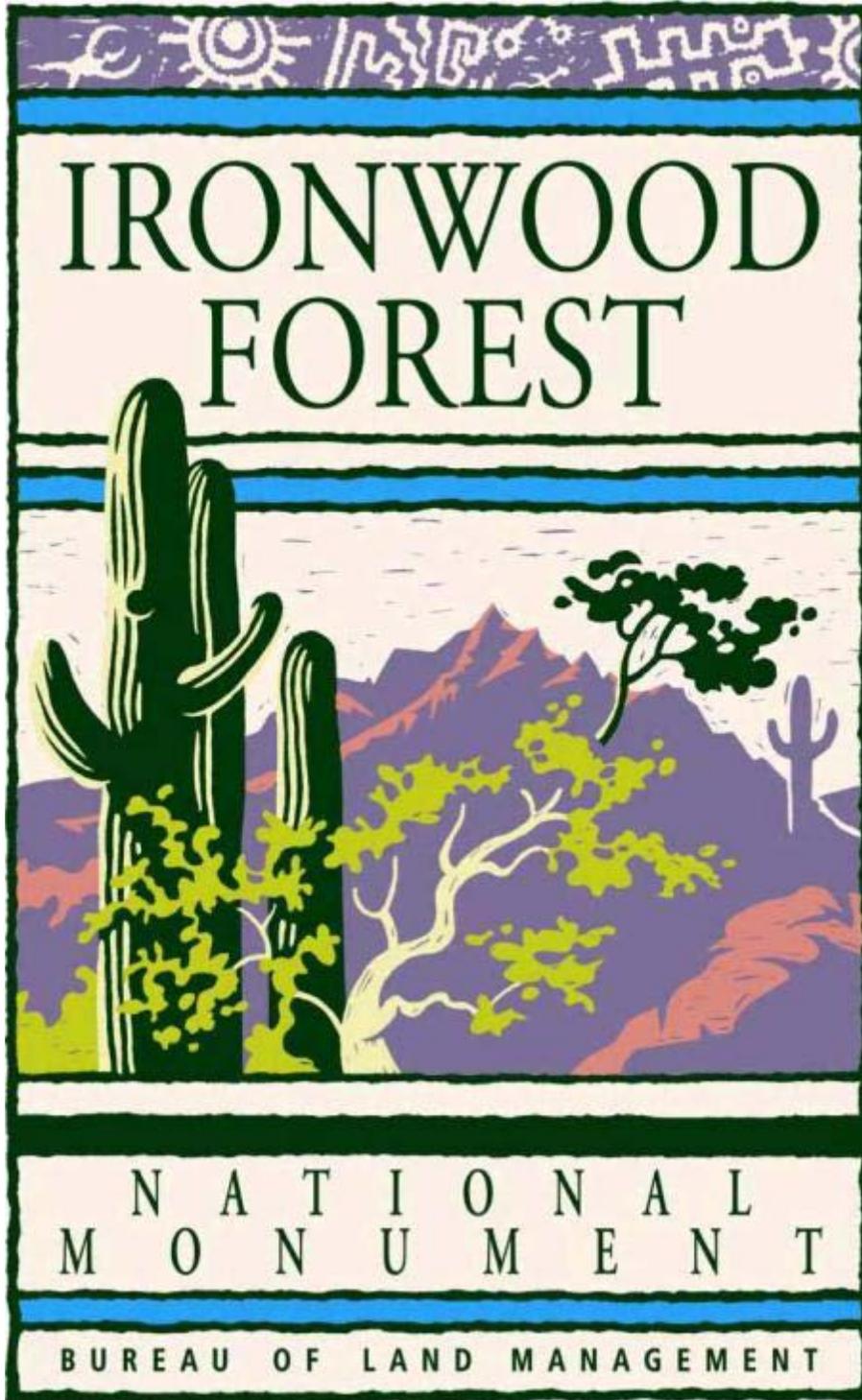


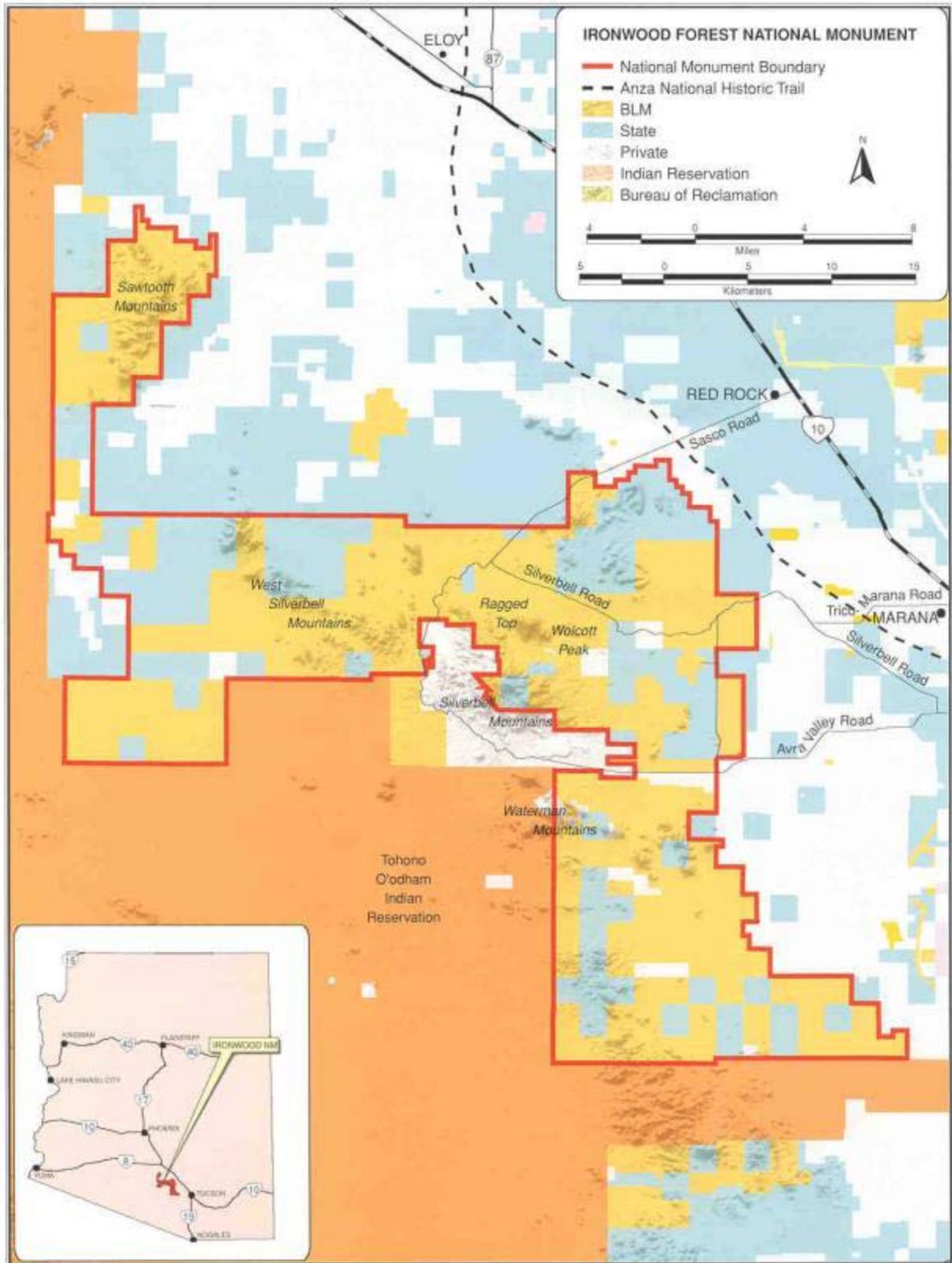
BUREAU OF LAND MANAGEMENT  
NATIONAL LANDSCAPE CONSERVATION SYSTEM



**Ironwood Forest National Monument  
FY 2010 Manager's Report**

## Introduction

- a. Accomplishments within this report reflect the time period October 1, 2009 through September 30, 2010
- b. Site Name: Ironwood Forest National Monument, address: Tucson Field Office, 12661 E. Broadway Blvd., Tucson, AZ 85748, (520) 258-7200  
Website:  
[http://www.blm.gov/az/st/en/prog/blm\\_special\\_areas/natmon/ironwood.html](http://www.blm.gov/az/st/en/prog/blm_special_areas/natmon/ironwood.html)
- c. Manager: Laura Olais (Acting Manager)
- d. Tucson Field Office, Gila District, Arizona State Office
- e. Presidential Proclamation 7320 established the Monument on June 9, 2000.
- f. “Section 2 of the Act of June 8, 1906 (34 Stat. 225, 16 U.S.C. 431) , authorizes the President, in his discretion, to declare by public proclamation historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest that are situated upon the lands owned or controlled by the Government of the United States to be national monuments, and to reserve as a part thereof parcels of land, the limits of which in all cases shall be confined to the smallest area compatible with the proper care and management of the objects to be protected.”  
  
The monument contains objects of scientific interest throughout its desert environment. Stands of ironwood, palo verde, and saguaro blanket the monument floor beneath the rugged mountain ranges, including the Silver Bell Mountains. Ragged Top Mountain is a biological and geological crown jewel amid the depositional plains in the monument.  
  
The monument presents a quintessential view of the Sonoran Desert with ancient legume and cactus forests. The geologic and topographic variability of the monument contributes to the area's high biological diversity. The Silver Bell Mountains within Ironwood Forest National Monument (IFNM) support the highest density of ironwood trees recorded in the Sonoran Desert.  
  
The ironwood-bursage habitat in the Silver Bell Mountains is associated with more than 674 species, including 64 mammalian and 57 bird species. Within the Sonoran Desert, Ragged Top Mountain contains the greatest richness of species. The monument is home to species federally listed as threatened or endangered, including the Nichols Turk's head cactus and the lesser long-nosed bat, and contains historic and potential habitat for the cactus ferruginous pygmy-owl. The desert bighorn sheep in the monument may be the last viable population indigenous to the Tucson basin. Section, Section 2 of the Act of June 8, 1906 (34 Stat. 225, 16 U.S.C. 431)
- g. Acreage: approximately 128,400 acres of public land within its designated boundaries.
- h. Estimated Annual Visitation: 23, 250
- i. Map (see next page)



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## **II. Land Use Planning**

### **a. Overview**

The Ironwood Forest National Monument (IFNM) Draft Resource Management Plan/Environmental Impact Statement (IFNM Draft RMP/EIS) was published in March 2007, and the Proposed IFNM RMP/Final EIS is currently being prepared for publication by September 2011.

### **b. Implementation-Level Planning**

Work on the IFNM Draft RMP in FY10 has consisted of responding to BLM Washington Office comments on the draft plan and conducting additional analysis and studies to support/revisit the RMP preferred decisions throughout the monument. BLM made changes to the RMP to better reflect the focus on the protection of monument objects as identified in the IFNM Presidential Proclamation. The Record of Decision and Approved Plan should be published in early 2012. This planning effort will also include the completion of a travel and transportation management plan.

### **c. Land Use Plan Implementation**

The IFNM RMP has not been finalized yet; therefore, there has not been any plan implementation.

## **III. Protecting America's Natural Resources**

### **a. Notable Natural Resources**

- i. Description of Resources:** The IFNM was designated to protect objects of scientific interest such as drought-adapted vegetation, archaeological objects, rugged mountain ranges, quintessential view of the Sonoran Desert, ironwood trees and habitat for threatened, endangered and rare wildlife and vegetation species. IFNM has two federally listed species: the Nichol's Turk's head cactus and the lesser long-nosed bat. As identified by BLM, U.S. Fish and Wildlife Service, Arizona Game and Fish Department and Pima County's Sonoran Desert Conservation Plan, 122 special status species occur in Pima and Pinal Counties in which IFNM occupies. Of these 122 species, 36 species occur or have the potential to occur on IFNM. A BLM listed sensitive species and Arizona Game and Fish Department species of concern, the desert tortoise, occurs on eight mountain ranges in the IFNM. The Arizona's Linkage Workgroup (2006) identified

IFNM as having regional and statewide habitat corridors that could aid in a landscape level, multi-jurisdictional approach to wildlife corridor conservation and management.

Priority plant communities on IFNM found to be sensitive due to their rarity, ecological diversity or vulnerability to disturbance by human trampling (illegal trafficking), fire or invasion by exotic plants consist of the following: dense patches of saguaro and ironwood trees, large ironwood trees, jojoba chaparral, xeroriparian, which includes washes critical to wildlife movements, cactus dunes, curly-mesquite grassland, cholla forests, creosote rings and Ragged Top Mountain which contains 72% of the total flora found in IFNM. (Please see picture of Ragged Top, which is the last page of this report.)

The ironwood-bursage habitat in the Silver Bell Mountains is associated with more than 674 species, including 64 mammalian species and 57 species of birds.



Cultural resource surveys on IFNM have found 279 recorded sites with the average density of about 11 sites per square mile. The data suggests there could be about 2,300 sites on IFNM.

Field inspections were completed on all eleven allotments in FY10. The population of the endangered Nichols Turks head cactus is monitored annually by researchers from the University of Arizona who reported finding a stable population in 2010, although there was some natural mortality due to foraging by desert bighorn sheep on the cactus within the study plots.

- ii. **Resource Management Challenges:** The primary challenges involving protection of resources is the presence of approximately 54 non-native plant species that occur on monument. A number of these plants have special adaptations that allow them to quickly invade and out-compete many native species.

Species that pose the greatest threats include buffelgrass, Sahara mustard, and Bermuda grass. Buffelgrass poses the greatest risk to the monument through increased risk of catastrophic fire and crowding out of native vegetation. BLM enlisted the help of the Arizona-Sonora Desert Museum for an inventory and assessment of buffelgrass in the IFNM, which indicated the rate of spread and helped BLM prioritize treatment. The report was received in 2010 and indicates that in some areas buffelgrass is spreading rapidly, while in the northern portion of the monument it is declining due to the effects of drought.

Off road highway vehicles traveling off road, cross country traffic from drug trafficking and the necessary law enforcement pursuit of such, and trash left by human and drug smuggling activities are other threats to resource protection on IFNM.

For safety reasons resulting from border-related drug trafficking and undocumented illegal aliens passing through the area, BLM personnel, other than Law Enforcement Rangers, do not enter the IFNM alone. This greatly hampers BLM's ability to establish an on-the-ground presence in the monument, especially on weekends, when two employees are rarely able to patrol together. An additional Park Ranger would address this issue. Other steps being taken to address these border-related issues are described in Section III. d. Restoration Efforts, particularly with respect to Project ROAM (Reclaim Our Arizona Monuments)

**b. Land Health Assessments**

- i. **Land Health Assessments:** All of monument's acreage has been assessed using land health standards, and most of the land is meeting standards. Before grazing leases will be issued, supplemental monitoring and utilization data collection will be done. There is one area on the Agua Blanca allotment that is not meeting standards because of impacts from recreational shooting and OHV use. These activities have removed vegetation in the area and have led to an increase in surface erosion within a cultural resource management area. In 2010, all allotments within the monument were field checked. For the assessments, ecological sites and the key areas within them were reviewed using BLM's standard Upland Assessment procedures.
- ii. **Additional Contributions to Meeting Land Health Standards:** Continual communication with allotment ranchers helps to keep IFNM staff apprised of necessary

maintenance and replacement of old or broken fences, needed upgrades to cattle guards and other issues that might arise.

**c. Inventory Efforts**

Vegetation Inventory: The 2009 Arizona-Sonora Desert Museum inventory and assessment of buffelgrass in IFNM was provided to BLM in 2010. This report indicates the rate of spread and assists the BLM in prioritizing treatment. Recreation site inventory was also done in 2010. The challenge on IFNM is to distinguish between visitor-related recreation and necessary law enforcement travel and use. Tread type and size is used to evaluate and differentiate between land users. IFNM staff is pursuing a connection with the University of Arizona faculty to draw interested graduate students to complete potential thesis work on IFNM to assist in natural resource inventories.

**d. Restoration Efforts**

Removal of Invasive Species: Landscape and site-specific restoration is currently BLM's top priority for the IFNM. In 2010, BLM conducted restoration projects on 220 acres of IFNM infested by buffelgrass. Sixty acres of buffelgrass were sprayed with herbicide as part of an effort to control this invasive species. Contracts have been let to treat an additional 120 acres in 2011 that could not be treated in 2010 because of lack of rainfall. Buffelgrass was removed manually by volunteer groups on about 175 acres. This includes about 50 acres of buffelgrass invasion within the Waterman Area of Critical Environmental Concern in an area occupied by an endangered species of cactus.

There was one BLM construction project in the monument in 2010 to further the restoration efforts on an old mining area that was infested with the invasive buffelgrass. BLM crews ripped the soil in the mining site that had become compacted and volunteers reseeded the area with native trees to supplement the native shrub and grass species that have naturally started to reclaim the area. Large boulders were placed along the road to keep vehicles off the reclaimed area while the plants are getting established.

Southern Arizona Project (SAP): Much of the work that occurs on the IFNM is funded by the SAP annual allocation. This work is geared toward remediation of impacts caused by illegal immigrants and drug trafficking. The Tucson Field Office received \$325,000 in SAP funds in 2010, of which \$160,000 was directed toward the monument. The majority of IFNM's allocation pays for two Restoration Interns supplied by the Student Conservation Association that scout for and mitigate the effects of smuggling activity in the monument. Restoration of areas impacted by illegal smuggling activities on the monument is a huge undertaking and a major program for IFNM management and staff. In 2010, as in several years

past, the BLM relied heavily on the services provided by two Student Conservation Associates (SCAs) that were hired to locate and restore these areas. The SCAs alone cleaned 11,707 lbs. of trash and 91 tires left by illegal drug and immigrant smugglers. They also organized and worked with a variety of organizations and volunteer groups to do cleanup, repairs, and restoration, including crews from the Tohono O’odham Nation, Humane Borders, volunteers and a crew from the Town of Marana that performs clean-up work on a weekly basis. In 2010, the Marana crew collected approximately 10,000 lbs. of trash and removed and disposed of 70 tires.

The SCAs have been crucial in cleaning the large “layup” sites that have been left from groups of 30 to 50 undocumented illegal aliens traveling through the monument on their route to Interstate 10. The waste and debris left by these large numbers of people can be quite unpleasant to clean but the SCAs over the last two years have done an incredible job of removing this type of trash. The result is beginning to show that due to law enforcement efforts and cleanups by SCAs and others, these large layup sites have almost disappeared from the IFNM. Even though layup sites are typically not as obvious, the effect upon the resources can be severe. Many items of trash contain materials that can be toxic to vegetation and wildlife. Typically, trash is carried down washes by monsoonal rains. Trash ends up being dispersed long distances from the original sites. There continues to be smaller piecemeal undocumented illegal aliens (UDA) trash all over the monument which the SCAs tackle also.

In addition to clearing areas of waste and debris, IFNM staff, Southwest Conservation Corp (SCC), and volunteers engaged in road restoration and rehabilitation of areas impacted by illegal intrusions. Illegal roads totaling 165,225 square feet were restored. Road restoration sites continued to be monitored for native plant success rates.

Photos of illegal off-road intrusions, before and after restoration:





Project ROAM – Reclaim Our Arizona Monuments was initiated in August 2010 to reclaim the IFNM and Sonoran Desert National Monument from the affects of illegal drug and human smuggling activities, through a long term plan involving the use of coordinated law enforcement efforts, mitigation, clean-up and improved safety for public visitors and employees. There are three objectives:

- 1) Improve visitor and employee safety through increased patrols by BLM law enforcement saturation patrols and continued coordination with cooperating law enforcement agencies.
- 2) Enhance protection of Monument Objects natural and cultural resources.
- 3) Improve communication outreach efforts that inform and educate communities and interested publics on the efforts underway and provide enhanced protection for public land users.

The project also builds awareness on BLM’s diligent efforts to effectively collaborate and cooperate with all law enforcement organizations across the 100-mile Borderlands area and extend BLM law enforcement capabilities and patrols in heavily impacted areas.

An incident command team was formed to manage the operation and started work on September 7, 2010. Enhanced law enforcement details began September 7, 2010. BLM reached out to partner agencies for assistance, including Tucson Sector of the Border Patrol. The team planned and initiated the main field work elements of Project ROAM in August and September to deter

smuggling activities and protect the work crews and their clean-up and rehabilitation work. Project ROAM work is on-going into 2011.

#### **IV. Protecting America's Heritage Resources**

##### **a. Notable Heritage Resources**

Professional interpretation of cultural resources within the IFNM has been intensive. The IFNM has been used as an "outdoor laboratory" for training student and vocational archaeologists. University of Arizona faculty and students have conducted two major research investigations of archaeological resources within IFNM. One of these studies involved an extensive survey that documented the Hohokam Los Robles platform mound community and the Cerro Prieto trincheras site, and resulted in the listing of the Los Robles Archaeological District in the National Register (Downum 1993). The second study was a University of Arizona research project that surveyed 5,186 acres in sample parcels distributed throughout the IFNM in order to better understand the distribution of archaeological resources (Heilen 2005; Heilen and Reid 2006). The survey doubled the number of recorded sites within the IFNM. The third study involved an evaluation of the Santa Ana de Cuiquiburitac visita site (Reid and Heilen 2005).

The incredible and diverse archaeological resources on the monument, the 53-mile boundary shared with the Tohono O'odham Nation, and the area's rich, but little understood history constitute a critical need for an IFNM-dedicated archaeologist. The Tucson Field Office archaeologist must cover all lands in the Tucson Field Office. With the exception of cultural resource inventories for monument transportation routes completed under contract, little additional archaeological work is being done on the monument.

Overall Condition of Heritage Resources: Historic resource conditions vary from good to fair to declining. Within the past six years, sites have been damaged from target shooting, natural erosion, and unauthorized roads related to illegal drug and immigrant smuggling. ARPA violations have also occurred, such as the theft of petroglyph boulders from a prehistoric site. Cultural properties continue to be monitored by Arizona Site Stewards, BLM archaeologists, and BLM Rangers. Travel management on the monument has been modified as a result.

##### **b. Inventory Efforts**

Prior to 2007, surveys inventoried cultural resources along 126.25 miles of selected roads within and adjacent to the IFNM (Fischler and French 2007; Whitney and others 2008). The surveys covered 30-foot-wide corridors along approximately 111.5 miles of roadways on Federal land managed by BLM and 7 miles of roadways on State Trust land within the IFNM boundary, and 7.75 miles on Arizona State Trust land adjacent to the IFNM.

Twenty-one documented surveys have, in the aggregate, inventoried approximately 21,194 acres (33.1 square miles) for cultural resources within the IFNM. Approximately 30 additional cultural investigations have been conducted in the IFNM, but are not well documented. The surveys encompass about 12% of the public land and about 9% of the nonpublic land within the IFNM.

Previous to 2007, The University of Arizona completed a more statistically rigorous sample survey that indicates that there could be about twice that many sites within the IFNM (Heilen and Reid 2006). The survey also recorded 3,400 isolated finds indicating that there could be on the order of 125,000 isolated artifacts and features within the IFNM.

### **c. Paleontological Resources**

Paleontological resources constitute a fragile and nonrenewable scientific record of the history of life on Earth. Areas containing vertebrate fossils or noteworthy occurrences of invertebrate or plant fossils are managed under one of four management classes:

*Class 1 (low sensitivity)*: Igneous and metamorphic geologic units and sedimentary geologic units where vertebrate fossils or uncommon nonvertebrate fossils are unlikely to occur.

*Class 2 (moderate sensitivity)*: Sedimentary geologic units that are known to contain or have unknown potential to contain fossils that vary in significance, abundance, and predictable occurrence.

The IFNM is mainly Class 1 and Class 2, though there are a few Class 3 areas. IFNM staff continues to seek funding for paleontological surveys on the monument.

### **d. Restoration Efforts**

One significant site on the IFNM has enjoyed greater protection since a boulder blockade was placed around it in FY 2007 to prevent illegal smugglers from driving over it. No breaches have been reported or observed. Undocumented illegal immigrant foot trails near cultural sites is a resource protection challenge.

### **e. Other Accomplishments**

Heritage resource protection remains central to the quarterly discussions at the Four Southern Tribes quarterly meetings that the Tucson Field Manager and IFNM manager attended in FY10.

## **V. Providing Recreation and Visitor Experiences**

### **a. Overview**

Estimated Annual Visitation for FY10 was 23,250 visits. This visitation represented a wide variety of uses, including: natural area explorations, bird watching, wildlife viewing, sightseeing, hunting, camping, biking, ATV use, recreational target shooting and stargazing.

Assets in the Ironwood Forest National Monument include roads and trails, boundary fencing, and small earthen dams impounding water for livestock and wildlife. None of these are currently included in the Tucson Field Office Asset Business Plan, but will be added once the IFNM Resource Management Plan is finalized. Assets and corresponding Asset Priority Index/Facility Condition Index will be reported once the Asset Business Plan is updated to reflect assets and needs in the monument. The update is anticipated to be completed in 2012.

**b. Facilities, Construction, and Maintenance**

- i. Signage:** An interim signing plan approved for the IFNM in 2003 guides installation of boundary, regulatory, informational and safety signing. A final signing plan is pending approval of the IFNM Resource Management Plan. Portal signs are installed at the main monument entrances along principal access roads. The portal signs meet NLCS unit signing requirements. Kiosks have not been installed, though there are plans to install several in 2011. Signing is in conformance with the BLM Sign Manual.
- ii. Physical facilities:** Physical facilities in the monument are limited to access roads and trails, and minimal ancillary improvements to support dispersed recreational opportunities in an undeveloped, semi-primitive recreational setting (i.e., parking turnouts and rustic campfire rings). The road system includes several routes maintained by Pima and Pinal Counties, which are in fair condition. The majority of the roads are primitive, single lane and minimally maintained for resource access, and suitable only for use by high clearance, 4WD, or off-highway vehicle use.
- iii. New or Ongoing Construction of Recreation-related Facilities:** There are no recreation facility developments that occurred in FY10.
- iv. Maintenance:** Maintenance work in 2010 consisted of repairing fences and vehicle barriers to prevent vehicle use in closed areas. In an effort to decrease illegal driving intrusions minimal post barriers have been placed in washes identified as high risk in order to preserve vegetation and wildlife. The monument's roads have been minimally maintained during the past ten years, and maintenance needs will be defined once the transportation plan is completed following completion of the IFNM Resource Management Plan. Minor road maintenance has been provided by grazing permittees on some roads to facilitate access to range improvements, with minimal maintenance

provided by the BLM. After the IFNM Resource Management Plan is completed, monument roads will be added to the Facility Asset Management System and placed on a maintenance schedule appropriate for the specific type of each route. There was one BLM construction project in the monument in 2010.

- v. **Deferred maintenance:** While no deferred maintenance program has yet been identified for Ironwood Forest National Monument facilities, the Tucson Field Office deferred maintenance plan will be updated to reflect the needs in the monument.



Caution signs were maintained in the IFNM in 2010 in response to an increase in illegal activity and encounters on the monument.

### c. **Comprehensive Travel and Transportation Management**

The primary modes of transportation on IFNM are by motor vehicle, off-highway vehicles, horseback, hiking and biking.

When the IFNM Proposed Resource Management plan is finalized in 2011, it will include a comprehensive travel and transportation management plan.

Increased opportunities, challenges, and trends present themselves constantly as new recreational usages appear such as geocaching which is a popular recreational activity in the southwest deserts. This activity can sometimes lead visitors to most remote sections of IFNM. Presenting opportunities to educate the public about IFNM is balanced with educating them about the rigors of remote exploratory visitation.

### d. **Recreation Fee Program**

The Ironwood Forest National Monument does not have any fee areas.

## **VI. Your Recovery Dollars at Work**

There were no American Recovery and Reinvestment Act construction projects on the monument in 2010.

## **VII. Engaging Youth in America's Great Outdoors**

### **a. Youth Engagement**

A total of 235 hours were donated by youth between the ages of 15 and 25 years old, mostly on buffelgrass eradication projects.

### **b. Youth Employment**

A total of 10 youth were hired through the Student Conservation Association and the Chicago Botanical Garden/ Conservation Lands Management programs. Together these interns contributed 3,520 hours toward road restoration and habitat rehabilitation. One of the interns assisted the Outdoor Recreational Planner in inventorying recreational impacts along road systems in IFNM.

## **VIII. Partnership and Volunteer Efforts**

### **a. Overview**

Friends of the Ironwood Forest (FIF) works to protect the biological, geological, archeological, and historical resources and values for which IFNM was established. In the gateway community of Marana, the Marana Parks and Recreation Department (MPR) offered space in its building for IFNM to display interpretive materials. Also, the MPR outreach staff helped educate the public on the IFNM who visit its building. MPR has advertised any educational events that IFNM is scheduling, such as the upcoming November 6, 2010 "Get Your Kids Outside" event at the MPR site with tours to IFNM.

### **b. Volunteer Accomplishments**

- The FIF recruited and organized 409.5 volunteer hours on the monument during FY10.
- FIF had a table at the Marana Harvest Festival, which was shared and co-staffed with the BLM on October, 24, 2009.
- There was a buffelgrass pull as part of the Save the Watermans, led by John Scheuring, Mark Lambert, Missy Matty and Rayna Dugan November 14, 2009.
- FIF and BLM had a Beat Back Buffelgrass Day pull at the base of Ragged Top on February 6, 2010.

- There were the 10th Anniversary events for the monument, including a tour on March 20, 2010, and a volunteer day on March 27, 2010.
- The Ironwood Festival, May 15, 2010, where BLM and the Friends shared an information table / space.
- The IFNM 10th Anniversary Celebration at Heritage Highlands on June 5, 2010.
- The National Public Lands Day volunteer service project at El Cerrito Represso, which the FIF and BLM co-sponsored with City of Marana and Tucson Audubon Society on September 25, 2010.

**c. Partnership Accomplishments**

<b>Ironwood Forest National Monument Fiscal Year 2010 Partnership Accomplishments</b>				
<b>Partner(s)</b>	<b>Project Name and Description</b>	<b>Accomplishments</b>	<b>Monetary and In-Kind Contributions</b>	
			<b>BLM</b>	<b>Partner</b>
Friends of the Ironwood Forest	Save the Waterman's	Eradicate Buffelgrass in the Waterman ACEC	\$ 500	\$ 4777.5
Friends of the Ironwood Forest	Eradicate Buffelgrass in the Manville Rd area	Removed buffelgrass on 10 acres	\$ 1000	\$ 3528
Arizona Desert Bighorn Sheep Society	Reconstruct Waterman wildlife catchment	Reconstruct Waterman wildlife catchment	\$300	\$840
		<b>Totals (\$)</b>	<b>\$1800.00</b>	<b>\$9145.50</b>

**Partnerships**

BLM relies heavily on partners to achieve management goals and objectives for the Ironwood Forest National Monument. From migrant trash clean-up to accompanying park rangers on patrols for safety reasons, there is critical work that would never be accomplished were it not for our partners and their willingness to contribute to the mission of the monument. BLM is developing a long-term partnership with FIF to achieve a variety of goals, including restoration of impacted lands and community outreach. IFNM also partners consistently with other government agencies such as the Border Patrol, Arizona Game and Fish Department and the National Park Service. See attached Excel table “Partnerships” for a complete list of partnership activities in the Ironwood Forest National Monument.

**b. Volunteer Agreements**

Ironwood Forest National Monument’s volunteer program continues to grow with multiple groups and organizations dedicating time and energy towards improving the monument, contributing a total of 727 hours of volunteer time. A variety of different volunteer projects occurred, including these highlights:

- FIF organized the very successful “Save the Watermans” project, which consisted of numerous volunteer buffelgrass removal events, treating hundreds of acres.
- The Arizona Desert Bighorn Sheep Society, with help from Arizona Game and Fish Department, and FIF, reconstructed a wildlife water catchment that was damaged by a rock slide that is used by bighorn sheep.
- Local and in-holder communities, such as Red Hill Community and Silverbell Estates neighborhood groups participated in several cleanups of undocumented immigrant trash and target shooting debris.
- Local ranchers worked on roads and cleaned up refuse left by illegal smuggling and target shooting activity.
- Humane Borders, a humanitarian aid group working in the borderland areas, contributed over 200 volunteer hours cleaning up trash in remote locations.
- Sonoran Desert Weed Whackers, the Sierra Club, FIF, and Arizona Cactus and Succulent Society participated in several buffelgrass removal projects.
- FIF organized volunteers to complete restoration of unauthorized routes, brushing out vehicle tracks and planting dead native plants.



Volunteers from Humane Borders clean up UDA garbage on the monument.



Volunteers from Friends of Ironwood Forest and a local church group clean up a target shooting site on the Ironwood Forest National Monument.

Groups included the Arizona Site Stewards, Arizona Native Plant Society, Arizona Desert Bighorn Sheep Society, Dove Mountain Hiking Club, Unitarian Congregation of Northwest Tucson, Friends of the Ironwood Forest, Sierra Club, the National Conservation System Foundation, Southern Arizona Geocachers, Tucson Weed Whackers, Arizona Cactus and Succulent Society, Red Hill Community, Silverbell Estates subdivision and Humane Borders.



Members of the Arizona Desert Bighorn Sheep Society did a wildlife water redevelopment project on the monument this year in cooperation with BLM, and the Arizona Game and Fish Department.

**IX. Science**

**a. Overview**

The Ironwood Forest National Monument has consistently drawn scientific inquiry since its designation in 2000, and 2010 was no exception. We received and approved several new requests for research on the monument, primarily focused on the monument’s unique vegetative resources. Other projects are looking into the use of innovative technology to apply herbicides in steep rough terrain with the use of helicopters, and the spread of invasive species in the Sonoran desert.

There is great potential to have graduate students from the University of Arizona and Pima College perform research on IFNM to assist with inventory and monitoring as identified in the IFNM Proposed Resource Management Plan. Science research, inventory and monitoring projects will follow the IFNM Proposed Resource Management Plan when it is finalized.

**b. Science Efforts**

<b>Ironwood Forest National Monument Fiscal Year 2010 Science Efforts</b>						
<b>Project Name and Description</b>	<b>Scientific Discipline</b>	<b>Research Contributor/ Collaborator</b>	<b>Land Management Applications</b>	<b>Products</b>	<b>Monetary and In-Kind Contributions</b>	
					<b>BLM</b>	<b>Partner</b>
Nichol Turks head cactus monitoring	Botany, T&E Species	Margret McIntosh	T&E species populations monitoring	1 report	\$ 0	\$ 1848
Spray ball testing	Invasive species control	USFS/NPS/Pima Co	Invasive species control in rough terrain		\$ 1813	\$ 75,000
			<b>Totals (\$)</b>		<b>\$1813.00</b>	<b>\$76,848.00</b>



Test plot to measure effectiveness of application water and marker dye to small areas by helicopter delivery system.



Helicopter delivery system with test plots in canyon behind helicopter.

## **X. Outreach, Environmental Education, and Interpretation Efforts**

### **a. Overview**

The year 2010 marked the 10<sup>th</sup> anniversary of the Ironwood Forest National Monument. Several events were held to celebrate the momentous occasion. First was a 10<sup>th</sup> Anniversary of IFNM Work Day to remove trash and buffelgrass from the monument. On March 20, 2010 there was a tour for 100 guests to show some of the resources for which the monument was designated to protect. We rented 10 vans to transport the participants into INFM. A 10<sup>th</sup> Anniversary IFNM celebration was held on June 5, 2010, for the original proclamation with about 150 guests attending. Marcilynn Burke, Deputy Director of BLM from the Washington office attended.



Marcilynn Burke, Deputy Director, BLM, Washington office attending June 5<sup>th</sup>. Tucson 10<sup>th</sup>. Anniversary IFNM



State Director Jim Kenna addressing 10<sup>th</sup> Anniversary tour participants



Tour participant capturing the beauty of the monument near Ragged Top.



Viewing a petroglyph panel at one of the tour stops.

**b. Visitor Centers**

- i.** The monument does not have a visitor center, but has entered into a partnership with the Town of Marana Parks and Recreation Department and has set up a display and information pamphlet table in their lobby to provide information to the public. Their staff member provides information on IFNM.
- ii.** The Marana Parks and Recreation center is planned to be the hub of the upcoming town development in that area. Presently, their building receives fewer than 1,000 visitors per year.

**c. Environmental Education**

- i.** Three volunteers compiled general BLM recreation binders that were distributed to 10 locations throughout Tucson for visitors to be educated on IFNM. One person also started “Talks and Tables” at bookstores, outdoor recreation stores and libraries and gave presentations on IFNM in a question and answer format with a PowerPoint presentation to show the IFNM. The intention is to get a docent trained by IFNM staff to give these presentations throughout Tucson to educate the public about INFM. The idea is to bring the presentations to where the people are, rather than ask them to attend a presentation somewhere. There were requests to continue this venue.
- ii.** Mark Lambert and Darrell Tersey gave presentation to Southern Arizona Wildlife Callers at their monthly meeting on January 14, 2010, about IFNM hunting opportunities, Resource Management Plan update, wildlife issues, viewing opportunities, etc.

**d. Interpretation**

- i.** The primary message we try to deliver is focused on the unique biological resources of the monument and the fragility of the Sonoran Desert ecosystem. We also emphasize awareness of resource protection concerns, and the unique safety concerns related to illegal border activity affecting the monument and visitors. This message includes tips on how to minimize impacts to the resources while recreating and avoiding encounters with borderland activity. On-site interpretation and public involvement in interpretation is limited, largely awaiting completion of the management plan.
- ii.** IFNM staff is attempting to educate the public about IFNM as many of them are unaware of the monument. Presently, the Park Ranger, two SCAs and sometimes administrative staff, as well as the Public Affairs assist in interpretive events. The IFNM staff is recruiting volunteers to assist with interpretation at the Tucson Field Office and to give talks throughout Tucson.
- iii.** The BLM staffed a booth at the Ironwood Festival at the Mason Center on May 15, 2010, providing visitor information and gave a one minute spot on PBS Arizona Illustrated.

**e. Outreach**

There is very little direct contact with the visiting public due to a small IFNM field staff, safety restrictions due to widespread illegal activity, and the presence of essentially no facilities in the monument. Presence of BLM personnel on the IFNM is minimal, with the exception of regular patrols by Law Enforcement Rangers. While portal signs are posted on most primary entrances into the monument, jurisdictional issues have prevented BLM from posting signs in some key areas. Signage within the monument is limited, and kiosks are almost nonexistent. Most signage within the monument warns of the prevalence of illegal smuggling activities, or educates motorized users to stay on roads. The BLM is working towards updating and improving onsite information available to visitors through installation of kiosks on the monument. Visitor contacts do occur through various efforts including field patrols, outreach at Tucson's annual Ironwood Festival and the Tucson Gem and Mineral Show, and local news coverage on various events. The BLM also organizes several volunteer events throughout the year and advertises these through flyers and partnerships. We have found that planning and executing volunteer events offers abundant opportunities to do outreach.

A limited number of visitors do contact the Tucson Field Office prior to their visit to the monument. About 75% of all incoming calls to the Tucson Field Office front desk request information about the Ironwood Forest National Monument. In addition, a significant number of users retrieve information from the monument website (site visitation is tracked monthly by

BLM). A rudimentary map of the IFNM is available on the website, which has been mentioned by several visitors as being the primary reference used for their visit to the area.

The IFNM relies heavily on the Friends of Ironwood Forest (FIF) for community outreach beyond what we provide on the ground or in the office. Outreach is a core part of FIF's mission and they have been successful at developing partnerships with local communities and other groups to increase awareness and support the mission of the Ironwood Forest National Monument.

Due to the high profile of border issues, the National Landscape Conservation System, and other issues related to the monument, BLM staff conducted numerous tours of the IFNM for the media, DOI and BLM officials, members of congress and congressional staffers, and others in 2010.

## **XI. Manager's Corner**

Due to the tremendous efforts of the two SCAs, volunteer groups and law enforcement on IFNM, trash from undocumented illegal aliens (UDA) has been greatly diminishing during FY10. The monument appears cleaner to those of us who frequent the land. There continues to be the piecemeal UDA trash in areas of the monument, but it is a very positive result to not see the large layup sites in the monument any more.

IFNM staff has also been increasing their communication with local neighbors of IFNM in order to have more eyes on the land. We have initiated communication by email so that the neighbors can send us pictures of concerns they have regarding resource protection, they have already been very instrumental in assisting the monument. We look forward to improving this communication in efforts to better protect the special natural resources that IFNM has.

We hope that with the help of docents to provide Tucson and Marana interpretive talks that more public will become educated about IFNM and want to visit the monument. An effort has been initiated to find docents who would be interested in assisting BLM in giving talks about IFNM natural resources. Eventually, if BLM can obtain vans for tours on IFNM, we would have a secured means of providing regularly scheduled interpretive tours given by docents trained by monument staff.

When the IFNM RMP has been finalized, the following concerns will need to be addressed before implementation:

The IFNM operates with a staff of five. All employees assigned to the monument also work on other lands managed by the Tucson Field Office. Presently, the Acting IFNM Manager is

responsible for RMP project management. The IFNM Manager also oversees the management of the Arizona National Scenic Trail and the 213,000-acre Middle Gila Canyons area, a popular dispersed recreation management area near the Towns of Florence and Superior, with a substantial amount of use coming from the Phoenix metropolitan area.

The single IFNM Park Ranger is also assigned to work on public lands in the Tucson urban area, four wilderness areas, the Arizona National Scenic Trail, two developed campgrounds, and the Middle Gila Canyons area. The IFNM Outdoor Recreation Planner and Natural Resource Specialist also work a considerable amount of time on Tucson Field Office recreation, range and wildlife programs outside of IFNM. Hours worked in these other areas are not paid for with monument funds.



**Ironwood Forest National Monument's Ragged Top Mountain at sunrise**