public contact should be made through outreach with adjacent landowners to explain the fire management program and to emphasize prevention of human-caused wildfires and actions that landowners can take to minimize the risk of wildfire on their property.

Fuels Management:

- Maintain green or bare ground (fallow) strips where they currently exist along some planting blocks. Consider establishing such strips near other plantings.
- In new plantings with multiple species, consider planting several rows of cottonwoods along the perimeter of the planting blocks. These—through shading—would reduce fine herbaceous fuels to leaf litter within a few years and provide additional protection from fire entering the planting block from adjacent lands.
- Reduce fine fuels along the perimeter of plantings, within planting blocks, and along roadways and irrigation systems. This will reduce the probability of fire entering a planting and reduce fire behavior if a wildfire does establish within a planting block.
- A common practice in fuels management is reduction of fine flashy fuels. Where appropriate and permitted, consider use of prescriptive grazing by domestic sheep in new MSCP plantings to reduce the fine fuels (understory Bermuda grass and alfalfa). This is a common practice in management of fine fuels.
- Maintain dry fuel breaks within MSCP plantings.
- Mow or establish dry fuel breaks in plantings that have low cottonwood stem density (e.g. cottonwood genetics plot at Cibola NWR) to break up continuous herbaceous fuels.
- In many LCR MSCP conservation areas, access roads and irrigation ditches also function as fuel breaks. Where habitat areas are in large homogenous blocks, consider establishing dry fire breaks (access roads, or bare dirt lines 6-8 ft in width) to hold surface fires or provide an anchor for initial attack firing operations.
- Remove or reduce tamarisk fuels in areas adjacent to MSCP plantings to reduce radiant/convective heating impinging on plantings and to reduce the number of firebrands produced by fire in tamarisk.

- Periodically clear established firebreaks in nearby tamarisk stands to preserve their usefulness for burning out in advance of a wildfire.
- Establish additional constructed firebreaks in adjacent tamarisk stands. These firebreaks would not of themselves stop fire spread in tamarisk, but they would provide firefighters a tactical position from which to burn out.
- Establish plans for immediate post-fire rehabilitation (e.g. rapid replanting) in cottonwood stands to preclude tamarisk invasion.
- Consider use of prescribed fire to rejuvenate decadent marsh areas.

III. Suppression

The following recommendations could be implemented through instruments such as Memorandums of Understand or Interagency Agreements with land managing or partner agencies.

Constraints:

- Avoid using retardants within 300 feet of open water.
- Avoid using heavy equipment within LCR MSCP conservation areas (heavy equipment may do more damage than surface fires).

Strategies and Tactics:

- Utilize roads and dry fuel breaks on the perimeter and interior of LCR MSCP conservation areas to confine fire, as much as possible, to a single compartment or a few compartments of vegetation.
- If fire is within a “compartment” (i.e., a small block separated from other blocks by roads or dry fuel breaks), consider burning out from the perimeter of that compartment to reduce the probability of fire crossing fuel breaks and moving into adjacent compartments. (Better to lose trees within the compartment than to risk losing trees in several compartments.)
- If suitable infrastructure is available and if canals are charged when a fire occurs near or in a LCR MACP conservation area, consider the possibility of immediately flooding that block and adjacent blocks to reduce or stop fire spread.
- Rather than constructing traditional “mineral soil” handlines in the interior of a cottonwood-willow stand, consider use of leaf blowers to create bare ground “firelines” in older MSCP cottonwood plantings. This technique would not be effective where rooted herbaceous vegetation exists.

Other:

- Provide fireline qualified resource advisors (READs) and/or agency representatives that can provide to Incident Commanders timely information in support of LCR MSCP habitat protection objectives during wildland fires.
- Investigate wildfires to determine cause.

Appendix H. Department of the Interior Wyden Guidance
Department of the Interior Wyden Amendment Guidelines for use of Emergency Stabilization and Burned Area Rehabilitation Funding

Purpose: The purpose of this document is to provide Department of the Interior (DOI) bureaus with consistent guidance for entering into cooperative watershed agreements using emergency stabilization and burned area rehabilitation funds on lands managed by other Federal agencies, Tribes, States, local governments, private landowners, or nonprofit entities. These guidelines identify the types of treatments that may be covered using emergency stabilization or burned area rehabilitation funding, and how projects proposed under the authority of the Wyden Amendment will be managed.

Background: The expenditure of emergency stabilization and burned area rehabilitation funds are allowable under United States Code Title 16, Section 1011 (also known as the Wyden Amendment) on lands managed by other Federal agencies, Tribes, States, local governments, private landowners, or nonprofit entities.

The Wyden Amendment states: *For fiscal year 1997 and each fiscal year thereafter, appropriations made for the Bureau of Land Management including appropriations for the Wildland Fire Management account allocated to the National Park Service, Fish and Wildlife Service, and Bureau of Indian Affairs may be used by the Secretary of the Interior for the purpose of entering into cooperative agreements with the heads of other Federal agencies, tribal, State, and local governments, private and nonprofit entities, and landowners for the protection, restoration, and enhancement of fish and wildlife habitat and other resources on public or private land and the reduction of risk from natural disaster where public safety is threatened that benefit these resources on public lands within the watershed.*

DOI agencies may utilize the Wyden Amendment authority for the purpose of carrying out emergency stabilization (ES) or burned area rehabilitation (BAR) treatments utilizing ES or BAR funds. When the Wyden Amendment authority is used, a Watershed Restoration and Enhancement Agreement must be developed.

Emergency Stabilization Actions Allowed under Wyden: Emergency stabilization actions are limited under Wyden to minimizing threats to human life or property.

- Installing structures to slow soil and water movement endangering human life and property.
- Stabilizing soil to prevent mud and debris flows across public roads and into communities.
- Increasing road drainage frequency and/or capacity to handle additional post-fire runoff threatening public roads and communities.
- Installing protective fences or barriers to protect treated or recovering areas.
- Monitoring of treatments and activities for up to three years.

Burned Area Rehabilitation Actions Allowed under Wyden: Burned area rehabilitation actions are limited under the Wyden Amendment to repairing lands adjoining DOI bureau lands that protect investments on bureau lands and provide tangible benefits to bureau lands or resource responsibilities.

Before entering into a Watershed Restoration and Enhancement Agreement, the following conditions must be met:

The proposed action:

- is included in a Burned Area Emergency Response (Emergency Stabilization) and/or Burn Area Rehabilitation Plan.
- is adjoining DOI bureau (BLM, BIA, NPS, USFWS) lands.
- is part of the response to the same wildfire impacting DOI bureau lands.
- must be in combination or compatible with/support treatments proposed on DOI bureau lands.
- is subject to the planning, implementing, and funding policy and standards in the DOI policy manual 620 DM 3, Interagency Burned Area Emergency Response and Rehabilitation Guidebooks, and other relevant bureau guidance documents.

Watershed Agreements: As stated in the Wyden Amendment, agreements may be either: (a) directly with a willing landowner or (b) indirectly through an agreement with a State, local, or Tribal government or other public entity, educational institution, or private nonprofit organization. A Watershed Restoration and Enhancement Agreement shall:

- A. include such terms and conditions mutually agreed to by the Agency Administrator and the landowner;
- B. improve the viability of and otherwise benefit the fish, wildlife, and other biotic resources on public land in the watershed;
- C. authorize the provision of technical assistance by the Agency Administrator in the planning of management activities that will further the purposes of the agreement;
- D. provide for the sharing of costs of implementing the agreement among the Federal government, the landowner, and other entities, as mutually agreed on by the affected interests;
- E. ensure that any expenditure by the Agency Administrator pursuant to the agreement is determined by the Agency Administrator to be in the public interest.

Other Terms and Conditions: The Wyden Amendment also states that the Agency Administrator may require such other terms and conditions as are necessary to protect the public investment on private lands, provided such terms and conditions are mutually agreed to by the Agency Administrator and the landowner. For the purpose of conducting emergency stabilization and burned area rehabilitation treatments, the agreement:

- will not have an impact on states' rights and responsibilities and will comply with the considerations, principles, and requirements of Executive Order 13132, Federalism.
- will identify which party to the agreement has responsibility for implementing each Burned Area Emergency Response and/or Burned Area Rehabilitation Plan treatment and activity.
- will stipulate neither emergency stabilization nor burned area rehabilitation funds are responsible for operation and maintenance of treatments beyond three years from containment of the wildfire.
- must state that the federal government will assume no liabilities.
- will include treatment effectiveness monitoring and reporting.