HIPPY FIRE

ACCOMPLISHMENT REPORT

U.S. FISH AND WILDLIFE SERVICE
CIBOLA NATIONAL WILDLIFE REFUGE
October 3, 2006

DATE:	October 3, 2006
AGENCY/UNIT:	U.S. Fish and Wildlife Service Cibola National Wildlife Refuge 66600 Cibola Lake Road, Rt. 2 Box 1 Cibola, Arizona 85328 Phone: 928-857-3253
LOCATION/SIZE:	Cibola, La Paz County, Arizona 424 acres, T1S, R24W, Sec.2 Lat. and Long.; 33° 21' 14.2" x 114° 41' 46.6"
PREPARED BY:	U.S. Department of Interior U.S. Fish and Wildlife Service Cibola National Wildlife Refuge and Regional Office BAER Team

Submitted By: Date:

William R. Seese, USFWS Cibola National Wildlife Refuge Manager

INTRODUCTION

The Hippy Fire Rehabilitation Plan was written based on the best available known information of the site at the time of plan submission. The primary objectives of the Hippy Fire Burned Area Rehabilitation Plan were:

- Utilize integrated management activities to improve lands unlikely to recover naturally from severe wild land fire damage by emulating historic ecosystem structure, function, diversity, and dynamics according to approved land management plans.

- Restore or establish healthy, functioning ecosystems, even if these ecosystems cannot fully emulate historic or pre-fire conditions as specified in approved land management plans.

- To reduce fire hazards to the surrounding resources and facilities, through restoration of native riparian vegetation (i.e. cottonwood, willow, mesquite), in place of more flammable and hazardous monotypic salt cedar.

The original burned area rehabilitation team consisted of Mike Hawkes (Refuge Manager), John Earle, and Brenda Zaun of Cibola NWR, and Mark Kaib from the Regional Office. The revised plan was implemented by Refuge Manager Thomas Alexander, currently retired. This accomplishment report is being managed and implemented by Refuge Manager Bill Seese.

The 424 acre area burned by the fire was dominated by mature salt cedar (*Tamarix chinensis*., with quailbush (*Atriplex lentiformis*), arrow-weed (*Tessaria sericea*), cottonwood (*Populus freemonti*i), and a 20 year old revegetation site that contained willow (*Salix goodingii*), screwbean mesquite (*Prosopis pubescens*), and honey mesquite (*Prosopis glandulosa*). The team found extensive high severity burn damage to the revegetation site as well as patches of cottonwood and willow trees located along the river in the backwater areas of J-dikes. Approximately 0.7 miles of refuge fencing was destroyed as well as 8 to 10 wooden utility poles that held the line supplying power to a pump that served as the refuge's water supply. The refuge and the community of Cibola experienced a power outage for several hours Sunday afternoon/evening. Severe radiant heat damaged the refuge boundary signs located on the 0.7 miles of fencing. The heat also melted the copper telephone wires together within a telephone junction box located along the fence line, rendering the refuge without telephone service until Monday morning. The wildlife biologist evaluated vegetation and habitat impacts and conducted an assessment of wildlife loss. The refuge manager assessed utility pole and line damage and notified Arizona Public Service (APS) utility company regarding damage and repairs required. On June 25, APS replaced the burned poles with steel utility poles.

REHABILITATION PLAN OBJECTIVES

- Prevent aggressive re-growth and re-establishment of undesirable exotic plant species such as salt cedar (*Tamarix chinensis*) and, as practical and necessary, restore natural conditions to areas disturbed by fire suppression actions.

- Replace utility poles, fencing, and signs, and repair the damaged section of irrigation ditch.

- Rehabilitate former salt cedar areas with cottonwoods, willows, mesquites, and other native species as specified in the Lower Colorado River National Wildlife Refuges Comprehensive Management Plan.

- Reduce fire hazards to surrounding communities and facilities.

SUMMARY OF ACTIVITIES AND COSTS

The prevention of aggressive re-growth and re-establishment of undesirable exotic plant species such as salt cedar (*Tamarix chinensis*) was accomplished by root plowing with dozers, and through chemical treatment of re-sprouts within years 1 and 2 (2003-2004). This allowed for the promotion of seed germination of native plants such as quail bush and native grasses. Approximately 125 acres of the original 424 acres burned was not leveled for flood irrigation, but, instead, allowed to restore itself through natural processes while emergent salt cedar sprouts were controlled with herbicides.

The remaining 300 acres of the original 424 acre restoration site was land leveled. Gates and water delivery structures were installed to deliver irrigation water to planted vegetation such as trees, shrubs, and grasses. Currently the leveled area is planted in small grains and native grasses to stop soil erosion, reduce soil salts, and provide grazing areas for wintering geese. After soil salt reduction takes place, trees will be planted only in the areas conducive to tree planting, as indicated by reduced salinities.

The summary of activities and cost table below identifies emergency rehabilitation costs charged for funding from Suppression Operations, Emergency Fire Rehabilitation, agency operation, and other funding sources. Specification numbers 1-3 have been funded and accomplished through Fiscal Year 01 and 02 expenditures (2003-2004). Specification numbers 4-11 have been funded and accomplished through Fiscal Year 03 expenditures (2005). Tree planting with seedlings as proposed in the original plan was replaced with planting native grasses and small grains to provide a grazing and loafing area for wintering geese populations. Soil samples revealed high salinity and reduced the viability of immediate small seedling plantings.

This table identifies rehabilitation costs charged or proposed for funding from rehabilitation funding sources. Treatments 1-11 were funded and accomplished through Fiscal 05 expenditures (2003-2004-2005).

No.	Treatment Specification	Unit	Unit Cost ($)	# Units	Implementation Method/ FY	Specification Total ($)
Contractor Services						
1	Repair concrete ditch	Job	$3,000	1	Contractor/01	$3,000
2	Replace fence	Mile	$10,000	0.7	Contractor/01	$7,000
3	Clear and pile aerial vegetation	Acre	$575	400	Contractor/02	$230,056
4	Root plow and pile salt cedar roots and woody debris	Acre	$240	400	Contractor/02	$96,168
5	Agriculture Engineering Plan for laser leveling, water conveyance system, and revegetation units	Job	$44,545	1	Contractor/02	$44,945
6	Earthwork, Levee, Roadwork, and water control design earthmoving specifications	Job	$7,500	1	Contractor/03	$7,500
7	Laser level ground	Cubic Yards	$1.50	121,000	Contractor/03	$181,500
8	Construct water conveyance system, turnouts, check gates, ditch lining and repairs, drainage ditches	Job	$120,660	1	Contractor/03	$120,960
9	Project construction management, construction staking, field inspections, office supplies, as built	Job	$21,500	1	Contractor/03	$21,500
10	Disc, irrigate, remove debris, soil sampling, control salt cedar, plant ground cover with native grasses and small grains	job	$45,500	1	Contractor/03	$45,500
Supplies						
11	Signs	ea	$7	13	Contractor/01	$89
Wages						
12	Planning, Implementation, and Monitoring of Revegetation Treatments	Pay Period	$2,171	13	Agency/03	$28,223
Total Completed Treatments……						**$798,927**
Total Rehabilitation Funding ……						**$798,927**
Treatment specification numbers 1-11, have been funded and accomplished through						
Fiscal Year 01, 02, and 03 expenditures (2003-2004-2005).						
Final Contract Payment on June 20, 2005						

The restoration of this site will provide a favorable environment for wildlife, soils, watershed, and native vegetation growth. It will add 300 acres toward a grazing and loafing area for wintering waterfowl. The added acreage on the refuge will also benefit neo-tropical bird migrations.

Site Recovery

Site preparation

Water control structures